REMEDIAL INVESTIGATION / FEASIBILITY STUDY AND CLEANUP ACTION PLAN

NE 8th and 106th
Bellevue, Washington
Cleanup Site ID: 7649
Facility Site ID: 5569973

Prepared for: SWB Bellevue II, LLC

Project No. 190298 • November 20, 2020 FINAL

Aspect CONSULTING

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earth + water

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11/20/2020

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Acronyms

Aspect	Aspect Consulting, LLC
BETX	benzene, ethylbenzene, toluene and xylenes
CAP	Cleanup Action Plan
CSM	Conceptual Site Model
CUL	Cleanup level
Ecology	Washington Department of Ecology
mg/kg	milligrams/kilograms
µg/L	micrograms per liter
MTCA	Model Toxics Control Act
NAVD88	North American Vertical Data of 1988
NFA	No Further Action
PCE	tetrachloroethylene
RI/FS	Remedial Investigation/Feasibility Study
RIWP	Remedial Investigation Work Plan
SAP	Sampling Analysis Plan
SVE	soil vapor extraction
TCE	trichloroethylene
TEF	toxic equivalency factor
TPH	Total Petroleum Hydrocarbons
VOC	volatile organic compound
WAC	Washington Administrative Code
WDNR	Washington Department of Natural Resources

Executive Summary

Aspect Consulting, LLC (Aspect), on behalf of SWB Bellevue II, LLC, has prepared this report to present the results of the remedial investigation (RI) / feasibility study (FS) and cleanup action plan (CAP) for the NE 8th and 106th Property located at 10605, 10629, and 10635 NE 8th Street in Bellevue, Washington (Subject Property; Figure 1). The Subject Property comprises three parcels (King County tax parcel numbers 154410-0215, -0216, and -0221) totaling approximately 1.5 acres and is currently developed with two retail complexes (circa 1958 and 1963) and a gravel parking lot. The west and center parcels of the Subject Property are listed in Ecology's database under Cleanup Site ID: 7649, Facility/Site ID: 5569973.

SWB Bellevue II, LLC is planning to redevelop the Subject Property as an office tower with multiple levels of below-grade parking. Cleanup will occur as part of the redevelopment, which will require mass excavation over most of the Subject Property extending to elevation 91 feet (NAVD88).

The purpose of this RI/FS is to collect and evaluate sufficient information to develop a conceptual site model (CSM) and, based on the CSM, develop and evaluate cleanup action alternatives to enable selection of a cleanup action. The objective of the CAP is to outline the cleanup action as determined by the FS. The RI, FS, and CAP were completed to meet the requirements of the Model Toxics Control Act (MTCA) cleanup regulation, Chapter 173-340 of the Washington Administrative Code (WAC).

The Subject Property is currently enrolled in Ecology's Voluntary Cleanup Program (VCP; Ecology Site ID 7649, Facility/Site No. 5569973, and VCP No. NW3259). SWB Bellevue II, LLC will implement the CAP with the objective of obtaining a determination from Ecology stating that no further remedial action is necessary at the property (a property-specific No Further Action (NFA) determination). The results of the cleanup action will be documented in a cleanup action report submitted for Ecology's review following construction/cleanup completion and recording of the institutional controls.

While several previous investigations have been conducted for the Subject Property from 1990 to 2019, delineation of the extent of impacts was not complete. The RI addressed those outstanding data gaps. Based on the results of the RI, soil and groundwater contamination at the Subject Property is present in three areas:

1. **Area 1. Petroleum Contamination in Soil on Western Parcel.** Although a remedial excavation was completed in the 1991, residual petroleum contamination remains in soil on the western parcel between elevations 147 and 157 feet north American vertical datum 1988 (NAVD88), attributable to operations at the historical service stations.
2. **Area 2. Chlorinated Solvent Contamination in Soil and Groundwater on Western Parcel.** Releases of chlorinated solvents at the upgradient Thinker Toys Site (former dry cleaner) are the source of chlorinated solvent contamination to

soil and shallow groundwater on the western portion of the Subject Property (Figure 6 and 7). Chlorinated solvent-contaminated groundwater is present in this portion of the Subject Property in monitoring wells screened from elevations 146 and 113 feet NAVD88. Chlorinated solvent-contaminated soil is present between elevations 139 and 92 feet NAVD88 in the northern portion of the western parcel, and at deeper depths near the south Subject Property boundary (AMW-4D and URS-SB-13) between approximately 60 and 65 feet bgs, elevation 94 to 89 feet NAVD88, forming a terraced-like pattern of contaminated soil across the Subject Property. Contaminated soil is documented at similar depths in borings on the south-adjoining Onni Property at approximately 103 feet NAVD88 (MW17-01; Figure 7 and 9). Deep groundwater, present at elevation 83 to 80 NAVD88, is not contaminated.

3. **Area 3. Shallow Tetrachloroethene (PCE) Contamination in Soil Near South Subject Property Boundary.** The source of shallow PCE soil contamination near the south subject property boundary (URS-MW-4) is unknown. However, based on shallow depth and proximity to several catch basins and manholes, this PCE contamination is likely the result of historical unauthorized disposal of chlorinated solvent products into the catch basins or manholes. PCE contamination is present in soil on the southern property boundary between elevations 142 and 124 feet NAVD88.

Soil gas was also analyzed. PCE and benzene were identified at concentrations above and below the MTCA Method B screening levels for subslab soil gas.

Based on the results of the RI and previous investigations, the following Contaminants of Concern (COCs) have been identified above MTCA cleanup levels on the Subject Property:

- Gasoline-range TPH in soil only
- Oil-range TPH in soil only
- Benzo(a)pyrene in soil only
- PCE in soil and groundwater

The cleanup levels proposed for the Site are MTCA Method A or B cleanup levels which are the most stringent of the established cleanup levels under MTCA for protection of human health and the environment and are appropriate for the Site based on current and future development as a commercial/retail space in the urban core of downtown Bellevue.

Four cleanup alternatives were developed for evaluation in the FS (Section 7):

- **Alternative 1**—Remedial excavation of contaminated soil on the entire Subject Property (including the northwest corner in the location of a City of Bellevue subsurface easement), off-property disposal of contaminated soil and groundwater within the building construction footprint. ECs include a chemical vapor barrier and subsurface wall drainage design that mitigates downward migration of groundwater.

- **Alternative 2** – Remedial excavation of contaminated soil within the building footprint during mass excavation, which excludes the City of Bellevue easement area in the northwest corner of the Subject Property. ECs include a chemical vapor barrier and subsurface wall drainage design that mitigates downward migration of groundwater.
- **Alternative 3**—Remedial excavation of contaminated soil within the building footprint during mass excavation, disposal, and chemical vapor barrier installation as in Alternative 1. Additional ECs include subsurface wall drains for shallow groundwater collection, groundwater treatment, and permitted disposal.
- **Alternative 4** – Remedial excavation of contaminated soil within the building footprint during mass excavation, disposal, and chemical vapor barrier installation as in Alternative 1 with addition of perimeter wells for shallow groundwater interception, permanent groundwater treatment system and permitted disposal.

The four cleanup alternatives were evaluated and compared against the remedial action objectives (RAOs) and the requirements of MTCA governing cleanup actions (WAC 173-340-360(2)). The selected remedial alternative, based on the threshold and screening criteria outlined in the FS, is **Alternative 2 –** Remedial excavation in the redevelopment area, environmental and institutional controls, and monitoring.

A CAP (Section 8) was developed to implement Alternative 2 and includes the following actions:

- **Remedial Excavation of Contaminated Soil** – Contaminated soil and groundwater at that is located within the redevelopment construction footprint will be excavated concurrently with the redevelopment mass excavation to approximately elevation 91 feet. Mass excavation for redevelopment will include installation of a shoring wall consisting of soldier piles and timber lagging. Soldier piles will be installed using steel casing around the drilled shaft to mitigate the risk for shallow contaminated groundwater to migrate vertically down the open shaft between drilling and grouting the set soldier pile. Excavated contaminated soil will be disposed of at permitted disposal facilities in accordance with applicable regulations. Excavation will remove all soil at the Subject Property that contains COPCs at concentrations above the MTCA cleanup levels, with the exception of one location in the northwest corner where excavation cannot be completed due to a City of Bellevue required easement.

  Dewatering will be conducted to facilitate the mass excavation—dewatered groundwater will be sampled, tested, and profiled prior to permitted disposal/discharge. If needed based on characterization testing, dewatered groundwater may be treated on-site prior to disposal or discharge.
- **Engineering Controls** – Alternative 2 includes the following engineering controls, which are described in detail in Section 8.0:

Temporary and permanent subsurface drainage will be constructed to mitigate the risk of contaminated shallow groundwater migrating vertically downward and impact the deep aquifer.

A Chemical vapor barrier will be installed at vertical and horizontal foundation walls covering the western 2/3rds of the foundation (Figure 14).

- **Institutional Controls –** Institutional controls are described in Section 8.0 and will include a deed restriction to prevent future, unrestricted development or any other activities that could create exposure pathways for direct contact with contaminated soil remaining in place after the cleanup action, and direct contact or use of contaminated shallow groundwater sourced from the upgradient Thinker Toys site.
- **Compliance Groundwater Monitoring** – Following construction, compliance groundwater monitoring will be conducted on a quarterly basis for one year to monitor post-cleanup/construction groundwater conditions in both the shallow and deep groundwater zones. Groundwater monitoring wells will be installed in the locations shown on Figure 14. The deep wells will be used as compliance groundwater wells to demonstrate that the remediation and redevelopment did not negatively impact the regional aquifer. The shallow wells will be sampled to evaluate movement (if any) of the up-gradient Thinker Toys PCE plume, however, these wells will not be used to demonstrate compliance for the Subject Property since remediation of the up-gradient Thinker Toys plume is ongoing.

This executive summary should only be used in the context of the full report.

1 Introduction

Aspect Consulting, LLC (Aspect), on behalf of SWB Bellevue II, LLC, has prepared this report to present the results of the remedial investigation (RI) and feasibility study (FS) for the NE 8th and 106th Property located at 10605, 10629, and 10635 NE 8th Street in Bellevue, Washington (Subject Property; Figure 1). The Subject Property comprises three parcels (King County tax parcel numbers 154410-0215, -0216, and -0221) totaling approximately 1.5 acres and is currently developed with two retail complexes (circa 1958 and 1963) and a gravel parking lot. The west and center parcels of the Subject Property are listed in the Washington State Department of Ecology's (Ecology) database under Cleanup Site ID: 7649, Facility/Site ID: 5569973.

The purpose of this RI/FS is to collect and evaluate sufficient information to develop a conceptual site model (CSM) and, based on the CSM, develop and evaluate cleanup action alternatives to enable selection of a cleanup action in accordance with Washington Administrative Code (WAC) 173-340-360 through -390. The objective of the CAP is to describe the cleanup action as determined by the FS in accordance with WAC 173-340-380. The RI/FS and CAP have been completed to meet the requirements of the Model Toxics Control Act (MTCA) Cleanup Regulation and regulations, Chapter 173-340 WAC.

1.1 Report Organization

This RI/FS and CAP report has been organized in accordance with Ecology's RI, FS and CAP Checklist Guidance documents (Publication Nos. 16-09-006 and 16-09-007, respectively) and includes the following:

- Section 2 provides a description of the Subject Property, a definition of the Site and property and presents a summary of the background information, including the environmental setting and historical use of the property/vicinity, regulatory history, and the geologic setting.
- Section 3 provides the scope of work and results of the RI, including a summary of the historical environmental studies and actions, as well as screening and cleanup levels used to evaluate the soil, groundwater, and soil vapor data collected for the RI to facilitate Site characterization.
- Section 4 presents the CSM for the Site, including the sources and nature and extent of concentrations of hazardous substances in soil and groundwater at the Site, and a preliminary assessment of potential receptors and exposure pathways.
- Section 5 presents the cleanup requirements for the Site, including remedial action objectives, cleanup levels and points of compliance for soil and groundwater.
- Section 6 presents a summary of the RI findings and introduction to the FS.

- Section 7 presents the FS, including a summary of cleanup standards, remedial action objectives (RAOs), and applicable laws and regulations; the results of the screening and detailed evaluation of feasible alternatives; and a description of the recommended remedial alternative.
- Section 8 presents the CAP, including a detailed description of the recommended remedial alternative, locations of residual contamination remaining after the cleanup, compliance monitoring requirements, and the schedule for implementation of the CAP.

2 Site Description and Background

This section describes the Site and property and summarizes background information, including the environmental setting, historical use of the property and vicinity, regulatory involvement, and a summary of the geologic and hydrogeologic setting. According to Ecology, a Site is defined as locations where contamination has come to be located. Section 4 of this report presents investigation results and the interpreted extent of contamination.

2.1 Project Location and Description

The Subject Property is located at NE 8th & 106th Ave located at 10605, 10629, and 10635 NE 8th Street in Bellevue, Washington (Subject Property; Figure 1). The Subject Property comprises three parcels (King County tax parcel numbers 154410-0215, -0216, and -0221) totaling approximately 1.5 acres and is currently developed with two retail complexes (circa 1958 and 1963) and a gravel parking lot (Figure 2). The Subject Property and surrounding area are zoned for commercial and retail uses.

2.1.1 Current and Future Land Use

The Subject Property is currently developed with two commercial/retail buildings on the east and central parcels. Parcels 154410-0215 (east, 0.75 acres) and 154410-0216 (central, 0.28 acres) are sloped down to the southwest, such that the first level of each building is below grade on the north side and at grade on the south side. The westernmost parcel (154410-0221, 0.43 acres) is currently a gravel parking lot and was last developed as a service station which closed in 1991. The west and center parcels of the Subject Property are listed in Ecology's database under Cleanup Site ID: 7649, Facility/Site ID: 5569973, and with UST ID: 8435. Current and historic property development is depicted on Figure 2.

SWB Bellevue II, LLC is planning to redevelop the Subject Property as an office tower with multiple levels of below-grade parking requiring mass excavation over most of the Subject Property extending to elevation 91 feet north American vertical datum 1988 (NAVD88[1]) or approximately 60 to 70 feet below the ground surface (bgs). The extent of the mass excavation of construction is shown on Figure 2. The redevelopment footprint and mass excavation does not include the northwest corner of the Subject property due to the presence of an underground easement required by the City of Bellevue. The City easement in this area restrict development and excavation in the upper 12-feet and from elevation 139 to 134, or 20 to 25 feet bgs. Restrictions to redevelopment also potentially limit implementation of certain remedial technologies, including *in situ* treatment technologies that require installation of wells or other infrastructure. All existing structures at the Subject Property will be demolished and removed prior to the mass excavation. There are no known plans to change the use of the Subject Property from commercial uses in the future.

[1]All elevations referenced in this report are in NAVD88.

2.2 Site History

The Subject Property is located in an area of downtown Bellevue that has been commercially developed since the 1960s, and in the past two decades has experienced abundant redevelopment with mixed-use high-rise retail commercial and residential space.

2.2.1 Historical Development and Operations

Historical development of the western parcel of the Subject Property included two generations of a gasoline and automotive service stations from 1958 to 1991, which resulted in petroleum contamination to soil at concentrations exceeding the MTCA cleanup levels. Demolition of the service station in 1992 included remedial excavation of most of the petroleum-contaminated soil. The location of the historical service station, and the remedial excavations are shown on Figure 2. Residual petroleum-contaminated soil was identified during a later investigation and remains in a specific area beneath the western parcel. Since 1992, the western parcel has been used as a gravel lot for parking.

The center and eastern parcels were historically developed for residential and agricultural use before the existing multi-unit retail complexes were constructed in 1958 and 1963, respectively.

The Subject Property is currently owned by SWB Bellevue II, LLC, who purchased it from Bosa Development Washington Inc. (Bosa Properties) in 2019. Prior to Bosa Properties' ownership, the Subject Property was owned by Sterling Reality Organization (SRO).

2.2.2 Adjacent and Nearby Properties

Adjacent and adjoining properties to the Subject Property have been developed with commercial uses since as early as the 1950s, and several adjacent properties confirmed contaminated sites. Most pertinent to this project are the upgradient north-northwest adjacent Thinker Toys site and the south directly-adjoining Onni/Barnes and Noble Property (Figure 2).

The Thinker Toys site was developed as a service station in the 1950s and then subsequently operated as a dry cleaner until 2007 when the property was paved for use as a parking lot. A release of total petroleum hydrocarbons (TPH) and chlorinated solvents, including tetrachlorethene (PCE), trichloroethene (TCE) and other associated solvent degredation compounds, to soil, groundwater, and soil gas occurred as a result of these former operations. The chlorinated solvent contamination has migrated to the south, across NE 8th Street and onto the Subject Property and is present in soil and groundwater on the western portion of the Subject Property. The documented Thinker Toys groundwater plume includes at least the northwest portion of the Subject Property and extends beyond the Subject Property boundary to the west, into the 106th Avenue NE right-of-way. The Thinker Toys site is listed in Ecology's data bases under Cleanup Site ID: 2477, Facility Site ID: 2462690, and VCP number NW2338.

The Onni/Barnes and Noble Property (Onni Site; south adjoining to the Subject Property) was originally developed as a bowling alley and theater. Chlorinated solvents have been confirmed in soil and groundwater beneath this directly-adjacent site. The source has been presumed to be either attributed to the release at the upgradient Thinker Toys site

(EPI, 2019) and/or an alternate PCE source located at the property boundary between the Subject Property and Onni Site (G-Logics, 2019). This issue is discussed further in Section 4 of this report. The Onni Site is listed in Ecology's databases under Cleanup Site ID: 14996 and Facility Site ID 73977.

2.3 Geology and Hydrogeology

Soils observed at the Subject Property consist primarily of imported fill materials overlying glacial till. Fill material ranges in thickness between 1 and 10 feet but is primarily less than 5 feet thick. The fill is observed to consist primarily of sand and gravel with varying amounts of silt. The fill is underlain by glacial till observed to depths ranging from 41.5 to 50 feet bgs (elevation 112 to 97 feet NAVD88). The glacial till is generally thick and massive, and characterized by alternating layers and interbeds of gray-brown dense/hard silty sands, sandy silts, and sands with varying amounts of gravel.

Advance outwash deposits are present beneath the glacial till extending to the maximum exploration depths of approximately 90 feet bgs (elevation 62 feet NAVD88). The advance outwash is generally coarser with larger gravels compared to the glacial till, which generally had smaller grain sizes and higher fines content. The deepest encountered layers of the glacial outwash were characterized by silts and sandy silts to sands with silt observed from approximately 50 to 70 feet bgs or elevations 100 to 80 feet NAVD88. Typically, a silt layer was encountered between approximately 70 and 80 feet bgs, corresponding to elevation 80 feet NAVD88.

Groundwater is present in two water bearing zones:

- A discontinuous shallow zone encountered inconsistently in sandier layers of the glacial till unit. Water levels in shallow wells have been measured ranging from approximately 20 to 39 feet bgs, corresponding to elevations of 136 to 117 feet NAVD88. Interpreted groundwater flow in the shallow zone is to the southwest.
- A continuous deep zone encountered from approximately 69 to 89 feet bgs, corresponding to elevations 83 to 80 feet NAVD88. Interpreted groundwater flow in the deep zone is to the southeast.

In the shallow zone, groundwater elevations appear to fluctuate one to two feet seasonally. Comparing groundwater flow directions in August 2019 and July 2020, in the shallow zone flow appears to shift from southwest to south and in the deep zone from southeast to east. Based on the August 2019 and July 2020 groundwater levels, there may be a seasonal shift in groundwater flow direction. Groundwater elevations and depth to water measurements are presented on Table 1. Groundwater table elevation contours are presented on Figure 3a and hydrographs are shown on Figure 3b.

Groundwater at the Subject Property is not used for public supply. The City of Bellevue municipal water is sourced from the Tolt River and Cedar River watersheds and not from groundwater. A search of Ecology's groundwater well database showed no public supply wells within 1 mile of the Subject Property. Based on the heavy urban development and use of the Subject Property and vicinity, groundwater is not expected to be used as drinking water in the future.

3 Field Investigations

The Subject Property has been the focus of numerous environmental investigations and studies occurring between the 1990s and 2019. Prior environmental investigations have identified impacts to soil by petroleum-associated constituents associated with the former auto service station on the western parcel, and to soil and groundwater by chlorinated solvent-associated constituents related to upgradient releases at the Thinker Toys site that have migrated onto and beneath the Subject Property.

Section 3.1 provides a summary of previous environmental investigations and a review of the regulatory status leading into the RI field program. Section 3.2 presents the Site Characterization which includes identification of the constituents of potential concern (COPCs, Table 2) and the RI investigation program components and results. Explorations locations are shown on Figure 4.

3.1 Previous Environmental Investigations

Environmental conditions at the Subject Property have been assessed by numerous environmental investigations or remedial actions occurring between 1990 and 2019. These have included subsurface investigations and soil and groundwater sampling targeting the nature and extent of chlorinated solvent impacts from off-site sources and a remedial action targeting petroleum impacts from the former on property gasoline station. These prior studies are described in detail in the RIWP (Aspect, 2020). Key findings are briefly summarized in this section.

Based on the results of prior studies at the Subject Property, the following environmental conditions are known:

- Demolition of the service station, including removal of the underground storage tanks (USTs), was conducted in 1991 and 1992 and there are no known USTs remaining at the Subject Property. At that time, approximately 1,500 cubic yards of TPH-contaminated soil was removed. However, residual TPH-contaminated soil was later identified in areas outside of the 1990 remedial excavations, and remains in place on the western portion of the Subject Property in localized areas between 0.5 and 9 feet bgs (Figure 5).
- Chlorinated solvent impacted soil sourced from the north-adjacent Thinker Toys Site has migrated onto the Subject Property and is present in soil in a terrace-like pattern across the two western parcels between approximately 20 feet and 75 feet bgs (elevation 139 and 89 feet NAVD88; Figure 6).
- Chlorinated solvent impacted soil from an unconfirmed source is present near the southern property boundary between approximately 15 feet and 30 feet bgs (elevation 140 and 125 feet NAVD88; Figure 6).
- Chlorinated solvent contaminated groundwater is present in the shallow water bearing unit only, generally beneath the western parcel. Prior studies have not shown chlorinated solvent contamination to the deep water-bearing zone beneath the Subject Property. These findings were confirmed during the RI, as shown on Figure 7.

Prior data gaps based on the prior studies included delineation of lateral extents of impacted groundwater and soil at the southern Subject Property boundary. These data gaps form the basis of the RI field program scope, and are described further in Section 3.2.2.

3.1.1 Regulatory Setting

The Subject Property was entered into Ecology's Voluntary Cleanup Program (VCP) in 2014, and Remedial Investigation/Feasibility Study (RIFS) and Cleanup Action Plan (CAP) reports were submitted between 2014 and 2016 (GeoEngineers, 2014a and b; EPI, 2016). In a March 2017 opinion letter on the 2016 CAP (EPI, 2016), Ecology stated that "upon completion of the proposed cleanup…no further remedial action will likely be necessary at the Property to clean up contamination associated with the Site," but that "further remedial action will likely be necessary elsewhere at the Site." The 2016 CAP has not been implemented.

The Site was terminated from the VCP in June 2019 for inactivity. However, on February 7, 2020, following their purchase of the Property, SWB Bellevue II, LLC reenrolled the Property into the VCP and concurrently submitted the work plan for this RI. Ecology accepted the Site into the VCP on February 11, 2020 (Cleanup Site ID 7649, Site No. 5569973, and VCP Project No. NW3259).*"*

3.2 Site Characterization

As previously noted, there have been numerous studies evaluating the presence of COPCs at the Subject Property, which have identified releases to soil and groundwater primarily affecting the western parcel, sourced from the upgradient Thinker Toys Site (former dry-cleaner release) to the north and the on-property former gasoline/auto service station. In addition, there is an unidentified source of shallow solvent contamination located near (or south of) the southern property boundary.

On February 7, 2020, Aspect completed and submitted an RI Work Plan (RIWP) to Ecology that detailed the methods and approach for the RI. The RIWP was approved by Ecology on February 11, 2020.

3.2.1 Contaminants of Potential Concern

Based on the data and results from prior studies, the list of COPCs and associate media to be evaluated during the RI are as follows:

- **In Soil Only:** Gasoline-, diesel-, and oil-range TPH and petroleum-associated volatile organic compound (VOCs)
- **In Soil and Groundwater:** Chlorinated VOCs, including PCE, TCE, cis-1,2-dichloroethene (cis-1,2-DCE), and vinyl chloride (among others)

The screening levels for the RI, or values that are used to evaluate data collected during the RI to assess the nature and extent of contamination at the Site, are the lowest published MTCA Method A cleanup levels for Unrestricted Land Use for soil, and Method A cleanup levels for groundwater. Where Method A cleanup levels have not been established, the lowest published MTCA Method B cleanup levels are used. Table 2

presents the COPCs and respective screening levels. The screening levels were selected based on the current and potential future exposure pathways and receptors, which are presented in Section 4.5.

3.2.2 Remedial Investigation Field Program

The RI Field Program was conducted between March and May 2020 to address Site characterization data gaps identified in the RIWP; evaluate the nature and extent of contamination at the Subject Property to support development of the CSM; and support development of remedial alternatives during the FS. The specific objectives of the RI Field Program include addressing the following data gaps identified in the RIWP:

- Delineate the southern and eastern extent of the groundwater plume in shallow groundwater emanating from the Thinker Toys Site
- Investigate the source of the shallow groundwater impacts near the southern property boundary
- Delineate the lateral extent of shallow groundwater impacts near the southern property boundary
- Investigate the source of the deep groundwater impacts near the southern property boundary
- Delineate the lateral extent of the deep groundwater impacts near the southern property boundary

The investigation work was completed in accordance with the RIWP (Aspect, 2020).

3.2.2.1 Investigation Components

Between March and May 2020 Aspect completed the following:

- Advanced seven soil gas probes (ASG-01 through ASG-07) using direct push technology to depths ranging from 5 to 12.5 feet bgs
- Advanced nine soil borings, completing four permanent groundwater monitoring wells (AB-1 to AB-5 and AMW-6D and AMW-7 to AMW-9), using sonic drilling methods to approximately 90 feet bgs, except for AB-5 which was completed to 45 feet bgs
- Development of the four new monitoring wells
- Groundwater sampling and water level measurements at 29 monitoring wells: 22 wells are located on the Subject Property, including the new monitoring wells; 2 are located in the NE 106th ROW, and 5 are located on the Onni property
- Laboratory analysis of soil, soil gas, and groundwater samples

Exploration locations are shown on Figure 4.

Soil Gas Investigation Methods. Soil gas probes were advanced using direct push drilling methods by Cascade Drilling to refusal at depths between 5 and 12.5 feet bgs on March 31, 2020. For each location, an approximately 6-inch long screen was installed

with filter pack, bentonite seal above the screen, multiple feet of bentonite backfill and an additional bentonite seal at the surface. Soil gas samples were obtained in accordance with Ecology's guidance (Ecology, 2018) using laboratory-supplied, evacuated and certified, stainless steel 1-liter canisters fitted with 150 milli-liters per minute (ml/min) flow controllers and dedicated sampling trains.

Prior to sampling, a shut-in test was performed by inducing a vacuum to the sampling train for 5 minutes and a minimum of 3 probe casing volumes were purged. The probe was enclosed in a leak-testing shroud at ground surface and helium tracer gas was applied to confirm that soil gas samples were not diluted by ambient air. Soil gas samples were transferred under appropriate chain-of-custody procedures to the analytical laboratory, Friedman and Bruya, Inc. of Seattle, Washington, and analyzed by U.S. Environmental Protection Agency (EPA) Method TO-15 for chlorinated VOCs and petroleum-associated VOCs and ASTM International, Inc. (ASTM) Method D1946 for helium.

Drilling and Well Installation Methods. On April 15 to 29, 2020 a total of nine borings (AB-1 through AB-5, AMW-6D, AMW-7, AMW-8, and AMW-9) were advanced to depths ranging from 45 to 90 feet bgs (elevation 111 to 64 feet NAVD88) using sonic drilling methods by Cascade Drilling. Conductor casing was used to prevent the downward migration of solvents in groundwater from the shallow to deep water-bearing zones for all borings advanced to 90 feet bgs. Soil samples were obtained continuously for lithologic classification and field screening by an Aspect geologist. Observed soils were classified in accordance with the Unified Soil Classification System (USCS) and recorded on boring logs.

Field screening methods included measurement of headspace volatiles using a photoionization detector (PID), water sheen, and visual and olfactory observation. Soil samples were placed in laboratory-supplied sampleware and transferred to Friedman & Bruya, Inc. under appropriate chain-of-custody procedures. Select soil samples were analyzed for the COPCs using EPA Method 8260C for VOCs and/or Northwest Methods NWTPH-Gx or -Dx for petroleum hydrocarbons, based on the results of field screening and environmental data objectives for each location. Boring and well construction logs are included in Appendix A.

Four of the nine soil borings were completed as monitoring wells, constructed of 2-inch Schedule 40 PVC casing with 20 feet of 0.010-inch slotted screen set at either the shallow water bearing zone (25 to 45 feet bgs, elevation 132 to 112 feet NAVD88; AMW-9), or the deeper water bearing zone (60 to 90 feet bgs, elevations between 94 to 64 feet NAVD88; AMW-6D, AMW-7, AMW-8). Boring AB-5 was initially planned for completion as a monitoring well (AMW-6S) with an anticipated screen in the shallow water-bearing zone; however, groundwater was not observed at this location and therefore a monitoring well was not installed.

On April 29 and 30, 2020, the four new monitoring wells were developed using a combination of surging across the well screen and pumping and monitoring of field parameters. Development was performed until groundwater parameters stabilized and the turbidity was below 5 Nephelometric Turbidity Units (NTU).

Groundwater Sampling Methods. Between May 4, 2020 and July 23, 2020 groundwater samples were obtained from 22 wells. Samples were obtained using standard low flow methodology (EPA, 1996) and new, unused sample tubing. Field parameters were collected during groundwater sampling—including depth to water, flow rate, temperature, specific conductivity, dissolved oxygen, pH, oxidation reduction potential, and turbidity—and sampling occurred once all parameters had stabilized[2]. None of the well screens were fully submerged during sampling and the tubing intake was placed at the midpoint of the water column. Samples were collected in laboratory-supplied bottleware, transported under standard chain-of-custody procedures, and submitted to Friedman and Bruya, Inc for laboratory analysis of the COPCs using EPA Method 8260C for VOCs. Several wells screened in the shallow water bearing zone were observed to be dry or contain too little water to facilitate sampling during the RI Field Program, including AMW-1, AMW-4S, AMW-5, URS-MW-2, URS-MW-4, URS-MW-5 and URS-MW-7D.

On July 23, 2020, synoptic groundwater levels were measured the 29 wells located on the Subject Property, the Onni Property and in the 106th Avenue NE ROW, however conditions were dry at 5 wells on the Subject Property and 2 wells on the Onni property. Each water level measurement was recorded to the hundredth of a foot, relative to the top of the north side of the well casing. Groundwater elevations were calculated using the surveyed top of casing elevations. Depth to water measurements and water level elevations from the RI Field Program and prior monitoring events are summarized on Table 1. Groundwater elevations and interpreted groundwater contours and flow direction are shown on Figure 3a and hydrographs are shown on Figure 3b.

Investigation-Derived Waste Management. All soil cuttings, well purge water, and decontamination water generated by the investigation were placed into labeled U.S. Department of Transportation-approved drums and temporarily stored at the Subject Property as investigation-derived waste (IDW).

3.2.3 Remedial Investigation Analytical Results

This section summarizes the analytical results for soil, groundwater, and soil gas samples obtained during the RI Field Program, by media. As previously discussed in Section 3.2.1, MTCA Method A cleanup levels and/or Method B cleanup levels are adopted as screening levels for the RI (Table 2). Results are therefore discussed relative to, and compared against, the appropriate MTCA Method A or B cleanup levels. Analytical results are presented in Table 3 through 5 and selected COPCs are shown in map view in Figures 5 through 8. COPCs are also shown in north-south and east-west cross-sections on Figures 9 and 10, respectively. Laboratory reports including chain-of-custody documentation are presented in Appendix B.

[2] Stabilization consists of the following over no less than 9 minutes: less than 10 percent change in dissolved oxygen and turbidity; less than 3 percent change in specific conductance; less than 10 millivolt change in oxidation reduction potential; and less than 0.1 change in pH.

3.2.3.1 Soil

Analytical results for COPCs in soil are presented in Table 3 and summarized on Figures 5 and 6. The following is a summary of COPCs identified above the MTCA cleanup levels during the RI Field Program:

- **AMW-8, 4 feet bgs:** Gasoline-range TPH was detected at 2,400 mg/kg in the soil sample obtained from 4 feet bgs at AMW-8, which exceeds the MTCA Method A cleanup level of 100 mg/kg. In this same sample, benzo(a)pyrene was detected at 1.8 mg/kg, exceeding the MTCA Method A Cleanup level of 0.1 mg/kg.

Remaining COPCs were either not detected above laboratory reporting limits or were detected at concentrations below the MTCA cleanup levels in soil samples obtained during the RI Field Program.

3.2.3.2 Groundwater

Analytical results for COPCs in groundwater are presented in Table 4 and shown on Figure 7. The following is a summary of COPCs identified above the MTCA cleanup levels during the RI Field Program:

- **AMW-9, B3/MW-3, MW-17, MW-18, MW-19, URS-MW-1, and URS-MW-7:** PCE was detected at concentrations exceeding the MTCA Method A cleanup level of 5 ug/L in samples from 7 of 29 total monitoring wells. All wells with exceedances were screened the shallow water-bearing zone. Exceedances detected in these samples ranged in concentration from 5.9 ug/L (MW-17, located in the 106th Ave NE ROW, southwest of the Thinker Toys property) to 71 ug/L (AMW-9 located near the north Subject Property boundary south of the Thinker Toys property).

Remaining COPCs were either not detected above laboratory reporting limits, or were detected at concentrations below the MTCA cleanup levels in groundwater samples obtained during the RI Field Program. COPCs, including PCE, were not detected at concentrations greater than the MTCA Method A cleanup level in any groundwater samples obtained from the deep water-bearing zone, including in well MW-17-01, located on the Onni property to the south, where PCE was detected above the cleanup level in a 2017 sampling event.

3.2.3.3 Soil Gas

Analytical results for soil gas are presented in Table 5 and shown on Figure 8. The following analytes were identified at concentrations above and below the MTCA Method B screening levels for subslab soil gas:

- Benzene was identified in all 7 samples ranging from 4.5 ug/m^3 to 30 ug/m^3. Benzene concentrations exceeded the MTCA Method B cleanup level (11 ug/m^3) in three samples, obtained from ASG-02, ASG-04, and ASG-05.

- PCE was identified in three samples ranging from 49 ug/m^3 to 320 ug/m^3. The PCE concentration was equal to the MTCA the Method B cleanup level (320 ug/m^3) in the sample, obtained from ASG-05.

- One or more other analytes were detected at concentrations below MTCA Method B screening levels in each of the 7 samples, including toluene, ethylbenzene, xylenes, 1,1,1-trichloroethane, naphthalene, 1,2-dichloroethane, and/or n-hexane.

Remaining CVOCs or petroleum-associated VOCs were not detected above laboratory reporting limits in soil gas samples obtained during the RI Field Program.

4 Conceptual Site Model

This section presents the conceptual site model (CSM), which was originally developed during the RIWP and refined based on the results of the RI Field Program. The CSM is the basis for developing technically feasible cleanup alternatives and selecting a final cleanup action. This section discusses the components of the CSM, including the source of the COPCs, nature and extent of contamination, contaminant fate and transport, and a preliminary exposure assessment.

4.1 Constituents of Concern

Based on the results of the RI Field Program and previous investigations, the following Constituents of Concern (COCs) have been identified above MTCA cleanup levels on the Subject Property:

- Gasoline-range TPH in soil only
- Oil-range TPH in soil only
- Benzo(a)pyrene in soil only
- PCE in soil and groundwater

Although TCE was historically detected at concentrations greater than the MTCA Method A cleanup level in three groundwater samples obtained from URS-MW-1 (located in the northwest corner of the Subject Property, nearest to the Thinker Toys Site), TCE has either not been detected or has been detected at concentrations less than the cleanup level since 2011 and it is no longer considered a COC for groundwater at the Subject Property.

4.2 Sources and Media of Concern

There are multiple sources of releases of these constituents to Subject Property soil and groundwater —one source of petroleum contamination in soil and up to three sources of chlorinated solvent contamination to soil and groundwater, as follows:

1. **Petroleum Contamination in Soil on Western Parcel.** As noted in Section 2.2.1 residual petroleum contamination remains in soil on the western parcel (between elevations 147 and 157 feet NAVD88), attributable to operations at the historical service stations (Figure 2).
2. **Chlorinated Solvent Contamination in Soil and Groundwater on Western Parcels.** Releases of chlorinated solvents at the upgradient Thinker Toys Site (former dry cleaner) are the source of chlorinated solvent contamination to soil and shallow groundwater on the western portion of the Subject Property (Figure 6 and 7). Chlorinated solvent-contaminated groundwater is present in this portion of the Subject Property in monitoring wells screened from elevations 146 and 113 feet NAVD88. Chlorinated solvent-contaminated soil is present between elevations 139 and 92 feet NAVD88 in the northern portion of the western parcel, and at deeper depths near the south Subject Property boundary (AMW-4D and

URS-SB-13) between approximately 60 and 65 feet bgs, elevation 94 to 89 feet NAVD88, forming a terraced-like pattern of contaminated soil across the Subject Property. Contaminated soil is documented at similar depths in borings on the south-adjoining Onni Property at approximately 103 feet NAVD88 (MW17-01; Figure 7 and 9). Deep groundwater, present at elevation 83 to 80 NAVD88, is not contaminated.

3. **Shallow Chlorinated Solvent Contamination in Soil Near South Subject Property Boundary.** The source of shallow PCE soil contamination near the south Subject Property boundary (URS-MW-4) is unknown, but based on shallow depth and proximity to several catch basins and manholes (Figure 6), is likely the result of historical unauthorized disposal of chlorinated solvent containing products into the catch basins or manholes. Chlorinated solvent contamination in soil on the southern Subject Property boundary is present between elevations 142 and 124 feet NAVD88.

Concentrations of PCE reported in soil gas likely originated from the contaminated soil and groundwater areas at the Site. The source of the benzene concentrations reported in soil gas is unknown.

4.3 Nature and Extent of Contamination

The following subsections summarize the physical conditions of the Subject Property and the known distribution of concentrations of COCs above the MTCA cleanup levels identified in soil, groundwater, and soil gas.

4.3.1 Physical Conditions

Consistent with previous explorations and detailed in Section 2.3, the observed geology included fill material at the surface underlain by glacial till as deep as elevation 97 feet NAVD88 and glacial outwash deposits to the maximum depths explored, elevation 62 feet NAVD88. As previously noted, intermittent and discontinuous layers of poorly sorted sands with silt were present throughout the glacial till and outwash. These layers act as preferential pathways for contamination movement across the Subject Property.

The shallow water-bearing zone was not encountered in many of the RI borings, while the deep water-bearing zone was observed in all deep borings (Table 1 and Figure 3a).

4.3.2 Soil Quality

COCs in soil that exceed the MTCA cleanup levels are limited to gasoline range TPH, oil range TPH, PCE, TCE, and benzo(a)pyrene[3]. Contaminated soil areas are described on a source by source basis below.

- **Petroleum Contamination on Western Parcel.** Petroleum-contaminated soil is present in shallow isolated pockets at depths from 0.5 to 9 feet bgs corresponding to elevations 157 to 147 feet NAVD88 (AMW-8, SRO-3, SRO-7 and SRO-17). Historical remedial excavations removed the bulk of the petroleum

[3] Methylene chloride was detected in multiple samples at concentrations above screening levels however all detections were qualified by the laboratory as likely or suspected lab contamination. Refer to Table 3 for details.

contamination, but some residual petroleum contamination was left in place, resulting in the observed discontinuity between exceedances. In addition, benzo(a)pyrene exceeds screening levels in soil at 4 feet bgs (AMW-8) where the concentration of gasoline-range TPH also exceeds screening levels. Petroleum contaminated soil is bounded laterally by multiple soil borings and by deeper samples (within approximately 5 feet) for all locations except AMW-8 which is bound by field screening that indicates reduced contamination at 8 feet bgs and no petroleum indicators by 16 feet bgs (Figure 5). The interpreted extent of residual TPH contamination to soil is shown on Figure 5.

- **Chlorinated Solvent Contamination on Western Parcel.** PCE-contaminated soil on the west parcel is present at depths of at least 20 to 65 feet bgs (elevations from 139 to 89 feet NAVD88). PCE-contaminated soil generally forms a northwest-southeast elongated zone that increases depth in a terraced-like pattern towards the southern property boundary. The width of this area of PCE-contaminated soil varies by depth.

  In shallow soils, 20 to 40 feet bgs, the extent of PCE-contamination soil is bound to the east by SRO-14, URS-SB-1, SRO-19, SRO-17 and -18, SRO-20 and -21, to the south by MW-20, SRO-4, and SRO-5, and is partially bound to the west by AMW-2, MW-18, and MW-17.

  In deep soils, 40 to 65 feet bgs, elevation 120 to 89 feet NAVD88, chlorinated solvent contamination appears to extend and deepen southward in a terraced-like pattern to the southern property boundary (AMW-4D, AMW-6D, URS-SB-13). Deep PCE-contaminated soil is bounded to the north by AB-1 and AB-2, and to the east by URS-SB-8.

  The PCE-contaminated soil extends off property to the north, west and south to an unknown extent. The interpreted lateral extent of PCE contamination in soil on the western parcel is shown on Figure 6 and PCE contamination in soil is shown in cross section on Figures 9 and 10.

  TCE-contaminated soil is present in two locations (borings HC-2 and HC-3) and, in both occurrences, is collocated with PCE contamination. In addition, detections of cis-1,2-dichloroethene (c12DCE) are present at seven locations (boring HC-2, HC-3, AMW-2, and at estimated concentrations in URS-MW8/SB11, URS-SB-9, URS-SB-12, and URS-14-14) and is collocated with PCE or within 10 feet of PCE detection (URS-MW-8/SB-11).

  The variability of presence of PCE-contaminated soil appears to be directly influenced by the observed layers of sandier material present throughout the glacial till and outwash units. In some borings PCE has been detected below cleanup levels or even non-detect, when surrounding concentrations exceed cleanup levels (e.g., AMW-2, HC-3). At similar sites in the Bellevue area and elsewhere, we have observed a similar influence of lithology on presence of PCE contamination in soil, where relatively thin layers of higher permeability soil contain PCE at concentrations exceeded cleanup levels while nearby soil of different lithology do not.

- **Shallow Chlorinated Solvent Contamination Near South Subject Property Boundary.** Shallow PCE-contaminated soil near the south Subject Property boundary is present at depths of at least 12.5 to 30 feet bgs, elevation 142 to 124 feet NAVD88 (URS-MW-4). PCE-contaminated soil at this location is bounded to the north by AB-2, to the east by AMW-5, to the south by AB-5, and to the west by URS-SB-13. The interpreted extent of the deep PCE contamination on the southern Subject Property boundary is shown on Figures 6. PCE contamination in soil is shown in cross section on Figure 9 and 10.

4.3.3 Groundwater Quality

4.3.3.1 Subject Property and NE 106th Ave NE ROW

Concentrations of the COCs in groundwater that exceed MTCA cleanup levels on the Subject Property is limited to PCE in the shallow water bearing zone on the western parcel (Figure 7).

In the most recent sampling of the shallow water bearing zone, concentrations of PCE exceeded MTCA cleanup levels in seven of the groundwater samples. PCE-contaminated shallow groundwater extends beyond the Subject Property boundaries to the north to the source property (Thinker Toys Site) and to the west to beneath 106th Ave NE. Shallow contaminated groundwater is bounded to the south by MW-20 and URS-MW-3, and to the southeast by AMW-3S. PCE-contaminated shallow groundwater is also present in the sample from URS-MW-7, on the south adjoining Onni Property. However, nearby monitoring wells AMW-4S, AMW-5 (on the Subject Property) have been dry during every sampling event since installation in October 2019. In addition, URS-MW-5 (Onni Property) has historically been dry and was dry during the July 2020 sampling event.

Along the north Subject Property boundary, shallow well URS-MW-2 has generally been dry, except for three historical monitoring events completed in March, June, and August of 2010 (Appendix C), in which no COCs were detected. The shallow well farther to the east, AMW-1, has been dry since its installation and borings advanced in this area (AB-4 and URS-SB-4; Figure 4) showed little to no evidence of a shallow water bearing zone present in this area. Based on these observations, the east extent of shallow contaminated groundwater is bound by URS-MW-2.

COCs have never been detected above MTCA cleanup levels in the deep water-bearing zone at the Subject Property.

4.3.3.2 Onni Property

At the south adjoining Onni Property, PCE was detected in groundwater samples obtained from the shallow (URS-MW-7) and deep (MW17-01) water-bearing zones. The concentration of PCE in the shallow groundwater sample exceeds cleanup level and the concentration of PCE in the deep groundwater sample is below cleanup levels. The only other results for these wells are from November 2017 and concentration in both the shallow and deep groundwater samples exceeded cleanup levels from that event (EPI, 2019; Table 4). Shallow contaminated groundwater on the Onni Property is bounded to the north and northeast by MW-20, URS-MW-3, URS-MW-6, and dry conditions at AMW-4S, AMW-5, URS-MW-4, and URS-MW-5.

4.3.4 Soil Gas Quality

Concentrations of the COCs in soil gas that exceed screening levels are limited to benzene and PCE. Concentrations of benzene in soil gas exceeded screening levels at three locations at the north central and south-central perimeter of the Subject Property. The concentration of PCE in soil gas exceeded screening levels in one sample, ASG-5 near the southern property boundary, and is co-located with PCE in soil and/or groundwater. The extent of PCE in soil gas is interpreted to be limited, corresponding with the presence of shallow PCE contamination to soil and groundwater at the southern Subject Property boundary.

4.4 Contaminant Fate and Transport

As discussed above, data evaluated during this RI indicate three sources of contamination at the Subject Property. Contaminant fate and transport are discussed below based on each source and associated area of contamination.

- **Petroleum Contamination on Western Parcel.** The source of the TPH contamination in shallow soils is attributable to the historical operation or a gasoline services station on the west parcel of the Subject Property. Petroleum contamination in soil was a result of direct releases from the historical USTs and associated piping and pump islands. A remedial excavation was conducted in 1992 to remove the historical sources and most of the petroleum contamination soil. However, residual petroleum contamination was left behind in discontinuous shallow (0 to 9 feet bgs) pockets of soil, outside of the excavation areas, in the area of the former service station. Petroleum products move through soil driven by gravity and capillary forces and the lateral and vertical spread is controlled primarily by soil conditions. Petroleum products degrade naturally in the presence of oxygen and by biodegradation depending on the soil characteristics and presence of naturally occurring bacteria.

- **Chlorinated Solvent Contamination on Western Parcel.** PCE contamination in soil and groundwater on the western portion of the Subject Property is attributable to the chlorinated solvent release at the north-adjacent Thinker Toys Site which transported through soil driven by gravity and capillary forces and reached groundwater generating a PCE plume in the shallow groundwater zone.

  In groundwater, PCE is transported via forces of diffusion, dispersion, and gravity. PCE is denser than water and therefore moves downward within a saturated zone driven by gravity and permeability of the soil. For this reason, it is typical for concentrations of PCE to increase with depth (e.g., HC-2, HC-3, URS-MW-7D, URS-SB-14, and URS-SB-13). From groundwater, PCE can contaminate soil as a result of sorption onto soil particles. The process by which PCE sorbs to soil is influenced by conditions, including soil type, concentration of PCE, and organic content in the soil. PCE contamination in deep soil is attributed to the shallow groundwater plume and is present variably throughout the Subject Property.

  The PCE groundwater plume in shallow groundwater (136 to 117 feet NAVD88) extends southwest from the Thinker Toys source area parallel to the direction of

groundwater flow, which is broadly to the southwest. However, at the Subject Property, the shallow groundwater flow direction is more variable. The glacial till at the Subject Property contains numerous, discontinuous sandy lenses, which act as preferential pathways for migration. The lateral extent of the groundwater plume, depths, and saturated intervals are irregular, attributed to preferential flow of groundwater through the discontinuous sandy layers and via dispersion (Figure 3). The presence of the shallow groundwater is partly controlled in part by seasonal precipitation such that some monitoring wells contain groundwater during part of the year and are dry at other times.

PCE has not been detected in monitoring wells screened in the deep water-bearing zone on the Subject Property. PCE was detected at a concentration less than the cleanup level in one groundwater sample from off-property monitoring well MW17-01 (on the south-adjoining Onni Property), which is screened in the deep water-bearing zone. As previously noted, PCE is transported to groundwater from soil and moves through groundwater driven by diffusion, dispersion, and gravity.

- **Shallow Chlorinated Solvent Contamination Near South Subject Property Boundary.** PCE contamination in shallow soil near the south Subject Property boundary is attributed to an unidentified release. As previously noted, PCE is transported through soil driven by gravity and capillary forces. Based on the location of PCE contamination near two utility manholes and a catch basin, and the local distribution of PCE, these surface features appear to provide preferential pathways for the lateral movement of PCE through soil along the south Subject Property boundary. Given the limited extent of PCE in shallow soils, the unidentified release was likely a one-time event rather than recurring.

  Shallow groundwater is not present in the monitoring wells on the Subject Property (AMW-4S and AMW-5) south boundary. PCE was detected in the shallow groundwater sample from monitoring wells URS-MW-7, on the south adjoining Onni Property at a concentration greater than the cleanup level. As previously noted, PCE is transported via forces of diffusion, dispersion, and gravity. The PCE in shallow groundwater in monitoring well URS-MW-7 on the Onni property does not appear to be commingled with the Thinker Toys plume.

4.5 Potential Receptors and Exposure Pathways

This section summarizes potential receptor and exposure pathways at the Subject Property by media and evaluates which pathways are complete for which receptors.

The following potential receptors and exposure pathways were identified for Subject Property soil:

- **Soil leaching to groundwater.** Contaminants in soil can leach to groundwater by infiltration of precipitation below unpaved or gravel surface areas through contaminated soil, or where groundwater is in contact with contaminated soil.

Following redevelopment, this pathway is anticipated to be incomplete on the Subject Property, but will remain complete for the upgradient portions of the Thinker Toys Site.

- **Direct contact with soil.** Human receptors, specifically construction workers, have the potential to contact contaminants in soil during the redevelopment activities. Following redevelopment, this pathway is anticipated to be incomplete.
- **Ingestion of groundwater.** Human receptors, specifically construction workers, have the potential to contact contaminants in groundwater via ingestion during the redevelopment activities. Groundwater beneath the Subject Property is not currently nor is it expected to be used as a drinking water source in the future. Following redevelopment, this pathway is anticipated to be incomplete.
- **Soil vapor discharge to indoor air.** Contaminated soil vapor emanating from contaminated soil or groundwater beyond the Subject Property boundaries and extent of redevelopment excavation has the potential to migrate and expose indoor air receptors to volatile contaminants.

4.6 Terrestrial Ecological Evaluation

According to MTCA a Terrestrial Ecological Evaluation (TEE) must be conducted at all contaminated Sites to protect native plants, soil biota, and wildlife, unless the Site qualifies for one of four exclusions. This Site qualifies for two of the four possible exclusion criteria and therefore does not require a TEE. The two exclusions that apply to the Site are:

- **Point of Compliance** ((WAC 173-340-7491(1)(1)): Following redevelopment, all soil contamination will be at least 15 feet below the surface. The redevelopment consists of soil excavation across the majority of the property, as shown on Figures 2, 5, and 6. Following redevelopment, all soil contamination will be removed from the Subject Property except for the location of URS-MW-1, where PCE associated with the upgradient Thinker Toys plume will remain at a depth of approximately 27.5 feet bgs (elevation 130.5 feet NAVD88) (Figure 6).
- **Undeveloped Land** ((WAC 173-340-7491(1)(c): There is less than 1.5 acres of contiguous undeveloped land on or within 500 feet of any area of the Site.

Ecology's Terrestrial Ecological Evaluation Form has been completed for the Site and is included as Appendix D.

5 Cleanup Requirements

This section presents the proposed cleanup levels for soil and groundwater, the rational for the selected levels and the points of compliance by media.

5.1 Remedial Action Objectives (RAOs)

RAOs are medium-specific or site-specific goals for protecting human health and the environment. They are established based on the nature and extent of contamination, the receptors that are currently and potentially threatened, and the potential for human and environmental exposure. Based on the potential exposure pathways, receptors and site characterization data obtained to date, the RAOs for the Site are as follows:

- Protection of humans from direct contact with contaminated soil and groundwater
- Protection of groundwater for drinking water use
- Protection of indoor air quality

As previously noted in Section 2.3, municipal water is sourced from the Tolt River and Cedar River watersheds. Groundwater is not expected to be used as a drinking water source in the future. However, protection of groundwater for drinking water use is retained as a RAO consistent with use of MTCA Method A.

5.2 Cleanup Levels

This section identifies the proposed soil, groundwater, and soil gas cleanup levels for the Site. The cleanup levels proposed for the Site have been developed in accordance with WAC 173-340-720 through 173-340-760 for those COCs that were identified at concentrations that exceed the screening levels, and for which there is a current or likely future exposure pathway. The MTCA Method A or B cleanup levels are the screening levels used for the RI, and are the proposed cleanup levels. These proposed cleanup levels are the most stringent of the established cleanup levels under MTCA for protection of human health and the environment and are appropriate for the Site based on current and future development as a commercial/retail space in the urban core of downtown Bellevue. The COCs for the Subject Property and the associated proposed cleanup levels for each are presented in Table 2.

5.3 Site Definition

As described above, the Subject Property has been impacted by releases sourced from on- and off-property sources. The MTCA-defined Site that forms the basis of the FS for the Subject Property includes the petroleum-contaminated soil that was sourced on the Subject Property and the shallow and deep PCE-contaminated soil on the southern property boundary that may or may not have been sourced on the Subject Property. In addition to these areas, the western portion of the Subject Property has been affected by releases of PCE from the up-gradient Thinker Toys Site. Contaminated soil and shallow groundwater within Subject Property boundaries that is sourced from the Thinker Toys Site is a portion of the Thinker Toys MTCA-defined Site and does not appear to be commingled with contamination that was or may have been sourced from the Subject

Property. Although the redevelopment mass excavation will result in remediation of a portion of the Thinker Toys MTCA-defined Site, it is anticipated that Thinker Toys Site COPCs will remain in soil and shallow groundwater in the northwest portion of the Subject Property following completion of the cleanup action described in this section.

5.4 Points of Compliance

A point of compliance is the point where cleanup levels shall be met and it specific to both media and contaminant. The point of compliance is defined by MTCA as point or points where cleanup levels shall be attained (WAC 173-340-200). This section describes the points of compliance for the Site. The points of compliance are used for development and evaluation of the cleanup alternatives in the FS.

Under MTCA, the standard point of compliance for direct contact with soil extends to 15 feet bgs. This is based on reasonable maximum depth of potential future excavation. As noted in Section 2.1.1, the planned redevelopment will result in mass excavation over the majority of the Subject Property (see Figures 2, 5, and 6) extending to elevation 91 feet NAVD88, or approximately 60 to 70 feet bgs; which is significantly deeper than the 15 feet bgs point of compliance. Confirmation soil samples will be collected from the excavation extents. Following redevelopment, all soil contamination will be removed from the Subject Property except for the location of URS-MW-1 in the northwest corner of the Subject Property, where PCE associated with the upgradient Thinker Toys plume will remain at a depth of approximately 27.5 feet bgs (elevation 130.5 feet NAVD88) (Figure 6), which meets the point of compliance.

Under MTCA, the standard point of compliance for groundwater cleanup levels is throughout the Site, regardless of whether groundwater is potable (WAC 173-340-720(8)(b)). The planned redevelopment will extend to property lot lines on all sides, except for the Northwest Corner where the City of Bellevue has an underground easement prohibiting redevelopment. Due to this easement, PCE-contaminated soil and shallow groundwater sourced from the upgradient Thinker Toys Site will remain in the northwest corner of the Subject Property following property redevelopment. Therefore, the conditional point of compliance for shallow groundwater is the redevelopment area (which excludes the easement area), and for deep groundwater is the Subject Property boundary. Both shallow and deep wells will be monitored following the remediation. The deep wells will be used as compliance groundwater wells to demonstrate that the remediation and redevelopment did not negatively impact the regional aquifer. The shallow wells will be sampled to evaluate movement (if any) of the up-gradient Thinker Toys PCE plume, however, these wells will not be used to demonstrate compliance for the Subject Property since remediation of the up-gradient Thinker Toys plume is ongoing.

6 Remedial Investigation Summary

Soil and groundwater contamination at the Subject Property is present in three areas:

1. **Petroleum Contamination in Soil on Western Parcel.** Although a remedial excavation was completed in the 1991, residual petroleum contamination remains in soil on the western parcel between elevations 147 and 157 feet north American vertical datum 1988 (NAVD88), attributable to operations at the historical service stations.

2. **Chlorinated Solvent Contamination in Soil and Groundwater on Western Parcel.** Releases of chlorinated solvents at the upgradient Thinker Toys Site (former dry cleaner) are the source of chlorinated solvent contamination to soil at elevations 139 to 92 feet NAVD88 on the western and northwestern portion of the Subject Property extending with increasing depth in a terraced-like pattern to elevations of 94 to 89 feet NAVD88 at the southern property boundary. Chlorinated solvent contaminated shallow groundwater is present in the northwest portion of the Subject Property. Shallow groundwater is encountered in at elevations 136 to 117 feet NAVD88.

   Deep groundwater at the Subject Property is not contaminated. At the south-adjoining Onni Property, PCE has been documented in groundwater and is preset in soil at elevation 103 feet NAD88.

3. **Shallow Tetrachloroethene (PCE) Contamination in Soil Near South Subject Property Boundary.** The source of shallow PCE soil contamination near the south subject property boundary (URS-MW-4) is unknown, but based on the limited extent, shallows depths, and proximity to several catch basins and manholes, is likely the result of historical unauthorized disposal of chlorinated solvent containing products into the catch basins or manholes. PCE contamination in soil on the southern property boundary is also present between elevations 142 and 124 feet NAVD88.

Soil gas was also analyzed and PCE and benzene were identified at concentrations above and below the MTCA Method B screening levels for subslab soil gas.

Based on the results of the RI and previous investigations, the following Contaminants of Concern (COCs) have been identified above MTCA cleanup levels on the Subject Property:

- Gasoline-range TPH in soil only
- Oil-range TPH in soil only
- Benzo(a)pyrene in soil only
- PCE in soil and groundwater

The cleanup levels proposed for the Site are MTCA Method A or B cleanup levels which are the most stringent of the established cleanup levels under MTCA for protection of

human health and the environment and are appropriate for the Site based on current and future development as a commercial/retail space in the urban core of downtown Bellevue.

7 Feasibility Study

Based on the RI results and CSM, this section presents and evaluates cleanup action alternatives. This FS considers the criteria defined in 173-340-360 WAC, including a disproportionate cost analysis (DCA), for evaluating remedial alternatives and selecting a cleanup action. The selected cleanup action is presented in Section 8.

7.1 Areas Requiring Cleanup

The areas to be addressed by a final remedy for the Subject Property are based on the sources and media of concern and the nature and extent of contamination presented in Section 4.2 and 4.3. For the purposes of this FS, three areas have been defined for remedial action evaluation and are shown on Figure 11.

- **Area 1: Petroleum Contamination on Western Parcel.** Residual petroleum contamination remains in three distinct areas of shallow soil (upper 9 feet) on the western parcel. Area 1 petroleum contamination in soil is attributable to operations at the historical service stations, and the pockets of residual contamination are near the limits of historical remedial excavations. Groundwater is not impacted with petroleum contamination.
- **Area 2: Chlorinated Solvent Contamination on Western Parcels.** Releases of chlorinated solvents at the upgradient Thinker Toys Site (former dry cleaner) are the source of chlorinated solvent contamination to soil (elevations 139 to 89 feet NAVD88) and shallow groundwater (encountered in at elevations 136 to 117 feet NAVD88) on the western portion of the Subject Property.
- **Area 3: Shallow Chlorinated Solvent Contamination Near South Subject Property Boundary.** Shallow soil in an isolated area near the south subject property boundary is contaminated with PCE. The area of PCE soil contamination is near several catch basins and manholes on the Subject Property (Figure 6) and does not appear to extend south onto the adjoining Onni Property. Area 3 PCE contamination in soil is present between elevations 142 and 124 feet NAVD88.

7.2 Applicable, Relevant and Appropriate Requirements (ARARs)

The MTCA, regulated under 173-340 WAC, establishes cleanup standards and other requirements for cleanup of the Subject Property. In addition to MTCA 173-340, other regulations and/or cleanup requirements are application to the Site, and include:

- The Resource Conservation and Recovery Act (RCRA)
- Washington Hazardous Waste Management Act (Chapter 70.105 RCW) and Dangerous Waste Regulations (Chapter 173-303 WAC)
- Solid Waste Management Act; Revised Code of Washington (RCW) 70.95; WAC Chapters 173-304 WAC and 173-351 WAC

- Federal and state Clean Air Acts (42 USC 7401 et seq.; 40 CFR 50; RCW 70.94; WAC 173-400, 403) and Puget Sound Clean Air Agency Regulations
- The State Environmental Policy Act (SEPA) (RCW 43.21C; WAC 197-11)
- Occupational Safety and Health Administration (OSHA) Regulations, 29 CFR Parts 1910 and 1926
- Washington Industrial Safety and Health Act (WISHA) and Washington Department of Labor and Industries Regulations, Chapter 296 WAC
- Washington Minimum Standards for Construction and Maintenance of Wells, Chapter 173-160 WAC
- City of Bellevue and King County regulations and codes

7.3 Potential Remedial Technologies and Screening

Multiple potential remedial technologies were considered for addressing soil and groundwater impacts at the Subject Property. Preliminary screening of the potential remedial technologies is based on effectiveness, implementability (including compatibility with the planned redevelopment design), and comparative cost. The following potential remedial technologies were considered:

- **Soil Excavation:** Removal of contaminated soil, followed by off-site disposal. Remedial excavation with off-site disposal is an effective means to remove soil contamination and mass excavation, consisting of soil removal to elevation 91 for construction of multi-levels of underground parking, is required as part of the redevelopment. Therefore, this technology is retained for all alternatives.
- **Groundwater Collection and Treatment:** Collection of contaminated groundwater for on-Site treatment and permitted discharge is an effective means to prevent unacceptable exposure to groundwater and potential future contamination of soil at the Subject Property.

  Two process options considered for application at the Subject Property include: (1) subsurface wall drains (included in Alternative 3) and (2) perimeter wells (included in Alternative 4) to collect contaminated groundwater for on-Site treatment and permitted discharge. The subsurface wall drainage option has a minimum footprint and screened intervals can be placed at a range of lateral and vertical locations.
- **Engineering Controls (ECs).** ECs are containment and/or mitigation systems designed to prevent or limit the movement of, or the exposure to, hazardous substances. ECs are retained because they are an effective means to prevent unacceptable exposures to remaining impacts at the Subject Property and may be implemented either during or after redevelopment.

  Specific EC process options retained include:

Temporary and permanent subsurface wall drainage systems designed to mitigate downward migration of contaminated groundwater.

A chemical vapor barrier placed beneath the foundation and along vertical subsurface walls within areas of potential vapor intrusion concern. The chemical vapor barrier would be constructed to be waterproof in areas where saturated conditions may contact the barrier.

- **Institutional Controls (ICs).** ICs are measures to limit or prohibit activities that may interfere with the integrity of a cleanup action or result in exposure to hazardous substances (e.g., limitations on the use of the property or resources, such as an environmental covenant or maintenance requirements for engineering controls).

  ICs are retained because they are easily implemented at a relatively low cost and are an effective means to prevent unacceptable exposures to remaining soil and groundwater impacts at the Subject Property.

There are many additional remedial technologies with demonstrated applicability for remediating chlorinated solvent contamination in soil and groundwater. Some of these include air sparge (AS) with soil vapor extraction (SVE) systems, dual-phase extraction (DPE), *in-situ* chemical oxidation/reduction, enhanced anaerobic biodegradation, among others. These technologies will not be needed to remediate the Subject Property for the following reasons:

- All accessible contaminated soil on the Subject Property will be excavated during property redevelopment, which requires mass soil excavation to elevation 91, and over-excavation will be completed to remove contaminated soil located along the southern property boundary to elevation 89 (in the location of boring URS-SB-13).
- COCs have not been detected in the deep regional aquifer on the Subject Property, so remediation of the deep aquifer is not necessary.
- The PCE contamination in the shallow aquifer on the western parcel is sourced from the upgradient Thinker Toys plume, which is being remediated by others.

In the northwest corner of the Subject Property where soil excavation is prohibited by the City of Bellevue underground easement, PCE-contaminated soil will remain at approximately 27.5 feet bgs. However, this soil contamination is sourced from the upgradient Thinker Toys plume and, until remediation is completed on the Thinker Toys Site, cannot be remediated on the Subject Property using alternative remedial technologies.

Table 6 presents a summary of the retained and rejected technologies.

7.4 Development of Remedial Alternatives

Four remedial alternatives were developed for comparison with MTCA criteria for cleanup actions using the technologies retained in the initial screening. All four alternatives address the three areas requiring cleanup and are described in detail in Sections 7.4.1 through 7.4.4. Each alternative includes remedial excavation of contaminated soil, the installation of a chemical vapor barrier, and quarterly groundwater sampling of 6 groundwater monitoring wells (4 shallow and 2 deep) for one-year post-remedial excavation.

Primary differences between the alternatives include the extent of the remedial excavation (for example, Alternative 1 includes excavation of contaminated soil in the northwest corner of the Subject Property in the location of the City of Bellevue underground easement, whereas Alternatives 2 through 4 include excavation of contaminated soil within the extent of the shoring that will be installed for redevelopment) and the mechanism for handling and disposing of shallow contaminated groundwater. Each alternative generally consists of the following:

- **Alternative 1**— Remedial excavation on the entire Subject Property concurrent with mass excavation to elevation 91 feet, including in the northwest corner of the Subject Property within the City of Bellevue underground easement, and off-property disposal of contaminated soil and groundwater. ECs include a chemical vapor barrier and temporary and permanent subsurface wall drainage design that mitigates downward migration of groundwater.

- **Alternative 2—** Remedial excavation concurrent with mass excavation to elevation 91 feet only within redevelopment footprint, which excludes the City of Bellevue easement area in the northwest corner of the Subject Property. ECs include a chemical vapor barrier and temporary and permanent subsurface wall drainage design that mitigates downward migration of groundwater.

- **Alternative 3**—Remedial excavation, disposal of contaminated soil, and chemical vapor barrier installation as in Alternative 1. Additional ECs include construction of subsurface wall drains in the permanent building design for shallow groundwater collection, on-site treatment of the collected contaminated groundwater, and permitted disposal of treated groundwater.

- **Alternative 4** – Remedial excavation, disposal of contaminated soil, and chemical vapor barrier installation as in Alternative 2. Additional ECs include installation of permanent perimeter wells for shallow groundwater interception, construction of an on-site groundwater treatment system, and permitted disposal of treated groundwater.

Details of these alternatives are described in the following sections. Feasibility-level cost estimates (+50/-30 percent) for each alternative were developed in accordance with U.S. Environmental Protection Agency (EPA) cost-estimating guidance (EPA, 2000) and professional experience with similar projects. A Summary of the remedial alternative evaluation is shown in Table 7. Cost-estimate details and assumptions for Alternatives 1

through 4 are provided in Tables 8 through 11. Figure 12 shows the general design elements for each Alternative.

7.4.1 Alternative 1 – Remedial Excavation of the Subject Property and Engineering Controls

Alternative 1 meets all RAOs and addresses contamination in Areas 1 through 3. It includes the following elements:

- **Remedial Excavation:** In Alternative 1, a remedial excavation will be completed to remove contaminated soil across the Subject Property, including within the northwest corner of the property in the location of the City of Bellevue underground easement. Following installation of the shoring, remedial excavation will be completed during mass excavation for property redevelopment to elevation 91 and contaminated soil along the southern property boundary that extends to elevation 89 (in the location of boring URS-SB-12) will be over-excavated to meet cleanup levels.

  The redevelopment footprint does not include the northwest corner of the Subject Property due to the easement and shoring is not being installed in this area for construction. Because of this, the shoring that would be required to remove the contaminated soil in the northwest corner to depths of approximately 27.5 feet bgs, backfilling to bring the area back to grade, and compaction and stabilization of the area are considered remediation related costs in Alternative 1.

  Contaminated soil generated during excavation will be profiled and disposed of at an appropriate permitted off-site disposal facility in accordance with applicable regulations. Shallow groundwater that is generated during the remedial excavation will be sampled, tested, and (if necessary) treated on-site prior to permitted discharge.

- **Engineering Controls related to PCE-Contaminated Shallow Groundwater Sourced from Thinker Toys:**

  Alternative 1 will include construction of both temporary and permanent subsurface wall drainage designs that will mitigate downward migration of the shallow PCE-contaminated groundwater into the deep aquifer. The temporary design includes installation of weep holes through the temporary shoring wall to allow the shallow contaminated groundwater to migrate into the open excavation where it will be collected on-site, sampled, treated (if necessary), and disposed of under a discharge permit.

  The permanent design will include installation of drainage mat above and below the shallow perched groundwater, but not between elevations approximately 136 and 102, where shallow contaminated groundwater may be encountered. Within this elevation zone, the building will be designed to withstand hydrostatic pressures. The absence of drainage mat in the shallow perched groundwater zone will prevent the vertical migration of the shallow contaminated groundwater to the deep regional aquifer.

In the northwest corner of the Subject Property, outside of the building footprint, an additional EC will be needed to prevent recontamination of the clean backfill by the shallow PCE-contaminated groundwater sourced from the upgradient Thinker Toys plume. Following installation of the shoring and remedial excavation of soil in the northwest corner, the remedial excavation will be backfilled with Controlled Density Fill (CDF).

- **Engineering Controls related to Vapor Intrusion:** A chemical vapor barrier will be installed for protection of indoor air quality from persistent off-property VOC impacts in groundwater.
- **Groundwater Compliance Monitoring:** Groundwater monitoring will be completed quarterly for one-year post remedial excavation to assess groundwater conditions in both the shallow and deep aquifer. Groundwater in the shallow aquifer will be monitored to evaluate the impact, if any, the property redevelopment has on the Thinker Toys PCE-contaminated groundwater plume. However, remediation and monitoring of the Thinker Toys plume is being completed by others, so the shallow wells will not be used to demonstrate compliance for the Subject Property since it is expected that solvents will be present in the shallow groundwater monitoring wells at concentrations greater than the MTCA Method A cleanup levels the entire year of sampling. The deep wells will be used as compliance groundwater wells to evaluate what impact, if any, the property redevelopment has on the deep regional aquifer and to demonstrate compliance on the Subject Property.

The time to achieve cleanup levels for the Subject Property under this alternative is concurrent with construction and redevelopment. The total estimated cost of Alternative 1 is $14.3M. Cost estimate details for Alternative 1 are presented in Table 8.

7.4.2 Alternative 2 – Remedial Excavation of the Redevelopment Area with Engineering Controls

Alternative 1 meets all RAOs and addresses contamination in Areas 1 through 3. It includes the following elements:

- **Remedial Excavation:** Alternative 2 includes remedial excavation only within the footprint of the redevelopment and will result in contaminated soil being removed from the entire Subject Property, with the exception of the northwest corner. In Alternative 2, the northwest corner of the Subject Property will not be excavated to accommodate the City of Bellevue easement, provide separation from existing utilities, and meet adequate footprint within garage for parking and circulation (extending structure does not provide usable space for the development and would incur additional cost). In the northwest corner, PCE contaminated soil is present at 27.5 feet bgs and is sourced from the upgradient Thinker Toys PCE groundwater plume. Protection from remaining soil and groundwater contamination in the northwest corner of the Subject Property that is sourced from the Thinker Toys PCE groundwater plume will rely on ICs, such as a restrictive covenant. All other excavation and disposal details are the same as Alternative 1.

- **Engineering Controls related to PCE-Contaminated Shallow Groundwater Sourced from Thinker Toys:** Alternative 2 will include construction of the same temporary and permanent subsurface wall drainage designs that will be constructed in Alternative 1.
- **Engineering Controls related to Vapor Intrusion:** A chemical vapor barrier will be installed for protection of indoor air quality from persistent off-property VOC impacts in groundwater.
- **Compliance Groundwater Monitoring:** Quarterly groundwater monitoring will be conducted as described in Alternative 1.

The time to achieve cleanup levels for the Subject Property under this alternative is concurrent with construction and redevelopment. The total estimated cost of Alternative 2 is $7.7M. Cost estimate details for Alternative 2 are presented in Table 9.

7.4.3 Alternative 3 – Remedial Excavation of the Redevelopment Area and Passive Groundwater Collection using Wall Drains

Alternative 3 meets all RAOs and addresses contamination in Areas 1 through 3. The remedial excavation and chemical vapor barrier are the same as Alternative 2. Alternative 3 is differentiated from Alterative 2 in the approach to handling and disposal of the shallow PCE-contaminated groundwater migrating to the property from the upgradient Thinker Toys plume and the compliance groundwater monitoring. Alternative 3 includes the following elements:

- **Remedial Excavation:** Same as Alternative 2.
- **Engineering Controls related to PCE-Contaminated Shallow Groundwater Sourced from Thinker Toys:** Rather than solely mitigating vertical movement of contaminated water as in Alternative 2, Alternative 3 includes a subsurface drainage system that will passively collect the shallow contaminated groundwater for on-site treatment and disposal through a discharge permit. Wall drains will be installed at various elevations for the length of the west wall and the western half of the north wall on the Subject Property. Groundwater would be collected and pumped to a holding tank and treated using granular activated carbon to meet sewer discharge requirements. Treated groundwater will be discharged under permit to the sanitary sewer through King County's Industrial Waste Program. Operation of the groundwater collection and treatment system will be required as long as PCE concentrations in groundwater require remediation.
- **Engineering Controls related to Vapor Intrusion:** Same as Alternative 2.
- **Compliance Groundwater Monitoring:** Similar to Alternative 2, performance monitoring will be conducted in the deep wells on a quarterly basis for one year to assess groundwater conditions at the Subject Property. In addition, this alternative would include ongoing analytical testing of the shallow groundwater monitoring wells and compliance monitoring of the treatment system discharge, which would be required for the life of the system.

The time to achieve cleanup levels for the Subject Property under this alternative is concurrent with construction and redevelopment, however operation of the groundwater treatment system is dependent on off-property conditions and is assumed to continue indefinitely. The total estimated cost of Alternative 3 is $10.3M, based on 30 years of monitoring[4]. Cost estimate details for Alternative 3 are presented in Table 10.

7.4.4 Alternative 4 – Remedial Excavation of the Redevelopment Area and Active Groundwater Collection using Pumping Wells

Alternative 3 meets all RAOs and addresses contamination in Areas 1 through 3. The remedial excavation and chemical vapor barrier are the same as Alternatives 2 and 3. Similar to Alternative 3, this alternative includes collection and treatment of groundwater, but unlike Alternative 3 where a passive collection system is utilized, Alternative 4 includes an active well assembly system to pump and treat PCE-contaminated groundwater in the shallow water zone. Alternative 4 is distinguished by the following elements:

- **Remedial Excavation:** Same as Alternative 2 and 3.
- **Engineering Controls related to PCE-Contaminated Shallow Groundwater Sourced from Thinker Toys:** Alternative 4 includes installation of an assembly of groundwater wells to be located along the western property boundary and west half of the northern property boundary to pump the shallow PCE-contaminated groundwater sourced from the Thinker Toys plume to an on-site treatment system. Well screen length and depth will vary between locations to target saturated zones, which are generally located between elevation 141 and 116 feet. Perimeter wells will be terminated above the lower aquifer in relatively finer and less permeable soils, where possible. Final perimeter well design would be refined based on observations of saturated conditions and soil type encountered during excavation. Each well will include at least a 5-foot sump and will have a dedicated extraction pump and conveyance piping to move contaminated groundwater to the on-site treatment system.

  On-site treatment and permitted disposal will be the same as Alternative 3. Operation of the groundwater collection and treatment system will be required as long as PCE concentrations in groundwater from the upgradient Thinker Toys plume require remediation.
- **Engineering Controls related to Vapor Intrusion:** Same as Alternative 2.
- **Compliance Groundwater Monitoring:** Similar to Alternatives 2 and 3, performance monitoring will be conducted in the deep wells on a quarterly basis for one year to assess groundwater conditions at the Subject Property. In addition, ongoing analytical testing and compliance monitoring of the treatment system for

[4] The 30-year monitoring timeframe was chosen to represent long-term monitoring due to the persistence of the upgradient Thinker Toys plume for the foreseeable future, and an estimated reasonable restoration timeframe for that plume.

maintenance of the discharge permit and system operations and maintenance (O&M) would be required for the life of the system.

The time to achieve cleanup levels for the Subject Property under this alternative is concurrent with construction and redevelopment; however, operation of the groundwater treatment system is dependent on off-property conditions and is assumed to continue indefinitely. The total estimated cost of Alternative 4 is $10.7M, based on 30 years of monitoring[5]. Cost estimate details for Alternative 4 are presented in Table 11.

7.5 Evaluation of Remedial Alternatives

Each alternative was evaluated against MTCA criteria and a disproportional cost analysis (DCA) was completed to compare the costs and benefits of the cleanup alternatives. Table 7 presents a summary of the remedial alternative evaluation.

MTCA requires that remedial alternatives for a site satisfy certain "threshold" criteria, as specified in 173-240-360(2) WAC:

- Protect human health and the environment
- Comply with cleanup standards
- Comply with applicable state and federal laws
- Provide for compliance monitoring

In addition to meeting the threshold criteria, cleanup action alternatives under MTCA must also use of permanent solutions to the maximum extent practicable, provide for a reasonable restoration time frame, and consider public concerns.

These criteria represent the minimum requirements for an acceptable cleanup action alternative under MTCA. All three alternatives meet these requirements (Table 7).

7.6 Disproportional Cost Analysis

The purpose of a DCA is to compare the costs and benefits of the cleanup alternatives developed in the FS. A DCA quantifies the environmental benefits by first rating each cleanup alternative with respect to each of the six DCA criteria (described in WAC 173-340-360(3)(f)) and summarized as follows:

- **Protectiveness:** The overall protectiveness of human health and the environment, including the degree to which existing risks are reduced, time required to reduce the risks and attain cleanup standards, on-site and off-site risks during implementation, and improvement in overall environmental quality.
- **Permanence:** The degree to which the alternative reduces the toxicity, mobility, or volume of hazardous substances, including the adequacy of destroying hazardous substances, the reduction or elimination of hazardous substance

[5] The 30-year monitoring timeframe was chosen to represent long-term monitoring due to the persistence of the upgradient Thinker Toys plume for the foreseeable future, and an estimated reasonable restoration timeframe for that plume.

releases and sources of releases, the degree of irreversibility of treatment, and the characteristics and quantity of the treatment residuals.

- **Cost:** The cost to design, construct, and implement the alternative, plus the cost of long-term operation and maintenance (O&M) required for the alternative.
- **Long-term effectiveness:** The degree of certainty that the alternative will successfully and reliably address contamination that exceeds applicable cleanup levels until cleanup levels are attained, the magnitude of the residual risk with the alternative in place, and the effectiveness of controls to manage treatment residue and remaining wastes.
- **Short-term risk management:** The risks to human health and the environment during construction and implementation of the alternative, and the effectiveness of measures that will be taken to manage such risks.
- **Implementability:** This includes consideration of whether the alternative is technically possible; the availability of necessary off-site facilities, services, and materials; administrative and regulatory requirements; scheduling, size, and complexity of the alternative; monitoring requirements; access for construction, operations, and monitoring; and integration with existing facility operations and other current or potential remedial actions.
- **Consideration of public concerns:** The concerns of individuals, community groups, local governments, Tribes, federal and state agencies, and other interested organizations will be considered.

Rating values are assigned on a scale of 1 to 10, where 1 indicates the criterion is satisfied to a very low degree, and 10 indicates the criterion is satisfied to a very high degree. Because Ecology does not consider all criteria to be of equal importance, each criterion is assigned a weighting factor. The six DCA criteria and respective weighting factors are:

- Overall protectiveness: 30 percent
- Permanence: 20 percent
- Long-term effectiveness: 20 percent
- Short-term risk: 10 percent
- Implementability: 10 percent
- Consideration of public concerns: 10 percent

An environmental benefits ranking is calculated for each cleanup alternative by multiplying the six rating values by their corresponding weighting factors and summing the weighted values. The environmental benefits rating of each alternative is then divided by the alternative's estimated cost (in tens of millions of dollars) to obtain a benefit/cost ratio, which is a relative measure of the cost-effectiveness of the alternative. For the purpose of this FS, because cleanup is tied to the redevelopment only incremental environmental costs associated with the development – including disposal of

contaminated soil and groundwater, collecting confirmation soil samples, and installation of a chemical vapor barrier – are included.

On a scale of 1 to 10, Alternative 2 ranked the highest at 8.7 and Alternative 1, 3, and 4 ranked at 7.6, 8.4 and 8.0 respectively. Details of the rankings are presented in the DCA Table 7. There were three factors where the alternatives varied most:

- **Long-term effectiveness:** Alternatives 1 and 2 limits downward migration of the shallow PCE-contaminated groundwater sourced from Thinker Toys while allowing it to migrate laterally as it has previously, and mitigates potential future contamination to the Subject Property. The effectiveness of Alternatives 1 and 2 is independent of ongoing remedial activities that may be conducted at the Thinker Toys plume. Whereas, groundwater collection and treatment systems in Alternatives 3 and 4 must operate as long as off-property plumes exist, which may be indefinitely, and are subject to decreases in efficiency and potential system failures.

  For Alternatives 2 through 4, the northwest corner of the Subject Property would remain within the plume of the upgradient Thinker Toys. Even in Alternative 1, where CDF would be used as backfill in the northwest corner, there is a potential for the clean backfill to be recontaminated by the persistent upgradient plume, essentially recreating the conditions that would remain in Alternatives 2, 3, and 4.

- **Implementability**: Alternative 2 has the highest implementability.

  Alternative 1 has significant challenges related to obtaining permission from the City of Bellevue to install shoring and excavate soil within the easement area, as well as significant challenges with stabilizing, shoring, excavation, and subsequent redevelopment construction. It is possible that excavation of the northwest corner is not implementable at all.

  Alternatives 3 and 4 have significant challenges related to groundwater collection design and conveyance and would require a permanent footprint on the Subject Property for the groundwater treatment system. The groundwater collected and treatment system of Alternative 3 has design challenges that make it difficult to reliably implement. In addition to the indefinite operation and maintenance of the treatment system, in a scenario where treatment is no longer needed, collected groundwater would need to be rerouted to an infiltration system, increasing design complexity.

  Installation of the perimeter well assembly of Alternative 4 would be challenging given the abundance of utilities in the public rights-of-way. This alternative is also weakened due to groundwater well design problems related to the variable presence and volume of shallow groundwater. In addition, perimeter wells may present a pathway for vertical migration of contaminated shallow groundwater, since no confining layer is consistently present between the shallow and deep zones throughout the Subject Property.

Consistent with the ranking results, Alternative 2 is the least costly and has a relative benefit to cost ratio of 0.11 compared to 0.05, 0.08, and 0.08 for Alternatives 1, 3, and 4,

respectively. Cost estimates for each alternative are presented in Tables 8 through 11. A DCA graph comparing cost and ranking is presented in Figure 13.

7.7 Recommended Remedial Action Alternative

Alternative 2 is the recommended alternative because it meets the RAO with the highest ranking and least complicated design, provides a similar level of permanence to other alternatives, and is the most cost effective to implement. An overview of the remedial elements of Alternative 2 are shown on Figure 14.

Alternatives 1, 3, and 4 are significantly more expensive than Alternative 2 and do not provide any meaningful environmental benefit. Therefore, Alternative 2 is the selected alternative. Implementation of this alternative, including a performance and compliance monitoring plan, is provided in Section 8.

8 Cleanup Action Plan (CAP)

This section presents the elements of the cleanup action plan for implementing the preferred remedial action (Alternative 2) evaluated during the FS. A CAP is a required part of the Site cleanup process conducted under the Voluntary Cleanup Program (VCP) under MTCA. The following sections provide supplemental detail on the selected remedy, including relevant construction details, restoration timeframe, point of compliance, and schedule for implementation.

8.1 Description of Selected Remedy

The selected remedial alternative for implementation during the cleanup action was developed through evaluation of the Site conditions, cleanup standards, ARARs, and applicable remedial technologies as described in the RI and FS portions of this report. This section provides a more detailed description of the selected remedial alternative.

As described previously, the selected remedial alternative was developed to address all of the contamination confirmed to have been sourced or potentially sourced from on-Subject Property releases, which includes the petroleum-contaminated soil on the western parcel and the shallow PCE-contaminated soil on the southern property boundary (the MTCA-defined Site for this evaluation), and meets the cleanup standards in Section 5. The western portion of the Subject Property has also been affected by releases of PCE from the up-gradient Thinker Toys Site. Contaminated soil and shallow groundwater within Subject Property boundaries that is sourced from the Thinker Toys Site is a portion of the Thinker Toys MTCA-defined Site. Although the redevelopment mass excavation will result in remediation of a portion of the Thinker Toys MTCA-defined Site, it is anticipated that Thinker Toys Site COPCs will remain in soil and shallow groundwater in the northwest corner of the Subject Property where a City of Bellevue easement prohibits soil excavation following completion of the cleanup action described in this section.

8.1.1 Description of Preferred Remedial Alternative

The selected remedial alternative, Alternative 2, evaluated during the FS has a reasonable restoration timeframe and is the most cost-effective of the remedial alternatives evaluated under the DCA (Section 7.6) that will result in Site and Subject Property conditions that meet MTCA. Therefore, under MTCA, Alternative 2 was identified as the alternative that is permanent to the maximum extent practicable and was selected for implementation as the cleanup action (see Section 7.7). Elements of the cleanup action have been designed concurrently with plans for Subject Property redevelopment, and implementation of the cleanup action will occur with redevelopment construction. Elements of the cleanup action are shown on Figure 14.

The cleanup action consists of remedial excavation and off-property disposal of contaminated Site soil and contaminated soil sourced from the upgradient Thinker Toys Site (conducted concurrently with redevelopment mass excavation), engineering controls in the form of subsurface wall drainage and a chemical vapor barrier, institutional control as a deed restriction, and compliance monitoring, as follows:

- **Remedial Excavation** – Contaminated soil and groundwater located within the redevelopment construction footprint shown on Figure 14 will be excavated

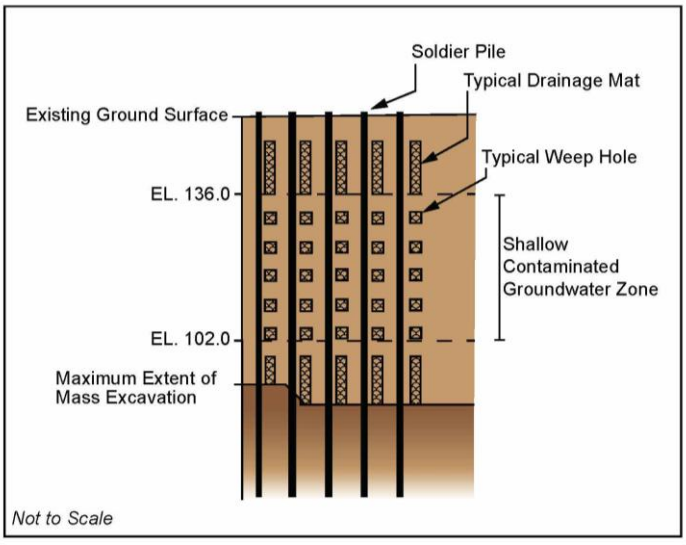
concurrently with the redevelopment mass excavation to approximately elevation 91 feet across the redevelopment area and to elevation 89 feet along the southern property boundary. This excavation will completely remove all Site contaminated soil and shallow groundwater that is sourced from on-Subject Property releases. Contaminated soil and shallow groundwater that is a component of the upgradient Thinker Toys Site, specifically the northwest corner of the Subject Property (Figure 14), will not be excavated due to a City of Bellevue easement.

Mass excavation will include installation of a temporary shoring wall to consist of a combination of soldier piles, soil nails, timber lagging and shotcrete—soldier piles will be installed using steel casing around the drilled shaft to mitigate the risk for shallow contaminated groundwater to migrate vertically down the open shaft between drilling and grouting the set soldier piles. Excavated soil and groundwater will be disposed of off-property at permitted disposal facilities in accordance with applicable regulations.

- **Engineering Controls** – Alternative 2 includes the following engineering controls to address Thinker Toys Site shallow contaminated groundwater:

  Subsurface wall drainage – A subsurface wall drainage system will be implemented to mitigate the risk for contaminated shallow groundwater to migrate vertically downward and impact the deep aquifer as a result of the cleanup action and redevelopment. The system includes specific drainage design between elevations 136 and 102 feet on both the temporary shoring wall for use during mass excavation (temporary system), as well as on the permanent foundation walls for long term use (permanent system). These design elements, discussed further below, will be installed where contaminated shallow groundwater is anticipated to come in contact with shoring or foundation walls, specifically the western-most 225 feet of the north-facing wall and the full west-facing wall (Figure 14).

  The temporary system on the shoring wall will consist of weep holes installed in a regular pattern between the elevations indicated above, to allow shallow contaminated groundwater to pass through the shotcrete and shoring wall into the open excavation. Contaminated shallow groundwater that passes through the weep hole system will be collected and stored on Site pending permitted disposal or discharge, following appropriate



Above: Conceptual illustration of subsurface wall drainage temporary system, to include typical weep holes at the shallow contaminated groundwater zone situated between elevations 102 and 136 feet.

characterization, profiling, and treatment (if needed). The temporary drainage system will be utilized until the foundation walls are constructed, at which time the permanent system installed along with construction of the foundation wall, will begin operation.

The permanent system on the foundation wall will be constructed with typical drainage board installed only above elevation 136 feet and below elevation 102 feet, or above and below the contaminated shallow groundwater zone. Between elevations 136 feet and 102 feet, the building will be designed to withstand hydrostatic pressures, and no drainage board will be installed between these elevations to minimize the likelihood for contaminated shallow groundwater to come in contact with drainage features at the foundation wall. The permanent system has no groundwater collection and discharge component in the design plan and is designed to allow shallow groundwater to migrate along its natural flow path around the foundation wall toward the west and south.

Chemical vapor barrier – A chemical vapor barrier will be installed at vertical and horizontal foundation walls covering the western two-thirds of the foundation (Figure 14). The selected product for the chemical vapor barrier]will consist of either Cetclo-brand Coreflex 60, a 60 mil thermoplastic waterproofing membrane with active polymer core, or Preprufe 275. The membrane will be installed with no less than 4 inch overlapped and welded seams, in accordance with manufacturer's recommendations.

- **Institutional Controls –** The cleanup action has been developed only to address the contamination resulting from releases that are confirmed or possibly occurred on the Subject Property, and residual Thinker Toys Site contaminated soil and shallow groundwater will remain within Subject Property boundaries beyond the redevelopment area shown on Figure 14, specifically in the northwest corner. These areas of the Subject Property will be managed by institutional controls. Institutional controls will include an Environmental Covenant to prevent future, unrestricted development or any other activities that could create exposure pathways for direct contact with Thinker Toys Site contaminated soil remaining in place after the cleanup action, and direct contact or use of contaminated shallow groundwater sourced from the upgradient Thinker Toys site.

- **Compliance Groundwater Monitoring** – Following construction, compliance groundwater monitoring will be conducted to monitor post-cleanup/construction groundwater conditions associated with the Site. Deep and shallow groundwater monitoring wells will be installed in the locations shown on Figure 14 and quarterly groundwater monitoring will occur for one-year to monitor post-construction and cleanup concentrations of COCs in shallow groundwater and monitoring general post-construction conditions of deep groundwater.

  Groundwater monitoring will occur quarterly for the first year following completion of the cleanup action. It is expected that COCs associated with the upgradient Thinker Toys site release will be present in shallow groundwater monitoring wells at concentrations greater than the MTCA Method A cleanup levels for the entire year of groundwater sampling. The shallow wells will be sampled to evaluate movement (if any) of the up-gradient Thinker Toys PCE

plume, however, these wells will not be used to demonstrate compliance for the Subject Property since remediation of the up-gradient Thinker Toys plume is ongoing. The deep wells will be used as compliance groundwater wells to demonstrate that the remediation and redevelopment did not negatively impact the regional aquifer. Results of compliance monitoring activities will be provided to Ecology following completion of the fourth quarter of monitoring.

8.1.2 Rationale for Selecting the Selected Cleanup Action

The selected cleanup action meets the cleanup requirements, including the RAOs, presented in Section 5 and also meets the four "threshold" requirements set forth in MTCA and identified in WAC 173-340-360(2)(a), as follows:

- **Protect human health and the environment** – Following cleanup/construction, all contaminated soil and groundwater associated with the MTCA-defined Site will be removed and the Site conditions will be protective of human and terrestrial receptors.

  Residual contamination sourced from the upgradient Thinker Toys Site in the northwest-corner of the Subject Property cannot be excavated or otherwise remediated during redevelopment and will remain in place. Residual PCE-contaminated soil is present in the northwest corner at 27.5 feet bgs (Figure 6) and is in contact with shallow contaminated groundwater, which has been encountered as shallow as 22 feet bgs, historically (Table 1). It is anticipated that residual Thinker Toys Site contamination will remain at the points of compliance established for this cleanup action; therefore, residual contaminated soil and groundwater in the northwest corner will be managed by implementation of institutional controls (deed restriction) that will be required *in perpetuity*.

- **Comply with cleanup standards** – The cleanup action developed for the Site will result in full removal of all contaminated soil and groundwater associated with the MTCA-defined Site and therefore meets the cleanup standards presented in Section 5, including the RAOs and the points of compliance for soil and groundwater (Section 5.3).

  At the northwest property corner, residual Thinker Toys Site contaminated soil and shallow groundwater will remain and will be managed by institutional controls (deed restriction). Compliance with cleanup standards for the cleanup of the on-property releases will be achieved by meeting the requirements of WAC 173-340-740(6)(f), as described in this section.

- **Comply with applicable state and federal laws** – The cleanup action was specifically developed to comply with MTCA. The cleanup action is anticipated to comply with all other potential ARARs (see Section 7.2) because the required engineering design and agency review processes will include steps to ensure compliance. The means of compliance with ARARs will be documented in the preconstruction documentation that will be prepared during the design phase.

- **Provide for compliance monitoring** – During construction, quality control measures will ensure that remedial excavation and engineering controls

construction meet the requirements of the CAP and MTCA. Post-construction/cleanup monitoring will occur for groundwater quality, as described in Section 8.1.1.

The cleanup action has a reasonable restoration timeframe and uses permanent solutions to the maximum extent practicable. The selected cleanup action meets MTCA threshold requirements and selection criteria per WAC 173-340-360.

8.2 Restoration timeframe

Cleanup will be achieved upon completion of the redevelopment construction and recording of the deed restriction. Mass excavation and subsequent construction of subgrade portions of the new building is anticipated to be completed in under 1 year from the start of construction, which is considered a reasonable restoration timeframe in accordance with the factors listed in WAC 173-340-360(4)(b).

Post-cleanup compliance monitoring in the form of groundwater monitoring will begin immediately following construction at the frequency described in Section 8.1.1, in accordance with WAC 173-340-410.

8.3 Schedule for Implementation

The implementation of the cleanup action will begin concurrently with the start of redevelopment excavation, which is planned for late First Quarter 2021 through First Quarter 2022. Construction of the engineering controls (subgrade drainage and chemical vapor barrier) is anticipated to be completed by Third Quarter 2022. Post-cleanup monitoring is anticipated to begin shortly after completion of the excavation phase of the project, likely in late First Quarter 2022 and will continue at the frequency described in Section 8.1.1. Institutional controls will be recorded following construction of the engineering controls in Third Quarter 2022.

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Limitations

Work for this project was performed for the SWB Bellevue II, LLC (Client), and this report was prepared in accordance with generally accepted professional practices for the nature and conditions of work completed in the same or similar localities, at the time the work was performed. This report does not represent a legal opinion. No other warranty, expressed or implied, is made.

All reports prepared by Aspect Consulting for the Client apply only to the services described in the Agreement(s) with the Client. Any use or reuse by any party other than the Client is at the sole risk of that party, and without liability to Aspect Consulting. Aspect Consulting's original files/reports shall govern in the event of any dispute regarding the content of electronic documents furnished to others.

Please refer to Appendix E titled "Report Limitations and Guidelines for Use" for additional information governing the use of this report.

TABLES

Table 1. Groundwater Elevations

Project No. 190298, NE8th St and 106th Ave, Bellevue, Washington

Well ID	Date	Well Screen Interval (ft bgs)	TOC elevation (ft NAVD88)	Well Screen Elevation (ft NAVD88)	Water Level (ft bTOC)	Groundwater Elevation (ft NAVD88)
Shallow Monitoring Wells						
URS-MW-1	10/22/2019	20-30	157.87	137.87 - 127.87	27.26	130.61
	1/21/2020				--	--
	5/7/2020				22.42	135.45
	7/23/2020				22.77	135.10
	11/10/2020				26.24	131.63
URS-MW-2	10/22/2019	20-30	160.22	140.22 - 130.22	Dry	--
	1/21/2020				Dry	--
	5/8/2020				Dry	--
	7/23/2020				29.86	130.36
	11/10/2020				29.9	130.32
URS-MW-3*	10/22/2019	20-30	153.98	133.98 - 123.98	23.25	130.73
	1/21/2020				20.55	133.43
	5/6/2020				21.13	132.85
	7/23/2020				21.86	132.12
	11/10/2020				22.89	131.09
URS-MW-4	10/22/2019	20-30	152.99	132.99 - 122.99	Dry	--
	5/8/2020				Dry	--
	7/23/2020				Dry	--
	11/10/2020				Dry	--
B3/MW-3*	10/22/2019	20-30	158.89	138.89 - 128.89	24.94	133.95
	1/21/2020				24.42	134.47
	5/7/2020				23.10	135.79
	7/23/2020				23.49	135.40
	11/10/2020				24.68	134.21
MW-17	10/22/2019	20-35	152.93	133.0 - 118.0	--	--
	1/21/2020				26.92	126.01
	5/8/2020				27.19	125.74
	7/23/2020				27.42	125.51
	11/10/2020				28.42	124.51
MW-18	10/22/2019	12.5-27.5	154.49	142.2 - 127.2	--	--
	1/21/2020				20.18	134.31
	5/8/2020				20.30	134.19
	7/23/2020				20.46	134.03
	11/10/2020				19.81	134.68
MW-19	10/22/2019	20-30	156.31	146.31 - 126.31	Dry	--
	1/29/2020				25.21	131.10
	5/6/2020				26.50	129.81
	7/23/2020				27.56	128.75
	11/10/2020				28.78	127.53
MW-20*	10/22/2019	15-30	152.63	137.63 - 122.63	22.69	129.94
	1/21/2020				20.80	131.83
	5/6/2020				20.96	131.67
	7/23/2020				21.47	131.16
	11/10/2020				22.28	130.35
AMW - 1	10/22/2019	35-45	170.41	135.41 - 125.41	Dry	--
	1/21/2020				Dry	--
	5/8/2020				Dry	--
	7/23/2020				Dry	--
	11/10/2020				Dry	--
AMW - 3S	10/22/2019	20-40	156.61	136.61 - 116.61	39.48	117.13
	1/21/2020				39.23	117.38
	5/6/2020				38.13	118.48
	7/23/2020				38.29	118.32
	11/10/2020				39.39	117.22
AMW - 4S	10/22/2019	30-40	153.36	123.36 - 113.36	Dry	--
	1/21/2020				Dry	--
	5/8/2020				Dry	--
	7/23/2020				Dry	--
	11/10/2020				Dry	--
AMW - 5	10/22/2019	30-40	154.25	124.25 - 114.25	Dry	--
	1/21/2020				Dry	--
	5/8/2020				Dry	--
	7/23/2020				Dry	--
	11/10/2020				Dry	--
AMW - 9	5/7/2020	25-45	158.18	133.18 - 113.18	37.19	120.99
	7/23/2020				36.97	121.21
	11/10/2020				NM	--

Table 1. Groundwater Elevations

Project No. 190298, NE8th St and 106th Ave, Bellevue, Washington

Well ID	Date	Well Screen Interval (ft bgs)	TOC elevation (ft NAVD88)	Well Screen Elevation (ft NAVD88)	Water Level (ft bTOC)	Groundwater Elevation (ft NAVD88)
Deep Monitoring Wells						
URS-MW-8*	10/22/2019	70-80	152.35	82.35 - 72.35	69.14	83.21
	1/21/2020				69.89	82.46
	5/4/2020				69.83	82.52
	7/23/2020				69.92	82.43
	11/10/2020				64.95	87.40
B1/MW-1	10/22/2019	70-90	169.63	99.63 - 79.63	87.92	81.71
	1/21/2020				89.04	80.59
	5/7/2020				89.46	80.17
	7/23/2020				92.81	76.82
	11/10/2020				91.74	77.89
B2/MW-2*	10/22/2019	70-90	159.02	89.02 - 69.02	75.78	83.24
	1/21/2020				76.35	82.67
	5/8/2020				76.40	82.62
	7/23/2020				76.51	82.51
	11/10/2020				76.91	82.11
B4/MW-4*	10/22/2019	70-90	157.06	87.06 - 67.06	76.38	80.68
	1/21/2020				76.64	80.42
	5/4/2020				76.79	80.27
	7/23/2020				76.86	80.20
	11/10/2020				76.99	80.07
AMW-2	10/22/2019	70-90	157.17	87.17 - 67.17	74.11	83.06
	1/29/2020				--	--
	5/8/2020				74.19	82.98
	7/23/2020				74.30	82.87
	11/10/2020				74.46	82.71
AMW-3D	10/22/2019	70-90	156.14	86.14 - 66.14	74.78	81.36
	1/21/2020				75.44	80.70
	5/6/2020				75.63	80.51
	7/23/2020				75.63	80.51
	11/10/2020				75.49	80.65
AMW-4D	10/22/2019	70-90	153.25	83.25 - 63.25	71.48	81.77
	1/21/2020				71.69	81.56
	5/5/2020				71.78	81.47
	7/23/2020				71.81	81.44
	11/10/2020				71.96	81.29
AMW-6D	5/4/2020	70-90	153.32	83.82 - 63.32	71.83	81.49
	7/23/2020				71.46	81.86
	11/10/2020				71.98	81.34
AMW-7	5/5/2020	60-80	153.24	93.24 - 73.24	71.60	81.64
	7/23/2020				71.74	81.50
	11/10/2020				71.85	81.39
AMW-8	5/5/2020	70-90	153.64	83.64 - 63.64	70.30	83.34
	7/23/2020				70.52	83.12
	11/10/2020				70.35	83.29
Onni Property Wells						
URS-MW-5	11/14/2017	25-35	152.13	127.13 - 117.13	34.74	117.39
	7/23/2020				Dry	--
URS-MW-6	11/14/2017	34-44	152.67	118.67 - 108.67	42.36	110.31
	7/23/2020				42.20	110.47
URS-MW-7	11/14/2017	26-36	152.91	126.91 - 116.91	34.22	118.69
	7/23/2020				34.11	118.80
URS-MW-7D	5/20/2020	--	--	--	--	--
	7/23/2020				Dry	--
MW17-01	11/15/2017	60-80	--	--	69.40	--
	7/23/2020				71.33	--

Notes

Well casing elevations surveyed by Bush, Roed, and Hitchings on September 10 and November 24, 2008.

AMW well casing elevations surveyed by PLS on October 3, 2019, with the exception of AMW-6D, AMW-7, AMW-8, and AMW-9, which were surveyed relative to AMW-3D on 7/23/2020. TOC elevations shown for these wells were adjusted for an error of +0.03 feet.

NAVD88 = North American Vertical Datum 1988, based on City of Bellevue

* Transducer deployed by Aspect Consulting in 3 shallow and 2 deep wells on 01/20/2020

ft = feet

bTOC = below top of casing

bgs = below ground surface

-- = no data

NM = not measured due to obstruction on well

Table 2. Screening and Cleanup Levels for COPCs[1]

Project No. 190295, NE8th St and 106th Ave, Bellevue, Washington

Constituent of Potential Concern (COPC)	Screening Level[2]	Unit	COPC retained as Constituent of Concern (COC)	Cleanup Level Constituen of Conern
Soil				
PCE	0.05	mg/kg	X	**0.05**
TCE	0.03	mg/kg	X	**0.03**
cDCE	ne	mg/kg		
Vinyl Chloride (VC)	ne	mg/kg		
Methylene Chloride	0.02	mg/kg		
Gasoline-Range TPH	100	mg/kg	X	**100**
Diesel-Range TPH	2000	mg/kg		
Oil-Range TPH	2000	mg/kg		
Benzo(a)pyrene	0.1	mg/kg	X	**0.1**
Groundwater				
PCE	5	ug/L	X	**5**
TCE	5	ug/L	X	**5**
cDCE	ne	ug/L		
Vinyl Chloride (VC)	0.2	ug/L		
Methylene Chloride	5	ug/L		
Gasoline-Range TPH	1000	ug/L		
Diesel-Range TPH	500	ug/L		
Oil-Range TPH	500	ug/L		

Notes

[1] Constituents of potential concern.

[2] MTCA Method A cleanup levels protective of human health and the environment.

PCE = tetrachloroethene

TCE = trichloroethene

cDCE = cis-dichhloroethene

TPH = total petroleum hydrocarbons

ne = not established under MTCA.

Units: mg/kg = milligrams per kilogram, ug/L = micrograms per liter

Table 3. Summary of Soil Quality Results

Project No. 190295, NE 8th St and 106th Ave, Bellevue, Washington

Location	Date	Name	Depth	Elevation	Petroleum Hydrocarbons			BTEX[1]				Metals[2]	PAHs[3]		Chlorinated VOCs[1]			
					Gasoline-Range Organics	Diesel-Range Organics	Motor Oil-Range Organics	Benzene	Toluene	Ethylbenzene	Total Xylenes	Lead	Benzo(a)pyrene	cPAHs TEQ[4]	Tetrachloroethene (PCE)	Trichloroethene (TCE)	cis-1,2-Dichloroethene (cDCE)	Vinyl Chloride
			ft bgs	ft NAVD88	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
MTCA Method A or B Cleanup Level					**100**	**2,000**	**2,000**	**0.03**	**7**	**6**	**9**	**250**	**0.1**	**0.1**	**0.05**	**0.03**	**1600**	**0.67**
Phase II Environmental Site Assessment, URS Corporation, 2000																		
URSSB-OP1	3/11/2000	URSSB-OP1-6	6	148	<5.6	<28	<56	<0.056	<0.056	<0.056	<0.112	--	--	--	--	--	--	--
	3/11/2000	URSSB-OP1-18	18	136	<5.6	<28	<56	<0.056	<0.056	<0.056	<0.112	--	--	--	<0.056	<0.056	<0.056	<0.056
URSSB-OP2	3/11/2000	URSSB-OP2-12	12	142	<5.4	<27	<56	<0.054	<0.054	<0.054	<0.108	--	--	--	<0.054	<0.054	<0.054	<0.054
URSSB-OP3	3/11/2000	URSSB-OP3-6	6	148	<5.9	<29	<59	<0.059	<0.059	<0.059	<0.118	--	--	--	--	--	--	--
	3/11/2000	URSSB-OP3-18	18	136	<5.6	<28	<56	<0.056	<0.056	<0.056	<0.112	--	--	--	--	--	--	--
URSSB-OP4	3/11/2000	URSSB-OP4-8	8	151	<5.4	<27	<54	<0.054	<0.054	<0.054	<0.108	--	--	--	--	--	--	--
URSSB-OP5	3/11/2000	URSSB-OP5-12	12	146	<5.4	<27	<54	<0.054	<0.054	<0.054	<0.108	--	--	--	<0.054	<0.054	<0.054	<0.054
URSSB-OP6	3/11/2000	URSSB-OP6-20	20	140	<5.4	<27	<54	<0.054	<0.054	<0.054	<0.108	<5.4	--	--	<0.054	<0.054	<0.054	<0.054
URSSB-OP7	3/11/2000	URSSB-OP7-16	16	142	<5.4	<28	**88**	<0.054	<0.054	<0.054	<0.108	--	--	--	--	--	--	--
URSSB-OP8	3/11/2000	URSSB-OP8-8	8	149	<5.6	<28	<56	<0.056	<0.056	<0.056	<0.112	--	--	--	--	--	--	--
	3/11/2000	URSSB-OP8-18	18	139	<5.5	<28	<55	<0.055	<0.055	<0.055	<0.110	<5.5	--	--	--	--	--	--
Phase II Environmental Site Assessment, Terra Associates, 2008																		
B2/MW-2	6/23/2008	MW-2-5	5	155	<22	<56	<110	--	--	--	--	--	--	--	--	--	--	--
	6/23/2008	MW-2-15	15	145	<22	<55	<110	--	--	--	--	--	--	--	--	--	--	--
	6/23/2008	MW-2-25	25	135	<22	<54	<110	--	--	--	--	--	--	--	--	--	--	--
Phase II Environmental Site Assessment, URS Corporation, 2008																		
URS-MW-1	8/25/2008	MW-1-15	15	143	<10	--	--	<0.02	<0.02	<0.03	<0.03	--	--	--	<0.02	<0.03	<0.02	<0.002
	8/25/2008	MW-1-27.5	27.5	130.5	<10	--	--	<0.02	<0.02	<0.03	<0.03	--	--	--	**0.41**	<0.03	<0.02	<0.002
URS-MW-2	8/27/2008	MW-2-15	15	144	<10	--	--	<0.02	<0.02	<0.03	<0.03	--	--	--	<0.02	<0.03	<0.02	<0.002
	8/27/2008	MW-2-27.5	27.5	131.5	<10	--	--	<0.02	<0.02	<0.03	<0.03	--	--	--	<0.02	<0.03	<0.02	<0.002
URS-MW-3	8/26/2008	MW-3-17.5	17.5	136.5	<10	--	--	<0.02	<0.02	<0.03	<0.03	--	--	--	<0.02	<0.03	<0.02	<0.002
	8/26/2008	MW-3-27.5	27.5	126.5	<10	--	--	<0.02	<0.02	<0.03	<0.03	--	--	--	<0.02	<0.03	<0.02	<0.002
URS-MW-4	8/26/2008	MW-4-12.5	12.5	141.5	<10	--	--	<0.02	<0.02	<0.03	<0.03	--	--	--	**0.17**	<0.03	<0.02	<0.002
	8/26/2008	MW-4-30	30	124	<10	--	--	<0.02	<0.02	<0.03	<0.03	--	--	--	**0.12**	<0.03	<0.02	<0.002
URS-MW-5*	11/18/2008	MW-5-24	24	129	<10	--	--	<0.02	<0.02	<0.03	<0.03	--	--	--	<0.02	<0.03	<0.02	<0.002
	11/18/2008	MW-5-31.5	31.5	121.5	<10	--	--	<0.02	<0.02	<0.03	<0.03	--	--	--	<0.02	<0.03	<0.02	<0.002
URS-MW-6*	11/18/2008	MW-6-21.5	21.5	131.5	<10	--	--	<0.02	<0.02	<0.03	<0.03	--	--	--	<0.02	<0.03	<0.02	<0.002
	11/18/2008	MW-6-31.5	31.5	121.5	<10	--	--	<0.02	<0.02	<0.03	<0.03	--	--	--	<0.02	<0.03	<0.02	<0.002
URS-MW-7*	11/18/2008	MW-7-26.5	26.5	126.5	<10	--	--	<0.02	<0.02	<0.03	<0.03	--	--	--	<0.02	<0.03	<0.02	<0.002
	11/18/2008	MW-7-31.5	31.5	121.5	<10	--	--	<0.02	<0.02	<0.03	<0.03	--	--	--	<0.02	<0.03	<0.02	<0.002
URS-SB-1	8/25/2008	SB-1-10	10	148	<10	--	--	<0.02	<0.02	<0.03	<0.03	--	--	--	<0.02	<0.03	<0.02	<0.002
	8/25/2008	SB-1-30	30	128	<10	--	--	<0.02	<0.02	<0.03	<0.03	--	--	--	**0.22**	<0.03	<0.02	<0.002
	8/25/2008	SB-1-45	45	113	<10	--	--	<0.02	<0.02	<0.03	<0.03	--	--	--	**0.05**	<0.03	<0.02	<0.002
	8/25/2008	SB-1-75	75	83	<10	--	--	<0.02	<0.02	<0.03	<0.03	--	--	--	<0.02	<0.03	<0.02	<0.002
URS-SB-2	8/25/2008	SB-2-10	10	147	<10	--	--	<0.02	<0.02	<0.03	<0.03	--	--	--	<0.02	<0.03	<0.02	<0.002
	8/25/2008	SB-2-27.5	27.5	129.5	<10	--	--	<0.02	<0.02	<0.03	<0.03	--	--	--	**0.070**	<0.03	<0.02	<0.002
URS-SB-3	8/26/2008	SB-3-17.5	17.5	137.5	<10	--	--	<0.02	<0.02	<0.03	<0.03	--	--	--	**0.05**	<0.03	<0.02	<0.002
	8/26/2008	SB-3-22.5	22.5	132.5	<10	--	--	<0.02	<0.02	<0.03	<0.03	--	--	--	**0.070**	<0.03	<0.02	<0.002
URS-SB-4	8/27/2008	SB-4-17.5	17.5	150.5	<10	--	--	<0.02	<0.02	<0.03	<0.03	--	--	--	<0.02	<0.03	<0.02	<0.002
	8/27/2008	SB-4-30	30	138	<10	--	--	<0.02	<0.02	<0.03	<0.03	--	--	--	<0.02	<0.03	<0.02	<0.002
URS-SB-8	11/19/2008	SB-8-21.5	21.5	134.5	--	--	--	<0.02	<0.02	<0.03	<0.03	--	--	--	<0.02	<0.03	<0.02	<0.002
	11/19/2008	SB-8-29	29	127	--	--	--	<0.02	<0.02	<0.03	<0.03	--	--	--	<0.02	<0.03	<0.02	<0.002
	11/19/2008	SB-8-41.5	41.5	114.5	--	--	--	<0.02	<0.02	<0.03	<0.03	--	--	--	<0.02	<0.03	<0.02	<0.002

Table 3. Summary of Soil Quality Results

Project No. 190295, NE 8th St and 106th Ave, Bellevue, Washington

Location	Date	Name	Depth	Elevation	Petroleum Hydrocarbons			BTEX[1]				Metals[2]	PAHs[3]		Chlorinated VOCs[1]			
					Gasoline-Range Organics	Diesel-Range Organics	Motor Oil-Range Organics	Benzene	Toluene	Ethylbenzene	Total Xylenes	Lead	Benzo(a)pyrene	cPAHs TEQ[4]	Tetrachloroethene (PCE)	Trichloroethene (TCE)	cis-1,2-Dichloroethene (cDCE)	Vinyl Chloride
			ft bgs	ft NAVD88	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
MTCA Method A or B Cleanup Level					**100**	**2,000**	**2,000**	**0.03**	**7**	**6**	**9**	**250**	**0.1**	**0.1**	**0.05**	**0.03**	**1600**	**0.67**
Supplemental Subsurface Investigation, Farallon Consulting, 2010																		
MW-17**	8/9/2010	MW-17-10.5	10.5	143.5	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/9/2010	MW-17-14	14	140	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/9/2010	MW-17-19	19	135	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/9/2010	MW-17-24	24	130	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/9/2010	MW-17-29	29	125	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/9/2010	MW-17-34.5	34.5	119.5	--	--	--	--	--	--	--	--	--	--	**0.031**	<0.03	<0.05	<0.05
	8/9/2010	MW-17-39	39	115	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
MW-18**	8/9/2010	MW-18-10	10	145	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/9/2010	MW-18-14	14	141	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/9/2010	MW-18-19	19	136	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/9/2010	MW-18-24	24	131	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
MW-19	8/5/2010	MW-19-4.5	4.5	152.5	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/5/2010	MW-19-9	9	148	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/5/2010	MW-19-24	24	133	<2	<50	<250	<0.03	<0.05	<0.05	<0.1	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/5/2010	MW-19-29	29	128	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
MW-20	8/6/2010	MW-20-4.5	4.5	148.5	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/6/2010	MW-20-10	10	143	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/6/2010	MW-20-14.5	14.5	138.5	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/6/2010	MW-20-19.5	19.5	133.5	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/6/2010	MW-20-25	25	128	<2	--	--	<0.03	<0.05	<0.05	<0.15	--	--	--	**0.026**	<0.03	<0.05	<0.05
	8/6/2010	MW-20-29.5	29.5	123.5	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
SRO-1	8/5/2010	SRO-1-1	1	158	**6.0**	--	--	<0.03	<0.05	<0.05	<0.15	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/5/2010	SRO-1-11	11	148	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/5/2010	SRO-1-16	16	143	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/5/2010	SRO-1-20	20	139	<2	<50	<250	<0.03	<0.05	<0.05	<0.15	--	--	--	**0.28**	<0.03	<0.05	<0.05
	8/5/2010	SRO-1-22	22	137	<2	<50	<250	<0.03	<0.05	<0.05	<0.15	--	--	--	**0.43**	<0.03	<0.05	<0.05
	8/5/2010	SRO-1-26	26	133	--	--	--	--	--	--	--	--	--	--	**0.25**	<0.03	<0.05	<0.05
SRO-2	8/5/2010	SRO-2-1	1	158	**3.0**	**67**	**760**	<0.03	<0.05	<0.05	<0.15	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/5/2010	SRO-2-5.5	5.5	153.5	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/5/2010	SRO-2-9	9	150	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/5/2010	SRO-2-14	14	145	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/5/2010	SRO-2-19	19	140	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/5/2010	SRO-2-23.5	23.5	135.5	<2	<50	<250	<0.03	<0.05	<0.05	<0.15	--	--	--	**0.12**	<0.03	<0.05	<0.05
	8/5/2010	SRO-2-27	27	132	--	--	--	--	--	--	--	--	--	--	**0.34**	<0.03	<0.05	<0.05
SRO-3	8/5/2010	SRO-3-1	1	157	**610**	**140**	**270**	<0.03	<0.05	<0.05	<0.15	**5.79**	--	--	<0.025	<0.03	<0.05	<0.05
	8/5/2010	SRO-3-3	3	155	<2	<50	<250	<0.03	<0.05	<0.05	<0.15	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/5/2010	SRO-3-7	7	151	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/5/2010	SRO-3-13	13	145	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/5/2010	SRO-3-18	18	140	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/5/2010	SRO-3-21	21	137	<2	<50	<250	<0.03	<0.05	<0.05	<0.15	--	--	--	**0.057**	<0.03	<0.05	<0.05
	8/5/2010	SRO-3-22.5	22.5	135.5	--	--	--	--	--	--	--	--	--	--	**0.060**	<0.03	<0.05	<0.05
	8/5/2010	SRO-3-27	27	131	--	--	--	--	--	--	--	--	--	--	**0.17**	<0.03	<0.05	<0.05
	8/5/2010	SRO-3-30	30	128	--	--	--	--	--	--	--	--	--	--	**0.16**	<0.03	<0.05	<0.05

Table 3. Summary of Soil Quality Results

Project No. 190295, NE 8th St and 106th Ave, Bellevue, Washington

Location	Date	Name	Depth	Elevation	Petroleum Hydrocarbons			BTEX[1]				Metals[2]	PAHs[3]		Chlorinated VOCs[1]			
					Gasoline-Range Organics	Diesel-Range Organics	Motor Oil-Range Organics	Benzene	Toluene	Ethylbenzene	Total Xylenes	Lead	Benzo(a)pyrene	cPAHs TEQ[4]	Tetrachloroethene (PCE)	Trichloroethene (TCE)	cis-1,2-Dichloroethene (cDCE)	Vinyl Chloride
			ft bgs	ft NAVD88	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
MTCA Method A or B Cleanup Level					**100**	**2,000**	**2,000**	**0.03**	**7**	**6**	**9**	**250**	**0.1**	**0.1**	**0.05**	**0.03**	**1600**	**0.67**
SRO-4	8/6/2010	SRO-4-6	6	148	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/6/2010	SRO-4-12	12	142	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/6/2010	SRO-4-17	17	137	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/6/2010	SRO-4-22	22	132	<2	<50	<250	<0.03	<0.05	<0.05	<0.15	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/6/2010	SRO-4-27	27	127	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/6/2010	SRO-4-30	30	124	--	--	--	--	--	--	--	--	--	--	**0.038**	<0.03	<0.05	<0.05
SRO-5	8/6/2010	SRO-5-3	3	152	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/6/2010	SRO-5-6	6	149	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/6/2010	SRO-5-11	11	144	**7.0**	<50	<250	<0.03	<0.05	<0.05	<0.15	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/6/2010	SRO-5-16	16	139	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/6/2010	SRO-5-21	21	134	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/6/2010	SRO-5-30	30	125	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
SRO-6	8/6/2010	SRO-6-5.2	5.2	148.8	<2	<50	<250	<0.03	<0.05	<0.05	<0.15	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/6/2010	SRO-6-12	12	142	<2	<50	<250	<0.03	<0.05	<0.05	<0.15	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/6/2010	SRO-6-15	15	139	<2	<50	**610**	<0.03	<0.05	<0.05	<0.15	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/6/2010	SRO-6-17	17	137	<2	**70**	**870**	<0.03	<0.05	<0.05	<0.15	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/6/2010	SRO-6-20.5	20.5	133.5	<2	<50	<250	<0.03	<0.05	<0.05	<0.15	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/6/2010	SRO-6-25	25	129	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/6/2010	SRO-6-30	30	124	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
SRO-7	8/6/2010	SRO-7-9	9	147	**1,100**	<50	<250	<0.03	<0.05	<0.05	<0.15	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/6/2010	SRO-7-12.5	12.5	143.5	<2	<50	<250	<0.03	<0.05	<0.05	<0.15	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/6/2010	SRO-7-19	19	137	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/6/2010	SRO-7-22.5	22.5	133.5	<2	--	--	<0.03	<0.05	<0.05	<0.15	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/6/2010	SRO-7-26	26	130	--	--	--	--	--	--	--	--	--	--	**0.046**	<0.03	<0.05	<0.05
	8/6/2010	SRO-7-30	30	126	--	--	--	--	--	--	--	--	--	--	**0.080**	<0.03	<0.05	<0.05
SRO-8	8/6/2010	SRO-8-4	4	152	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/6/2010	SRO-8-8	8	148	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/6/2010	SRO-8-13.5	13.5	142.5	**4.0**	--	--	<0.03	<0.05	<0.05	<0.15	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/6/2010	SRO-8-14.5	14.5	141.5	<2.0	<50	<250	<0.03	<0.05	<0.05	<0.15	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/6/2010	SRO-8-18	18	138	<2.0	-	-	<0.03	<0.05	<0.05	<0.15	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/6/2010	SRO-8-22	22	134	**3**	<50	<250	<0.03	<0.05	**0.10**	**0.21**	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/6/2010	SRO-8-23.5	23.5	132.5	--	--	--	--	--	--	--	--	--	--	**0.15**	<0.03	<0.05	<0.05
	8/6/2010	SRO-8-26	26	130	--	--	--	--	--	--	--	--	--	--	**0.16**	<0.03	<0.05	<0.05
	8/6/2010	SRO-8-29	29	127	--	--	--	--	--	--	--	--	--	--	**0.19**	<0.03	<0.05	<0.05
SRO-9	8/9/2010	SRO-9-3	3	155	<2	--	--	<0.03	<0.05	<0.05	<0.15	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/9/2010	SRO-9-8	8	150	<2	--	--	<0.03	<0.05	<0.05	<0.15	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/9/2010	SRO-9-13	13	145	--	--	--	--	--	--	--	--	--	--	<0.625	<0.03	<0.05	<0.05
	8/9/2010	SRO-9-17.5	17.5	140.5	<2	--	--	<0.03	<0.05	<0.05	<0.15	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/9/2010	SRO-9-21.5	21.5	136.5	<2	--	--	<0.03	<0.05	<0.05	<0.15	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/9/2010	SRO-9-26	26	132	<2	--	--	<0.03	<0.05	<0.05	<0.15	--	--	--	0.037	<0.03	<0.05	<0.05
	8/9/2010	SRO-9-29.5	29.5	128.5	<2	--	--	<0.03	<0.05	<0.05	<0.15	--	--	--	**0.057**	<0.03	<0.05	<0.05
SRO-10	8/9/2010	SRO-10-1	1	153	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/9/2010	SRO-10-7	7	147	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/9/2010	SRO-10-10	10	144	<2	--	--	<0.03	<0.05	<0.05	<0.15	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/9/2010	SRO-10-16	16	138	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/9/2010	SRO-10-21	21	133	<2	--	--	<0.03	<0.05	<0.05	<0.15	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/9/2010	SRO-10-23.5	23.5	130.5	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/9/2010	SRO-10-29	29	125	<2	--	--	<0.03	<0.05	<0.05	<0.15	--	--	--	<0.025	<0.03	<0.05	<0.05

Table 3. Summary of Soil Quality Results

Project No. 190295, NE 8th St and 106th Ave, Bellevue, Washington

Location	Date	Name	Depth	Elevation	Petroleum Hydrocarbons			BTEX[1]				Metals[2]	PAHs[3]		Chlorinated VOCs[1]			
					Gasoline-Range Organics	Diesel-Range Organics	Motor Oil-Range Organics	Benzene	Toluene	Ethylbenzene	Total Xylenes	Lead	Benzo(a)pyrene	cPAHs TEQ[4]	Tetrachloroethene (PCE)	Trichloroethene (TCE)	cis-1,2-Dichloroethene (cDCE)	Vinyl Chloride
			ft bgs	ft NAVD88	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
MTCA Method A or B Cleanup Level					**100**	**2,000**	**2,000**	**0.03**	**7**	**6**	**9**	**250**	**0.1**	**0.1**	**0.05**	**0.03**	**1600**	**0.67**
SRO-11	8/9/2010	SRO-11-1	1	153	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/9/2010	SRO-11-5	5	149	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/9/2010	SRO-11-10	10	144	<2	--	--	<0.03	<0.05	<0.05	<0.15	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/9/2010	SRO-11-15	15	139	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/9/2010	SRO-11-20	20	134	<2	--	--	<0.03	<0.05	<0.05	<0.15	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/9/2010	SRO-11-25	25	129	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/9/2010	SRO-11-28	28	126	<2	--	--	<0.03	<0.05	<0.05	<0.15	--	--	--	<0.025	<0.03	<0.05	<0.05
SRO-12	8/9/2010	SRO-12-5	5	150	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/9/2010	SRO-12-8	8	147	<2	--	--	<0.03	<0.05	<0.05	<0.15	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/9/2010	SRO-12-13	13	142	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/9/2010	SRO-12-17	17	138	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/9/2010	SRO-12-21	21	134	<2	--	--	<0.03	<0.05	<0.05	<0.15	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/9/2010	SRO-12-23.5	23.5	131.5	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/9/2010	SRO-12-29.5	29.5	125.5	<2	--	--	<0.03	<0.05	<0.0.5	<0.15	--	--	--	<0.025	<0.03	<0.05	<0.05
SRO-13	8/9/2010	SRO-13-0.5	0.5	157.5	<2	**280**	**3,100**	<0.03	<0.05	<0.05	<0.15	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/9/2010	SRO-13-5.5	5.5	152.5	<2	<50	<250	<0.03	<0.05	<0.05	<0.15	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/9/2010	SRO-13-11	11	147	<2	<S0	<250	<0.03	<0.05	<0.05	<0.15	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/9/2010	SRO-13-15.5	15.5	142.5	<2	<50	**400**	<0.03	<0.05	<0.05	<0.15	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/9/2010	SRO-13-20.5	20.5	137.5	<2	<S0	<250	<0.03	<0.05	<0.05	<0.15	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/9/2010	SRO-13-24.5	24.5	133.5	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/9/2010	SRO-13-29.5	29.5	128.5	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
SRO-14	8/10/2010	SRO-14-1.5	1.5	158.5	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/10/2010	SRO-14-6.5	6.5	153.5	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/10/2010	SRO-14-12	12	148	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/10/2010	SRO-14-17	17	143	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/10/2010	SRO-14-22	22	138	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/10/2010	SRO-14-25.2	25.2	134.8	--	--	--	--	--	--	--	--	--	--	**0.035**	<0.03	<0.05	<0.05
	8/10/2010	SRO-14-29.8	29.8	130.2	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
SRO-15	8/10/2010	SRO-15-1	1	159	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/10/2010	SRO-15-5	5	155	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/10/2010	SRO-15-10	10	150	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/10/2010	SRO-15-15	15	145	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/10/2010	SRO-15-20	20	140	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/10/2010	SRO-15-25	25	135	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/10/2010	SRO-15-29.5	29.5	130.5	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
SRO-16	8/10/2010	SRO-16-2	2	157	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/10/2010	SRO-16-7	7	152	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/10/2010	SRO-16-12	12	147	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/10/2010	SRO-16-17	17	142	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/10/2010	SRO-16-22	22	137	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/10/2010	SRO-16-25.5	25.5	133.5	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/10/2010	SRO-16-29.5	29.5	129.5	--	--	--	--	--	--	--	--	--	--	**0.039**	<0.03	<0.05	<0.05
SRO-17	8/10/2010	SRO-17-1.8	1.8	155.2	**2,800**	**130**	<250	<0.03	<0.05	**0.55**	**0.77**	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/10/2010	SRO-17-5.5	5.5	151.5	**2.0**	<50	<250	<0.03	<0.05	<0.05	<0.15	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/10/2010	SRO-17-10.5	10.5	146.5	<2	<50	<250	<0.03	<0.05	<0.05	<0.15	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/10/2010	SRO-17-16	16	141	<2	<50	<250	<0.03	<0.05	<0.05	<0.15	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/10/2010	SRO-17-21	21	136	<2	<50	<250	<0.03	<0.05	<0.05	<0.15	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/10/2010	SRO-17-25	25	132	<2	<50	<250	<0.03	<0.05	<0.05	<0.15	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/10/2010	SRO-17-30	30	127	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05

Table 3. Summary of Soil Quality Results

Project No. 190295, NE 8th St and 106th Ave, Bellevue, Washington

Location	Date	Name	Depth	Elevation	Petroleum Hydrocarbons			BTEX[1]				Metals[2]	PAHs[3]		Chlorinated VOCs[1]			
					Gasoline-Range Organics	Diesel-Range Organics	Motor Oil-Range Organics	Benzene	Toluene	Ethylbenzene	Total Xylenes	Lead	Benzo(a)pyrene	cPAHs TEQ[4]	Tetrachloroethene (PCE)	Trichloroethene (TCE)	cis-1,2-Dichloroethene (cDCE)	Vinyl Chloride
			ft bgs	ft NAVD88	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
MTCA Method A or B Cleanup Level					**100**	**2,000**	**2,000**	**0.03**	**7**	**6**	**9**	**250**	**0.1**	**0.1**	**0.05**	**0.03**	**1600**	**0.67**
SRO-18	8/10/2010	SRO-18-2	2	155	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/10/2010	SRO-18-5.5	5.5	151.5	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
SRO-19	8/10/2010	SRO-19-2	2	155	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/10/2010	SRO-19-5.5	5.5	151.5	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
SRO-20	8/10/2010	SRO-20-2	2	155	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
	8/10/2010	SRO-20-6	6	151	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
SRO-21	8/10/2010	SRO-21-6.5	6.5	150.5	--	--	--	--	--	--	--	--	--	--	<0.025	<0.03	<0.05	<0.05
Soil Data Gaps Investigation, Hart Crowser, 2011																		
HC-1-1	8/13/2011	HC-1-1	20	139	--	--	--	<0.02	<0.05	<0.05	<0.05	--	--	--	<0.05	<0.02	<0.05	<0.05
HC-1-2	8/13/2011	HC-1-2	22.5	136.5	--	--	--	<0.02	<0.05	<0.05	<0.05	--	--	--	**0.092**	<0.02	<0.05	<0.05
HC-1-3	8/13/2011	HC-1-3	25	134	--	--	--	<0.02	<0.05	<0.05	<0.05	--	--	--	**0.36**	<0.02	<0.05	<0.05
HC-1-4	8/13/2011	HC-1-4	27.5	131.5	--	--	--	<0.02	<0.05	<0.05	<0.05	--	--	--	**0.46**	<0.02	<0.05	<0.05
HC-1-5	8/13/2011	HC-1-5	30	129	--	--	--	<0.02	<0.05	<0.05	<0.05	--	--	--	**0.43**	<0.02	<0.05	<0.05
HC-1-6	8/13/2011	HC-1-6	32.5	126.5	--	--	--	<0.02	<0.05	<0.05	<0.05	--	--	--	**0.74**	<0.02	<0.05	<0.05
HC-1-7	8/13/2011	HC-1-7	35	124	--	--	--	<0.02	<0.05	<0.05	<0.05	--	--	--	**0.38**	<0.02	<0.05	<0.05
HC-1-8	8/13/2011	HC-1-8	37.5	121.5	--	--	--	<0.02	<0.05	<0.05	<0.05	--	--	--	**0.92**	<0.02	<0.05	<0.05
HC-1-9	8/13/2011	HC-1-9	40	119	<5	<20	<50	<0.02	<0.05	<0.05	<0.05	**1.3**	--	--	**1.10**	<0.02	<0.05	<0.05
HC-1-10	8/13/2011	HC-1-10	42.5	116.5	--	--	--	<0.02	<0.05	<0.05	<0.05	--	--	--	**0.41**	<0.02	<0.05	<0.05
HC-1-11	8/13/2011	HC-1-11	45	114	--	--	--	<0.02	<0.05	<0.05	<0.05	--	--	--	**2.30**	<0.02	<0.05	<0.05
HC-1-12	8/13/2011	HC-1-12	47.5	111.5	--	--	--	<0.02	<0.05	<0.05	<0.05	--	--	--	**1.80**	<0.02	<0.05	<0.05
HC-1-13	8/13/2011	HC-1-13	50	109	--	--	--	<0.02	<0.05	<0.05	<0.05	--	--	--	**0.070**	<0.02	<0.05	<0.05
HC-2-1	8/13/2011	HC-2-1	20	137	--	--	--	<0.02	<0.05	<0.05	<0.05	--	--	--	<0.05	<0.02	<0.05	<0.05
HC-2-2	8/13/2011	HC-2-2	22.5	134.5	--	--	--	<0.02	<0.05	<0.05	<0.05	--	--	--	**0.11**	<0.02	<0.05	<0.05
HC-2-3	8/13/2011	HC-2-3	25	132	--	--	--	<0.02	<0.05	<0.05	<0.05	--	--	--	**0.29**	<0.02	<0.05	<0.05
HC-2-4	8/13/2011	HC-2-4	27.5	129.5	--	--	--	<0.02	<0.05	<0.05	<0.05	--	--	--	**0.33**	<0.02	<0.05	<0.05
HC-2-5	8/13/2011	HC-2-5	30	127	--	--	--	<0.02	<0.05	<0.05	<0.05	--	--	--	**0.31**	<0.02	<0.05	<0.05
HC-2-6	8/13/2011	HC-2-6	32.5	124.5	--	--	--	<0.02	<0.05	<0.05	<0.05	--	--	--	**0.22**	<0.02	<0.05	<0.05
HC-2-7	8/13/2011	HC-2-7	35	122	--	--	--	<0.02	<0.05	<0.05	<0.05	--	--	--	**0.23**	<0.02	<0.05	<0.05
HC-2-8	8/13/2011	HC-2-8	37.5	119.5	--	--	--	<0.02	<0.05	<0.05	<0.05	--	--	--	**0.46**	<0.02	<0.05	<0.05
HC-2-9	8/13/2011	HC-2-9	40	117	<5	<20	<50	<0.02	<0.05	<0.05	<0.05	<1	--	--	**0.60**	<0.02	<0.05	<0.05
HC-2-10	8/13/2011	HC-2-10	42.5	114.5	--	--	--	<0.02	<0.05	<0.05	<0.05	--	--	--	**1.20**	<0.02	<0.05	<0.05
HC-2-11	8/13/2011	HC-2-11	45	112	--	--	--	<0.02	<0.05	<0.05	<0.05	--	--	--	**0.58**	<0.02	<0.05	<0.05
HC-2-12	8/13/2011	HC-2-12	47.5	109.5	--	--	--	<0.02	<0.05	<0.05	<0.05	--	--	--	**2.00**	**0.044**	**0.061**	<0.05
HC-2-13	8/13/2011	HC-2-13	50	107	--	--	--	<0.02	<0.05	<0.05	<0.05	--	--	--	**0.11**	<0.02	<0.05	<0.05
HC-3-1	8/13/2011	HC-3-1	20	136	--	--	--	<0.02	<0.05	<0.05	<0.05	--	--	--	<0.05	<0.02	<0.05	<0.05
HC-3-2	8/13/2011	HC-3-2	22.5	133.5	--	--	--	<0.02	<0.05	<0.05	<0.05	--	--	--	**0.13**	<0.02	<0.05	<0.05
HC-3-3	8/13/2011	HC-3-3	25	131	--	--	--	<0.02	<0.05	<0.05	<0.05	--	--	--	**0.16**	<0.02	<0.05	<0.05
HC-3-4	8/13/2011	HC-3-4	27.5	128.5	--	--	--	<0.02	<0.05	<0.05	<0.05	--	--	--	**0.061**	<0.02	<0.05	<0.05
HC-3-5	8/13/2011	HC-3-5	30	126	--	--	--	<0.02	<0.05	<0.05	<0.05	--	--	--	**0.18**	<0.02	<0.05	<0.05
HC-3-6	8/13/2011	HC-3-6	32.5	123.5	--	--	--	<0.02	<0.05	<0.05	<0.05	--	--	--	**0.13**	<0.02	<0.05	<0.05
HC-3-7	8/13/2011	HC-3-7	35	121	--	--	--	<0.02	<0.05	<0.05	<0.05	--	--	--	**0.10**	<0.02	<0.05	<0.05
HC-3-8	8/13/2011	HC-3-8	37.5	118.5	--	--	--	<0.02	<0.05	<0.05	<0.05	--	--	--	**0.37**	<0.02	<0.05	<0.05
HC-3-9	8/13/2011	HC-3-9	40	116	<5	<20	<50	<0.02	<0.05	<0.05	<0.05	**1.3**	--	--	**0.27**	<0.02	<0.05	<0.05
HC-3-10	8/13/2011	HC-3-10	42.5	113.5	--	--	--	<0.02	<0.05	<0.05	<0.05	--	--	--	**0.17**	<0.02	<0.05	<0.05
HC-3-11	8/13/2011	HC-3-11	45	111	--	--	--	<0.02	<0.05	<0.05	<0.05	--	--	--	**0.05**	<0.02	**0.067**	<0.05
HC-3-12	8/13/2011	HC-3-12	47.5	108.5	--	--	--	<0.02	<0.05	<0.05	<0.05	--	--	--	<0.05	<0.02	<0.05	<0.05
HC-3-13	8/13/2011	HC-3-13	50	106	--	--	--	<0.02	<0.05	<0.05	<0.05	--	--	--	**0.91**	**0.087**	**0.059**	<0.05

Table 3. Summary of Soil Quality Results

Project No. 190295, NE 8th St and 106th Ave, Bellevue, Washington

Location	Date	Name	Depth	Elevation	Petroleum Hydrocarbons			BTEX[1]				Metals[2]	PAHs[3]		Chlorinated VOCs[1]			
					Gasoline-Range Organics	Diesel-Range Organics	Motor Oil-Range Organics	Benzene	Toluene	Ethylbenzene	Total Xylenes	Lead	Benzo(a)pyrene	cPAHs TEQ[4]	Tetrachloroethene (PCE)	Trichloroethene (TCE)	cis-1,2-Dichloroethene (cDCE)	Vinyl Chloride
			ft bgs	ft NAVD88	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
MTCA Method A or B Cleanup Level					**100**	**2,000**	**2,000**	**0.03**	**7**	**6**	**9**	**250**	**0.1**	**0.1**	**0.05**	**0.03**	**1600**	**0.67**
Supplemental Soil Data Gaps Investigation, URS Corporation, 2011																		
URS-SB-9	10/10/2011	SB-9-50	50	108	--	--	--	<0.0142	<0.0142	<0.0213	<0.0284	--	--	--	**0.0218**	<0.0213	**0.00217 J**	<0.00142
	10/10/2011	SB-9-55	55	103	--	--	--	<0.0139	<0.0139	<0.0208	<0.0278	--	--	--	**0.276**	**0.00624 J**	**0.00708 J**	<0.00139
	10/10/2011	SB-9-60	60	98	--	--	--	<0.0136	<0.0136	<0.0204	<0.0272	--	--	--	**0.000720 J**	<0.0204	<0.0136	<0.00136
	10/10/2011	SB-9-65	65	93	--	--	--	<0.0126	<0.0126	<0.0189	<0.0252	--	--	--	<0.0126	<0.0189	<0.0126	<0.00126
	10/10/2011	SB-9-70	70	88	--	--	--	<0.0143	<0.0143	<0.0214	<0.0286	--	--	--	<0.0143	<0.0214	<0.0143	<0.00143
	10/10/2011	SB-9-75	75	83	--	--	--	<0.0151	<0.0151	<0.0226	<0.0302	--	--	--	<0.0151	<0.0226	<0.0151	<0.00151
	10/10/2011	SB-9-80	80	78	--	--	--	<0.0142	<0.0142	<0.0213	<0.0284	--	--	--	<0.0142	<0.0213	<0.0142	<0.00142
URS-SB-10	10/11/2011	SB-10-50	50	106	--	--	--	<0.0117	<0.0117	<0.0175	<0.0234	--	--	--	<0.0117	<0.0175	<0.0117	<0.00117
	10/11/2011	SB-10-55	55	101	--	--	--	<0.0111	<0.0111	<0.0167	<0.0222	--	--	--	<0.0111	<0.0167	<0.0111	<0.00111
	10/11/2011	SB-10-60	60	96	--	--	--	<0.00967	<0.00967	<0.00145	<0.01934	--	--	--	**0.00160 J**	<0.00145	<0.00967	<0.000967
	10/11/2011	SB-10-65	65	91	--	--	--	<0.0142	<0.0142	<0.0213	<0.0284	--	--	--	<0.0142	<0.0213	<0.0142	<0.00142
	10/11/2011	SB-10-70	70	86	--	--	--	**0.000413 J**	**0.000546 J**	<0.0221	<0.0296	--	--	--	<0.0148	<0.0221	<0.0148	<0.00148
	10/11/2011	SB-10-75	75	81	--	--	--	<0.00952	**0.000438 J**	<0.0143	<0.01904	--	--	--	<0.00952	<0.0143	<0.00952	<0.000952
URS-MW8 (SB-11)	10/12/2011	SB-11-35	35	118	--	--	--	<0.0126	<0.0126	<0.0190	<0.0252	--	--	--	**0.00148 J**	<0.0190	<0.0126	<0.00126
	10/12/2011	SB-11-40	40	113	--	--	--	<0.0109	<0.0109	<0.0164	<0.0218	--	--	--	**0.000383 J**	<0.0164	<0.0109	<0.00109
	10/12/2011	SB-11-45	45	108	--	--	--	<0.0112	<0.0112	<0.0168	<0.0224	--	--	--	<0.0112	<0.0168	<0.0112	<0.00112
	10/12/2011	SB-11-50	50	103	--	--	--	<0.0124	<0.0124	<0.0186	<0.0248	--	--	--	<0.0124	<0.0186	**0.000497 J**	<0.00124
	10/12/2011	SB-11-55	55	98	--	--	--	<0.0124	<0.0124	<0.0186	<0.0248	--	--	--	<0.0124	<0.0186	**0.000867 J**	<0.00124
	10/12/2011	SB-11-60	60	93	--	--	--	<0.0105	<0.0105	<0.0158	<0.021	--	--	--	<0.0105	<0.0158	<0.0105	<0.00105
	10/12/2011	SB-11-65	65	88	--	--	--	<0.0104	<0.0104	<0.0156	<0.0208	--	--	--	<0.0104	<0.0156	<0.0104	<0.00104
	10/12/2011	SB-11-70	70	83	--	--	--	<0.0105	<0.0105	<0.0158	<0.021	--	--	--	<0.0105	<0.0158	<0.0105	<0.00105
	10/12/2011	SB-11-75	75	78	--	--	--	<0.0138	<0.0138	<0.0207	<0.0276	--	--	--	<0.0138	<0.0207	<0.0138	<0.00138
	10/12/2011	SB-11-80	80	73	--	--	--	<0.0113	<0.0113	<0.0170	<0.0226	--	--	--	<0.0113	<0.0170	<0.0113	<0.00113
URS-SB-12	10/12/2011	SB-12-35	35	119	--	--	--	<0.0129	<0.0129	<0.0193	<0.0258	--	--	--	<0.0129	<0.0193	<0.0129	<0.00129
	10/12/2011	SB-12-40	40	114	--	--	--	<0.0128	<0.0128	<0.0192	<0.0256	--	--	--	**0.00436 J**	<0.0192	**0.000641 J**	<0.00128
	10/12/2011	SB-12-45	45	109	--	--	--	<0.0115	<0.0115	<0.0173	<0.023	--	--	--	**0.00479 J**	**0.000403 J**	**0.000749 J**	<0.00115
	10/12/2011	SB-12-55	55	99	--	--	--	<0.00667	<0.00667	<0.0100	<0.01334	--	--	--	**0.00606 J**	**0.000460 J**	**0.000393 J**	<0.000667
	10/12/2011	SB-12-60	60	94	--	--	--	<0.00982	<0.00982	<0.0147	<0.01964	--	--	--	**0.00901 J**	**0.00120 J**	**0.00102 J**	<0.000982
	10/12/2011	SB-12-65	65	89	--	--	--	<0.0151	<0.0151	<0.0227	<0.0302	--	--	--	<0.0151	<0.0227	**0.00153 J**	<0.00151
	10/12/2011	SB-12-70	70	84	--	--	--	<0.0159	<0.0159	<0.0239	<0.0318	--	--	--	<0.0159	<0.0239	<0.0159	<0.00159
	10/12/2011	SB-12-75	75	79	--	--	--	<0.0156	<0.0156	<0.0235	<0.0312	--	--	--	<0.0156	<0.0235	<0.0156	<0.00156
URS-SB-13	10/13/2011	SB-13-35	35	119	--	--	--	<0.0117	<0.0117	<0.0175	<0.0234	--	--	--	**0.0142**	<0.0175	<0.0117	<0.00117
	10/13/2011	SB-13-40	40	114	--	--	--	<0.0140	<0.0140	<0.0210	<0.028	--	--	--	**0.0140 J**	<0.0210	<0.0140	<0.00140
	10/13/2011	SB-13-45	45	109	--	--	--	<0.0142	<0.0142	<0.0213	<0.0284	--	--	--	**0.00347 J**	<0.0213	<0.0142	<0.00142
	10/13/2011	SB-13-60	60	94	--	--	--	<0.0116	**0.000394 J**	<0.0174	<0.0232	--	--	--	**0.0647**	**0.000382 J**	<0.0116	<0.00116
	10/13/2011	SB-13-65	65	89	--	--	--	<0.0136	<0.0136	<0.0204	<0.0272	--	--	--	**0.0861**	<0.0204	<0.0136	<0.00136
	10/13/2011	SB-13-70	70	84	--	--	--	<0.0145	<0.0145	<0.0218	<0.029	--	--	--	<0.0145	<0.0218	<0.0145	<0.00145
	10/13/2011	SB-13-75	75	79	--	--	--	<0.0149	<0.0149	<0.0223	<0.0298	--	--	--	<0.0149	<0.0223	<0.0149	<0.00149
URS-SB-14	10/11/2011	SB-14-35	35	121	--	--	--	<0.00954	<0.00954	<0.0143	<0.01908	--	--	--	<0.00954	<0.0143	<0.00954	<0.000954
	10/11/2011	SB-14-40	40	116	--	--	--	<0.0112	<0.0112	<0.0168	<0.0224	--	--	--	**0.0541**	**0.000659 J**	<0.0112	<0.00112
	10/11/2011	SB-14-45	45	111	--	--	--	<0.0117	<0.0117	<0.0176	<0.0234	--	--	--	**0.0712**	**0.00114 J**	**0.00172 J**	<0.00117
	10/11/2011	SB-14-50	50	106	--	--	--	<0.0101	<0.0101	<0.0152	<0.0202	--	--	--	**0.166**	**0.00164 J**	**0.00346 J**	<0.00101
	10/11/2011	SB-14-55	55	101	--	--	--	<0.0126	<0.0126	<0.0189	<0.0252	--	--	--	**0.105**	**0.00119 J**	**0.00475 J**	<0.00126
	10/11/2011	SB-14-60	60	96	--	--	--	<0.00946	<0.00946	<0.0142	<0.01898	--	--	--	**0.000312 J**	<0.0142	<0.00946	<0.000946
	10/11/2011	SB-14-65	65	91	--	--	--	<0.00915	<0.00915	<0.0137	<0.0183	--	--	--	<0.00915	<0.0137	<0.00915	<0.00915
	10/11/2011	SB-14-70	70	86	--	--	--	<0.0137	<0.0137	<0.0206	<0.0274	--	--	--	<0.0137	<0.0206	<0.0137	<0.00137
	10/11/2011	SB-14-75	75	81	--	--	--	<0.0104	<0.0104	<0.0156	<0.0208	--	--	--	<0.0104	<0.0156	<0.0104	<0.00104

Table 3. Summary of Soil Quality Results

Project No. 190295, NE 8th St and 106th Ave, Bellevue, Washington

					Petroleum Hydrocarbons			BTEX[1]				Metals[2]	PAHs[3]		Chlorinated VOCs[1]			
Location	Date	Name	Depth	Elevation	Gasoline-Range Organics	Diesel-Range Organics	Motor Oil-Range Organics	Benzene	Toluene	Ethylbenzene	Total Xylenes	Lead	Benzo(a)pyrene	cPAHs TEQ[4]	Tetrachloroethene (PCE)	Trichloroethene (TCE)	cis-1,2-Dichloroethene (cDCE)	Vinyl Chloride
			ft bgs	ft NAVD88	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
MTCA Method A or B Cleanup Level					**100**	**2,000**	**2,000**	**0.03**	**7**	**6**	**9**	**250**	**0.1**	**0.1**	**0.05**	**0.03**	**1600**	**0.67**
URS-SB-15	10/11/2011	SB-15-35	35	125	--	--	--	<0.0126	<0.0126	<0.0189	<0.0252	--	--	--	**0.0331**	<0.0189	<0.0126	<0.00126
	10/11/2011	SB-15-40	40	120	--	--	--	<0.00921	<0.00921	<0.0138	<0.01842	--	--	--	**0.00263 J**	<0.0138	<0.00921	<0.000921
	10/11/2011	SB-15-45	45	115	--	--	--	<0.0128	<0.0128	<0.0191	<0.0256	--	--	--	<0.0128	<0.0191	<0.0128	<0.00128
	10/10/2011	SB-15-50	50	110	--	--	--	<0.0128	<0.0128	<0.0192	<0.0256	--	--	--	<0.0128	<0.0192	<0.0128	<0.00128
	10/10/2011	SB-15-55	55	105	--	--	--	<0.00851	<0.00851	<0.0128	<0.01702	--	--	--	<0.00851	<0.0128	<0.00851	<0.000851
	10/10/2011	SB-15-60	60	100	--	--	--	<0.0101	<0.0101	<0.0151	<0.0202	--	--	--	<0.0101	<0.0151	<0.0101	<0.00101
	10/10/2011	SB-15-65	65	95	--	--	--	<0.0140	<0.0140	<0.0210	<0.028	--	--	--	<0.0140	<0.0210	<0.0140	<0.00140
	10/10/2011	SB-15-70	70	90	--	--	--	<0.0127	<0.0127	<0.0190	<0.0254	--	--	--	<0.0127	<0.0190	<0.0127	<0.00127
	10/10/2011	SB-15-75	75	85	--	--	--	<0.0119	<0.0119	<0.0179	<0.0238	--	--	--	<0.0119	<0.0179	<0.0119	<0.000119
URS-MW-7D (SB-16)*	11/14/2011	SB-16-30	30	123	--	--	--	NA	NA	NA	NA	NA	--	--	**0.00880 J**	<0.0191	NA	NA
	11/14/2011	SB-16-35	35	118	--	--	--	NA	NA	NA	NA	NA	--	--	**0.00105 J**	<0.0177	NA	NA
	11/14/2011	SB-16-40	40	113	--	--	--	NA	NA	NA	NA	NA	--	--	**0.00310 J**	<0.0196	NA	NA
	11/14/2011	SB-16-45	45	108	--	--	--	NA	NA	NA	NA	NA	--	--	**0.00276 J**	<0.0170	NA	NA
	11/14/2011	SB-16-47.5	47.5	105.5	--	--	--	NA	NA	NA	NA	NA	--	--	**0.000318 J**	<0.0207	NA	NA
	11/14/2011	SB-16-60	60	93	--	--	--	NA	NA	NA	NA	NA	--	--	**0.727**	**0.00308 J**	NA	NA
	11/14/2011	SB-16-65	65	88	--	--	--	NA	NA	NA	NA	NA	--	--	**0.772**	**0.000799 J**	NA	NA
	11/14/2011	SB-16-70	70	83	--	--	--	NA	NA	NA	NA	NA	--	--	<0.0130	<0.0195	NA	NA
	11/14/2011	SB-16-75	75	78	--	--	--	NA	NA	NA	NA	NA	--	--	<0.0122	<0.0183	NA	NA
URS-SB-17	11/15/2011	SB-17-40	40	117	--	--	--	--	--	--	--	--	--	--	<0.00937	<0.0141	<0.00937	<0.000937
	11/15/2011	SB-17-45	45	112	--	--	--	--	--	--	--	--	--	--	<0.00915	<0.0137	<0.00915	<0.000915
	11/15/2011	SB-17-65	65	92	--	--	--	--	--	--	--	--	--	--	<0.0122	<0.0183	<0.0122	<0.00122
	11/15/2011	SB-17-70	70	87	--	--	--	--	--	--	--	--	--	--	<0.0124	<0.0186	<0.0124	<0.00124
	11/15/2011	SB-17-75	75	82	--	--	--	--	--	--	--	--	--	--	<0.0156	<0.0234	<0.0156	<0.00156
URS-SB-21	11/17/2011	SB-21-30	30	128	--	--	--	--	--	--	--	--	--	--	**0.00590 J**	<0.0218	<0.0145	<0.00145
	11/17/2011	SB-21-35	35	123	--	--	--	--	--	--	--	--	--	--	**0.00560 J**	<0.0174	<0.0116	<0.00116
	11/17/2011	SB-21-40	40	118	--	--	--	--	--	--	--	--	--	--	<0.0116	<0.0174	<0.0116	<0.00116
	11/17/2011	SB-21-45	45	113	--	--	--	--	--	--	--	--	--	--	<0.0159	<0.0238	<0.0159	<0.00159
	11/17/2011	SB-21-50	50	108	--	--	--	--	--	--	--	--	--	--	<0.0157	<0.0235	<0.0157	<0.00157
	11/17/2011	SB-21-60	60	98	--	--	--	--	--	--	--	--	--	--	<0.0104	<0.0156	<0.0104	<0.00104
	11/17/2011	SB-21-65	65	93	--	--	--	--	--	--	--	--	--	--	<0.0192	<0.0288	<0.0192	<0.00192
	11/17/2011	SB-21-70	70	88	--	--	--	--	--	--	--	--	--	--	<0.0203	<0.0304	<0.0203	<0.00203
	11/17/2011	SB-21-71.5	71.5	86.5	--	--	--	--	--	--	--	--	--	--	<0.0170	<0.0255	<0.0170	<0.00170
	11/17/2011	SB-21-73	73	85	--	--	--	--	--	--	--	--	--	--	<0.0156	<0.0234	<0.0156	<0.00156
	11/17/2011	SB-21-74.5	74.5	83.5	--	--	--	--	--	--	--	--	--	--	<0.0196	<0.0294	<0.0196	<0.00196
	11/17/2011	SB-21-80	80	78	--	--	--	--	--	--	--	--	--	--	<0.0143	<0.0214	<0.0143	<0.00143
Thinker Toys Summary of Additional Data, EPI, 2019																		
MW17-01*	11/8/2017	MW17-01-40	40	113	--	--	--	--	--	--	--	--	--	--	<0.025	<0.02	<0.05	<0.05
	11/8/2017	MW17-01-45	45	108	--	--	--	--	--	--	--	--	--	--	<0.025	<0.02	<0.05	<0.05
	11/8/2017	MW17-01-50	50	103	--	--	--	--	--	--	--	--	--	--	**0.30**	<0.02	<0.05	<0.05
	11/8/2017	MW17-01-55	55	98	--	--	--	--	--	--	--	--	--	--	<0.025	<0.02	<0.05	<0.05
	11/8/2017	MW17-01-60	60	93	--	--	--	--	--	--	--	--	--	--	<0.025	<0.02	<0.05	<0.05
	11/8/2017	MW17-01-65	65	88	--	--	--	--	--	--	--	--	--	--	<0.025	<0.02	<0.05	<0.05
	11/8/2017	MW17-01-70	70	83	--	--	--	--	--	--	--	--	--	--	<0.025	<0.02	<0.05	<0.05
	11/8/2017	MW17-01-75	75	78	--	--	--	--	--	--	--	--	--	--	<0.025	<0.02	<0.05	<0.05
	11/8/2017	MW17-01-80	80	73	--	--	--	--	--	--	--	--	--	--	<0.025	<0.02	<0.05	<0.05
	11/8/2017	MW17-01-85	85	68	--	--	--	--	--	--	--	--	--	--	<0.025	<0.02	<0.05	<0.05
	11/8/2017	MW17-01-90	90	63	--	--	--	--	--	--	--	--	--	--	<0.025	<0.02	<0.05	<0.05

Table 3. Summary of Soil Quality Results

Project No. 190295, NE 8th St and 106th Ave, Bellevue, Washington

Location	Date	Name	Depth	Elevation	Petroleum Hydrocarbons			BTEX[1]				Metals[2]	PAHs[3]		Chlorinated VOCs[1]			
					Gasoline-Range Organics	Diesel-Range Organics	Motor Oil-Range Organics	Benzene	Toluene	Ethylbenzene	Total Xylenes	Lead	Benzo(a)pyrene	cPAHs TEQ[4]	Tetrachloroethene (PCE)	Trichloroethene (TCE)	cis-1,2-Dichloroethene (cDCE)	Vinyl Chloride
			ft bgs	ft NAVD88	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
MTCA Method A or B Cleanup Level					**100**	**2,000**	**2,000**	**0.03**	**7**	**6**	**9**	**250**	**0.1**	**0.1**	**0.05**	**0.03**	**1600**	**0.67**
Phase II Environmental Site Assessment, Aspect Consulting, 2019																		
AMW-1	09/26/2019	AMW-1-15.0	15	155.41	<5	<50	<250	--	--	--	--	--	--	--	<0.005	<0.003	<0.005	<0.005
	09/26/2019	AMW-1-37.5	37.5	132.91	<5	<50	<250	--	--	--	--	--	--	--	<0.005	<0.003	<0.005	<0.005
	09/26/2019	AMW-1-45.0	45	125.41	<5	<50	<250	--	--	--	--	--	--	--	<0.005	<0.003	<0.005	<0.005
AMW-2	09/26/2019	AMW-2-19	19	138.17	<5	--	--	--	--	--	--	--	--	--	<0.005	<0.003	<0.005	<0.005
	09/26/2019	AMW-2-54	54	103.17	--	--	--	--	--	--	--	--	--	--	<0.005	<0.003	<0.005	<0.005
	09/26/2019	AMW-2-65	65	92.17	--	--	--	--	--	--	--	--	--	--	**0.13**	<0.003	**0.034**	<0.005
	09/26/2019	AMW-2-72	72	85.17	--	--	--	--	--	--	--	--	--	--	<0.005	<0.003	<0.005	<0.005
	09/26/2019	AMW-2-81	81	76.17	--	--	--	--	--	--	--	--	--	--	<0.005	<0.003	<0.005	<0.005
AMW-3D	09/30/2019	AMW-3D-35.0	35	121.14	--	--	--	--	--	--	--	--	--	--	<0.005	<0.003	<0.005	<0.005
	09/30/2019	AMW-3D-45.0	45	111.14	--	--	--	--	--	--	--	--	--	--	**0.019**	<0.003	<0.005	<0.005
	09/30/2019	AMW-3D-55.0	55	101.14	--	--	--	--	--	--	--	--	--	--	<0.005	<0.003	<0.005	<0.005
	09/30/2019	AMW-3D-75.0	75	81.14	--	--	--	--	--	--	--	--	--	--	<0.005	<0.003	<0.005	<0.005
AMW-3S	09/27/2019	AMW-3S-27.5	27.5	129.11	--	--	--	--	--	--	--	--	--	--	<0.005	<0.003	<0.005	<0.005
	09/27/2019	AMW-3S-35	35	121.61	--	--	--	--	--	--	--	--	--	--	<0.005	<0.003	<0.005	<0.005
AMW-4D	09/27/2019	AMW-4D-5.5	5.5	147.75	--	--	--	--	--	--	--	--	--	--	<0.005	<0.003	<0.005	<0.005
	09/27/2019	AMW-4D-20.0	20	133.25	--	--	--	--	--	--	--	--	--	--	<0.005	<0.003	<0.005	<0.005
	09/27/2019	AMW-4D-30.0	30	123.25	--	--	--	--	--	--	--	--	--	--	<0.005	<0.003	<0.005	<0.005
	09/27/2019	AMW-4D-35.0	35	118.25	--	--	--	--	--	--	--	--	--	--	<0.005	<0.003	<0.005	<0.005
	09/27/2019	AMW-4D-50.0	50	103.25	--	--	--	--	--	--	--	--	--	--	<0.005	<0.003	<0.005	<0.005
	09/27/2019	AMW-4D-55.0	55	98.25	--	--	--	--	--	--	--	--	--	--	<0.005	<0.003	<0.005	<0.005
	09/27/2019	AMW-4D-60.0	60	93.25	--	--	--	--	--	--	--	--	--	--	**0.014**	<0.003	<0.005	<0.005
	09/27/2019	AMW-4D-63.5	63.5	89.75	--	--	--	--	--	--	--	--	--	--	**0.12**	<0.003	<0.005	<0.005
	09/27/2019	AMW-4D-69.5	69.5	83.75	--	--	--	--	--	--	--	--	--	--	<0.005	<0.003	<0.005	<0.005
	09/27/2019	AMW-4D-80.0	80	73.25	--	--	--	--	--	--	--	--	--	--	<0.005	<0.003	<0.005	<0.005
	09/27/2019	AMW-4D-89.0	89	64.25	--	--	--	--	--	--	--	--	--	--	<0.005	<0.003	<0.005	<0.005
AMW-4S	09/26/2019	AMW-4S-5.0	5	148.36	--	--	--	--	--	--	--	--	--	--	**0.014**	<0.003	<0.005	<0.005
	09/26/2019	AMW-4S-10.0	10	143.36	--	--	--	--	--	--	--	--	--	--	<0.005	<0.003	<0.005	<0.005
	09/26/2019	AMW-4S-15.0	15	138.38	--	--	--	--	--	--	--	--	--	--	<0.005	<0.003	<0.005	<0.005
AMW-5	09/27/2019	AMW-5-5	5	149.25	--	--	--	--	--	--	--	--	--	--	<0.005	<0.003	<0.005	<0.005
	09/27/2019	AMW-5-10	10	144.25	--	--	--	--	--	--	--	--	--	--	<0.005	<0.003	<0.005	<0.005
	09/27/2019	AMW-5-15	15	139.25	--	--	--	--	--	--	--	--	--	--	<0.005	<0.003	<0.005	<0.005
	09/27/2019	AMW-5-20	20	134.25	--	--	--	--	--	--	--	--	--	--	<0.005	<0.003	<0.005	<0.005
	09/27/2019	AMW-5-35	35	119.25	--	--	--	--	--	--	--	--	--	--	<0.005	<0.003	<0.005	<0.005
Remedial Investigation Field Program, Aspect Consulting, 2020																		
AB-1	04/15/2020	AB-1-2.5	2.5	151.5	<5 J	<50	<250	--	--	--	--	--	<0.05	ND	<0.005 J	<0.003 J	<0.005 J	<0.005 J
	04/20/2020	AB-1-5	5	149	<5	<50	<250	<0.003	<0.005	<0.005	<0.01	--	--	--	<0.005	<0.003	<0.005	<0.005
	04/20/2020	AB-1-14	14	140	--	--	--	--	--	--	--	--	--	--	<0.005	<0.003	<0.005	<0.005
	04/20/2020	AB-1-65	65	89	--	--	--	--	--	--	--	--	--	--	<0.005	<0.003	<0.005	<0.005
	04/20/2020	AB-1-74	74	80	--	--	--	--	--	--	--	--	--	--	<0.005	<0.003	<0.005	<0.005
AB-2	04/21/2020	AB-2-10	10	144	<5	<50	<250	<0.003	<0.005	<0.005	<0.01	--	--	--	<0.005	<0.003	<0.005	<0.005
	04/21/2020	AB-2-33	33	121	--	--	--	--	--	--	--	--	--	--	<0.005	<0.003	<0.005	<0.005
	04/21/2020	AB-2-54	54	100	--	--	--	--	--	--	--	--	--	--	**0.0052**	<0.003	<0.005	<0.005
	04/21/2020	AB-2-69	69	85	--	--	--	--	--	--	--	--	--	--	<0.005	<0.003	<0.005	<0.005
AB-3	04/28/2020	AB-3-27	27	131	--	--	--	--	--	--	--	--	--	--	<0.005	<0.003	<0.005	<0.005
	04/28/2020	AB-3-52	52	106	--	--	--	--	--	--	--	--	--	--	<0.005	<0.003	<0.005	<0.005
AB-4	04/23/2020	AB-4-5	5	158	<5 J	<50	<250	<0.003	<0.005	<0.005	<0.01	**1.71**	<0.01	ND	<0.005	<0.003	<0.005	<0.005
	04/23/2020	AB-4-55	55	108	--	--	--	--	--	--	--	--	--	--	<0.005	<0.003	<0.005	<0.005
	04/23/2020	AB-4-77	77	86	--	--	--	--	--	--	--	--	--	--	<0.005	<0.003	<0.005	<0.005

Table 3. Summary of Soil Quality Results

Project No. 190295, NE 8th St and 106th Ave, Bellevue, Washington

					Petroleum Hydrocarbons			BTEX[1]				Metals[2]	PAHs[3]		Chlorinated VOCs[1]			
Location	Date	Name	Depth	Elevation	Gasoline-Range Organics	Diesel-Range Organics	Motor Oil-Range Organics	Benzene	Toluene	Ethylbenzene	Total Xylenes	Lead	Benzo(a)pyrene	cPAHs TEQ[4]	Tetrachloroethene (PCE)	Trichloroethene (TCE)	cis-1,2-Dichloroethene (cDCE)	Vinyl Chloride
			ft bgs	ft NAVD88	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
MTCA Method A or B Cleanup Level					**100**	**2,000**	**2,000**	**0.03**	**7**	**6**	**9**	**250**	**0.1**	**0.1**	**0.05**	**0.03**	**1600**	**0.67**
AB-5	04/16/2020	AB-5-20	20	134	--	--	--	--	--	--	--	--	--	--	<0.005	<0.003	<0.005	<0.005
	04/16/2020	AB-5-34	34	120	--	--	--	--	--	--	--	--	--	--	<0.005	<0.003	<0.005	<0.005
	04/16/2020	AB-5-40	40	114	--	--	--	--	--	--	--	--	--	--	<0.005	<0.003	<0.005	<0.005
AMW-6D	04/17/2020	AMW-6D-16	16	138	--	--	--	--	--	--	--	--	--	--	**0.0051**	<0.003	<0.005	<0.005
	04/17/2020	AMW-6D-52	52	102	--	--	--	--	--	--	--	--	--	--	<0.005	<0.003	<0.005	<0.005
	04/17/2020	AMW-6D-63	63	91	--	--	--	--	--	--	--	--	--	--	**0.023**	<0.003	<0.005	<0.005
	04/17/2020	AMW-6D-74	74	80	--	--	--	--	--	--	--	--	--	--	<0.005	<0.003	<0.005	<0.005
AMW-6S[5]	04/15/2020	AMW-6S-2.5	2.5	151.5	--	--	--	--	--	--	--	--	--	--	**0.016 J**	<0.003 J	<0.005 J	<0.005 J
AMW-7	04/22/2020	AMW-7-53	53	101	--	--	--	--	--	--	--	--	--	--	<0.005	<0.003	<0.005	<0.005
	04/22/2020	AMW-7-59	59	95	--	--	--	--	--	--	--	--	--	--	**0.034**	<0.003	<0.005	<0.005
	04/22/2020	AMW-7-68	68	86	--	--	--	--	--	--	--	--	--	--	<0.005	<0.003	<0.005	<0.005
	04/22/2020	AMW-7-75	75	79	--	--	--	--	--	--	--	--	--	--	<0.005	<0.003	<0.005	<0.005
AMW-8	04/27/2020	AMW-8-4	4	151	**2,400**	**610 X**	**790**	<0.003	<0.005	<0.005	**0.027**	**65.1**	**1.8**	**2.5**	<0.005	<0.003	<0.005	<0.005
	04/27/2020	AMW-8-16	16	139	--	--	--	--	--	--	--	--	--	--	<0.005	<0.003	<0.005	<0.005
	04/27/2020	AMW-8-21	21	134	--	--	--	--	--	--	--	--	--	--	<0.005	<0.003	<0.005	<0.005
	04/27/2020	AMW-8-47	47	108	--	--	--	--	--	--	--	--	--	--	<0.005	<0.003	<0.005	<0.005
	04/27/2020	AMW-8-57	57	98	--	--	--	--	--	--	--	--	--	--	<0.005	<0.003	<0.005	<0.005
	04/27/2020	AMW-8-64	64	91	--	--	--	--	--	--	--	--	--	--	<0.005	<0.003	<0.005	<0.005
	04/27/2020	AMW-8-70	70	85	--	--	--	--	--	--	--	--	--	--	<0.005	<0.003	<0.005	<0.005
AMW-9	04/24/2020	AMW-9-5	5	152	<5 J	**110 X**	**420 X**	<0.003	<0.005	<0.005	--	**4.15**	<0.05	ND	<0.005	<0.003	<0.005	<0.005
	04/24/2020	AMW-9-28	28	129	--	--	--	--	--	--	--	--	--	--	<0.005	<0.003	<0.005	<0.005
	04/24/2020	AMW-9-35	35	122	--	--	--	--	--	--	--	--	--	--	<0.005	<0.003	<0.005	<0.005
	04/24/2020	AMW-9-51	51	106	--	--	--	--	--	--	--	--	--	--	<0.005	<0.003	<0.005	<0.005
	04/24/2020	AMW-9-67	67	90	--	--	--	--	--	--	--	--	--	--	<0.005	<0.003	<0.005	<0.005

Notes

Bold = analyte was detected at or above the laboratory reporting limit

Blue Shaded = detected concentration exceeded the Model Toxics Control Act (MTCA) cleanup level (CUL)

< = analyte was not detected at or above the reporting limit shown

J = result value estimated

UJ = analyte not detected and the reporting limit is an estimate.

X = the laboratory has indicated that the chromatographic pattern does not match fuel standard used for quantitation.

NA = historical data have not been located by the date of this report.

ft bgs = feet below ground surface

ft NAVD88 = feet North American Vertical Datum 1988

mg/kg = milligrams per kilogram

-- = not tested

1 - Only select petroleum-associated and solvent-associated volatile organic compounds (VOCs) are shown in this summary table; refer to the laboratory reports for the full list of VOCs analyzed. Other VOCs were not detected above the MTCA CULs.

2 - Select samples were analyzed for additional metals, with none detected above the MTCA CULs; refer to the laboratory reports for the full list of metals analyzed.

3 - Only polycyclic aromatic hydrocarbons(PAHs) detected at concentrations above the MTCA CULs are included in this summary table; refer to the laboratory reports.

4 - Sum of carcinogenic PAHs (cPAHs) calculated using the Toxic Equivalency (TEQ) method; none detects (NDs) were incorporated as half of the reporting limit.

5 - AMW-6S and AB-5 are the same boring. No groundwater was encountered and a monitoring well was not installed.

* - Exploration is located on the south-adjoining Onni Property

** - Exploration is located in the west-adjoining 106th Ave NE right-of-way.

Methylene chloride has also been detected occasionally in historical investigation, but has been flagged as the result of laboratory contamination. Refer to the laboratory reports for detected concentrations of methylene chloride.

Data for soil samples obtained by Aspect (2019 through 2020) underwent Aspect's data quality review, as summarized in the data quality review findings in Appendix B.

Data for soil samples obtained from 2000 through 2017 is as reported in reports prepared by others. Refer to the referenced report for additional information and laboratory reports.

Table 4. Summary of Groundwater Quality Results

Project No. 190298, NE 8th St and 106th Ave, Bellevue, Washington

Location	Date	Petroleum Hydrocarbons			BTEX[1]				Chlorinated VOCs[1]			
		Gasoline-Range Organics ug/L	Diesel-Range Organics ug/L	Motor Oil-Range Organics ug/L	Benzene ug/L	Toluene ug/L	Ethylbenzene ug/L	Total Xylenes ug/L	Tetrachloroethelyne (PCE) ug/L	Trichloroethelyne (TCE) ug/L	cis-1,2-Dichloroethene (cDCE) ug/L	Vinyl Chloride ug/L
MTCA Method A or B Cleanup Level		**1000**	**500**	**500**	**5**	**100**	**700**	**1000**	**5**	**5**	**16**	**0.2**
Shallow Wells												
AMW-3S	10/03/2019	--	--	--	<0.35	<1	<1	<1	**1.3 J**	<1 J	<1 J	<0.2 J
	05/06/2020	--	--	--	--	--	--	--	<1	<1	<1	<0.2
AMW-9	05/07/2020	--	--	--	--	--	--	--	**71**	<1	<1	<0.2
B3-MW-3	07/07/2008	<100	<250	<500	<0.4	<0.4	<2.0	<1.2	**80**	**0.42**	--	NA
	09/10/2008	<100	--	--	<1.0	<1.0	<1.0	<1.0	**88**	<1.0	<1.0	NA
	11/21/2008	--	--	--	<1.0	<1.0	<1.0	<1.0	**20**	<1.0	<1.0	NA
	03/17/2010	<50	--	--	<1.0	<1.0	<1.0	<1.0	**68**	<1.0	<1.0	NA
	06/17/2010	<50	--	--	<1.0	<1.0	<1.0	<1.0	**44**	<1.0	<1.0	NA
	08/23/2010	--	--	--	--	--	--	--	**50**	<1.0	<1.0	NA
	11/22/2011	--	--	--	--	--	--	--	**23.7**	<1.0	<1.0	NA
	08/14/2019	<100	<50	<250	<0.35	<1	<1	<1	**33**	<1	<1	<0.2
	05/07/2020	--	--	--	--	--	--	--	**24**	<1	<1	<0.2
MW-17**	10/09/2019	--	--	--	<0.35	<1	<1	<1	**41**	**2.5**	**3.3**	<0.2
	05/08/2020	--	--	--	--	--	--	--	**5.9**	<1	<1	<0.2
MW-18**	10/09/2019	--	--	--	<0.35	<1	<1	<1	**58**	**1.4**	<1	<0.2
	05/08/2020	--	--	--	--	--	--	--	**37**	**1.4**	<1	<0.2
MW-19	08/25/2010	<100	<50	<250	<0.35	<1	<1	<3	**33**	**1.1**	<1.0	NA
	11/21/2011	--	--	--	--	--	--	--	**31.0**	**1.08**	**0.140 J**	NA
	08/15/2019	--	--	--	--	--	--	--	**5.8**	<1	<1	<0.2
	05/06/2020	--	--	--	--	--	--	--	**11**	<1	<1	<0.2
MW-20	08/25/2010	<100	<50	<250	<0.35	<1	<1	<3	**4.6**	<1.0	<1.0	NA
	11/22/2011	--	--	--	--	--	--	--	**1.03**	**0.140 J**	<1.0	NA
	08/15/2019	<100	**70 X**	<250	<0.35	<1	<1	<1	**2.9**	<1	<1	<0.2
	05/06/2020	--	--	--	--	--	--	--	**2.0**	<1	<1	<0.2
URS-MW-1	09/10/2008	<100	--	--	<1.0	<1.0	<1.0	<1.0	**340**	**3.5**	<1.0	NA
	11/21/2008	--	--	--	<1.0	<1.0	<1.0	<1.0	**210**	**3.4**	<1.0	NA
	03/17/2010	<50	--	--	<1.0	<1.0	<1.0	<1.0	**460**	**22**	**11**	NA
	06/17/2010	<50	--	--	<1.0	<1.0	<1.0	<1.0	**320**	**9.6**	**1.2**	NA
	08/24/2010	--	--	--	--	--	--	--	**430**	**10**	**6.1**	NA
	11/22/2011	--	--	--	--	--	--	--	**114**	**4.36**	**1.47**	NA
	08/14/2019	<100	<50	<250	<0.35	<1	<1	<1	**45**	<1	<1	<0.2
	05/07/2020	--	--	--	--	--	--	--	**38**	<1	<1	<0.2

Table 4. Summary of Groundwater Quality Results

Project No. 190298, NE 8th St and 106th Ave, Bellevue, Washington

Location	Date	Petroleum Hydrocarbons			BTEX[1]				Chlorinated VOCs[1]			
		Gasoline-Range Organics ug/L	Diesel-Range Organics ug/L	Motor Oil-Range Organics ug/L	Benzene ug/L	Toluene ug/L	Ethylbenzene ug/L	Total Xylenes ug/L	Tetrachloroethelyne (PCE) ug/L	Trichloroethelyne (TCE) ug/L	cis-1,2-Dichloroethene (cDCE) ug/L	Vinyl Chloride ug/L
MTCA Method A or B Cleanup Level		**1000**	**500**	**500**	**5**	**100**	**700**	**1000**	**5**	**5**	**16**	**0.2**
URS-MW-3	09/10/2008	<100	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA
	11/21/2008	--	--	--	<1.0	<1.0	<1.0	<1.0	**3.9**	<1.0	<1.0	NA
	03/17/2010	<50	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA
	06/17/2010	<50	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	<0.2	<1.0	NA
	08/23/2010	--	--	--	--	--	--	--	<1.0	<0.2	<1.0	NA
	11/22/2011	--	--	--	--	--	--	--	<1.0	<1.0	<1.0	NA
	08/14/2019	<100	<50	<250	<0.35	<1	<1	<1	<1	<1	<1	<0.2
	05/06/2020	--	--	--	--	--	--	--	<1	<1	<1	<0.2
URS-MW-6*	07/23/2020	--	--	--	--	--	--	--	<1	<1	<1	<0.2
URS-MW-7*	11/15/2017	--	--	--	--	--	--	--	**21**	<1	**1.6**	<0.2
	07/23/2020	--	--	--	--	--	--	--	**6.9**	<1	**1.0**	<0.2
Deep Wells												
AMW-2	09/30/2019	--	--	--	<0.35	<1	<1	<1	<1	<1	<1	<0.2
	05/08/2020	--	--	--	--	--	--	--	<1	<1	<1	<0.2
AMW-3D	10/08/2019	--	--	--	<0.35	<1	<1	<1	<1	<1	<1	<0.2
	05/06/2020	--	--	--	--	--	--	--	<1	<1	<1	<0.2
AMW-4D	10/08/2019	--	--	--	<0.35	<1	<1	<1	**1.3**	<1	<1	<0.2
	05/05/2020	--	--	--	--	--	--	--	<1	<1	<1	<0.2
AMW-6D	05/04/2020	--	--	--	--	--	--	--	<1	<1	<1	<0.2
AMW-7	05/05/2020	--	--	--	--	--	--	--	<1	<1	<1	<0.2
AMW-8	05/05/2020	--	--	--	--	--	--	--	<1	<1	<1	<0.2
B1/MW-1	03/17/2010	<50	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA
	11/29/2011	--	--	--	--	--	--	--	<1.0	<1.0	<1.0	NA
	05/07/2020	--	--	--	--	--	--	--	<1	<1	<1	<0.2
B2/MW-2	07/07/2008	<100	<250	<500	<0.2	<0.2	<1.0	<0.6	<0.2	<0.2	--	NA
	11/21/2008	--	--	--	<1.0	<1.0	<1.0	<1.0	**2.0**	<1.0	<1.0	NA
	03/17/2010	<50	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA
	06/17/2010	<50	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA
	11/29/2011	--	--	--	--	--	--	--	<1.0	<1.0	<1.0	NA
	08/15/2019	--	--	--	<0.35	<1	<1	<1	<1	<1	<1	<0.2
	05/08/2020	--	--	--	--	--	--	--	<1	<1	<1	<0.2

Table 4. Summary of Groundwater Quality Results

Project No. 190298, NE 8th St and 106th Ave, Bellevue, Washington

Location	Date	Petroleum Hydrocarbons			BTEX[1]				Chlorinated VOCs[1]			
		Gasoline-Range Organics ug/L	Diesel-Range Organics ug/L	Motor Oil-Range Organics ug/L	Benzene ug/L	Toluene ug/L	Ethylbenzene ug/L	Total Xylenes ug/L	Tetrachloroethelyne (PCE) ug/L	Trichloroethelyne (TCE) ug/L	cis-1,2-Dichloroethene (cDCE) ug/L	Vinyl Chloride ug/L
MTCA Method A or B Cleanup Level		**1000**	**500**	**500**	**5**	**100**	**700**	**1000**	**5**	**5**	**16**	**0.2**
B4/MW-4	07/07/2008	<100	<250	<500	<0.2	<0.2	<1.0	<0.6	<0.2	<0.2	--	NA
	11/21/2008	--	--	--	<1.0	<1.0	<1.0	<1.0	**1.9**	<1.0	<1.0	NA
	03/17/2010	<50	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA
	06/17/2010	<50	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA
	11/29/2011	--	--	--	--	--	--	--	<1.0	<1.0	<1.0	NA
	08/15/2019	--	--	--	<0.35	<1	<1	<1	<1	<1	<1	<0.2
	05/04/2020	--	--	--	--	--	--	--	<1	<1	<1	<0.2
URS-MW-8	08/15/2019	--	--	--	<0.35	<1	<1	<1	<1	<1	<1	<0.2
	05/04/2020	--	--	--	--	--	--	--	<1	<1	<1	<0.2
MW17-01*	11/15/2017	--	--	--	--	--	--	--	**7.7**	<1	<1	<0.2
	7/23/2020	--	--	--	--	--	--	--	**1.9**	<1	<1	<0.2

Notes

Bold = analyte was detected at or above the laboratory reporting limit

Blue Shaded = detected concentration exceeded the Model Toxics Control Act (MTCA) cleanup level (CUL)

< = analyte was not detected at or above the reporting limit shown

J = result value estimated

UJ = analyte not detected and the reporting limit is an estimate

X = the laboratory has indicated that the chromatographic pattern does not match fuel standard used for quantitation

ug/L = micrograms per liter

-- = not tested

NA = historical data have not been located as of the date of this report.

1 - Only select petroleum-associated and solvent-associated volatile organic compounds (VOCs) are shown in this summary table; refer to the laboratory reports for the full list of VOCs analyzed. Other VOCs were not detected above the MTCA CULs.

* - Exploration is located on the south-adjoining Onni Property

** - Exploration is located in the west-adjoining 106th Ave NE right-of-way.

Data for groundwater samples obtained by Aspect (2019 through 2020) underwent Aspect's data quality review, as summarized in the data quality review findings in Appendix B.

Data for groundwater samples obtained from 2000 through 2017 is as reported in reports prepared by others. Refer to the referenced report for additional information and laboratory reports.

Table 5. Soil Gas Results

Project No. 190298, NE 8th Ave and 106th Ave NE, Bellevue, Washington

		Location	ASG-01	ASG-02	ASG-03	ASG-04	ASG-05	ASG-06	ASG-07
		Date	03/31/2020	03/31/2020	03/31/2020	03/31/2020	03/31/2020	03/31/2020	03/31/2020
		Sample ID	ASG-1-033120	ASG-2-033120	ASG-3-033120	ASG-4-033120	ASG-5-033120	ASG-6-033120	ASG-7-033120
		Units[1]	ug/m3						
Analyte	**Unit**	**MTCA Method B[2]**							
BTEX									
Benzene	ug/m3	11	**8.1**	**30**	**4.5**	**22**	**20**	**9**	**9**
Toluene	ug/m3	76000	< 62 U	< 150 U	< 64 U	< 64 U	< 110 U	< 64 U	**1200 E**
Ethylbenzene	ug/m3	15000	**3.5**	**180**	**35**	**30**	**5.7**	**2.9**	**26**
Total Xylenes	ug/m3	1500	**18.6**	**790**	**151**	**145**	**31.4**	**11.9**	**104**
Polycyclic Aromatic Hydrocarbons (PAHs)									
Naphthalene	ug/m3	2.5	< 0.86 U	< 2.1 U	< 0.89 U	**1.7**	< 1.5 U	< 0.89 U	< 2.2 U
Volatile Organic Compounds (VOCs)									
1,1,1-Trichloroethane	ug/m3	76000	< 1.8 U	< 4.4 U	**4.2**	< 1.9 U	**15**	< 1.9 U	< 4.6 U
1,1,2-Trichloroethane	ug/m3	3	< 0.36 U	< 0.87 U	< 0.37 U	< 0.37 U	< 0.62 U	< 0.37 U	< 0.92 U
1,1-Dichloroethane	ug/m3	52	< 1.3 U	< 3.2 U	< 1.4 U	< 1.4 U	< 2.3 U	< 1.4 U	< 3.4 U
1,1-Dichloroethene	ug/m3	3000	< 1.3 U	< 3.2 U	< 1.3 U	< 1.3 U	< 2.3 U	< 1.3 U	< 3.3 U
1,2-Dibromoethane (EDB)	ug/m3	0.14	< 0.25 U	< 0.61 U	< 0.26 U	< 0.26 U	< 0.44 U	< 0.26 U	< 0.65 U
1,2-Dichloroethane (EDC)	ug/m3	3.2	< 0.13 U	< 0.32 U	< 0.14 U	< 0.14 U	< 0.23 U	**0.19**	< 0.34 U
Chloroethane	ug/m3	150000	< 8.7 U	< 21 U	< 9 U	< 9 U	< 15 U	< 9 U	< 22 U
cis-1,2-Dichloroethene (cDCE)	ug/m3		< 1.3 U	< 3.2 U	< 1.3 U	< 1.3 U	< 2.3 U	< 1.3 U	< 3.3 U
m,p-Xylenes	ug/m3	1500	**13**	**610**	**120**	**110**	**22**	**8.8**	**85**
Methyl tert-butyl ether (MTBE)	ug/m3	320	< 5.9 U	< 14 U	< 6.1 U	< 6.1 U	< 10 U	< 6.1 U	< 15 U
n-Hexane	ug/m3	11000	**44**	**120**	**13**	**35**	**50**	**48**	**2200 E**
o-Xylene	ug/m3	1500	**5.6**	**180**	**31**	**35**	**9.4**	**3.1**	**19**
Tetrachloroethene (PCE)	ug/m3	320	< 22 U	< 54 U	**150**	**49**	**320**	< 23 U	< 57 U
trans-1,2-Dichloroethene	ug/m3		< 1.3 U	< 3.2 U	< 1.3 U	< 1.3 U	< 2.3 U	< 1.3 U	< 3.3 U
Trichloroethene (TCE)	ug/m3	12	< 0.89 U	< 2.1 U	< 0.91 U	< 0.91 U	< 1.5 U	< 0.91 U	< 2.3 U
Vinyl Chloride	ug/m3	9.4	< 0.84 U	< 2 U	< 0.87 U	< 0.87 U	< 1.5 U	< 0.87 U	< 2.1 U

Notes

[1] All results are in micrograms per cubic meter (ug/m^3).

[2] Model Toxics Control Act (MTCA) Mehod B cleanup level for subslab soil gas.

Bold = Analyte was detected at or above the laboratory reporting limit (RL)

Blue Shaded = Detected result exceeds MTCA Method B screening level.

U = Analyte not detected at or above RL shown.

E = Result exceeded the laboratory instrument calibration range. Result usable for qualitative analysis of analyte presence, but numeric value should not be included in quantitate analysis.

Table 6. Preliminary Screening of Remedial Technologies

Project No. 190298, NE 8th St and 106th Ave NE, Bellevue, Washington

Remedial Technology	Effectiveness	Implementability	Comparative Cost	Screening Result
Institutional Controls	Medium	High	Low	Retained
Engineering Controls[1]	High	High	Medium	Retained
Waterproof Installation	Low	Low	High	Not Retained
Drainage System with Groundwater Control	Low	Medium	Medium	Not Retained
Chemical Vapor Barrier	High	High	Low	Retained
Excavation and Offsite Disposal	High	High	Medium	Retained
Groundwater Collection/Treatment: Wall Drains	Medium	Medium	Medium	Retained
Groundwater Interception/Treatment: Perimeter Wells	Medium	Medium	High	Retained
Active In Situ Treatments[2]	Medium	Low	High	Not Retained

Notes:

[1] Effective in preventing unacceptable exposures, but does not reduce contaminant mass.

[2] Not effective technologies without source control. Source for Area 2 is off-property and is considered to exist indefinitely for the purpose of this FFS.

Table 7. Summary of Remedial Alternative Evaluation

Project No. 190298, NE 8th St and 106th Ave NE, Bellevue, Washington

Alternative Number	Alternative 1	Alternative 2	Alternative 3	Alternative 4
Description	- Remedial Excavation (entire Subject Property) and disposal of contaminated soil on the property - No collection or treatment of contaminated groundwater, building designed for hydrostatic pressure - Installation of chemical vapor barrier.	- Remedial Excavation (redevelopment footprint) and disposal of contaminated soil on the property - No collection or treatment of contaminated groundwater, building designed for hydrostatic pressure - Installation of chemical vapor barrier.	- Remedial Excavation and disposal of contaminated soil on the property - Collection of shallow contaminated groundwater via subsurface wall drainage, on-site treatment and permitted discharge. - Installation of chemical vapor barrier.	- Remedial Excavation and disposal of contaminated soil on the property - Installation of interception wells to collect shallow contaminated groundwater, on-site treatment and permitted discharge. - Installation of chemical vapor barrier
Overall Alternative Ranking	7.6	8.7	8.4	8.0
Cost:	$14,258,000	$7,664,000	$10,300,000	$10,748,000
Relative Benefit to Cost Ratio (multiplied by 100,000)	**0.05**	**0.11**	**0.08**	**0.07**
Threshold Criteria				
Protection of Human Health and the Environment	Yes – Alternative will protect human health and the environment.	Yes – Alternative will protect human health and the environment.	Yes – Alternative will protect human health and the environment.	Yes – Alternative will protect human health and the environment.
Compliance with Cleanup Standards	Yes – Compliance for potential residual contamination below Elevation 91 would rely on institutional and engineering controls.	Yes – Compliance for potential residual contamination below Elevation 91 would rely on institutional and engineering controls.	Yes – Compliance for potential residual contamination below Elevation 91 would rely on institutional and engineering controls.	Yes – Compliance for potential residual contamination below Elevation 91 would rely on institutional and engineering controls.
Compliance with Applicable State and Federal Laws	Yes – Alternative complies with applicable laws.	Yes – Alternative complies with applicable laws.	Yes – Alternative complies with applicable laws.	Yes – Alternative complies with applicable laws.
Provision for Compliance Monitoring	Yes – Alternative includes provisions for compliance monitoring.	Yes – Alternative includes provisions for compliance monitoring.	Yes – Alternative includes provisions for compliance monitoring.	Yes – Alternative includes provisions for compliance monitoring.
Restoration Time Frame	Concurrent with planned construction and development	Concurrent with planned construction and development	Primarily concurrent with planned construction and development, however treatment system to operate indefinitely.	Primarily concurrent with planned construction and development, however treatment system to operate indefinitely.
Evaluation Criteria				
Protectiveness (30% Weighted Factor):	Protective of identified exposure pathways, but requires institutional and engineering controls (9).	Protective of identified exposure pathways, but requires institutional and engineering controls (9).	Protective of identified exposure pathways, but requires institutional and engineering controls (9).	Protective of identified exposure pathways, but requires institutional and engineering controls (9).
Permanence (20% Weighted Factor):	Removal of impacted soil and shallow groundwater is permanent at the Subject Property, but there is uncertainly because off-property sources remain (9).	Removal of impacted soil and shallow groundwater is permanent at the Subject Property, but there is uncertainly because off-property sources remain (9).	Removal of impacted soil and shallow groundwater is permanent at the Subject Property. Groundwater treatment provides a slight additional permanent destruction of contaminants (9).	Removal of impacted soil and shallow groundwater is permanent at the Subject Property. Groundwater treatment provides a slight additional permanent destruction of contaminants (9).
Long-Term Effectiveness (20% Weighted Factor):	Existing contamination will be removed, but relies on engineering controls (water proofing) to prevent potential new contamination from off-property sources (7).	Existing contamination will be removed, but relies on engineering controls (building design) to prevent potential new contamination from off-property sources (8).	Existing contamination will be removed, but relies on engineering controls and collection system of uncertain effectiveness to prevent potential new contamination from off-property sources (7).	Existing contamination will be removed, but relies on engineering controls and collection system of uncertain effectiveness to prevent potential new contamination from off-property sources (7).
Short-Term Risk Management (10% Weighted Factor):	Moderate risk related to construction activities. Some additional risk related to complicated excavation, shoring, and backfilling in northeast corner (6).	Moderate risk related to construction activities (8).	Moderate risk related to construction activities (8).	Moderate risk related to construction activities. Slight additional risk from construction and operation of extraction well system in right-of-way (7).
Implementability (10% Weighted Factor):	May not be implementable depending on City of Bellevue feedback regarding their easement and logistics of engineering. Requires significant planning and engineering design, and implementation of monitoring program (3).	Highest implementability, requires planning and engineering design, and implementation of monitoring program (10).	Moderate implementability, includes technical challenges associated with drainage and treatment system design, requires planning and engineering design, and implementation of monitoring program (8).	Moderate implementability, includes technical challenges associated with interception well array (e.g., physical space for wells and conveyance piping, variable volume, conductivity, and gradients) (6).
Public Concerns (10% Weighted Factor):	Potential influence on shallow groundwater zone and existing off-property plume(s) (8).	Potential influence on shallow groundwater zone and existing off-property plume(s) (8).	Potential influence on shallow groundwater zone and existing off-property plume(s) (9).	Potential influence on shallow groundwater zone and existing off-property plume(s) and disruption and inconvenience to local traffic and business during monitoring well and system installation (8).

Notes

For each evaluation criterion, technologies are ranked on a scale of **1 to 10**, with 1 representing the lowest protectiveness, permanence, effectiveness, risk management, and implementability, and greatest level of public concern.

Table 8. Remedial Alternative 1 Cost Estimate

Project No. 190298, NE 8th St and 106th Ave NE, Bellevue, Washington

Alternative 1
Subject Property Remedial Excavation and Off-Site Disposal of contaminated soil with Chemical Vapor Barrier
Feasibility Study Level (+50/-30 percent)

CAPITAL COSTS - REMEDIATION

Item	Unit	Unit Cost	Quantity	Total Cost	Notes
Remedial Excavation within Redevelopment Area					
Well decommissioning	each	$ 600	25	$ 15,000	
Soil transport and disposal[1]: Clean	ton	$ -	226,801	$ -	
Soil transport and disposal[1]: Impacted	ton	$ 32	1,883	$ 60,256	Quantity and cost based on ROM table
Soil transport and disposal[1]: Contamianted	ton	$ 56	2,442	$ 135,531	Quantity and cost based on ROM table
Soil transport and disposal[1]: CID	ton	$ 77	37,731	$ 2,905,306	Quantity and cost based on ROM table
Analytical sampling	sample	$ 500	100	$ 50,000	Assumes 90 soil samples and 10 water samples
Shoring to case piles on western sidewall	each	$ 1,250	24	$ 30,000	
Temporary and Permanent Drainage[2]	LS	$ 200,000	1	$ 200,000	Estimated based on additional engineering required
Subtotal Remedial Excavation within Redevelopment Area				*$ 3,396,093*	
Remedial Excavation in the Northwest Corner					
Soil transport and disposal: Clean	ton	$ 30	1,516	$ 45,480	
Soil transport and disposal: CID	ton	$ 90	3,715	$ 334,350	
Shoring	sf	$ 90	5,037	$ 453,330	Includes placement and removal. I added 75% to unit cost for removal.
Backfill with CDF	tons	$ 306	5,231	$ 1,600,686	
Additional Engineering, Construction, and Coordina	LS	$ 250,000	250,000	$ 250,000	
Coordination with City of Bellevue[3]	LS	$ 50,000	1	$ 50,000	
Subtotal Remedial Excavation in the Northwest Corner				*$ 2,733,846*	
Chemical Vapor Barrier, Institutional Controls, Replacement MWs					
Chemical vapor barrier[4]	sf	$ 18	115,890	$ 2,086,020	
Institutional Controls[5]	LS	$ 100,000	1	$ 100,000	
Replacement Monitoring Wells	LS	$ 60,000	1	$ 60,000	2 deep wells and 2 shallow wells; ROW permitting for 1 shallow wells
SubtotalChemical Vapor Barrier, Institutional Controls, Replacement MWs				*$ 2,246,020*	
Taxes (Contractor)			10.1%	*$ 845,972*	
Remedial Design, Field Oversight, Report (Consultant)			20%	*$ 1,675,192*	
Construction Management (Contractor)			10%	*$ 837,596*	
Capital Costs Subtotal				$ 11,734,719	
Contingency (Scope and Bid Uncertainty)			*20%*	*$ 2,346,944*	
ESTIMATED CAPITAL COSTS - REMEDIATION				**$ 14,081,663**	

COMPLIANCE GROUNDWATER MONITORING

Item	Quantity	Unit	Unit Cost	Total Cost	Notes
Compliance Monitoring (GW Sampling of 6 wells quarterly for 1 year)					
Groundwater Sampling	4	event	$ 20,000	$ 80,000	
Evaluation and Reporting	4	event	$ 20,000	$ 80,000	
Subtotal Compliance Monitoring (GW Sampling of 6 wells quarterly for 1 year)				*$ 160,000*	
Project Management			10.0%	*$ 16,000*	
ESTIMATED COMPLIANCE GROUNDWATER MONITORING				**$ 176,000**	
TOTAL ESTIMATED COST				**$ 14,258,000**	

Notes

(1) Soil handling volumes from 2020 ROM. FS includes additional costs beyond typical construction costs for removing clean soil.

(2) Based on Sellen Construction's cost estimate for collect and dispose of contaminated water and plugging and capping temporary drainage ports on the north and west walls

(3) Coordination with City related to easements in the upper 25 feet bgs (approximate elevation 134 NAVD88)

(4) Assumes Prepruf 160R and 300R.

(5) Institutional Controls may include environmental covenants and/or engineering controls.

Sales tax has been excluded from this estimate

Table 9. Remedial Alternative 2 Cost Estimate

Project No. 190298, NE 8th St and 106th Ave NE, Bellevue, Washington

Alternative 2
Redevelopment Footprint Remedial Excavation to Elevation 91 and Off-Site Disposal of contaminated soil with Chemical Vapor Barrier
Feasibility Study Level (+50/-30 percent)

CAPITAL COSTS - REMEDIATION

Item	Unit	Unit Cost	Quantity	Total Cost	Notes
Remedial Excavation to Elevation 91					
Well decommissioning	each	$ 600	25	$ 15,000	
Soil transport and disposal[1]: Clean	ton	$ -	226,801	$ -	Included in standard construction costs
Soil transport and disposal[1]: Impacted	ton	$ 32	1,783	$ 57,056	Quantity and cost based on ROM table
Soil transport and disposal[1]: Contamianted	ton	$ 56	2,442	$ 135,531	Quantity and cost based on ROM table
Soil transport and disposal[1]: CID	ton	$ 77	37,375	$ 2,877,875	Quantity and cost based on ROM table
Analytical sampling	sample	$ 500	100	$ 50,000	Assumes 90 soil samples and 10 water samples
Shoring to case piles on western sidewall	each	$ 1,250	24	$ 30,000	
Temporary and Permanent Drainage[2]	LS	$ 100,000	1	$ 100,000	
Subtotal Remedial Excavation to Elevation 91				*$ 3,265,462*	
Chemical Vapor Barrier, Institutional Controls, Replacement MWs					
Chemical vapor barrier[3]	sf	$ 10	115,890	$ 1,158,900	
Institutional Controls[4]	LS	$ 100,000	1	$ 100,000	
Replacement Monitoring Wells	LS	$ 60,000	1	$ 60,000	2 deep wells and 2 shallow wells; ROW permitting for 1 shallow wells
SubtotalChemical Vapor Barrier, Institutional Controls, Replacement MWs				*$ 1,318,900*	
Taxes (Contractor)			10.1%	*$ 463,021*	
Remedial Design, Field Oversight, Report (Consultant)			20%	*$ 916,872*	
Construction Management (Contractor)			6%	*$ 275,062*	
Capital Costs Subtotal				$ 6,239,317	
Contingency (Scope and Bid Uncertainty)			*20%*	*$ 1,247,863*	
ESTIMATED CAPITAL COSTS - REMEDIATION				**$ 7,487,180**	

COMPLIANCE GROUNDWATER MONITORING

Item	Quantity	Unit	Unit Cost	Total Cost	Notes
Compliance Monitoring (GW Sampling of 6 wells quarterly for 1 year)					
Groundwater Sampling	4	event	$ 20,000	$ 80,000	
Evaluation and Reporting	4	event	$ 20,000	$ 80,000	
Subtotal Compliance Monitoring (GW Sampling of 6 wells quarterly for 1 year)				*$ 160,000*	
Project Management			10.0%	*$ 16,000*	
ESTIMATED COMPLIANCE GROUNDWATER MONITORING				**$ 176,000**	
TOTAL ESTIMATED COST				**$ 7,664,000**	

Notes

(1) Soil handling volumes from 2020 ROM. FS includes additional costs beyond typical construction costs for removing clean soil.

(2) Based on Sellen Construction's cost estimate for collect and dispose of contaminated water and plugging and capping temporary drainage ports on the north and west walls

(3) Assumes Prepruf 160R and 300R.

(4) Institutional Controls may include environmental covenants and/or engineering controls.

Sales tax has been excluded from this estimate

Table 10. Remedial Alternative 3 Cost Estimate

Project No. 190298, NE 8th St and 106th Ave NE, Bellevue, Washington

Alternative 3
Alternative 2 with the addition of
Groundwater Collection via Subsurface Wall Drains and On-Site Treatment System with Permitted Discharge
Feasibility Study Level (+50/-30 percent)

CAPITAL COSTS - REMEDIATION

Item	Unit	Unit Cost	Quantity	Total Cost	Notes
Remedial Excavation within Redevelopment Area					
Well decommissioning	each	$ 600	25	$ 15,000	
Soil transport and disposal[1]: Clean	ton	$ -	226,801	$ -	Included in standard construction costs
Soil transport and disposal[1]: Impacted	ton	$ 32	1,783	$ 57,056	Quantity and cost based on ROM table
Soil transport and disposal[1]: Contamianted	ton	$ 56	2,442	$ 135,531	Quantity and cost based on ROM table
Soil transport and disposal[1]: CID	ton	$ 77	37,375	$ 2,877,875	Quantity and cost based on ROM table
Analytical sampling	sample	500	100	$ 50,000	Assumes 90 soil samples and 10 water samples
Temporary Drainage[2]	LS	$ 50,000	1	$ 50,000	
Shoring to case piles on western sidewall	each	1,250	24	$ 30,000	
Subtotal Remedial Excavation within Redevelopment Area				*$ 3,215,462*	
Engineering Controls for Management of Contaminated Shallow Groundwater					
Installation of Subsurface Wall Drains	LS	$ 200,000	1	$ 200,000	
SubtotalEngineering Controls for Management of Contaminated Shallow Groundwater				*$ 200,000*	
Chemical Vapor Barrier, Institutional Controls, Replacement MWs					
Chemical vapor barrier[3]	sf	$ 10	115,890	$ 1,158,900	
Institutional Controls[4]	LS	$ 150,000	1	$ 150,000	
Replacement Monitoring Wells	LS	$ 60,000	1	$ 60,000	2 deep wells and 2 shallow wells; ROW permitting for 1 shallow wells
SubtotalChemical Vapor Barrier, Institutional Controls, Replacement MWs				*$ 1,368,900*	
Taxes (Contractor)			10.1%	*$ 483,221*	
Remedial Design, Field Oversight, Report (Consultant)			20%	*$ 956,872*	
Construction Management (Contractor)			6%	*$ 287,062*	
Capital Costs Subtotal				$ 6,511,517	
Contingency (Scope and Bid Uncertainty)			*20%*	*$ 1,302,303*	
ESTIMATED CAPITAL COSTS - REMEDIATION				**$ 7,813,820**	

COMPLIANCE GROUNDWATER MONITORING

Item	Quantity	Unit	Unit Cost	Total Cost	Notes
Compliance Monitoring (GW Sampling of 6 wells quarterly for 1 year)					
Groundwater Sampling	4	event	$ 20,000	$ 80,000	
Evaluation and Reporting	4	event	$ 20,000	$ 80,000	
Subtotal Compliance Monitoring (GW Sampling of 6 wells quarterly for 1 year)				*$ 160,000*	
Compliance Operation and Monitoring of Treatment System					
Treatment System Monitoring (Monthly)[5]	30	year	$ 60,000	$ 1,800,000	Includes monthly discharge waste reporting
Evaluation and Reporting	30	year	$ 10,000	$ 300,000	
Subtotal Compliance Operation and Monitoring of Treatment System				*$ 2,100,000*	
Project Management			10.0%	*$ 226,000*	
ESTIMATED COMPLIANCE GROUNDWATER MONITORING				**$ 2,486,000**	
TOTAL ESTIMATED COST				**$ 10,300,000**	

Notes

(1) Soil handling volumes from 2020 ROM. FS includes additional costs beyond typical construction costs for removing clean soil.

(2) Based on Sellen Construction's cost estimate for collect and dispose of contaminated water and plugging and capping temporary drainage ports on the north and west walls

(3) Assumes Prepruf 160R and 300R.

(4) Institutional Controls may include environmental covenants and/or engineering controls.

(5) Operation of the treatment system for 30 years based on estimated restoration timeframe for upgradient plume.

Sales tax has been excluded from this estimate

Table 11. Remedial Alternative 4 Cost Estimate

Project No. 190298, NE 8th St and 106th Ave NE, Bellevue, Washington

Alternative 4

Alternative 2 with the addition of Active Groundwater Collection via Pumping Wells and On-Site Treatment System with Permitted Discharge

Feasibility Study Level (+50/-30 percent)

CAPITAL COSTS - REMEDIATION

Item	Unit	Unit Cost	Quantity	Total Cost	Notes
Remedial Excavation to Elevation 91					
Well decommissioning	each	$ 600	25	$ 15,000	
Soil handling[1]: Clean	ton	$ -	226,801	$ -	Included in standard construction costs
Soil handling[1]: Impacted	ton	$ 32	1,783	$ 57,056	Quantity and cost based on ROM table
Soil handling[1]: Contamianted	ton	$ 56	2,442	$ 135,531	Quantity and cost based on ROM table
Soil handling[1]: CID	ton	$ 77	37,375	$ 2,877,875	Quantity and cost based on ROM table
Analytical sampling	sample	500	100	$ 50,000	Assumes 90 soil samples and 10 water samples
Shoring to case piles on western sidewall	each	$ 1,250	24	$ 30,000	
Temporary and Permanent Drainage[2]	LS	$ 100,000	1	$ 100,000	
Subtotal Remedial Excavation to Elevation 91				*$ 3,265,462*	
Engineering Controls for Management of Contaminated Shallow Groundwater					
Shallow Extraction Wells & Conveyance[5]	LS	$ 230,000	1	$ 230,000	9 extractions well
IDW Management and Disposal	LS	$ 33,000	1	$ 33,000	
SubtotalEngineering Controls for Management of Contaminated Shallow Groundwater				*$ 263,000*	
Chemical Vapor Barrier, Institutional Controls, Replacement MWs					
Chemical vapor barrier[3]	sf	$ 10	115,890	$ 1,158,900	
Institutional Controls[4]	LS	$ 100,000	1	$ 100,000	
Replacement Monitoring Wells	LS	$ 60,000	1	$ 60,000	2 deep wells and 2 shallow wells; ROW permitting for 1 shallow wells
SubtotalChemical Vapor Barrier, Institutional Controls, Replacement MWs				*$ 1,318,900*	
Taxes (Contractor)			10.1%	*$ 463,021*	
Remedial Design, Field Oversight, Report (Consultant)			20%	*$ 969,472*	
Construction Management (Contractor)			6%	*$ 275,062*	
Capital Costs Subtotal				$ 6,554,917	
Contingency (Scope and Bid Uncertainty)			*20%*	*$ 1,310,983*	
ESTIMATED CAPITAL COSTS - REMEDIATION				**$ 7,865,900**	

COMPLIANCE GROUNDWATER MONITORING

Item	Quantity	Unit	Unit Cost	Total Cost	Notes
Compliance Monitoring (GW Sampling of 6 wells quarterly for 1 year)					
Groundwater Sampling	4	event	$ 20,000	$ 80,000	
Evaluation and Reporting	4	event	$ 20,000	$ 80,000	
Subtotal Compliance Monitoring (GW Sampling of 6 wells quarterly for 1 year)				*$ 160,000*	
Compliance Operation and Monitoring of Treatment System					
Treatment System Monitoring (Monthly)[6]	30	year	$ 72,000	$ 2,160,000	Includes monthly discharge waste reporting
Evaluation and Reporting	30	year	$ 10,000	$ 300,000	
Subtotal Compliance Operation and Monitoring of Treatment System				*$ 2,460,000*	
Project Management			10.0%	*$ 262,000*	
ESTIMATED COMPLIANCE GROUNDWATER MONITORING				**$ 2,882,000**	
TOTAL ESTIMATED COST				**$ 10,748,000**	

Notes

(1) Soil handling volumes from 2020 ROM. FS includes additional costs beyond typical construction costs for removing clean soil.

(2) Based on Sellen Construction's cost estimate for collect and dispose of contaminated water and plugging and capping temporary drainage ports on the north and west walls

(3) Assumes Prepruf 160R and 300R.

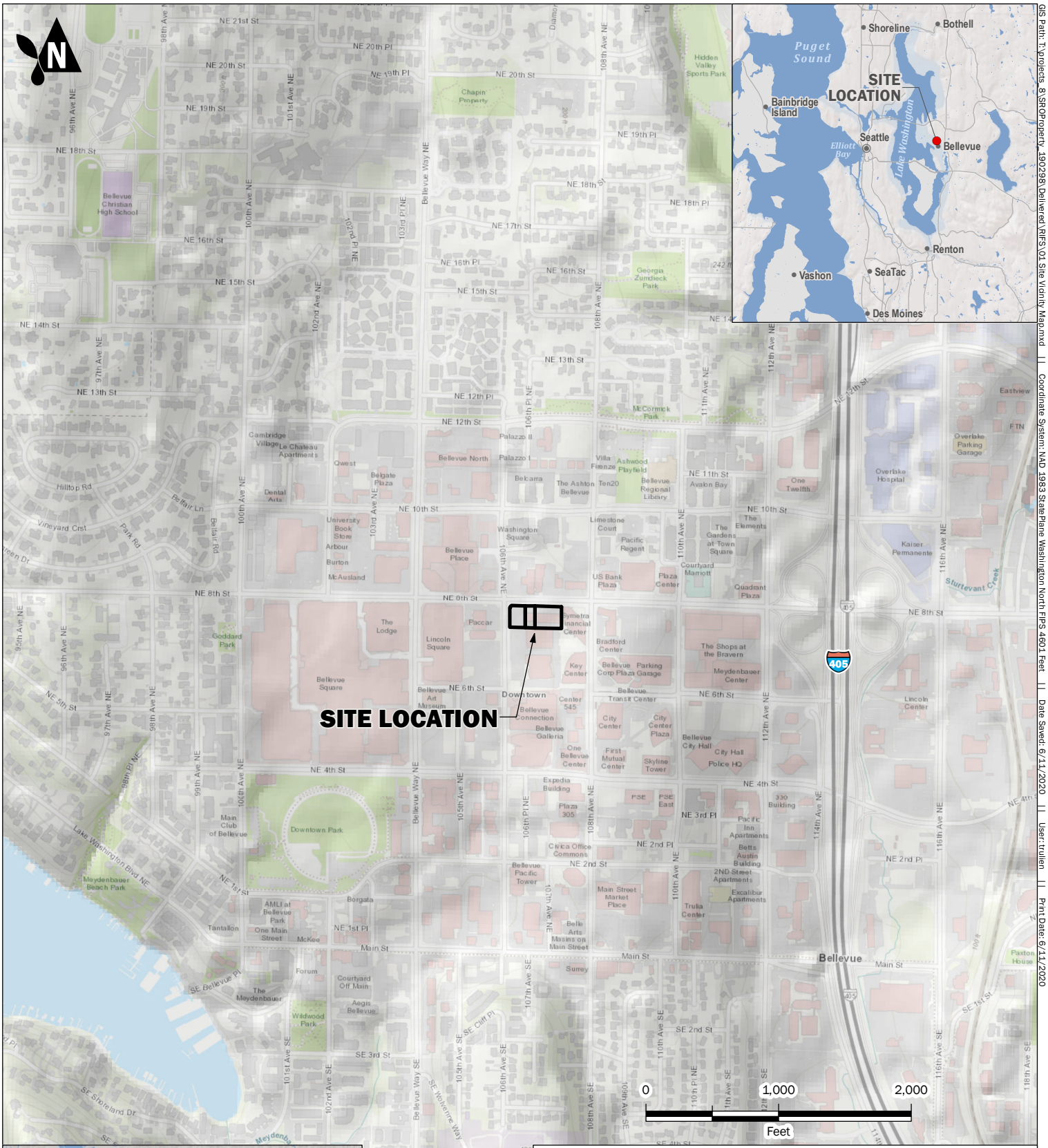
(4) Institutional Controls may include environmental covenants and/or engineering controls.

(5) Includes system installation and assocaited ROW permitting and reporting.

(6) Operation of the treatment system for 30 years based on estimated restoration timeframe for upgradient plume.

Sales tax has been excluded from this estimate

FIGURES



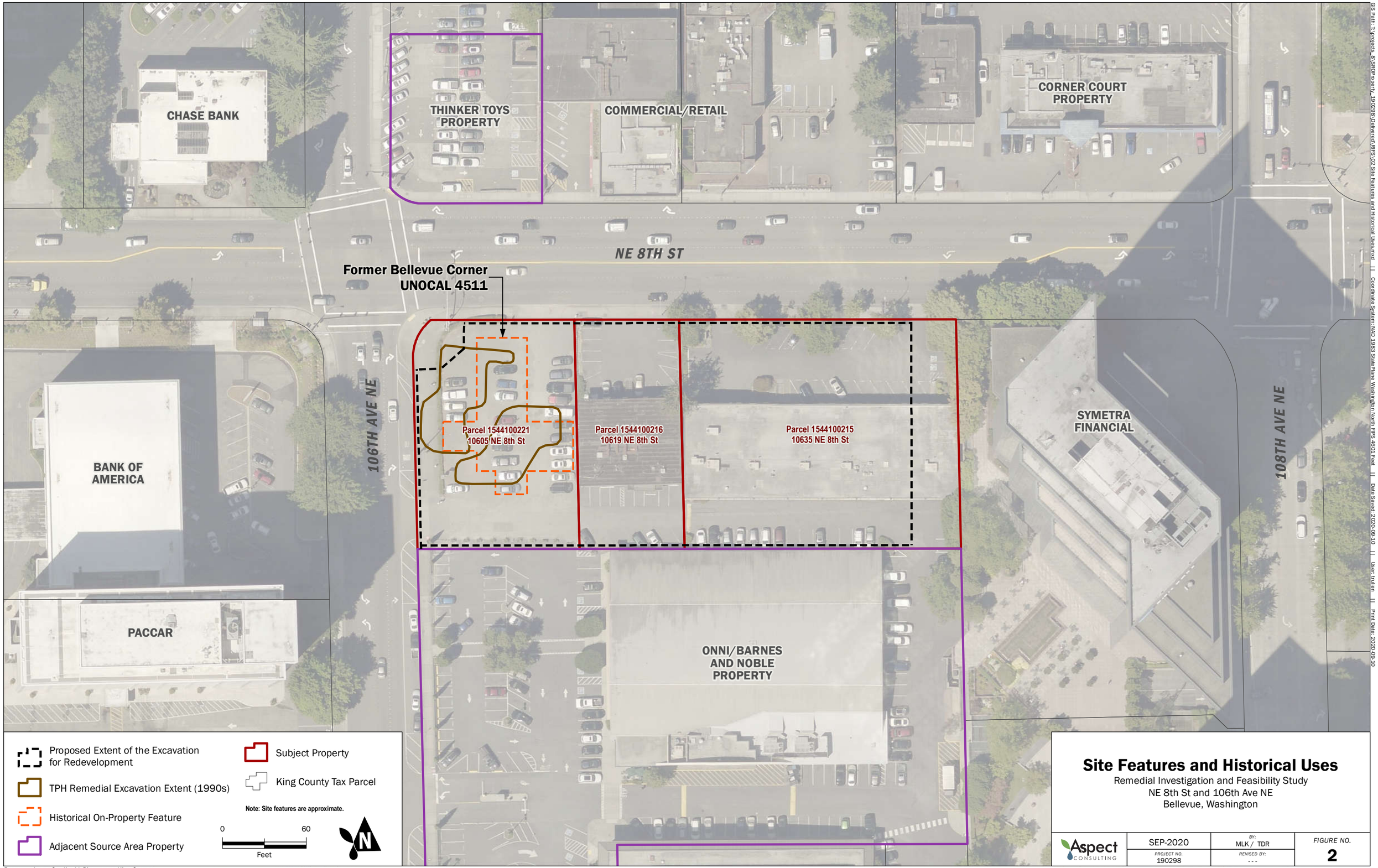
Site Vicinity Map

Remedial Investigation and Feasibility Study
NE 8th St and 106th Ave NE
Bellevue, Washington

Aspect CONSULTING	JUN-2020	BY: MLK / TDR	FIGURE NO. 1
	PROJECT NO. 190298	REVISED BY: ---	

Basemap Layer Credits || Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

GIS Path: T:\projects_8\SROP\property_190298\Delivered\RIFS\01 Site Vicinity Map.mxd || Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet || Date Saved: 6/11/2020 || User: trullen || Print Date: 6/11/2020



Basemap Layer Credits || Pictometry, King County

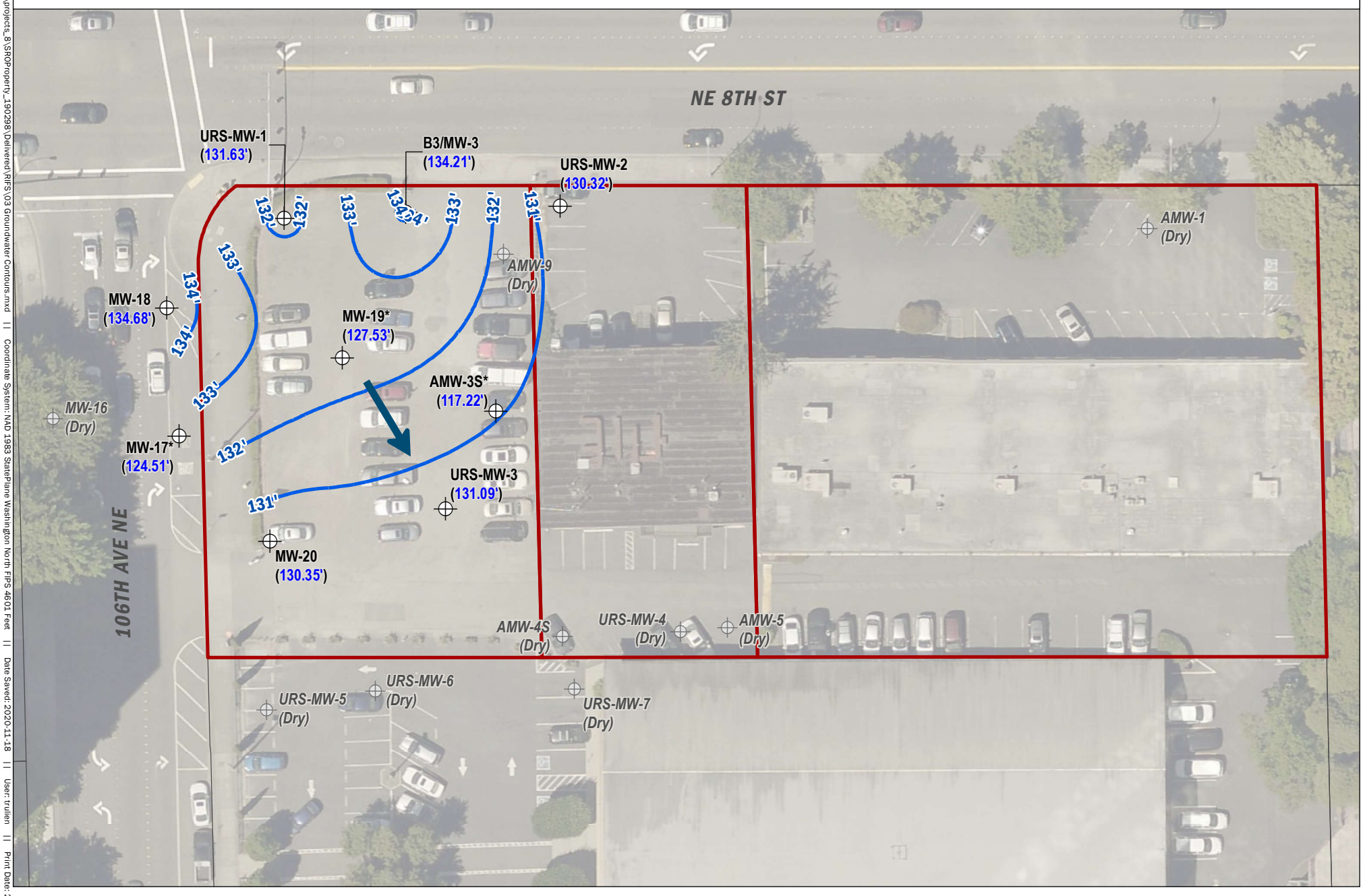
Site Features and Historical Uses

Remedial Investigation and Feasibility Study
NE 8th St and 106th Ave NE
Bellevue, Washington

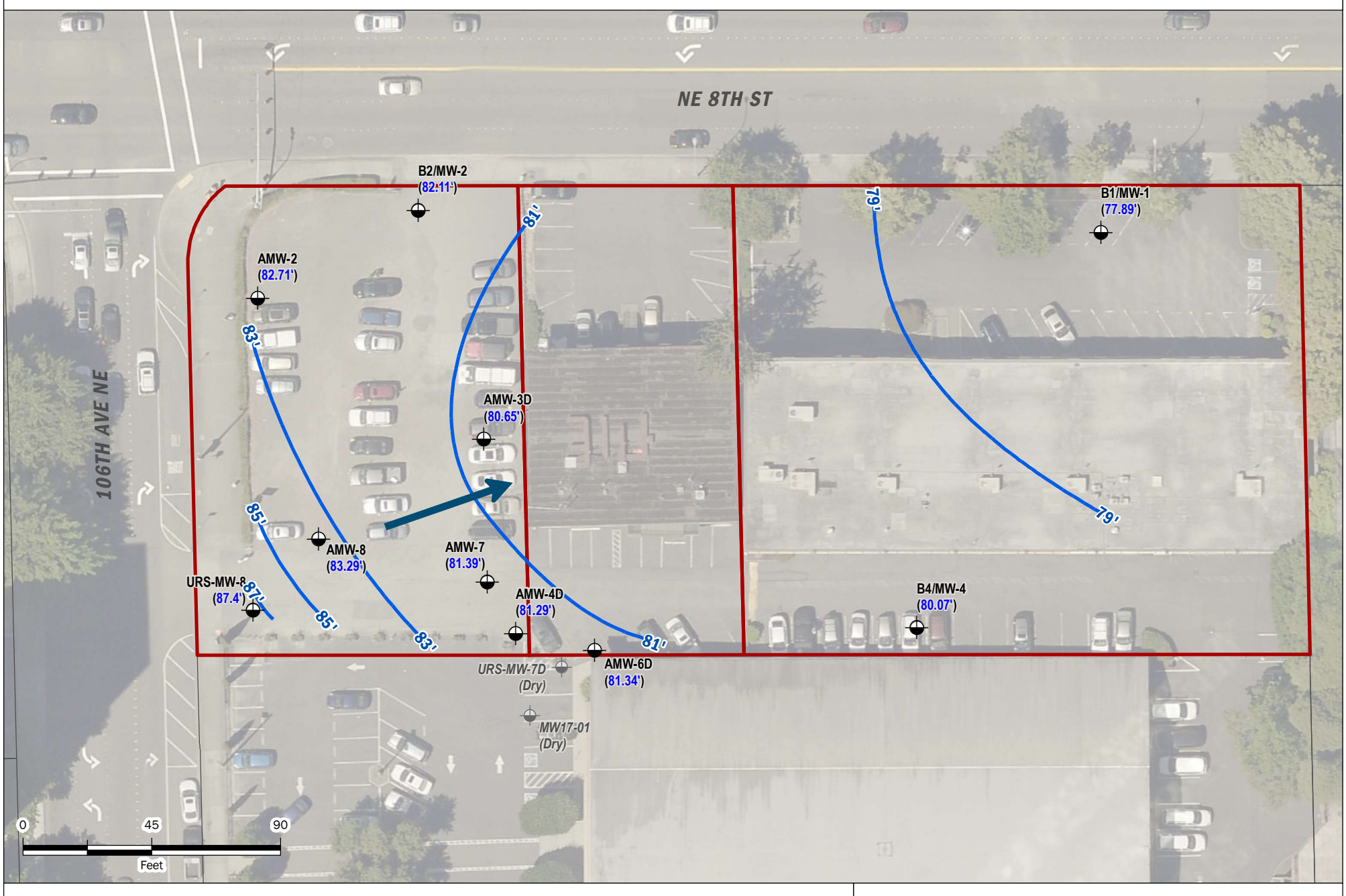
Aspect CONSULTING	SEP-2020	BY: MLK / TDR	FIGURE NO. 2
	PROJECT NO. 190298	REVISED BY: ---	

GIS Path: T:\projects_8\SR0\Property_190298\Darkwire\RIFS\02 Site Features and Historical Uses.mxd || Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet || Date Saved: 2020-09-10 || User: tullen || Print Date: 2020-09-10

SHALLOW GROUNDWATER CONTOURS, NOVEMBER 2020 (134 to 130 FT MSL)



DEEP GROUNDWATER CONTOURS, NOVEMBER 2020 (83 to 80 FT MSL)



Shallow Monitoring Well

Deep Monitoring Well

Shallow Monitoring Well Not Sampled Not Sampled or Dry in July 2020

Deep Monitoring Well Not Sampled Not Sampled or Dry in July 2020

Interpreted Groundwater Flow Direction

Groundwater Contour Line (dashed where inferred)

Subject Property

King County Tax Parcel

Exploration name
MW-18
(134.68')
Groundwater Elevation (msl)

Notes:
1) Site features are approximate.
*Groundwater elevation not used in contour interpretation.

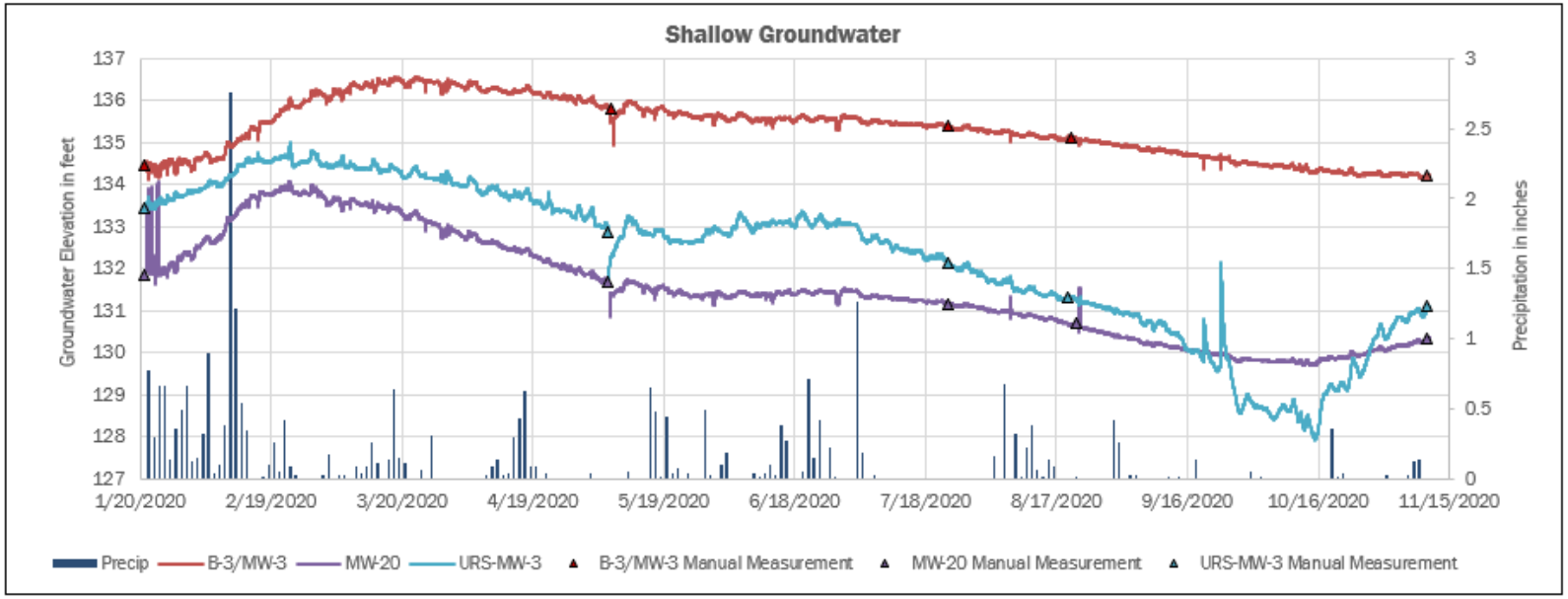
msl = Mean sea level

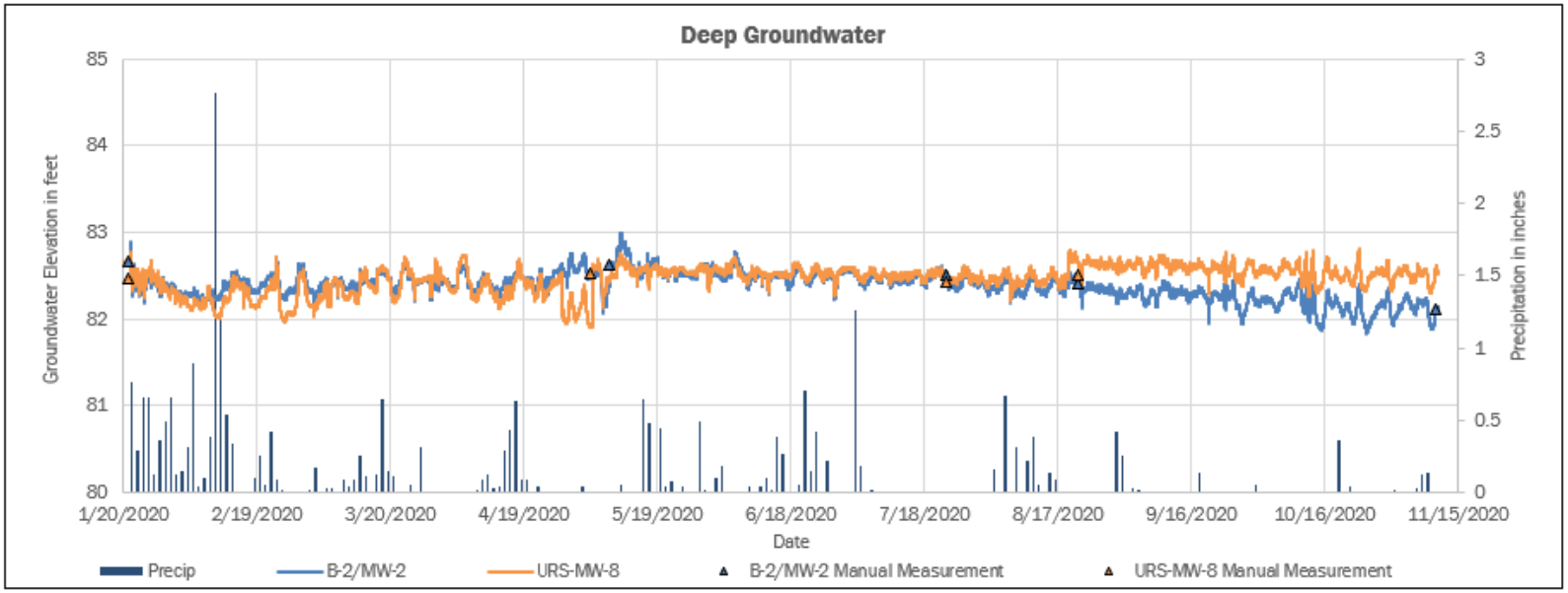
Groundwater Contour Map

Remedial Investigation and Feasibility Study
NE 8th St and 106th Ave NE
Bellevue, Washington

Aspect Consulting	NOV-2020	BY: MLK / TDR	FIGURE NO. 3
	PROJECT NO. 190298	REVISED BY: MLK / WEG	

Basemap Layer Credits || Pictometry, King County





Shallow and Deep Groundwater Hydrographs

Remedial Investigation and Feasibility Study
NE 8th St and 106th Ave NE
Bellevue, Washington

Aspect Consulting	NOV-2020	BY: ALC	FIGURE NO. 3b
	PROJECT NO. 190298	REVISED BY: ---	

THINKER TOYS PROPERTY

NE 8TH ST

106TH AVE NE

SYMETRA FINANCIAL

ONNI/BARNES AND NOBLE PROPERTY

Parcel 1544100216
10619 NE 8th St

Parcel 1544100215
10635 NE 8th St

Parcel 1544100221
10605 NE 8th St

170'
165'
160'
155'
175'
180'

A
A'
B
B'

AB-1
AB-2
AB-3
AB-4
AB-5 (AMW-6S)
AMW-1
AMW-2
AMW-3D
AMW-3S
AMW-4S
AMW-4D
AMW-5
AMW-6D
AMW-7
AMW-8
AMW-9
ASG-1
ASG-2
ASG-3
ASG-4
ASG-5
ASG-6
ASG-7
ASG-8
B1/MW-1
B2/MW-2
B3/MW-3
B4/MW-4
HC-1
HC-2
HC-3
MW-16
MW-17
MW-18
MW-19
MW-20
MW17-01
SRO-1
SRO-2
SRO-3
SRO-4
SRO-5
SRO-6
SRO-7
SRO-8
SRO-9
SRO-10
SRO-11
SRO-12
SRO-13
SRO-14
SRO-15
SRO-16
SRO-17
SRO-18
SRO-19
SRO-20
SRO-21
URS-MW-1
URS-MW-2
URS-MW-3
URS-MW-4
URS-MW-5
URS-MW-6
URS-MW-7
URS-MW-7D
URS-MW-8/SB-11
URS-SB-1
URS-SB-2
URS-SB-3
URS-SB-4
URS-SB-8
URS-SB-9
URS-SB-10
URS-SB-12
URS-SB-13
URS-SB-14
URS-SB-15
URS-SB-17
URS-SB-21
URSSB-OP1
URSSB-OP2
URSSB-OP3
URSSB-OP4
URSSB-OP5
URSSB-OP6
URSSB-OP7
URSSB-OP8

Aspect RI Exploration (May 2020)
- Monitoring Well
- Soil Gas Sample Location
- Soil Boring

Historical Exploration
- Shallow Monitoring Well
- Deep Monitoring Well
- Soil Boring
- CrossSection

- 5-ft Ground Surface Contour Line
- 1-ft Ground Surface Contour Line
- Subject Property
- King County Tax Parcel

Notes:
1) Site features are approximate.
2) Contour lines created from King County 2016 lidar dataset from DNR Lidar Portal.
3) Historical features were installed by others from 2000 to 2011.

bgs = Below ground surface

0 40
Feet

N

Exploration Locations

Remedial Investigation and Feasibility Study
NE 8th St and 106th Ave NE
Bellevue, Washington

Aspect CONSULTING	JUN-2020	BY: MLK / TDR	FIGURE NO. 4
	PROJECT NO. 190298	REVISED BY: WEG	

Basemap Layer Credits || Pictometry, King County

GIS Path: T:\projects_8\SRO\Property_190298\Darkwire\RIFS\04 Exploration Locations.mxd || Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet || Date Saved: 2020-06-30 || User: tdullen || Print Date: 2020-06-30

TPH concentration exceeds the MTCA Method A cleanup level for gasoline and/or oil-range hydrocarbons.

TPH concentration less than the MTCA Method A cleanup level for gasoline, diesel, and/or oil-range hydrocarbons.

TPH not detected.

TPH Remedial Excavation Extent (1990s)

Proposed Extent of the Excavation for Redevelopment

Catch Basin

Manhole

Subject Property

King County Tax Parcel

Notes:

1) Site features are approximate.
2) Includes historical data from others collected between 2000 and 2011.
3) Only select catch basins and manholes are depicted
TPH = Total petroleum hydrocarbons
4) Only explorations with TPH results are included on this figure.

MTCA = Model Toxics Cleanup Act
TPH = Total petroleum hydrocarbons

N

0 30

Feet

TPH Concentrations in Soil

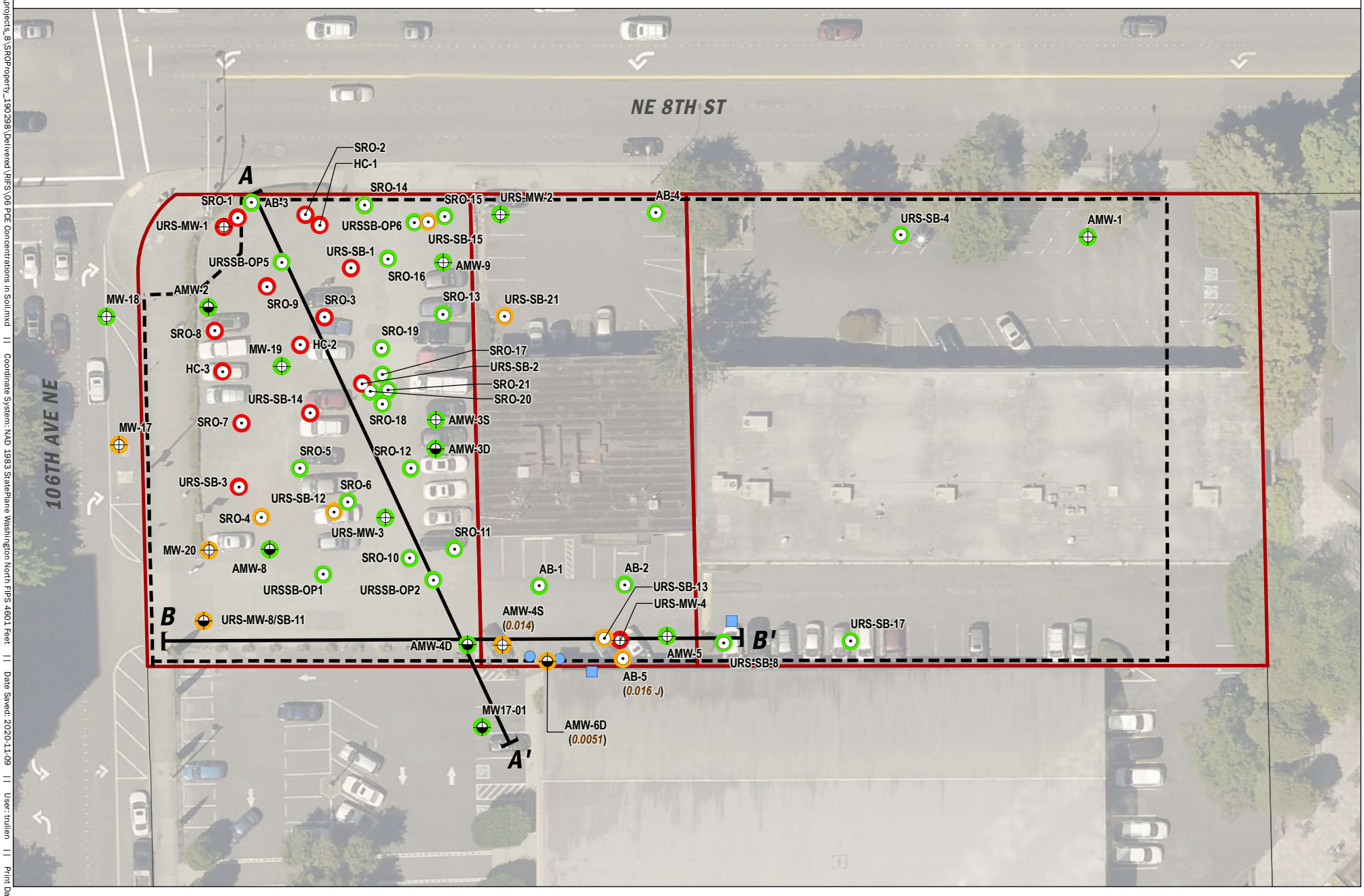
Remedial Investigation and Feasibility Study
NE 8th St and 106th Ave NE
Bellevue, Washington

Aspect Consulting	NOV-2020	BY: MLK / TDR	FIGURE NO. 5
	PROJECT NO. 190298	REVISED BY: WEG	

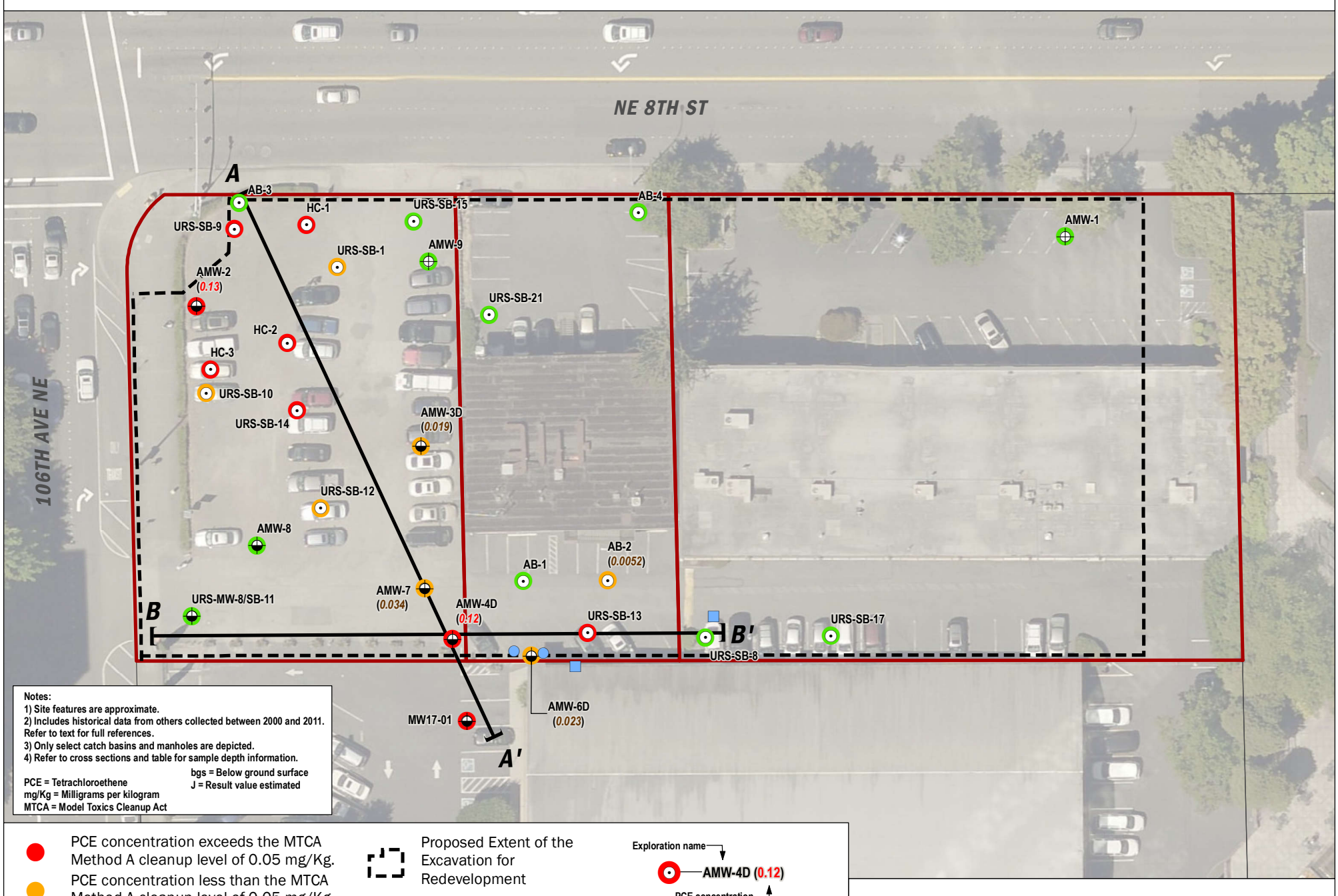
Basemap Layer Credits || Pictometry, King County

GIS Path: T:\projects_8\SROProperty_190298\Deliverables\RIFS\05 TPH Concentrations in Soil.mxd || Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet || Date Saved: 2020-11-09 || User: tsullen || Print Date: 2020-11-09

PCE IN SHALLOW SOIL (0 TO 40 FT BGS)



PCE IN DEEP SOIL (>40 FT BGS)



Notes:
1) Site features are approximate.
2) Includes historical data from others collected between 2000 and 2011. Refer to text for full references.
3) Only select catch basins and manholes are depicted.
4) Refer to cross sections and table for sample depth information.

PCE = Tetrachloroethene
mg/Kg = Milligrams per kilogram
MTCA = Model Toxics Cleanup Act
bgs = Below ground surface
J = Result value estimated

- PCE concentration exceeds the MTCA Method A cleanup level of 0.05 mg/Kg.
- PCE concentration less than the MTCA Method A cleanup level of 0.05 mg/Kg.
- PCE not detected.
- Monitoring Well
- Deep Monitoring Well
- Soil Boring
- Cross Section
- Proposed Extent of the Excavation for Redevelopment
- Catch Basin
- Manhole
- Subject Property
- King County Tax Parcel

Exploration name → AMW-4D (0.12) ← PCE concentration in mg/Kg

N

0 45
Feet

PCE Concentrations in Soil

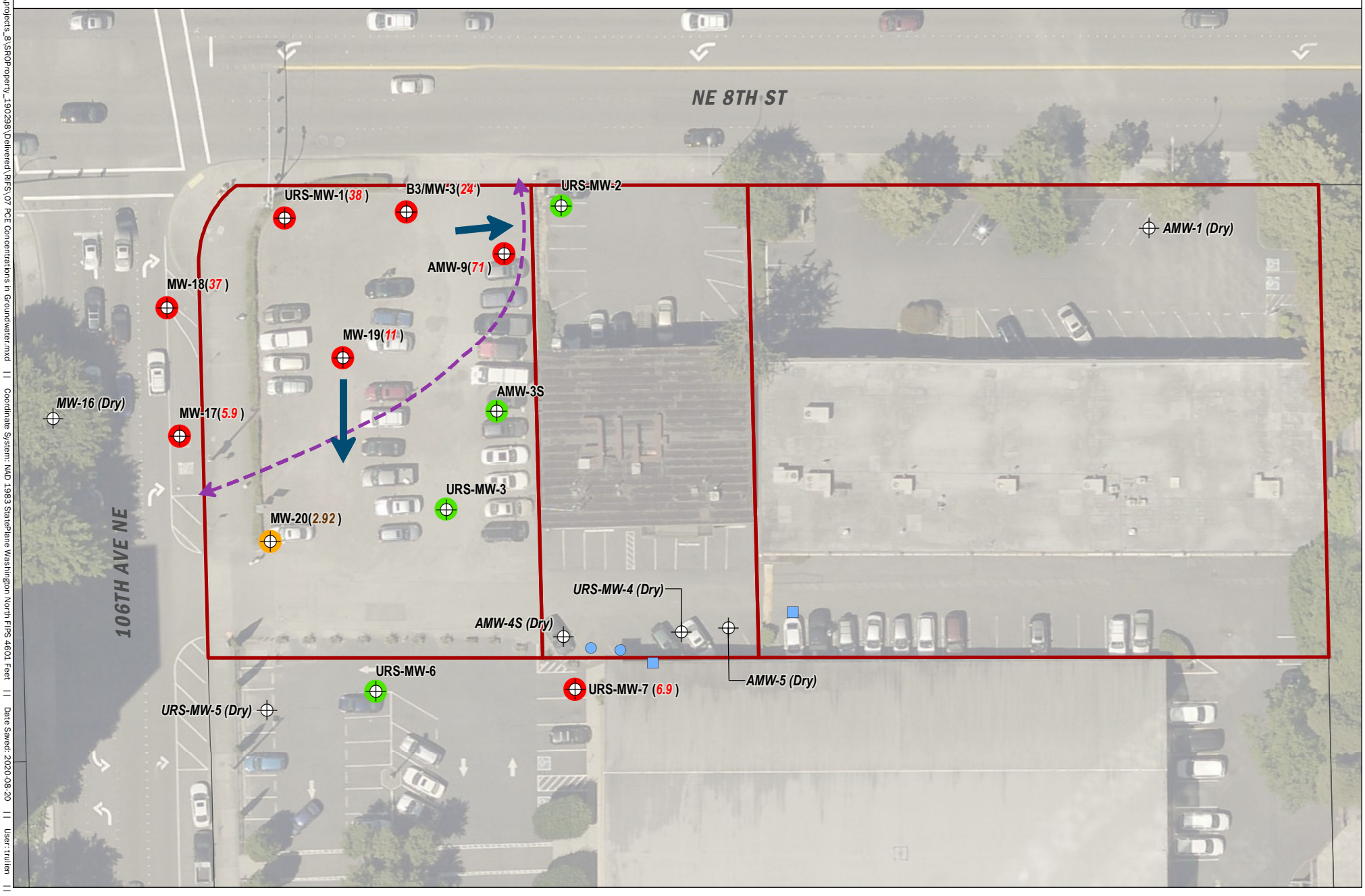
Remedial Investigation and Feasibility Study
NE 8th St and 106th Ave NE
Bellevue, Washington

Aspect Consulting	NOV-2020	BY: MLK / TDR	FIGURE NO. 6
	PROJECT NO. 190298	REVISED BY: WEG	

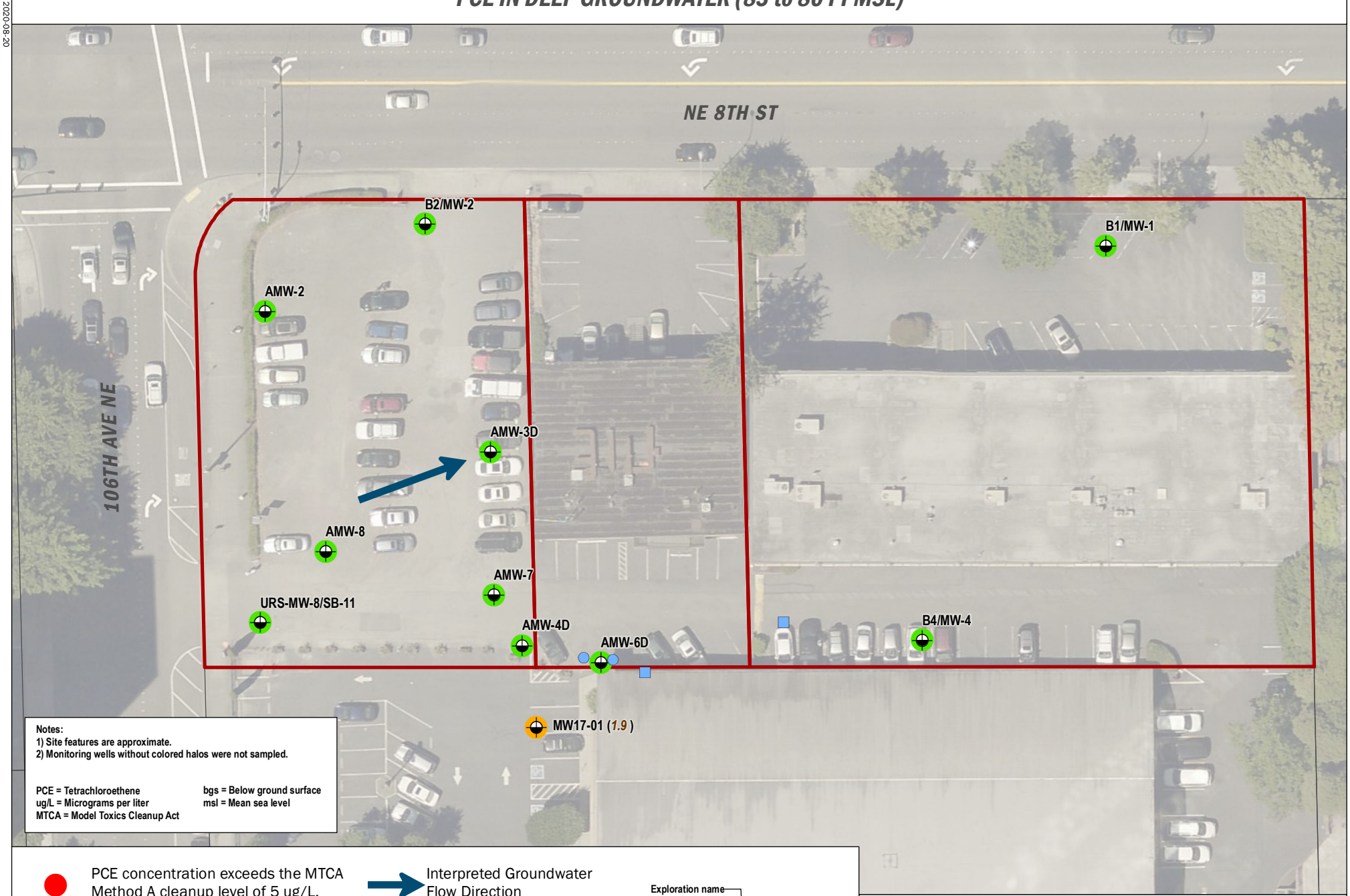
Basemap Layer Credits || Pictometry, King County

GIS Path: T:\projects_8\SRProperty_190298\Delivered\RIFS\07 PCE Concentrations in Groundwater.mxd || Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet || Date Saved: 2020-08-20 || User: ttullen || Print Date: 2020-08-20

PCE IN SHALLOW GROUNDWATER (134 to 130 FT MSL)



PCE IN DEEP GROUNDWATER (83 to 80 FT MSL)



Notes:
1) Site features are approximate.
2) Monitoring wells without colored halos were not sampled.

PCE = Tetrachloroethene
ug/L = Micrograms per liter
MTCA = Model Toxics Cleanup Act
bgs = Below ground surface
msl = Mean sea level

- PCE concentration exceeds the MTCA Method A cleanup level of 5 ug/L.
- PCE concentration less than the MTCA Method A cleanup level of 5 ug/L.
- PCE not detected.
- Monitoring Well
- Deep Monitoring Well
- Interpreted Extent of MTCA Exceedances in Groundwater (Thinker Toys Release)
- Interpreted Groundwater Flow Direction
- Catch Basin
- Manhole
- Subject Property
- King County Tax Parcel

Exploration name — MW-19 (31) — PCE concentration in mg/Kg

0 45
Feet

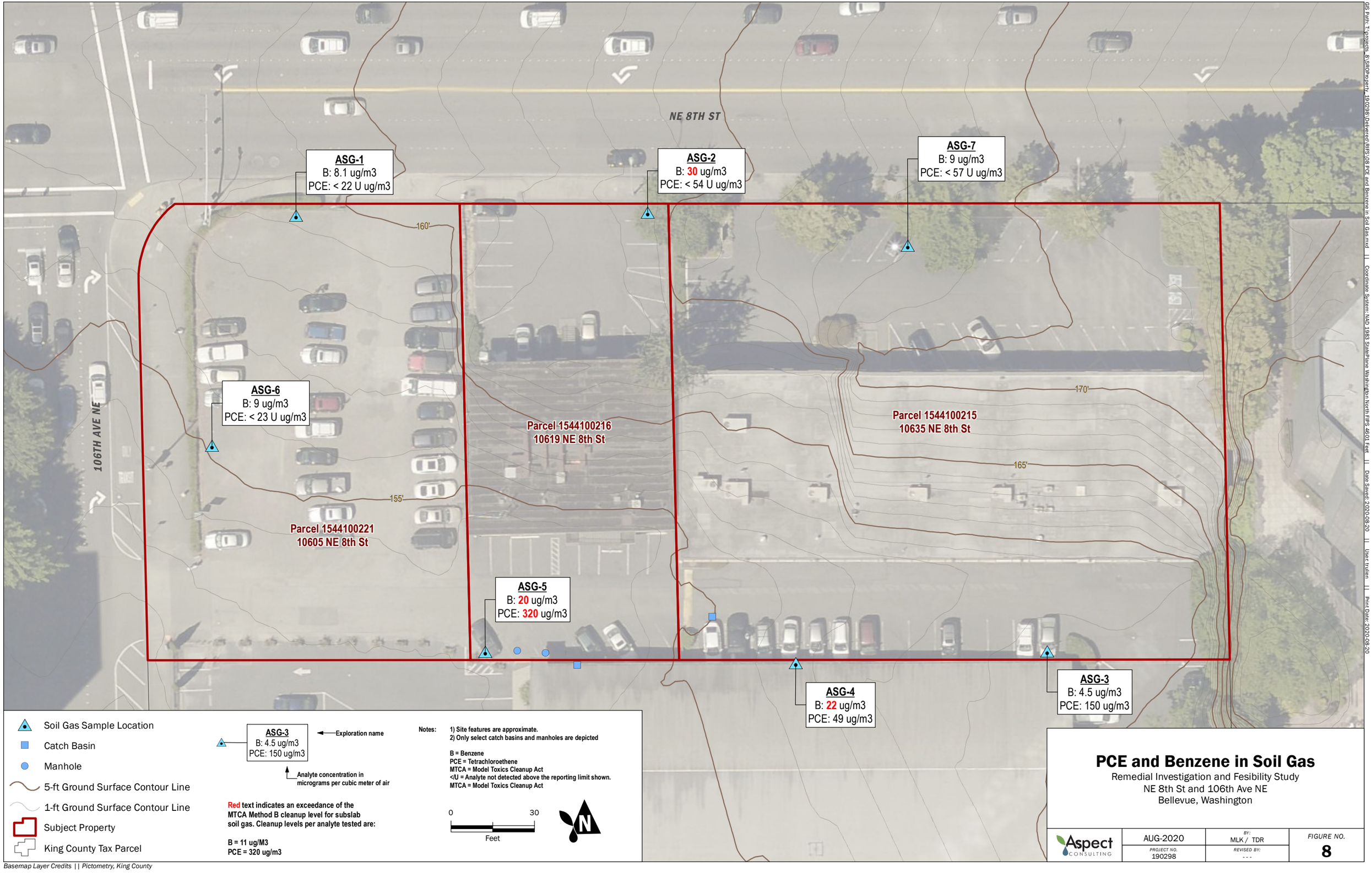
N

PCE Concentrations in Groundwater

Remedial Investigation and Feasibility Study
NE 8th St and 106th Ave NE
Bellevue, Washington

Aspect Consulting	AUG-2020	BY: MLK / TDR	FIGURE NO. 7
	PROJECT NO. 190298	REVISED BY: WEG	

Basemap Layer Credits || Pictometry, King County

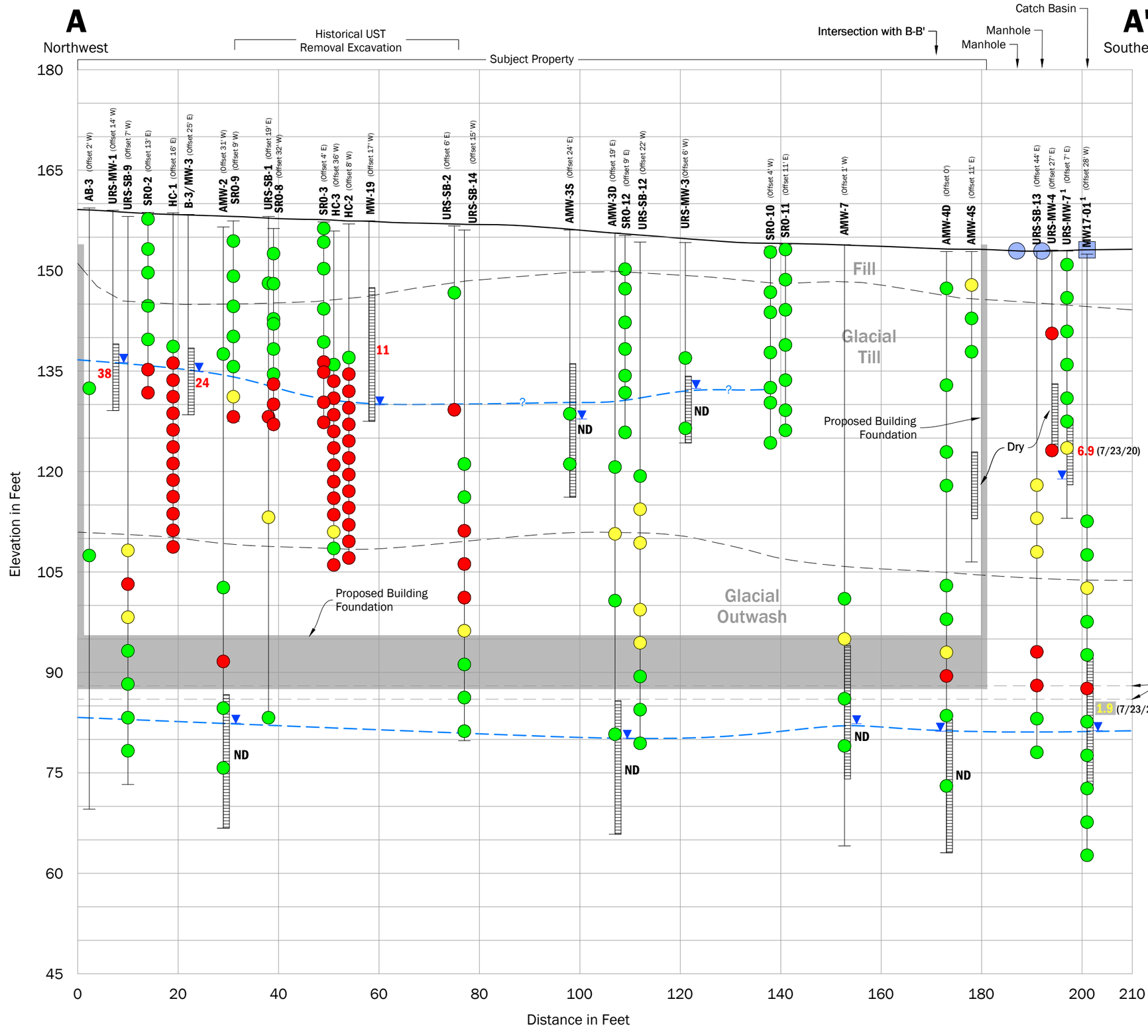


PCE and Benzene in Soil Gas

Remedial Investigation and Fesibility Study
NE 8th St and 106th Ave NE
Bellevue, Washington

Aspect Consulting	AUG-2020	BY: MLK / TDR	FIGURE NO. 8
	PROJECT NO. 190298	REVISED BY: ---	

Basemap Layer Credits || Pictometry, King County



Legend

(Offset 19' E)
AMW-3D
Offset Distance and Direction from Profile
Boring Identification
Analytical Sample Location
Water Levels Measure July 23, 2020
21
Screened Interval

PCE Groundwater Concentrations in micrograms per liter (µg/L). Sampling conducted in May 2020, except where noted. Red represents concentrations that exceed the MTCA cleanup level of 5 µg/L. Yellow represents detections below the MTCA cleanup level.[2]

[1] Explorations are located on the southeast-adjoining Barnes and Noble Property
[2] See Figure 7 and Table 4 for Details

Estimated Geologic Contact
Inferred Groundwater Level
Catch Basin
Manhole

Analytical Results

- One or more of contaminants of concern detected at a concentration greater than the MTCA Method A cleanup level.
- One or more of contaminants of concern detected at a concentration less than the MTCA Method A cleanup level.
- Contaminants of concern not detected.

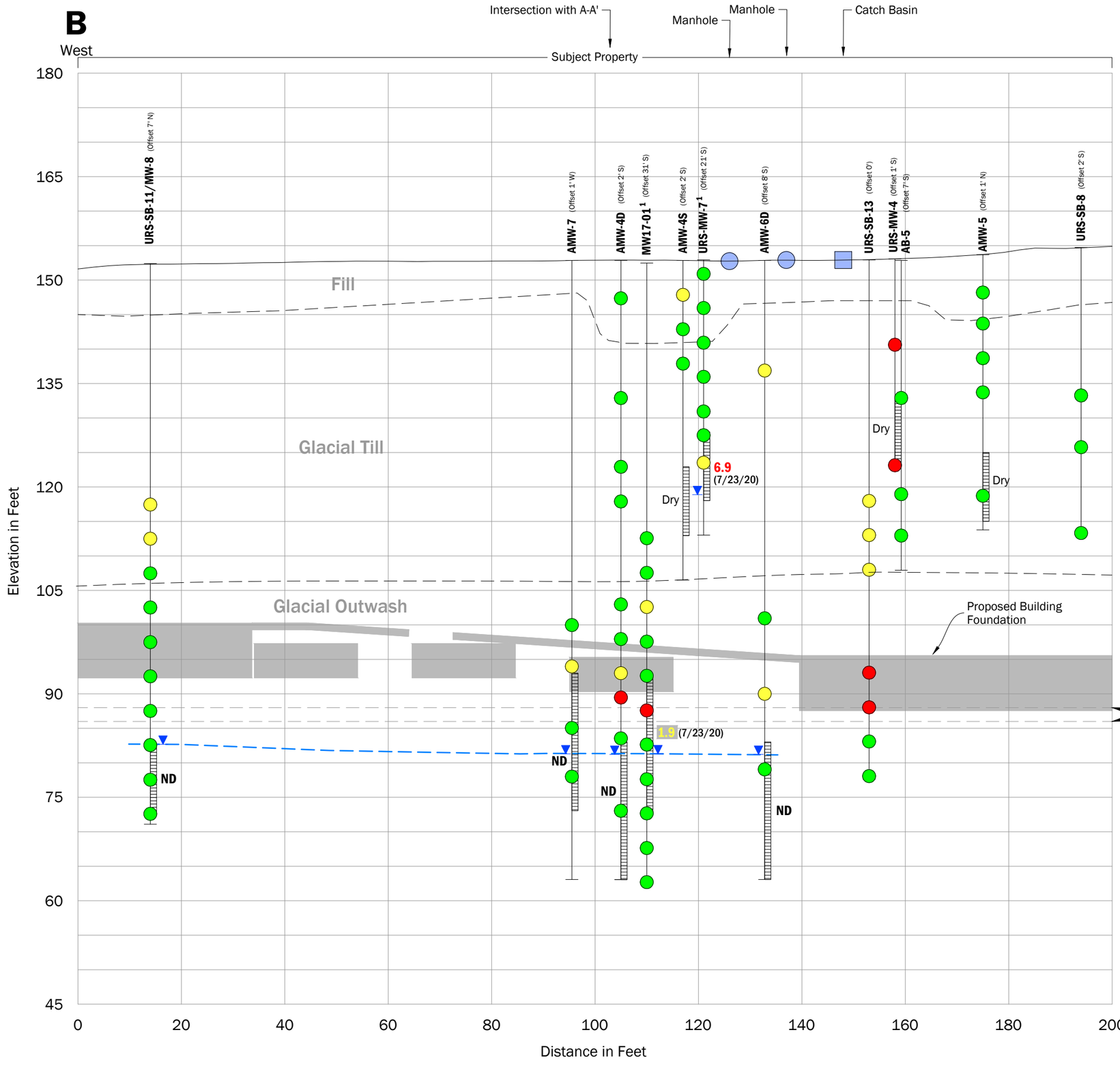
Horizontal Scale: 1" = 20'
Vertical Scale: 1" = 15'
Vertical Exaggeration 1.33x

0 20 40 Feet

Cross Section A-A'

Remedial Investigation and Feasibility Study
NE 8th Street and 106th Ave NE
Bellevue, Washington

Aspect Consulting	Aug-2020	MLK/SCC	FIGURE NO.
	PROJECT NO. 190298	REVISED BY: SCC	9



Legend

(Offset 19' E)
AMW-3D
Offset Distance and Direction from Profile
Boring Identification
Analytical Sample Location
Water Levels Measure July 23, 2020
21
Screened Interval

PCE Groundwater Concentrations in micrograms per liter (µg/L). Sampling conducted in May 2020, except where noted. Red represents concentrations that exceed the MTCA cleanup level of 5 µg/L. Yellow represents detections below the MTCA cleanup level.[2]

[1] Explorations are located on the southeast-adjoining Barnes and Noble Property
[2] See Figure 7 and Table 4 for Details

Estimated Geologic Contact
Inferred Groundwater Level
Catch Basin
Manhole

Analytical Results

- One or more of contaminants of concern detected at a concentration greater than the MTCA Method A cleanup level.
- One or more of contaminants of concern detected at a concentration less than the MTCA Method A cleanup level.
- Contaminants of concern not detected.

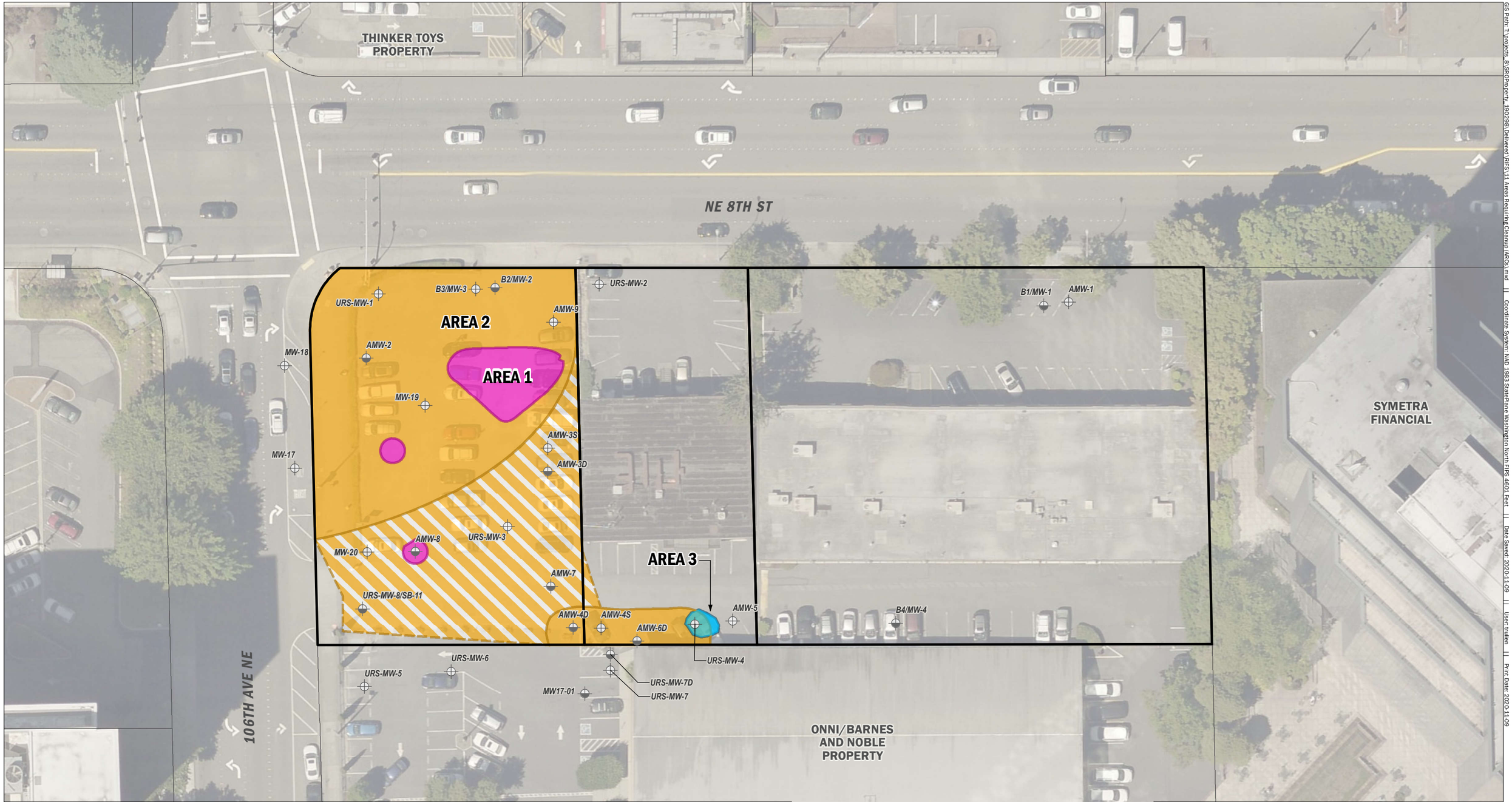
Horizontal Scale: 1" = 20'
Vertical Scale: 1" = 15'
Vertical Exaggeration 1.33x

0 20 40 Feet

Cross Section B-B'

Remedial Investigation and Feasibility Study
NE 8th Street and 106th Ave NE
Bellevue, Washington

Aspect Consulting	Aug-2020	BY: MLK/SCC	FIGURE NO. 10
	PROJECT NO. 190298	REVISED BY: SCC	



Areas Requiring Cleanup

- Area 1: TPH Contamination - West Parcel Soil
- Area 2: PCE Contamination - West Parcel Soil and Groundwater
- Area 2: PCE present in terrace-like pattern in soil
- Area 3: PCE Contamination - South Property boundary, shallow soil

- Subject Property
- King County Tax Parcel

Explorations

- Shallow Monitoring Well
- Deep Monitoring Well

Notes:

1) Site features are approximate.
2) Monitoring wells "AMW" installed by Aspect. All other monitoring wells installed by other from 2000 to 2011.

CUL = Cleanup level

0 40
Feet

N

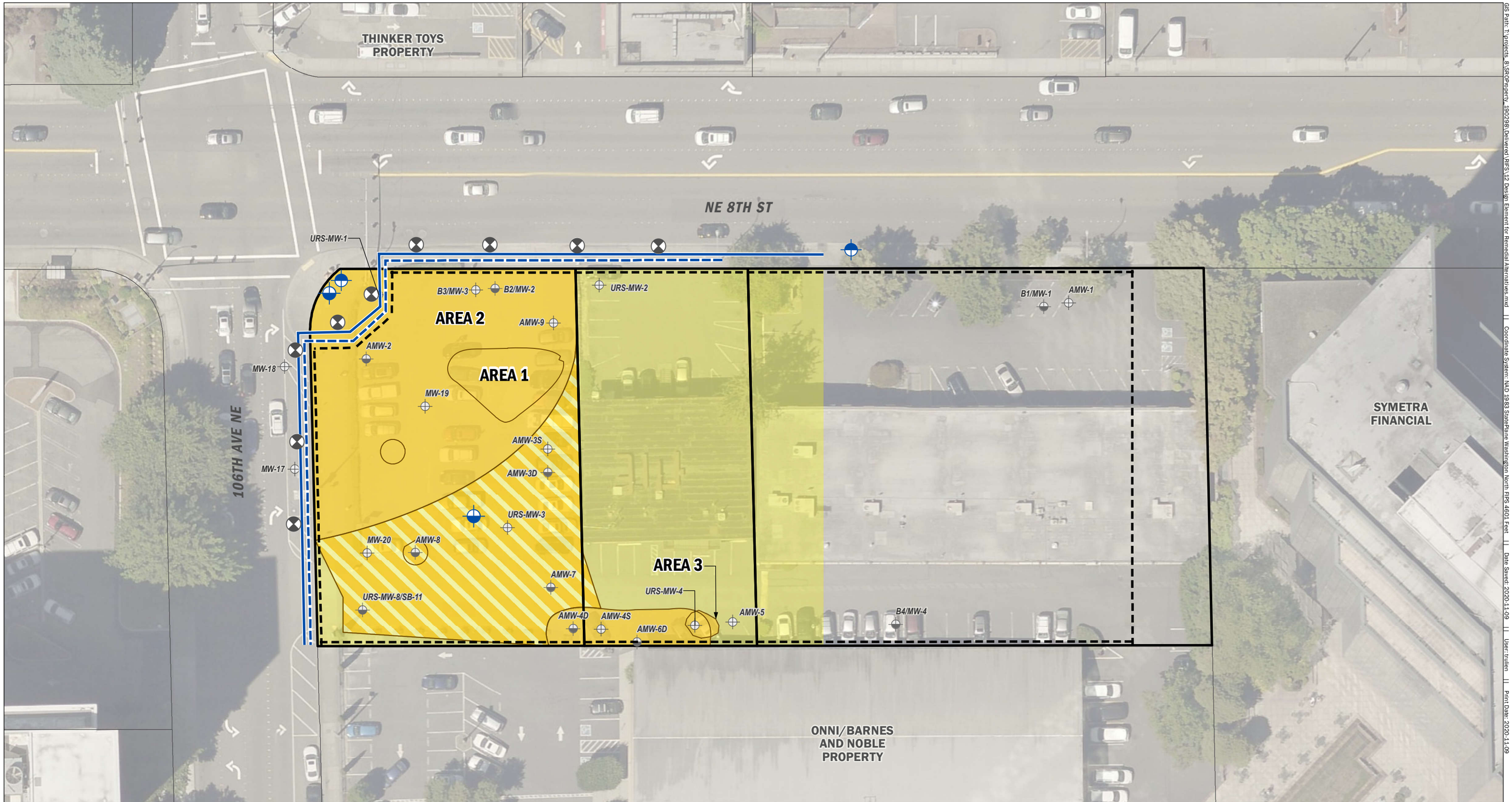
Areas Requiring Cleanup

Remedial Investigation and Feasibility Study
NE 8th St and 106th Ave NE
Bellevue, Washington

Aspect CONSULTING	NOV-2020	BY: MLK / TDR	FIGURE NO. 11
	PROJECT NO. 190298	REVISED BY: WEG	

Basemap Layer Credits || Pictometry, King County

GIS Path: T:\projects_8\SR\Property_190298\Deliverables\RIFS\11 Areas Requiring Cleanup (ARCs).mxd || Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet || Date Saved: 2020-11-09 || User: trullen || Print Date: 2020-11-09



Feasibility Study Recommendations

Features Offset for Cartographic Purposes

- Shallow Monitoring Well (Alt 2 & Alt 3)
- Deep Monitoring Well (Alt 2 & Alt 3)
- Perimeter Extraction Well, Shallow Zone (Alt 4)
- Drain Strips
- Permanent Drainage Feature
- Temporary Drainage Feature
- Extent of Chemcial Vapor Barrier
- Areas Requiring Cleanup
- Areas Requiring Partial Cleanup
- Proposed Extent of the Excavation for Redevelopment
- Subject Property
- King County Tax Parcel

Existing Explorations

- Shallow Monitoring Well
- Deep Monitoring Well

Notes:

1) Site features are approximate.
2) Monitoring wells "AMW" installed by Aspect. All other monitoring wells installed by other from 2000 to 2011.

0 40
Feet

N

Design Element for Remedial Alternatives

Remedial Investigation and Feasibility Study
NE 8th St and 106th Ave NE
Bellevue, Washington

Aspect Consulting	NOV-2020	BY: MLK / TDR	FIGURE NO. 12
	PROJECT NO. 190298	REVISED BY: WEG	

Basemap Layer Credits || Pictometry, King County

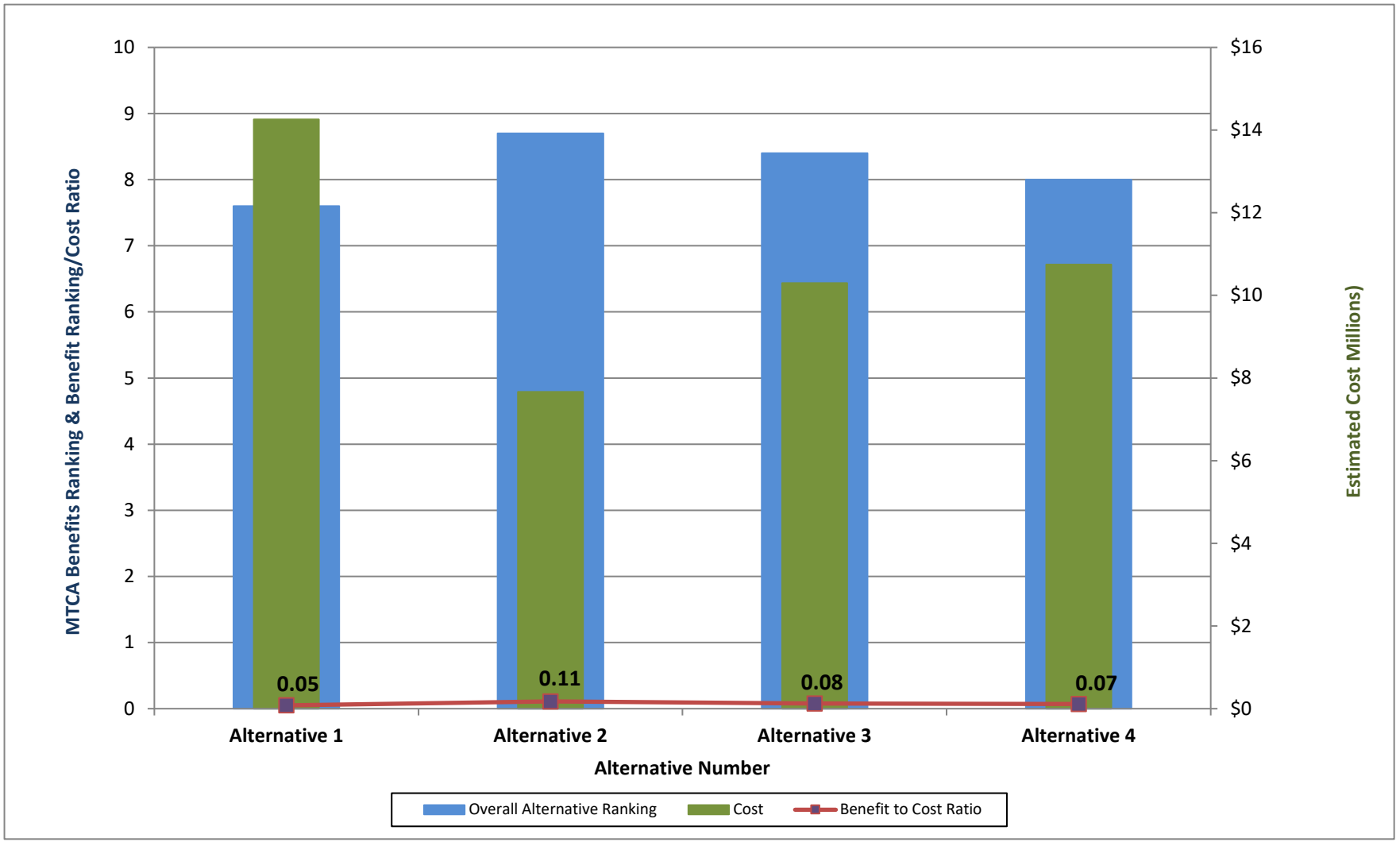
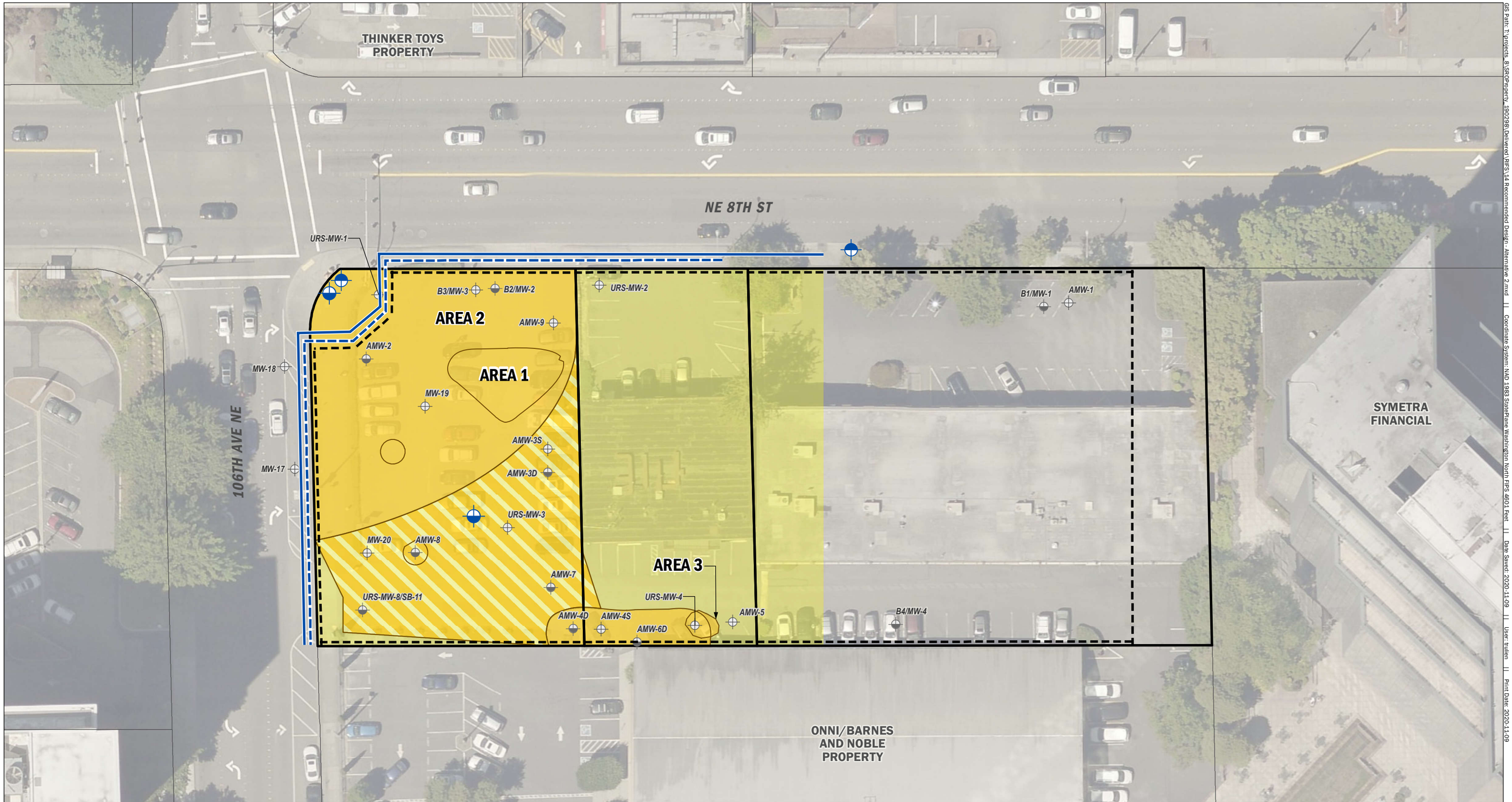


Figure 13

Remedial Investigation/Feasibility Studyy and Cleanup Action Plan
NE 8th St and 106th Ave NE, Bellevue, WA
Project No 190298

Aspect Consulting
11/9/2020
\\aspect.local\dfs\Projects\Schnitzer West\NE 8th and 106th\Report Drafts\RIFS-CAP\Tables\Table 6-10 FFS Tables



Feasibility Study Recommendations

Features Offset for Cartographic Purposes

- Shallow Monitoring Well (Alt 2)
- Deep Monitoring Well (Alt 2)
- Drain Strips
- Permanent Drainage Feature
- Temporary Drainage Feature
- Extent of Chemical Vapor Barrier
- Areas Requiring Cleanup
- Areas Requiring Partial Cleanup
- Proposed Extent of the Excavation for Redevelopment
- Subject Property
- King County Tax Parcel

Existing Explorations

- Shallow Monitoring Well
- Deep Monitoring Well

Notes:

1) Site features are approximate.
2) Monitoring wells "AMW" installed by Aspect. All other monitoring wells installed by other from 2000 to 2011.

0 40
Feet

N

Recommeded Design - Alternative 2

Remedial Investigation and Feasibility Study
NE 8th St and 106th Ave NE
Bellevue, Washington

Aspect CONSULTING	NOV-2020	BY: MLK / TDR	FIGURE NO. 14
	PROJECT NO. 190298	REVISED BY: WEG	

Basemap Layer Credits || Pictometry, King County

GIS Path: T:\projects_8\SR\Property_190298\Deliverable\RIFS_14 Recommended Design - Alternative 2.mxd || Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet || Date Saved: 2020-11-09 || User: trullen || Print Date: 2020-11-09

APPENDIX A

Boring Logs

Coarse-Grained Soils - More than 50%[1] Retained on No. 200 Sieve	Gravels - More than 50%[1] of Coarse Fraction Retained on No. 4 Sieve	≤5% Fines	GW	Well-graded GRAVEL Well-graded GRAVEL WITH SAND
			GP	Poorly-graded GRAVEL Poorly-graded GRAVEL WITH SAND
		≥15% Fines	GM	SILTY GRAVEL SILTY GRAVEL WITH SAND
			GC	CLAYEY GRAVEL CLAYEY GRAVEL WITH SAND
	Sands - 50%[1] or More of Coarse Fraction Passes No. 4 Sieve	≤5% Fines	SW	Well-graded SAND Well-graded SAND WITH GRAVEL
			SP	Poorly-graded SAND Poorly-graded SAND WITH GRAVEL
		≥15% Fines	SM	SILTY SAND SILTY SAND WITH GRAVEL
			SC	CLAYEY SAND CLAYEY SAND WITH GRAVEL
Fine-Grained Soils - 50%[1] or More Passes No. 200 Sieve	Silts and Clays Liquid Limit Less than 50%		ML	SILT SANDY or GRAVELLY SILT SILT WITH SAND SILT WITH GRAVEL
			CL	LEAN CLAY SANDY or GRAVELLY LEAN CLAY LEAN CLAY WITH SAND LEAN CLAY WITH GRAVEL
			OL	ORGANIC SILT SANDY or GRAVELLY ORGANIC SILT ORGANIC SILT WITH SAND ORGANIC SILT WITH GRAVEL
	Silts and Clays Liquid Limit 50% or More		MH	ELASTIC SILT SANDY or GRAVELLY ELASTIC SILT ELASTIC SILT WITH SAND ELASTIC SILT WITH GRAVEL
			CH	FAT CLAY SANDY or GRAVELLY FAT CLAY FAT CLAY WITH SAND FAT CLAY WITH GRAVEL
			OH	ORGANIC CLAY SANDY or GRAVELLY ORGANIC CLAY ORGANIC CLAY WITH SAND ORGANIC CLAY WITH GRAVEL
Highly Organic Soils			PT	PEAT and other mostly organic soils

"WITH SILT" or "WITH CLAY" means 5 to 15% silt and clay, denoted by a "-" in the group name; e.g., SP-SM • "SILTY" or "CLAYEY" means >15% silt and clay • "WITH SAND" or "WITH GRAVEL" means 15 to 30% sand and gravel. • "SANDY" or "GRAVELLY" means >30% sand and gravel. • "Well-graded" means approximately equal amounts of fine to coarse grain sizes • "Poorly graded" means unequal amounts of grain sizes • Group names separated by "/" means soil contains layers of the two soil types; e.g., SM/ML.

Soils were described and identified in the field in general accordance with the methods described in ASTM D2488. Where indicated in the log, soils were classified using ASTM D2487 or other laboratory tests as appropriate. Refer to the report accompanying these exploration logs for details.

1. Estimated or measured percentage by dry weight
2. (SPT) Standard Penetration Test (ASTM D1586)
3. Determined by SPT, DCPT (ASTM STP399) or other field methods. See report text for details.

GEOTECHNICAL LAB TESTS

MC	=	Natural Moisture Content
GS	=	Grain Size Distribution
FC	=	Fines Content (% < 0.075 mm)
GH	=	Hydrometer Test
AL	=	Atterberg Limits
C	=	Consolidation Test
Str	=	Strength Test
OC	=	Organic Content (% Loss by Ignition)
Comp	=	Proctor Test
K	=	Hydraulic Conductivity Test
SG	=	Specific Gravity Test

CHEMICAL LAB TESTS

Organic Chemicals

BTEX	=	Benzene, Toluene, Ethylbenzene, Xylenes
TPH-Dx	=	Diesel and Oil-Range Petroleum Hydrocarbons
TPH-G	=	Gasoline-Range Petroleum Hydrocarbons
VOCs	=	Volatile Organic Compounds
SVOCs	=	Semi-Volatile Organic Compounds
PAHs	=	Polycyclic Aromatic Hydrocarbon Compounds
PCBs	=	Polychlorinated Biphenyls

Metals

RCRA8	=	As, Ba, Cd, Cr, Pb, Hg, Se, Ag, (d = dissolved, t = total)
MTCA5	=	As, Cd, Cr, Hg, Pb (d = dissolved, t = total)
PP-13	=	Ag, As, Be, Cd, Cr, Cu, Hg, Ni, Pb, Sb, Se, Tl, Zn (d=dissolved, t=total)

FIELD TESTS

PID	=	Photoionization Detector
Sheen	=	Oil Sheen Test
SPT[2]	=	Standard Penetration Test
NSPT	=	Non-Standard Penetration Test
DCPT	=	Dynamic Cone Penetration Test

COMPONENT DEFINITIONS

Descriptive Term		*Size Range and Sieve Number*
Boulders	=	Larger than 12 inches
Cobbles	=	3 inches to 12 inches
Coarse Gravel	=	3 inches to 3/4 inches
Fine Gravel	=	3/4 inches to No. 4 (4.75 mm)
Coarse Sand	=	No. 4 (4.75 mm) to No. 10 (2.00 mm)
Medium Sand	=	No. 10 (2.00 mm) to No. 40 (0.425 mm)
Fine Sand	=	No. 40 (0.425 mm) to No. 200 (0.075 mm)
Silt and Clay	=	Smaller than No. 200 (0.075 mm)

ESTIMATED[1] PERCENTAGE

% by Weight		*Modifier*	*% by Weight*		*Modifier*
<1	=	Subtrace	15 to 25	=	Little
1 to <5	=	Trace	30 to 45	=	Some
5 to 10	=	Few	>50	=	Mostly

MOISTURE CONTENT

Dry	=	Absence of moisture, dusty, dry to the touch
Slightly Moist	=	Perceptible moisture
Moist	=	Damp but no visible water
Very Moist	=	Water visible but not free draining
Wet	=	Visible free water, usually from below water table

RELATIVE DENSITY

Non-Cohesive or Coarse-Grained Soils

Density[3]		*SPT*[2] *Blows/Foot*	*Penetration with 1/2" Diameter Rod*
Very Loose	=	0 to 4	≥ 2'
Loose	=	5 to 10	1' to 2'
Medium Dense	=	11 to 30	3" to 1'
Dense	=	31 to 50	1" to 3"
Very Dense	=	> 50	< 1"

CONSISTENCY

Cohesive or Fine-Grained Soils

Consistency[3]		*SPT*[2] *Blows/Foot*	*Manual Test*
Very Soft	=	0 to 1	Penetrated >1" easily by thumb. Extrudes between thumb & fingers.
Soft	=	2 to 4	Penetrated 1/4" to 1" easily by thumb. Easily molded.
Medium Stiff	=	5 to 8	Penetrated >1/4" with effort by thumb. Molded with strong pressure.
Stiff	=	9 to 15	Indented ~1/4" with effort by thumb.
Very Stiff	=	16 to 30	Indented easily by thumbnail.
Hard	=	> 30	Indented with difficulty by thumbnail.

GEOLOGIC CONTACTS

Observed and Distinct — Observed and Gradual — Inferred

Aspect CONSULTING

Exploration Log Key

Aspect CONSULTING	Schnitzer NE 8th - 190298		Environmental Exploration Log	
	Project Address & Site Specific Location 10619 NE 8th St, Bellevue, WA, 98004, SW corner of 10619 Building		*Coordinates (Lat,Lon WGS84)* 47.6169, -122.1983 (est)	*Exploration Number* **AB-1**
Contractor Cascade Drilling	*Equipment* Sonic - TerraSonic	*Sampling Method* Rotary core	*Ground Surface Elev. (NAVD88)* 154' (est)	
Operator Tim	*Exploration Method(s)* Sonic	*Work Start/Completion Dates* 4/20/2020	*Top of Casing Elev. (NAVD88)* NA	*Depth to Water (Below GS)* 74' (ATD)

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
0	154	Boring completed with concrete to surface					ASPHALT; Road surface	0
							FILL SAND WITH GRAVEL (SP); moist, light brown; non-plastic; medium, subangular sand; medium to coarse, subrounded gravel; few cobbles	
		0 to 5 ft cleared with air knife, sampled with hand auger		AB-1-2.5 NWTPH-Dx, Gx, PAHs, CVOCs	PID=1.9 Sheen=No sheen Odor=None			
	150	Boring backfilled with 3/8-inch hydrated bentonite chips					**GLACIAL TILL** SILTY SAND WITH GRAVEL (SM); moist, gray-brown; non-plastic; fine to medium, subangular sand; fine to medium, subrounded gravel; some cobbles	
5				AB-1-5 NWTPH-Dx, Gx, VOCs	PID=0.0 Sheen=No sheen Odor=None PID=16.2 Sheen=No sheen Odor=None		SILTY SAND (SM); slightly moist, gray-brown; non-plastic; fine to medium, subangular sand; trace fine, subrounded gravel	5
			S1					
	145		S2				fine to coarse gravel; some oxide staining	
10					PID=6.2 Sheen=No sheen Odor=None			10
	140			AB-1-14 CVOCs	PID=3.4 Sheen=No sheen Odor=None			
15			S3					15
					PID=1.2 Sheen=No sheen Odor=None			
	135						fine, subrounded gravel; some oxide staining	
20								20
			S4					
	130							

Legend

Sample Type
- Grab sample
- Continuous core 4" ID

Water Level
- Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: DWU
Approved by: MLK

Exploration Log AB-1

Sheet 1 of 4

NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINTW\PROJECTS\190298_SCHNITZER_NE8TH.GPJ May 20, 2020

Aspect CONSULTING	Schnitzer NE 8th - 190298		Environmental Exploration Log	
	Project Address & Site Specific Location		*Coordinates (Lat,Lon WGS84)*	*Exploration Number*
	10619 NE 8th St, Bellevue, WA, 98004, SW corner of 10619 Building		47.6169, -122.1983 (est)	**AB-1**
Contractor	*Equipment*	*Sampling Method*	*Ground Surface Elev. (NAVD88)*	
Cascade Drilling	Sonic - TerraSonic	Rotary core	154' (est)	
Operator	*Exploration Method(s)*	*Work Start/Completion Dates*	*Top of Casing Elev. (NAVD88)*	*Depth to Water (Below GS)*
Tim	Sonic	4/20/2020	NA	74' (ATD)

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
					PID=0.6 Sheen=No sheen Odor=None		SAND WITH SILT (SP-SM); moist, light brown; non-plastic; fine to medium, subangular sand; subtrace fine, subrounded gravel (continued)	
			S4				SILTY SAND (SM); very moist, light brown; low plasticity; fine to coarse, dominantly fine, subangular sand; trace fine, subrounded gravel	
					PID=1.2 Sheen=No sheen Odor=None			
30	125							30
					PID=1.1 Sheen=No sheen Odor=None		SAND WITH SILT (SP-SM); moist, gray-brown; non-plasticity; fine to medium, dominantly medium, subangular sand; trace fine to coarse, subrounded gravel	
	120		S5				SILTY SAND (SM); moist, gray-brown; low plasticity; fine to medium, subangular sand; trace fine, subrounded gravel	
35								35
					PID=1.5 Sheen=No sheen Odor=None		SAND WITH SILT AND GRAVEL (SP-SM); moist, gray-brown; non-plastic; fine to medium, subangular sand; fine to medium, subrounded gravel	
	115						SILTY SAND WITH GRAVEL (SM); moist, gray-brown; low plasticity; fine to medium, some coarse, subangular sand; fine to coarse, subangular gravel	
40								40
			S6				**GLACIAL OUTWASH** SAND WITH SILT AND GRAVEL (SW-SM); moist, gray-brown; non-plastic; fine to coarse, subangular sand; fine to coarse, subrounded gravel; cobbles up to 6 in	
					PID=1.1 Sheen=No sheen Odor=None		SILTY SAND WITH GRAVEL (SM); moist, gray-brown; low plasticity; fine to medium, subangular sand; fine to coarse, subangular gravel	
	110							
45		8 inch diam. conductor casing sealed with bentonie chips 42 to 45 ft					SAND WITH SILT AND GRAVEL (SW-SM); moist, gray-brown; non-plastic; fine to coarse, subangular sand; fine to coarse, mostly medium, subrounded gravel	45
			S7					
	105	6 inch outer casing 45 to 90 ft						

Legend

Sample Type
- Grab sample
- Continuous core 4" ID

Water Level
- Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: DWU
Approved by: MLK

Exploration Log AB-1

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NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINTW\PROJECTS\190298_SCHNITZER_NE8TH.GPJ May 20, 2020

Aspect CONSULTING	Schnitzer NE 8th - 190298		Environmental Exploration Log	
	Project Address & Site Specific Location 10619 NE 8th St, Bellevue, WA, 98004, SW corner of 10619 Building		*Coordinates (Lat,Lon WGS84)* 47.6169, -122.1983 (est)	*Exploration Number* **AB-1**
Contractor Cascade Drilling	*Equipment* Sonic - TerraSonic	*Sampling Method* Rotary core	*Ground Surface Elev. (NAVD88)* 154' (est)	
Operator Tim	*Exploration Method(s)* Sonic	*Work Start/Completion Dates* 4/20/2020	*Top of Casing Elev. (NAVD88)* NA	*Depth to Water (Below GS)* 74' (ATD)

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
					PID=4.0 Sheen=No sheen Odor=None		SAND WITH SILT AND GRAVEL (SW-SM); moist, gray-brown; non-plastic; fine to coarse, subangular sand; fine to coarse, mostly medium, subrounded gravel (continued)	
55	100	Slow drilling	S8		PID=0.6 Sheen=No sheen Odor=None		GRAVEL WITH SILT AND SAND (GW-GM); slightly moist, gray-brown; non-plastic; fine to coarse, subangular to subrounded sand; fine to coarse, subrounded gravel	55
					PID=7.4 Sheen=No sheen Odor=None			
60	95		S9					60
65	90			AB-1-65 CVOCs	PID=7.2 Sheen=No sheen Odor=None		SILTY SAND (SM); moist, gray-brown; low plasticity; fine to medium, subangular sand; trace fine, subrounded gravel	65
							GRAVEL WITH SAND (GW); slightly moist, gray; non-plastic; fine to coarse, subangular sand; fine to coarse, subrounded gravel	
70	85		S10		PID=1.4 Sheen=No sheen Odor=None		SILTY SAND (SM); moist, gray-brown; low plasticity; fine to medium, subangular sand; trace fine, subrounded gravel	70
			S11				SAND WITH SILT (SP-SM); moist, gray-brown; non-plastic; fine, subangular sand	
	80	▽ 4/20/2020		AB-1-74 CVOCs	PID=1.4 Sheen=No sheen Odor=None		SILT (ML); very moist, gray-brown; low plasticity	

Legend

Sample Type
- Grab sample
- Continuous core 4" ID

Water Level
- ▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: DWU
Approved by: MLK

Exploration Log AB-1

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NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINTW\PROJECTS\190298_SCHNITZER_NE8TH.GPJ May 20, 2020

Aspect CONSULTING	Schnitzer NE 8th - 190298		Environmental Exploration Log	
	Project Address & Site Specific Location 10619 NE 8th St, Bellevue, WA, 98004, SW corner of 10619 Building		*Coordinates (Lat,Lon WGS84)* 47.6169, -122.1983 (est)	*Exploration Number* **AB-1**
Contractor Cascade Drilling	*Equipment* Sonic - TerraSonic	*Sampling Method* Rotary core	*Ground Surface Elev. (NAVD88)* 154' (est)	
Operator Tim	*Exploration Method(s)* Sonic	*Work Start/Completion Dates* 4/20/2020	*Top of Casing Elev. (NAVD88)* NA	*Depth to Water (Below GS)* 74' (ATD)

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
							SILT (ML); very moist, gray-brown; low plasticity (continued)	
	75				PID=1.1 Sheen=No sheen Odor=None		SILTY SAND (SM); moist, gray-brown; low plasticity; fine, subangular sand	
80								80
					PID=1.7 Sheen=No sheen Odor=None		SILT (ML); very moist, gray-brown; low plasticity	
	70		S12					
85								85
					PID=1.2 Sheen=No sheen Odor=None		SILTY SAND (SM); very moist, gray; low plasticity; fine, subangular sand	
	65							
90							Bottom of exploration at 90 ft. bgs.	90
	60							
95								95
	55							

Legend

Sample Type
- Grab sample
- Continuous core 4" ID

Water Level
- Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: DWU
Approved by: MLK

Exploration Log AB-1
Sheet 4 of 4

NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINTW\PROJECTS\190298_SCHNITZER_NE8TH.GPJ May 20, 2020

Aspect CONSULTING	Schnitzer NE 8th - 190298		Environmental Exploration Log	
	Project Address & Site Specific Location 10619 NE 8th St, Bellevue, WA, 98004, SW corner of covered parking area		*Coordinates (Lat,Lon WGS84)* 47.6169, -122.1981 (est)	*Exploration Number* **AB-2**
Contractor Cascade Drilling	*Equipment* Sonic - TerraSonic	*Sampling Method* Rotary core	*Ground Surface Elev. (NAVD88)* 154' (est)	
Operator Tim	*Exploration Method(s)* Sonic	*Work Start/Completion Dates* 4/21/2020	*Top of Casing Elev. (NAVD88)* NA	*Depth to Water (Below GS)* 72' (ATD)

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
0	154	Boring completed with concrete to surface					ASPHALT; Road surface	0
							FILL SAND WITH SILT AND GRAVEL (SP-SM); moist, gray brown; non-plastic; fine to medium sand; fine, subrounded gravel; some brick fragments	
		0 to 5 ft cleared with air knife, sampled with hand auger			PID=0.0 Sheen=No sheen Odor=None		**GLACIAL TILL** SILTY SAND (SM); moist, gray-brown; non-plastic; fine to medium, subangular sand; trace fine, subrounded gravel; subtrace cobbles <6 in	
5	150	Boring backfilled with 3/8-inch hydrated bentonite chips	S1		PID=0.0 Sheen=No sheen Odor=None			5
10	145			AB-2-10 NWTPH-Dx, Gx, VOCs	PID=1.6 Sheen=Slight Odor=None		fine to medium, subrounded gravel	10
							SAND WITH SILT (SP-SM); moist, gray-brown; non-plastic; dominantly medium with fine subangular sand	
	140		S2				SILTY SAND (SM); moist, gray-brown; low plasticity; fine to medium, subangular sand; trace fine to medium, subrounded gravel	
15					PID=1.0 Sheen=No sheen Odor=None			15
	135				PID=0.2 Sheen=No sheen Odor=None		some oxide staining	
20			S3					20
	130				PID=0.6 Sheen=No sheen Odor=None			

Legend

Sample Type
- Grab sample
- Continuous core 4" ID

Water Level
- Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: DWU
Approved by: MLK

Exploration Log AB-2

Sheet 1 of 4

NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINTW\PROJECTS\190298_SCHNITZER_NE8TH.GPJ May 20, 2020

Aspect CONSULTING	Schnitzer NE 8th - 190298		Environmental Exploration Log	
	Project Address & Site Specific Location 10619 NE 8th St, Bellevue, WA, 98004, SW corner of covered parking area		*Coordinates (Lat,Lon WGS84)* 47.6169, -122.1981 (est)	*Exploration Number* **AB-2**
Contractor Cascade Drilling	*Equipment* Sonic - TerraSonic	*Sampling Method* Rotary core	*Ground Surface Elev. (NAVD88)* 154' (est)	
Operator Tim	*Exploration Method(s)* Sonic	*Work Start/Completion Dates* 4/21/2020	*Top of Casing Elev. (NAVD88)* NA	*Depth to Water (Below GS)* 72' (ATD)

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
			S3				SILTY SAND (SM); moist, gray-brown; low plasticity; fine to medium, subangular sand; trace fine to medium, subrounded gravel (continued) becomes very moist	
					PID=0.5 Sheen=No sheen Odor=None		SILT (ML); moist, light brown; non-plastic	
	125						SAND WITH SILT (SP-SM); moist, red brown to gray; non-plastic; medium, subangular sand; significant oxide staining	
30							SILTY SAND (SM); moist, gray-brown; low plasticity; fine to medium, subangular sand; trace fine to medium, subrounded gravel	30
			S4				SAND WITH SILT (SP-SM); slightly moist, light gray; non-plastic; medium, subangular sand	
				AB-2-33 CVOCs	PID=1.1 Sheen=Slight Odor=None		GRAVEL WITH SILT AND SAND (GP-GM); slightly moist, gray-brown; non-plastic; fine to coarse, mostly medium, subangular sand; fine, subangular to subrounded gravel	
	120						SILTY SAND (SM); moist, gray-brown; low plasticity; fine to medium, subangular sand; trace fine to coarse, subrounded gravel	
35							few 6 in cobbles	35
							SAND WITH SILT (SP-SM); slightly moist, gray-brown; non-plastic; medium, subangular sand	
	115		S5		PID=3.5 Sheen=Slight Odor=None		SILTY SAND WITH GRAVEL (SM); moist, gray-brown; low plasticity; fine to medium, subangular sand; fine to coarse, subangular to subrounded gravel	
40								40
					PID=1.3 Sheen=No sheen Odor=None		SILTY SAND (SM); moist, gray-brown; low plasticity; fine to medium, subangular sand; trace fine, subrounded gravel	
	110							
45		8 inch diam. conductor casing sealed with bentonie chips 42 to 45 ft					SILTY SAND WITH GRAVEL (SM); moist, gray-brown; low plasticity; fine to medium, subangular sand; fine to coarse, subrounded gravel	45
			S6				**GLACIAL OUTWASH** GRAVEL WITH SILT AND SAND (GW-GM); slightly moist, gray-brown; non-plastic; fine to coarse, subangular sand; fine to coarse, subangular to subrounded gravel	
		6 inch outer casing 45 to 90 ft						
	105		S7		PID=4.5 Sheen=No sheen Odor=None			

Legend

Sample Type
- Grab sample
- Continuous core 4" ID

Water Level
- Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: DWU
Approved by: MLK

Exploration Log AB-2

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NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINTW\PROJECTS\190298_SCHNITZER_NE8TH.GPJ May 20, 2020

Aspect CONSULTING	Schnitzer NE 8th - 190298		Environmental Exploration Log	
	Project Address & Site Specific Location 10619 NE 8th St, Bellevue, WA, 98004, SW corner of covered parking area		*Coordinates (Lat,Lon WGS84)* 47.6169, -122.1981 (est)	*Exploration Number* **AB-2**
Contractor Cascade Drilling	*Equipment* Sonic - TerraSonic	*Sampling Method* Rotary core	*Ground Surface Elev. (NAVD88)* 154' (est)	
Operator Tim	*Exploration Method(s)* Sonic	*Work Start/Completion Dates* 4/21/2020	*Top of Casing Elev. (NAVD88)* NA	*Depth to Water (Below GS)* 72' (ATD)

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
			S7		PID=12.6 Sheen=Slight Odor=None		**GLACIAL OUTWASH** GRAVEL WITH SILT AND SAND (GW-GM); slightly moist, gray-brown; non-plastic; fine to coarse, subangular sand; fine to coarse, subangular to subrounded gravel (continued)	
55	100						SILT (ML); moist, gray-brown; low plasticity; some gray mottling	55
60	95		S8	AB-2-59 CVOCs	PID=5.4 Sheen=No sheen Odor=None			60
	90						SAND WITH SILT (SP-SM); slightly moist, light brown; non-plastic; fine, subangular sand	
65					PID=2.4 Sheen=No sheen Odor=None		SILT (ML); slightly moist, light brown; low plasticity; some oxide staining	65
							GRAVEL WITH SILT AND SAND (GP-GM); moist, gray-brown; non-plastic; fine to coarse, subangular sand; fine to medium, subrounded gravel	
70	85		S9	AB-2-69 CVOCs	PID=18.2 Sheen=Slight Odor=None			70
		▽ 4/21/2020					SAND WITH SILT (SP-SM); moist, light brown; non-plastic; fine, subangular sand; some oxide staining	
					PID=8.8 Sheen=No sheen Odor=None		SILT (ML); very moist, light brown; low plasticity	
	80						SANDY SILT (ML); moist, gray; low plasticity; fine, subangular sand; interbedded with SILT (ML)	

Legend

Sample Type
- Grab sample
- Continuous core 4" ID

Water Level
- ▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: DWU
Approved by: MLK

Exploration Log AB-2

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NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINTW\PROJECTS\190298_SCHNITZER_NE8TH.GPJ May 20, 2020

Aspect CONSULTING	Schnitzer NE 8th - 190298		Environmental Exploration Log	
	Project Address & Site Specific Location 10619 NE 8th St, Bellevue, WA, 98004, SW corner of covered parking area		*Coordinates (Lat,Lon WGS84)* 47.6169, -122.1981 (est)	*Exploration Number* **AB-2**
Contractor Cascade Drilling	*Equipment* Sonic - TerraSonic	*Sampling Method* Rotary core	*Ground Surface Elev. (NAVD88)* 154' (est)	
Operator Tim	*Exploration Method(s)* Sonic	*Work Start/Completion Dates* 4/21/2020	*Top of Casing Elev. (NAVD88)* NA	*Depth to Water (Below GS)* 72' (ATD)

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
80	75		S10		PID=2.0 Sheen=No sheen Odor=None		SAND WITH SILT (SP-SM); wet, light brown; non-plastic; mediu, subangular sand	80
85	70				PID=1.1 Sheen=No sheen Odor=None		SILT (ML); very moist, light brown; low plasticity; some oxide staining SAND WITH SILT (SP-SM); wet, light brown; non-plastic; medium, subangular sand	85
90	65				PID=0.6 Sheen=No sheen Odor=None		SILT (ML); wet, gray; low plasticity Bottom of exploration at 90 ft. bgs.	90
95	60							95
	55							

Legend

Sample Type
- Grab sample
- Continuous core 4" ID

Water Level
- Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: DWU
Approved by: MLK

Exploration Log AB-2
Sheet 4 of 4

NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINTW\PROJECTS\190298_SCHNITZER_NE8TH.GPJ May 20, 2020

Aspect CONSULTING	Schnitzer NE 8th - 190298		Environmental Exploration Log	
	Project Address & Site Specific Location 10619 NE 8th St, Bellevue, WA, 98004, NW corner of parking lot		*Coordinates (Lat,Lon WGS84)* 47.6173, -122.1987 (est)	*Exploration Number* **AB-3**
Contractor Cascade Drilling	*Equipment* Sonic - TerraSonic	*Sampling Method* Rotary core	*Ground Surface Elev. (NAVD88)* 158' (est)	
Operator Tim	*Exploration Method(s)* Sonic	*Work Start/Completion Dates* 4/28/2020	*Top of Casing Elev. (NAVD88)* NA	*Depth to Water (Below GS)* 75' (ATD)

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
0	158	Boring completed with concrete to surface	S1				**FILL** SILTY SAND WITH GRAVEL (SM); moist, brown; low to medium plasticity; fine to medium, subangular sand; fine to coarse, subrounded to subangular gravel	0
							SILTY SAND WITH GRAVEL (SM); moist, dark brown; low to medium plasticity; fine to medium, subangular sand; fine to coarse, subrounded to subangular gravel	
	155	Boring backfilled with 3/8-inch hydrated bentonite chips			PID=0.0 Sheen=Slight Odor=None			
5							SAND WITH SILT (SP-SM); moist, light brown; low to medium plasticity; fine to medium, subangular sand	5
	150		S2		PID=0.2 Sheen=No sheen Odor=None		**GLACIAL TILL** SILTY SAND WITH GRAVEL (SM); moist, light brown; low to medium plasticity; fine to medium, subangular sand; fine to medium, subrounded to subangular gravel	
10								10
	145							
15					PID=0.1 Sheen=No sheen Odor=None			15
	140		S3					
20					PID=0.2 Sheen=Slight Odor=None			20
	135							
					PID=0.4 Sheen=No sheen Odor=None		SAND WITH SILT (SP-SM); moist, light brown; low to medium plasticity; fine to medium, subangular sand	

Legend

Sample Type
- ◯ No Soil Sample Recovery
- ◧ Continuous core 4" ID

Water Level
- ▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: DWU
Approved by: MLK

Exploration Log AB-3

Sheet 1 of 4

NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINTW\PROJECTS\190298_SCHNITZER_NE8TH.GPJ May 20, 2020

Aspect CONSULTING	Schnitzer NE 8th - 190298		Environmental Exploration Log	
	Project Address & Site Specific Location 10619 NE 8th St, Bellevue, WA, 98004, NW corner of parking lot		*Coordinates (Lat,Lon WGS84)* 47.6173, -122.1987 (est)	*Exploration Number* **AB-3**
Contractor Cascade Drilling	*Equipment* Sonic - TerraSonic	*Sampling Method* Rotary core	*Ground Surface Elev. (NAVD88)* 158' (est)	
Operator Tim	*Exploration Method(s)* Sonic	*Work Start/Completion Dates* 4/28/2020	*Top of Casing Elev. (NAVD88)* NA	*Depth to Water (Below GS)* 75' (ATD)

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
							SILTY SAND WITH GRAVEL (SM); moist, light brown; low to medium plasticity; fine to medium, subangular sand; fine to medium, subrounded to subangular gravel	
				AB-03-27 CVOCs	PID=0.2 Sheen=No sheen Odor=None		SAND WITH SILT (SP-SM); very moist, light brown; low to medium plasticity; fine to medium, subangular sand	
	130						SILTY SAND WITH GRAVEL (SM); moist, light brown; low to medium plasticity; fine to medium, subangular sand; fine to medium, subrounded to subangular gravel	
30			S4					30
	125				PID=0.3 Sheen=No sheen Odor=None			
35								35
	120				PID=1.2 Sheen=No sheen Odor=None		SAND WITH SILT (SP-SM); moist, light brown; low to medium plasticity; fine to medium, subangular sand	
40			S5				SILTY SAND WITH GRAVEL (SM); moist, light brown; low to medium plasticity; fine to medium, subangular sand; fine to coarse, subrounded to subangular gravel	40
	115				PID=0.2 Sheen=No sheen Odor=None			
45		8 inch diam. conductor casing sealed with bentonie chips 42 to 45 ft	S6				SILT WITH GRAVEL (ML); slightly moist, gray; non-plastic; fine, subrounded to subangular gravel	45
					PID=0.3 Sheen=No sheen Odor=None		SILTY SAND (SM); moist, gray and brown; low plasticity; fine to medium, subangular sand; trace fine to medium, subrounded gravel	
	110	6 inch outer casing 45 to 90 ft	S7				**GLACIAL OUTWASH** SILT WITH GRAVEL (ML); slightly moist, gray; non plastic; fine, subrounded to subangular gravel	

Legend

Sample Type
- ◯ No Soil Sample Recovery
- ◧ Continuous core 4" ID

Water Level
- ▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: DWU
Approved by: MLK

Exploration Log AB-3

Aspect CONSULTING	Schnitzer NE 8th - 190298		Environmental Exploration Log	
	Project Address & Site Specific Location 10619 NE 8th St, Bellevue, WA, 98004, NW corner of parking lot		*Coordinates (Lat,Lon WGS84)* 47.6173, -122.1987 (est)	*Exploration Number* **AB-3**
Contractor Cascade Drilling	*Equipment* Sonic - TerraSonic	*Sampling Method* Rotary core	*Ground Surface Elev. (NAVD88)* 158' (est)	
Operator Tim	*Exploration Method(s)* Sonic	*Work Start/Completion Dates* 4/28/2020	*Top of Casing Elev. (NAVD88)* NA	*Depth to Water (Below GS)* 75' (ATD)

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
55	105		S7	AB-03-52 CVOCs	PID=0.2 Sheen=Slight Odor=None		SILTY SAND WITH GRAVEL (SM); slightly moist, gray; non-plastic; fine to medium, subangular sand; fine to medium, subrounded gravel; breaks into blocks	55
60	100		S8		PID=0.5 Sheen=Organic sheen Odor=None			60
65	95				PID=0.4 Sheen=Organic sheen Odor=None			65
70	90		S9		PID=0.4 Sheen=No sheen Odor=None		SILT (ML); moist, gray; fines low plasticity	70
	85	▽ 4/28/2020			PID=0.1 Sheen=No sheen Odor=None		SILTY SAND (SM); moist, gray; fines non-plastic; fine to medium, subangular sand SILT (ML); moist, gray; fines low plasticity	

Legend

Sample Type
- ◯ No Soil Sample Recovery
- ◧ Continuous core 4" ID

Water Level
- ▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: DWU
Approved by: MLK

Exploration Log AB-3
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NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINTW\PROJECTS\190298_SCHNITZER_NE8TH.GPJ May 20, 2020

Aspect CONSULTING	Schnitzer NE 8th - 190298		Environmental Exploration Log	
	Project Address & Site Specific Location 10619 NE 8th St, Bellevue, WA, 98004, NW corner of parking lot		*Coordinates (Lat,Lon WGS84)* 47.6173, -122.1987 (est)	*Exploration Number* **AB-3**
Contractor Cascade Drilling	*Equipment* Sonic - TerraSonic	*Sampling Method* Rotary core	*Ground Surface Elev. (NAVD88)* 158' (est)	
Operator Tim	*Exploration Method(s)* Sonic	*Work Start/Completion Dates* 4/28/2020	*Top of Casing Elev. (NAVD88)* NA	*Depth to Water (Below GS)* 75' (ATD)

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
							SAND WITH SILT (SP-SM); moist, gray; fines non-plastic; fine, subangular sand (continued) becomes wet	
							SILT (ML); very moist, gray; fines non-plastic; trace fine to coarse, subrounded to subangular gravel	
80	80		S10		PID=0.2 Sheen=No sheen Odor=None			80
85	75				PID=0.2 Sheen=No sheen Odor=None			85
	70		S11		PID=0.1 Odor=None			
90							Bottom of exploration at 90 ft. bgs.	90
95	65							95
	60							

Legend

Sample Type
- ◯ No Soil Sample Recovery
- ◧ Continuous core 4" ID

Water Level
- ▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: DWU
Approved by: MLK

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NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINTW\PROJECTS\190298_SCHNITZER_NE8TH.GPJ May 20, 2020

Aspect CONSULTING	Schnitzer NE 8th - 190298		Environmental Exploration Log	
	Project Address & Site Specific Location 10619 NE 8th St, Bellevue, WA, 98004, NE side of 10619 Building		*Coordinates (Lat,Lon WGS84)* 47.6175, -122.1981 (est)	*Exploration Number* **AB-4**
Contractor Cascade Drilling	*Equipment* Sonic - TerraSonic	*Sampling Method* Rotary core	*Ground Surface Elev. (NAVD88)* 163' (est)	
Operator Tim	*Exploration Method(s)* Sonic	*Work Start/Completion Dates* 4/23/2020	*Top of Casing Elev. (NAVD88)* NA	*Depth to Water (Below GS)* 79' (ATD)

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
0	163	Boring completed with concrete to surface					ASPHALT; asphalt	0
							FILL SILTY SAND (SM); moist, red-brown to gray-brown; fines low plasticity; fine to medium, subangular sand; no odor	
	160		S1				SAND WITH SILT (SP-SM); moist, gray and brown; fines low plasticity; medium, subangular sand; no odor	
		Boring backfilled with 3/8-inch hydrated bentonite chips					**GLACIAL TILL** SILTY SAND (SM); moist, gray and brown; fines low plasticity; fine to medium, subangular sand; trace fine to medium, subrounded gravel; no odor; becomes slighlty moist at 27 feet; becomes moist at 29 feet	
5				AB-04-5 NWTPH-Dx, Gx, VOCs, PAHs, MTCA 5 Metals	PID=0.4 Sheen=Slightly organic sheen Odor=None			5
	155				PID=0.6 Sheen=Slight Odor=None			
10			S2					10
					PID=0.7 Sheen=Slight Odor=None			
	150							
15								15
	145							
20			S3		PID=1.5 Sheen=Slight Odor=None			20
	140				PID=1.5 Sheen=No sheen Odor=None			

Legend

Sample Type
- ◯ No Soil Sample Recovery
- ◧ Continuous core 4" ID

Water Level
- ▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: DWU
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Exploration Log AB-4

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NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINTW\PROJECTS\190298_SCHNITZER_NE8TH.GPJ May 20, 2020

Aspect CONSULTING	Schnitzer NE 8th - 190298		Environmental Exploration Log	
	Project Address & Site Specific Location 10619 NE 8th St, Bellevue, WA, 98004, NE side of 10619 Building		*Coordinates (Lat,Lon WGS84)* 47.6175, -122.1981 (est)	*Exploration Number* **AB-4**
Contractor Cascade Drilling	*Equipment* Sonic - TerraSonic	*Sampling Method* Rotary core	*Ground Surface Elev. (NAVD88)* 163' (est)	
Operator Tim	*Exploration Method(s)* Sonic	*Work Start/Completion Dates* 4/23/2020	*Top of Casing Elev. (NAVD88)* NA	*Depth to Water (Below GS)* 79' (ATD)

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
							SILTY SAND (SM); moist, gray and brown; fines low plasticity; fine to medium, subangular sand; trace fine to medium, subrounded gravel; no odor; becomes slighlty moist at 27 feet; becomes moist at 29 feet	
					PID=1.0 Sheen=No sheen Odor=None		SILTY SAND WITH GRAVEL (SM); moist, gray and brown; fines low plasticity; fine to medium, subangular sand; fine to medium, subrounded to subangular gravel, no odor	
	135						SAND WITH SILT (SP-SM); moist, gray and brown; fines low to medium plasticity; fine to medium, subangular sand; fine to medium, subrounded to subangular gravel; no odor	
30			S4				SILTY SAND (SM); moist, gray and brown; fines low to medium plasticity; fine to medium, subangular sand; trace fine to medium gravel	30
	130				PID=0.9 Sheen=No sheen Odor=None			
35								35
			S5		PID=0.9 Sheen=Slight			
	125							
40			S6					40
					PID=0.6 Sheen=No sheen Odor=None			
	120		S7					
							SAND WITH SILT (SP-SM); moist, gray and brown; fines low to medium plasticity; fine to medium, subangular sand; no odor	
45		8 inch diam. conductor casing sealed with bentonie chips 42 to 45 ft					SILTY SAND (SM); moist, gray and brown; fines low to medium plasticity; fine to medium, subangular sand; trace fine to medium, subrounded gravel	45
			S8					
	115	6 inch outer casing 45 to 90 ft			PID=0.6 Sheen=No sheen			

Legend

Sample Type
- No Soil Sample Recovery
- Continuous core 4" ID

Water Level
- Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: DWU
Approved by: MLK

Exploration Log AB-4

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NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINTW\PROJECTS\190298_SCHNITZER_NE8TH.GPJ May 20, 2020

Aspect CONSULTING	Schnitzer NE 8th - 190298		Environmental Exploration Log	
	Project Address & Site Specific Location 10619 NE 8th St, Bellevue, WA, 98004, NE side of 10619 Building		*Coordinates (Lat,Lon WGS84)* 47.6175, -122.1981 (est)	*Exploration Number* **AB-4**
Contractor Cascade Drilling	*Equipment* Sonic - TerraSonic	*Sampling Method* Rotary core	*Ground Surface Elev. (NAVD88)* 163' (est)	
Operator Tim	*Exploration Method(s)* Sonic	*Work Start/Completion Dates* 4/23/2020	*Top of Casing Elev. (NAVD88)* NA	*Depth to Water (Below GS)* 79' (ATD)

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
							SILTY SAND (SM); moist, gray and brown; fines low to medium plasticity; fine to medium, subangular sand; trace fine to medium, subrounded gravel (continued)	
							GLACIAL OUTWASH SILTY GRAVEL (GM); moist, light gray; fines non-plastic; fine to medium, subrounded gravel; blocky fractures; trace coarse sand	
55	110		S8		PID=1.1 Sheen=No sheen			55
			S9	AB-04-55 CVOCs			GRAVEL WITH SILT AND SAND (GP-GM); moist, gray and brown; fines non-plastic; fine to coarse, subangular to subrounded sand; fine to medium, subrounded gravel; becomes dry at 59 feet	
60	105				PID=1.7 Sheen=No sheen Odor=None		SILTY GRAVEL (GM); moist, gray and brown; fines non-plastic; fine to medium, subrounded gravel; trace coarse sand; no odor	60
			S10		PID=0.7 Sheen=No sheen Odor=None		GRAVEL WITH SILT AND SAND (GP-GM); slightly moist, gray; fines non-plastic; fine to coarse, subangular to subrounded sand; fine to medium, subrounded gravel; no odor	
65	100						SILT (ML); moist, light brown; fines non-plastic; some oxide staining, no odor	65
					PID=0.3 Sheen=No sheen Odor=None		SILTY SAND (SM); moist, light brown; fines non-plastic; fine, subangular sand; no odor	
70	95		S11				SILT (ML); moist, light brown; fines non-plastic; some gray mottling; no odor	70
							SANDY SILT (ML); moist, light brown; fines non-plastic; some oxide staining and layering	
	90				PID=0.4 Sheen=No sheen Odor=None		SILT (ML); moist, light brown; fines non-plastic; heavy oxide layer at contact with SANDY SILT (ML) above; fine, subrounded gravel in oxide layer	

Legend

Sample Type
- ◯ No Soil Sample Recovery
- ◧ Continuous core 4" ID

Water Level
- ▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: DWU
Approved by: MLK

Exploration Log AB-4

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NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINTW\PROJECTS\190298_SCHNITZER_NE8TH.GPJ May 20, 2020

Aspect CONSULTING	Schnitzer NE 8th - 190298		Environmental Exploration Log	
	Project Address & Site Specific Location 10619 NE 8th St, Bellevue, WA, 98004, NE side of 10619 Building		*Coordinates (Lat,Lon WGS84)* 47.6175, -122.1981 (est)	*Exploration Number* **AB-4**
Contractor Cascade Drilling	*Equipment* Sonic - TerraSonic	*Sampling Method* Rotary core	*Ground Surface Elev. (NAVD88)* 163' (est)	
Operator Tim	*Exploration Method(s)* Sonic	*Work Start/Completion Dates* 4/23/2020	*Top of Casing Elev. (NAVD88)* NA	*Depth to Water (Below GS)* 79' (ATD)

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
80	85	▽ 4/23/2020	S12	AB-04-77 CVOCs	PID=0.5 Sheen=No sheen Odor=None		SILT (ML); moist, light brown; fines non-plastic; heavy oxide layer at contact with SANDY SILT (ML) above; fine, subrounded gravel in oxide layer (continued)	80
85	80				PID=0.3 Sheen=No sheen Odor=None		becomes wet, gray	85
90	75		S13		PID=0.3 Sheen=No sheen Odor=None		Bottom of exploration at 90 ft. bgs.	90
95	70							95
	65							

Legend

Sample Type
- ◯ No Soil Sample Recovery
- ◧ Continuous core 4" ID

Water Level
- ▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: DWU
Approved by: MLK

Exploration Log AB-4
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NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINTW\PROJECTS\190298_SCHNITZER_NE8TH.GPJ May 20, 2020

Aspect CONSULTING	Schnitzer NE 8th - 190298		Environmental Exploration Log	
	Project Address & Site Specific Location 10619 NE 8th St, Bellevue, WA, 98004, NW corner of Barnes and Noble Building		*Coordinates (Lat,Lon WGS84)* 47.6169, -122.1982 (est)	*Exploration Number* **AB-5**
Contractor Cascade Drilling	*Equipment* Sonic - TerraSonic	*Sampling Method* Rotary core	*Ground Surface Elev. (NAVD88)* 154' (est)	
Operator Tim	*Exploration Method(s)* Sonic	*Work Start/Completion Dates* 4/16/2020	*Top of Casing Elev. (NAVD88)* NA	*Depth to Water (Below GS)* No Water Encountered

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
0	155	Boring completed with concrete to surface 0 to 5 ft cleared with air knife, sampled with hand auger Boring backfilled with 3/8 inch hydrated bentonite chips	S1	AMW-6S-2.5 CVOCs	PID=1.0 Sheen=No sheen Odor=None		ASPHALT; road surface **FILL** SAND WITH GRAVEL (SP); moist, light brown; fine to medium, subangular sand; medium to coarse, subrounded gravel	0
5	150				PID=1.5 Sheen=Slight Odor=None		gravel becomes fine **GLACIAL TILL** SILTY SAND WITH GRAVEL (SM); moist, light brown; non-plastic; fine to medium, mostly fine, subangular sand; fine to coarse, subrounded gravel	5
			S2		PID=9.2 Sheen=No sheen Odor=None		SILTY SAND (SM); moist, gray-brown; non-plastic; fine to medium, subangular sand; trace fine to medium, subrounded gravel	
10	145		S3		PID=13.6 Sheen=No sheen Odor=None			10
					PID=11.8 Sheen=No sheen Odor=No sheen			
15	140		S4					15
			S5					
20	135			AB-5-20 CVOCs	PID=None Sheen=No sheen Odor=None			20
			S6				SAND WITH SILT (SP-SM); moist, light brown; non-plastic; medium, subangular sand SANDY SILT (ML); moist, light brown; low plasticity; fine, subangular sand	
	130							

Legend

Sample Type
- Grab sample
- Continuous core 4" ID

Water Level
- No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: DWU
Approved by: MLK

Exploration Log AB-5

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NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINTW\PROJECTS\190298_SCHNITZER_NE8TH.GPJ May 20, 2020

Aspect CONSULTING	Schnitzer NE 8th - 190298		Environmental Exploration Log	
	Project Address & Site Specific Location 10619 NE 8th St, Bellevue, WA, 98004, NW corner of Barnes and Noble Building		*Coordinates (Lat,Lon WGS84)* 47.6169, -122.1982 (est)	*Exploration Number* **AB-5**
Contractor Cascade Drilling	*Equipment* Sonic - TerraSonic	*Sampling Method* Rotary core	*Ground Surface Elev. (NAVD88)* 154' (est)	
Operator Tim	*Exploration Method(s)* Sonic	*Work Start/Completion Dates* 4/16/2020	*Top of Casing Elev. (NAVD88)* NA	*Depth to Water (Below GS)* No Water Encountered

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
			S7		PID=16.2 Sheen=No sheen Odor=None		SANDY SILT (ML); moist, light brown; low plasticity; fine, subangular sand (continued)	
					PID=9.4 Sheen=No sheen Odor=None		SILTY SAND (SM); very moist, gray-brown; low plasticity; fine to medium, subangular sand; subtrace fine to medium, subrounded gravel; some oxide staining	
30	125						SAND WITH SILT AND GRAVEL (SP-SM); moist, light brown; non-plastic; fine to medium, subangular sand; fine to medium, subrounded gravel	30
			S8				SILTY SAND WITH GRAVEL (SM); moist, gray-brown; low plasticity; fine to medium, subangular sand; fine to medium, subrounded gravel	
					PID=35.8 Sheen=No sheen Odor=None			
	120			AB-5-34 CVOCs	PID=68.5 Sheen=No sheen Odor=None			
35							some oxide staining	35
			S9				4 in cobble	
	115							
40				AB-5-40 CVOCs	PID=64.4 Sheen=No sheen Odor=None		some oxide staining	40
			S10		PID=12.1 Sheen=No sheen Odor=None			
	110							
45					PID=28.6 Sheen=No sheen Odor=None		Bottom of exploration at 45 ft. bgs.	45
	105							

Legend

Sample Type
- Grab sample
- Continuous core 4" ID

Water Level
- No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: DWU
Approved by: MLK

Exploration Log AB-5

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NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINTW\PROJECTS\190298_SCHNITZER_NE8TH.GPJ May 20, 2020

Schnitzer NE 8th - 190298

Monitoring Well Log

Aspect CONSULTING

Project Address & Site Specific Location	Coordinates (Lat,Lon WGS84)	Exploration Number
10619 NE 8th St, Bellevue, WA, 98004, NW corner of Barnes and Noble Building	47.6169, -122.1983 (est)	**AMW-6D**

Contractor	Equipment	Sampling Method	Ground Surface Elev. (NAVD88)	
Cascade Drilling	Sonic - TerraSonic	Rotary core	154' (est)	
Operator	**Exploration Method(s)**	**Work Start/Completion Dates**	**Top of Casing Elev. (NAVD88)**	**Depth to Water (Below GS)**
Tim	Sonic	4/17/2020 to 4/20/2020	NA	70' (ATD)

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
							ASPHALT; Road surface	
		8 inch diam. flush monument in concrete					**FILL** SAND WITH GRAVEL (SP); moist, light brown; fine to medium, subangular sand; medium to coarse, subrounded gravel; trace brick fragments 1/16 in metal mesh	
		0 - 5 ft cleared with air knife, sampled with hand auger						
	150	2 inch diam. Sch 40 PVC riser 0 to 70 ft					becomes red-brown, gravel fine, subrounded	
5			S1				**GLACIAL TILL** SILTY SAND (SM); moist, gray-brown; low plasticity; fine to medium, subangular sand; trace fine, subrounded gravel	5
	145	3/8 inch bentonite chips, hydrated, 2 to 68 ft			PID=4.5 Sheen=No sheen Odor=None			
10			S2				becomes very well compacted, sand mostly fine; fine to medium, subrounded gravel	10
	140				PID=3.8 Sheen=No sheen Odor=None			
15			S3	AMW-6D-16 CVOCs				15
					PID=3.3 Sheen=No sheen Odor=None		becomes very moist, outside of sampler wet	
			S4					
	135				PID=3.7 Sheen=No sheen Odor=None		SAND WITH SILT (SP-SM); moist, gray-brown; low plasticity; fine to medium, subangular sand; trace fine to coarse, subrounded gravel	
20								20
			S5				SILTY SAND (SM); moist, gray-brown; low plasticity; fine to medium, subangular sand; trace fine to coarse, subrounded gravel	
	130				PID=2.0 Sheen=No sheen Odor=None			

Legend

Sample Type
- Grab sample
- Continuous core 4" ID

Water Level
- Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: DWU
Approved by: MLK

Exploration Log AMW-6D

Sheet 1 of 4

NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINTW\PROJECTS\190298_SCHNITZER_NE8TH.GPJ May 20, 2020

Aspect CONSULTING	Schnitzer NE 8th - 190298		Monitoring Well Log	
	Project Address & Site Specific Location 10619 NE 8th St, Bellevue, WA, 98004, NW corner of Barnes and Noble Building		*Coordinates (Lat,Lon WGS84)* 47.6169, -122.1983 (est)	*Exploration Number* **AMW-6D**
Contractor Cascade Drilling	*Equipment* Sonic - TerraSonic	*Sampling Method* Rotary core	*Ground Surface Elev. (NAVD88)* 154' (est)	
Operator Tim	*Exploration Method(s)* Sonic	*Work Start/Completion Dates* 4/17/2020 to 4/20/2020	*Top of Casing Elev. (NAVD88)* NA	*Depth to Water (Below GS)* 70' (ATD)

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
30	125		S6		PID=1.8 Sheen=No sheen Odor=None		SILTY SAND (SM); moist, gray-brown; low plasticity; fine to medium, subangular sand; trace fine to coarse, subrounded gravel (continued)	30
			S7		PID=2.4 Sheen=No sheen Odor=None			
35	120		S8				SILTY SAND WITH GRAVEL (SM); moist, gray-brown; low plasticity; fine to coarse, dominantly medium, subangular sand; fine to coarse, subrounded gravel	35
40	115		S9		PID=11.3 Sheen=No sheen Odor=None PID=1.4 Sheen=No sheen Odor=None			40
45	110	8 inch diam. conductor casing sealed with bentonie chips 42 to 45 ft						45
	105	6 inch outer casing 45 to 90 ft	S11				**GLACIAL OUTWASH** GRAVEL WITH SILT AND SAND (GP-GM); slightly moist, light gray; non-plastic; fine to coarse, subangular to subrounded sand; fine to coarse, subangular to subrounded gravel	

Legend

Sample Type
- Grab sample
- Continuous core 4" ID

Water Level
- Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: DWU
Approved by: MLK

Exploration Log AMW-6D
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NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINTW\PROJECTS\190298_SCHNITZER_NE8TH.GPJ May 20, 2020

Aspect CONSULTING	Schnitzer NE 8th - 190298		Monitoring Well Log	
	Project Address & Site Specific Location 10619 NE 8th St, Bellevue, WA, 98004, NW corner of Barnes and Noble Building		*Coordinates (Lat,Lon WGS84)* 47.6169, -122.1983 (est)	*Exploration Number* **AMW-6D**
Contractor Cascade Drilling	*Equipment* Sonic - TerraSonic	*Sampling Method* Rotary core	*Ground Surface Elev. (NAVD88)* 154' (est)	
Operator Tim	*Exploration Method(s)* Sonic	*Work Start/Completion Dates* 4/17/2020 to 4/20/2020	*Top of Casing Elev. (NAVD88)* NA	*Depth to Water (Below GS)* 70' (ATD)

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
					PID=4.9 Sheen=No sheen Odor=None		**GLACIAL OUTWASH** GRAVEL WITH SILT AND SAND (GP-GM); slightly moist, light gray; non-plastic; fine to coarse, subangular to subrounded sand; fine to coarse, subangular to subrounded gravel (continued)	
			S11	AMW-6D-52 CVOCs	PID=10.4 Sheen=No sheen Odor=None		becomes slightly moist, 5 in cobbles; slow drilling	
55	100						becomes moist, fine to coarse gravel	55
					PID=0.3 Sheen=No sheen Odor=None			
60	95		S12				SANDY SILT (ML); very moist, gray-brown; low plasticity; fine, subangular sand	60
				AMW-6D-63 CVOCs	PID=4.9 Sheen=No sheen Odor=None		SAND WITH SILT (SP-SM); moist, gray-brown; non-plastic; fine to medium, subangular sand; some oxide staining	
65	90						SILT (ML); moist, gray-brown; low plasticity	65
							SILT WITH SAND (ML); very moist, gray; low plasticity; fine, subangular sand	
							SAND WITH SILT (SP-SM); moist, light brown; non-plastic; fine, subangular sand; interbedded with layers of gray SILT (ML)	
	85	2x20 silica sand filter pack 68 to 90 ft			PID=0.6 Sheen=No sheen Odor=None			
70		▽ 4/17/2020	S13				SILT (ML); moist, gray; low plasticity	70
		2 inch diam. Sch 40 PVC slotted screen, 0.010 inch slot, 70 to 90 ft					SAND (SP); very moist, gray; fine, subangular sand	
							becomes light brown	
	80			AMW-6D-74 CVOCs	PID=1.0 Sheen=No sheen Odor=None			

Legend

Sample Type
- Grab sample
- Continuous core 4" ID

Water Level
- ▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: DWU
Approved by: MLK

Exploration Log AMW-6D

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NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINTW\PROJECTS\190298_SCHNITZER_NE8TH.GPJ May 20, 2020

Aspect CONSULTING	Schnitzer NE 8th - 190298		Monitoring Well Log	
	Project Address & Site Specific Location 10619 NE 8th St, Bellevue, WA, 98004, NW corner of Barnes and Noble Building		*Coordinates (Lat,Lon WGS84)* 47.6169, -122.1983 (est)	*Exploration Number* **AMW-6D**
Contractor Cascade Drilling	*Equipment* Sonic - TerraSonic	*Sampling Method* Rotary core	*Ground Surface Elev. (NAVD88)* 154' (est)	
Operator Tim	*Exploration Method(s)* Sonic	*Work Start/Completion Dates* 4/17/2020 to 4/20/2020	*Top of Casing Elev. (NAVD88)* NA	*Depth to Water (Below GS)* 70' (ATD)

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
							SILT (ML); very moist, gray; low plasticity	
					PID=0.4 Sheen=No sheen Odor=None		SILTY SAND (SM); wet, medium brown; non-plastic; fine to medium subangular sand	
							SILT (ML); very moist, gray; low plasticity	
80	75		S14				becomes moist	80
					PID=0.1 Sheen=No sheen Odor=None			
85	70							85
			S15					
90	65	Threaded cap			PID=0.1 Sheen=No sheen Odor=None		Bottom of exploration at 90 ft. bgs.	90
95	60							95
	55							

Legend

Sample Type
- Grab sample
- Continuous core 4" ID

Water Level
- Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: DWU
Approved by: MLK

Exploration Log AMW-6D
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NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINTW\PROJECTS\190298_SCHNITZER_NE8TH.GPJ May 20, 2020

Aspect CONSULTING	Schnitzer NE 8th - 190298		Monitoring Well Log	
	Project Address & Site Specific Location 10619 NE 8th St, Bellevue, WA, 98004, SW corner of 10619 Building		*Coordinates (Lat,Lon WGS84)* 47.6169, -122.1985 (est)	*Exploration Number* **AMW-7**
Contractor Cascade Drilling	*Equipment* Sonic - TerraSonic	*Sampling Method* Rotary core	*Ground Surface Elev. (NAVD88)* 154' (est)	
Operator Tim	*Exploration Method(s)* Sonic	*Work Start/Completion Dates* 4/22/2020	*Top of Casing Elev. (NAVD88)* NA	*Depth to Water (Below GS)* 60' (ATD)

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
0	154	8 inch diam. flush monument in concrete					ASPHALT; Road surface	0
							FILL SAND WITH SILT AND GRAVEL (SP-SM); moist, light brown; non-plastic; medium, subangular sand; medium to coarse, subrounded gravel	
							ASPHALT; black	
		0 - 5 ft cleared with air knife, sampled with hand auger					SAND WITH SILT AND GRAVEL (SP-SM); moist, light brown; non-plastic; medium, subangular sand; medium to coarse, subrounded gravel; some wood debris and oxide staining	
	150	2 inch diam. Sch 40 PVC riser 0 to 70 ft						
5			S1				fine to medium sand	5
							GLACIAL TILL SILTY SAND (SM); moist, gray-brown; low plasticity; fine to medium, mostly fine, subangular sand; trace fine, subrounded gravel	
		3/8 inch bentonite chips, hydrated, 2 to 58 ft			PID=0.1 Sheen=No sheen Odor=None			
	145						some oxide staining	
10			S2					10
					PID=0.3 Sheen=Slight Odor=None			
	140							
15					PID=0.4 Sheen=No sheen Odor=None			15
	135						SAND WITH SILT (SP-SM); moist, gray-brown; non-plastic; medium to coarse, subangular sand	
20			S3				SILTY SAND (SM); moist, gray-brown; low plasticity; fine to medium, subangular sand; trace fine, subrounded gravel	20
					PID=0.5 Sheen=Very slight Odor=None			
	130						SILT (ML); moist, light brown; low plasticity; some oxide	

Legend

Sample Type
- Grab sample
- Continuous core 4" ID

Water Level
- Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: DWU
Approved by: MLK

Exploration Log AMW-7

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NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINTW\PROJECTS\190298_SCHNITZER_NE8TH.GPJ May 20, 2020

Aspect CONSULTING	Schnitzer NE 8th - 190298		Monitoring Well Log	
	Project Address & Site Specific Location		*Coordinates (Lat,Lon WGS84)*	*Exploration Number*
	10619 NE 8th St, Bellevue, WA, 98004, SW corner of 10619 Building		47.6169, -122.1985 (est)	**AMW-7**
Contractor	*Equipment*	*Sampling Method*	*Ground Surface Elev. (NAVD88)*	
Cascade Drilling	Sonic - TerraSonic	Rotary core	154' (est)	
Operator	*Exploration Method(s)*	*Work Start/Completion Dates*	*Top of Casing Elev. (NAVD88)*	*Depth to Water (Below GS)*
Tim	Sonic	4/22/2020	NA	60' (ATD)

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
30	125		S3		PID=0.4 Sheen=Very slight Odor=None		staining SILTY SAND (SM); moist, gray-brown; low plasticity; fine to medium sand; trace fine to coarse, subangular gravel	30
35	120		S4		PID=0.3 Sheen=No sheen Odor=None			35
40	115		S5		PID=0.5 Sheen=No sheen Odor=None		SAND WITH SILT AND GRAVEL (SP-SM); moist, gray-brown; non-plastic; fine to medium, subangular to subrounded sand; fine to medium, subrounded gravel	40
45	110	8 inch diam. conductor casing sealed with bentonie chips 42 to 45 ft			PID=0.5 Sheen=No sheen Odor=None		SILTY SAND (SM); moist, gray-brown; low plasticity; fine to medium, subangular sand; trace fine, subrounded gravel	45
	105	6 inch outer casing 45 to 90 ft	S6		PID=1.0 Sheen=No sheen Odor=None		**GLACIAL OUTWASH** GRAVEL WITH SILT AND SAND (GW-GM); slightly moist, light gray; non-plastic; fine to coarse, subangular sand; fine to coarse, subangular to subrounded gravel	

Legend

Sample Type
- Grab sample
- Continuous core 4" ID

Water Level
- Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: DWU
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Exploration Log AMW-7

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NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINTW\PROJECTS\190298_SCHNITZER_NE8TH.GPJ May 20, 2020

Aspect CONSULTING	Schnitzer NE 8th - 190298		Monitoring Well Log	
	Project Address & Site Specific Location 10619 NE 8th St, Bellevue, WA, 98004, SW corner of 10619 Building		*Coordinates (Lat,Lon WGS84)* 47.6169, -122.1985 (est)	*Exploration Number* **AMW-7**
Contractor Cascade Drilling	*Equipment* Sonic - TerraSonic	*Sampling Method* Rotary core	*Ground Surface Elev. (NAVD88)* 154' (est)	
Operator Tim	*Exploration Method(s)* Sonic	*Work Start/Completion Dates* 4/22/2020	*Top of Casing Elev. (NAVD88)* NA	*Depth to Water (Below GS)* 60' (ATD)

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
							GLACIAL OUTWASH GRAVEL WITH SILT AND SAND (GW-GM); slightly moist, light gray; non-plastic; fine to coarse, subangular sand; fine to coarse, subangular to subrounded gravel (continued)	
55	100		S6	AMW-7-53 CVOCs	PID=2.8 Sheen=No sheen Odor=No odor			55
			S7				SILT (ML); moist, light brown; low plasticity; some oxide staining SAND WITH SILT (SP-SM); moist, light brown; non-plastic; fine to medium, subangular sand	
60	95	2x20 silica sand filter pack 58 to 80 ft ▽ 4/22/2020 2 inch diam. Sch 40 PVC slotted screen, 0.010 inch slot, 60 to 80 ft		AMW-7-59 CVOCs	PID=0.0 Sheen=No sheen Odor=No odor		SILT (ML); moist, light brown; low plasticity; some oxide staining becomes very moist, gray	60
65	90		S8		PID=0.0 Sheen=No sheen Odor=None		0.3 ft layer fine gravel SAND WITH SILT (SP-SM); wet, gray; non-plastic; fine, subangular sand	65
70	85			AMW-7-68 CVOCs	PID=0.0 Sheen=No sheen Odor=No odor			70
	80		S9				SILT (ML); wet, gray; low plasticity	

Legend

Sample Type
- Grab sample
- Continuous core 4" ID

Water Level
- ▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: DWU
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Exploration Log AMW-7

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NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINTW\PROJECTS\190298_SCHNITZER_NE8TH.GPJ May 20, 2020

Aspect CONSULTING	Schnitzer NE 8th - 190298		Monitoring Well Log	
	Project Address & Site Specific Location 10619 NE 8th St, Bellevue, WA, 98004, SW corner of 10619 Building		*Coordinates (Lat,Lon WGS84)* 47.6169, -122.1985 (est)	*Exploration Number* **AMW-7**
Contractor Cascade Drilling	*Equipment* Sonic - TerraSonic	*Sampling Method* Rotary core	*Ground Surface Elev. (NAVD88)* 154' (est)	
Operator Tim	*Exploration Method(s)* Sonic	*Work Start/Completion Dates* 4/22/2020	*Top of Casing Elev. (NAVD88)* NA	*Depth to Water (Below GS)* 60' (ATD)

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
				AMW-7-75 CVOCs	PID=0.8 Sheen=No sheen Odor=No odor		SILT (ML); wet, gray; low plasticity (continued)	
					PID=0.5 Sheen=No sheen Odor=None			
80	75	Threaded cap						80
		Boring backfilled with 3/8 inch hydrated bentonite chips	S9		PID=0.7 Sheen=No sheen Odor=None			
85	70							85
	65				PID=0.9 Sheen=No sheen Odor=None			
90							Bottom of exploration at 90 ft. bgs.	90
95	60							95
	55							

Legend

Sample Type
- Grab sample
- Continuous core 4" ID

Water Level
- Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: DWU
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NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINTW\PROJECTS\190298_SCHNITZER_NE8TH.GPJ May 20, 2020

Aspect CONSULTING	Schnitzer NE 8th - 190298		Monitoring Well Log	
	Project Address & Site Specific Location 10619 NE 8th St, Bellevue, WA, 98004, SW corner of parking lot		*Coordinates (Lat,Lon WGS84)* 47.6170, -122.1987 (est)	*Exploration Number* **AMW-8**
Contractor Cascade Drilling	*Equipment* Sonic - TerraSonic	*Sampling Method* Rotary core	*Ground Surface Elev. (NAVD88)* 155' (est)	
Operator Tim	*Exploration Method(s)* Sonic	*Work Start/Completion Dates* 4/27/2020	*Top of Casing Elev. (NAVD88)* NA	*Depth to Water (Below GS)* 70' (ATD)

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
		8 inch diam. flush monument in concrete	S1				**FILL** GRAVEL WITH SILT (GP-GM); slightly moist, brown; non-plastic; fine to coarse, subangular sand; fine to medium, subrounded gravel	
							SAND WITH SILT (SP-SM); moist, light brown; non-plastic; fine to medium, subangular sand; trace fine to medium, subrounded gravel; slight petroleum-like odor	
				AMW-8-4 NWTPH-Dx, Gx; VOCs; PAHs; Metals	PID=304.9 Sheen=Heavy Odor=Moderate petroleum-like		SILTY SAND (SM); very moist, grey; low plasticity; fine to medium, subangular sand; trace fine to medium, subrounded gravel; moderate petroleum-like odor	
		2 inch diam. Sch 40 PVC riser 0 to 70 ft					ASPHALT; dark brown to black	
5	150						**GLACIAL TILL** SILTY SAND (SM); moist, light gray-brown; low plasticity; fine to medium, subangular sand; subtrace fine, subrounded gravel	5
		3/8 inch bentonite chips, hydrated, 2 to 68 ft			PID=0.0 Sheen=Slight Odor=None			
10	145		S2				trace medium, subrounded gravel	10
							SAND WITH SILT (SP-SM); moist, light brown; non-plastic; fine to medium, subangular sand; some oxide staining	
					PID=0.2 Sheen=Slight Odor=None			
15	140						SILTY SAND (SM); very moist, gray; low plasticity; fine to medium subangular sand; fine to coarse, subrounded gravel	15
				AMW-8-16 CVOCs	PID=12.5 Sheen=No sheen Odor=None			
							gravel becomes fine to medium; some dark brown mottling	
20	135		S3				become gray-brown	20
				AMW-8-21 CVOCs	PID=18.3 Sheen=No sheen Odor=None		becomes gray	
							becomes moist, gray brown	

Legend

Sample Type
- ◯ No Soil Sample Recovery
- ◧ Continuous core 4" ID

Water Level
- ▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: DWU
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Exploration Log AMW-8
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NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINTW\PROJECTS\190298_SCHNITZER_NE8TH.GPJ May 20, 2020

Aspect CONSULTING	Schnitzer NE 8th - 190298		Monitoring Well Log	
	Project Address & Site Specific Location 10619 NE 8th St, Bellevue, WA, 98004, SW corner of parking lot		*Coordinates (Lat,Lon WGS84)* 47.6170, -122.1987 (est)	*Exploration Number* **AMW-8**
Contractor Cascade Drilling	*Equipment* Sonic - TerraSonic	*Sampling Method* Rotary core	*Ground Surface Elev. (NAVD88)* 155' (est)	
Operator Tim	*Exploration Method(s)* Sonic	*Work Start/Completion Dates* 4/27/2020	*Top of Casing Elev. (NAVD88)* NA	*Depth to Water (Below GS)* 70' (ATD)

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
							SILTY SAND WITH GRAVEL (SM); moist, gray brown; low plasticity fines; fine to medium, subangular sand; fine to medium, subrounded gravel	
					PID=0.4 Sheen=No sheen Odor=None			
30	125		S4					30
							SILTY SAND (SM); moist, gray brown; low plasticity fines; fine to medium, subangular sand; trace fine to medium, subrounded gravel	
					PID=0.2 Sheen=No sheen Odor=None			
35	120		S5					35
			S6		PID=0.2 Sheen=No sheen Odor=None		SAND WITH SILT (SP-SM); very moist, gray brown; non-plastic; fine to medium, subangular sand; trace fine to coarse, subangular gravel	
40	115						SILTY SAND (SM); very moist, gray brown; low plasticity, fine to medium, subangular sand	40
							SAND WITH SILT AND GRAVEL (SP-SM); very moist, gray brown; non-plastic; fine to coarse, subangular sand; fine to coarse, subrounded gravel	
			S7				SILTY SAND (SM); very moist, gray brown; low plasticity; fine to medium, subangular sand; trace fine to coarse, subangular to subrounded gravel	
					PID=0.3 Sheen=No sheen Odor=None		becomes moist	
45	110	8 inch diam. conductor casing sealed with bentonie chips 42 to 45 ft						45
							SILT WITH GRAVEL (ML); slightly moist; gray; non-plastic; fine to medium, subrounded to subangular gravel; blocky fracture	
				AMW-8-47 CVOCs			SILTY SAND (SM); moist, gray brown; low plasticity fines; fine to medium, subangular sand; trace fine, subrounded gravel; blocky fracture	
			S8		PID=1.2 Sheen=No sheen Odor=None			
		6 inch outer casing 45 to 90 ft						

Legend

Sample Type
- ◯ No Soil Sample Recovery
- ◧ Continuous core 4" ID

Water Level
- ▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: DWU
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Exploration Log AMW-8

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NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINTW\PROJECTS\190298_SCHNITZER_NE8TH.GPJ May 20, 2020

Aspect CONSULTING	Schnitzer NE 8th - 190298		Monitoring Well Log	
	Project Address & Site Specific Location 10619 NE 8th St, Bellevue, WA, 98004, SW corner of parking lot		*Coordinates (Lat,Lon WGS84)* 47.6170, -122.1987 (est)	*Exploration Number* **AMW-8**
Contractor Cascade Drilling	*Equipment* Sonic - TerraSonic	*Sampling Method* Rotary core	*Ground Surface Elev. (NAVD88)* 155' (est)	
Operator Tim	*Exploration Method(s)* Sonic	*Work Start/Completion Dates* 4/27/2020	*Top of Casing Elev. (NAVD88)* NA	*Depth to Water (Below GS)* 70' (ATD)

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
			S8				SILTY SAND (SM); moist, gray brown; low plasticity fines; fine to medium, subangular sand; trace fine, subrounded gravel; blocky fracture (continued)	
							fine to coarse gravel	
55	100		S9	AMW-8-57 CVOCs	PID=0.3 Sheen=No sheen Odor=None		**GLACIAL OUTWASH** SAND WITH SILT (SP-SM); slightly moist, gray; non-plastic; fine to medium, subangular sand	55
					PID=1.1 Sheen=Slight Odor=None		SILT WITH GRAVEL (ML); slightly moist, gray; non-plastic; fine, subrounded gravel	
							SILT (ML); moist, light brown; non-plastic	
							0.3 ft layer of SP-SM as above	
60	95						SAND WITH SILT (SP-SM); moist, light brown; non-plastic; fine to medium, subangular sand	60
							SILT (ML); very moist, gray; low plasticity	
			S10	AMW-8-64 CVOCs	PID=0.1 Sheen=No sheen Odor=None			
65	90						SANDY SILT (ML); very moist, gray; low plasticity; fine, subangular sand	65
							SAND WITH SILT (SP-SM); moist, light brown; non-plastic; fine to medium, subangular sand	
							SILT (ML); very moist, gray; low plasticity	
		2x20 silica sand filter pack 68 to 90 ft						
70	85	▽ 4/27/2020		AMW-8-70 CVOCs	PID=0.1 Sheen=No sheen Odor=None			70
		2 inch diam. Sch 40 PVC slotted screen, 0.010 inch slot, 70 to 90 ft					SAND WITH SILT (SP-SM); very moist, gray; non-plastic; dominantly medium, some fine, subangular sand	
			S11		PID=0.2 Sheen=No sheen Odor=None			

Legend

Sample Type
- ◯ No Soil Sample Recovery
- ◧ Continuous core 4" ID

Water Level
- ▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: DWU
Approved by: MLK

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NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINTW\PROJECTS\190298_SCHNITZER_NE8TH.GPJ May 20, 2020

Aspect CONSULTING	Schnitzer NE 8th - 190298		Monitoring Well Log	
	Project Address & Site Specific Location 10619 NE 8th St, Bellevue, WA, 98004, SW corner of parking lot		*Coordinates (Lat,Lon WGS84)* 47.6170, -122.1987 (est)	*Exploration Number* **AMW-8**
Contractor Cascade Drilling	*Equipment* Sonic - TerraSonic	*Sampling Method* Rotary core	*Ground Surface Elev. (NAVD88)* 155' (est)	
Operator Tim	*Exploration Method(s)* Sonic	*Work Start/Completion Dates* 4/27/2020	*Top of Casing Elev. (NAVD88)* NA	*Depth to Water (Below GS)* 70' (ATD)

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
							SAND WITH SILT (SP-SM); very moist, gray; non-plastic; dominantly medium, some fine, subangular sand (continued)	
			S11		PID=0.0 Sheen=No sheen Odor=None		SILT (ML); very moist, gray; low plasticity	
80	75							80
					PID=0.0 Sheen=No sheen Odor=None			
85	70		S12					85
					PID=0.0 Sheen=No sheen Odor=None			
90	65	Threaded cap					Bottom of exploration at 90 ft. bgs.	90
95	60							95

Legend

Sample Type
- No Soil Sample Recovery
- Continuous core 4" ID

Water Level
- Water Level ATD

See Exploration Log Key for explanation of symbols

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NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINTW\PROJECTS\190298_SCHNITZER_NE8TH.GPJ May 20, 2020

Schnitzer NE 8th - 190298

Monitoring Well Log

Aspect CONSULTING

Project Address & Site Specific Location	Coordinates (Lat,Lon WGS84)	Exploration Number
10619 NE 8th St, Bellevue, WA, 98004, NW corner of 10619 Building	47.6172, -122.1984 (est)	**AMW-9**

Contractor	Equipment	Sampling Method	Ground Surface Elev. (NAVD88)	
Cascade Drilling	Sonic - TerraSonic	Rotary core	157' (est)	
Operator	**Exploration Method(s)**	**Work Start/Completion Dates**	**Top of Casing Elev. (NAVD88)**	**Depth to Water (Below GS)**
Tim	Sonic	4/24/2020	NA	30' (ATD)

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
							ASPHALT; Road surface	
		8 inch diam. flush monument in concrete					**FILL** GRAVEL WITH SILT AND SAND (GP-GM); moist, gray-brown; non-plastic; fine to coarse, subangular sand; fine to medium, rubrounded gravel	
	155		S1				SAND WITH SILT AND GRAVEL (SP-SM); moist, brown; non-plastic; fine to medium, subangular sand; fine, subangular gravel	
		2 inch diam. Sch 40 PVC riser 0 to 25 ft					SAND WITH SILT (SP-SM); moist, light brown; non-plastic; medium, subangular sand; some wood debris	
5				AMW-9-5 NWTPH-Dx, Gx, VOCs, PAHs, MTCA 5 Metals	PID=36.0 Sheen=No sheen Odor=Slight sweet, pine-like		**GLACIAL TILL** SILTY SAND (SM); moist, gray-brown; low plasticity; fine to medium, subangular sand; trace fine, subrounded gravel	5
	150				PID=0.5 Sheen=No sheen Odor=None			
		3/8 inch bentonite chips, hydrated, 2 to 23 ft						
10			S2				grouping of 6 in cobbles	10
	145							
					PID=0.3 Sheen=No sheen Odor=None			
15								15
	140				PID=0.5 Sheen=No sheen Odor=None			
20			S3					20
	135							
					PID=0.6 Sheen=No sheen Odor=None		SAND WITH SILT (SP-SM); moist, gray-brown; non-plastic; medium, subangular sand	
		2x20 silica sand filter pack 23 to 45 ft					SILT (ML); moist, gray-brown; non-plastic	
							SILTY SAND (SM); moist, gray-brown; low plasticity; fine	

Legend

Sample Type
- No Soil Sample Recovery
- Continuous core 4" ID

Water Level
- Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: DWU
Approved by: MLK

Exploration Log AMW-9

Sheet 1 of 4

NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINTW\PROJECTS\190298_SCHNITZER_NE8TH.GPJ May 20, 2020

Aspect CONSULTING	Schnitzer NE 8th - 190298		Monitoring Well Log	
	Project Address & Site Specific Location 10619 NE 8th St, Bellevue, WA, 98004, NW corner of 10619 Building		*Coordinates (Lat,Lon WGS84)* 47.6172, -122.1984 (est)	*Exploration Number* **AMW-9**
Contractor Cascade Drilling	*Equipment* Sonic - TerraSonic	*Sampling Method* Rotary core	*Ground Surface Elev. (NAVD88)* 157' (est)	
Operator Tim	*Exploration Method(s)* Sonic	*Work Start/Completion Dates* 4/24/2020	*Top of Casing Elev. (NAVD88)* NA	*Depth to Water (Below GS)* 30' (ATD)

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
							to medium, subangular sand; trace fine, subrounded gravel	
							SILTY SAND (SM); moist, gray-brown; low plasticity; fine to medium, subangular sand; trace fine, subrounded gravel (continued)	
							some oxide staining	
	130	2 inch diam. Sch 40 PVC slotted screen, 0.010 inch slot, 25 to 45 ft		AMW-9-28 CVOCs	PID=1.1 Sheen=No sheen Odor=None		SILTY SAND WITH GRAVEL (SM); moist, gray-brown; low plasticity; fine to medium, subangular sand; fine to medium, subangular gravel	
30		▽ 4/24/2020	S4					30
							SAND WITH SILT (SP-SM); very moist, gray-brown; non-plastic; fine to medium, subangular sand; trace fine, subrounded gravel	
	125				PID=1.0 Sheen=No sheen Odor=None			
							SILTY SAND (SM); very moist, gray-brown; low plasticity; fine to medium, subangular sand; trace fine, subrounded gravel	
35				AMW-9-35 CVOCs	PID=1.0 Sheen=No sheen Odor=None		outside of sampler is wet; some oxide staining	35
	120							
40			S5					40
	115				PID=0.8 Sheen=No sheen Odor=None			
45		8 inch diam. conductor casing sealed with bentonie chips 42 to 45 ft Threaded cap					SILT (ML); slightly moist, dark gray; low plasticity, well compacted, breaks into blocks; trace fine to medium, subrounded gravel	45
	110	6 inch outer casing 45 to 90 ft, boring backfilled with 3/8" hydrated bentonite chips, 45 to 90 ft	S6		PID=0.8 Sheen=Very slight Odor=None		SAND WITH SILT AND GRAVEL (SP-SM); moist, gray-brown; non-plastic; fine to medium, subangular sand; fine, subrounded gravel	

Legend

Sample Type
- ◯ No Soil Sample Recovery
- ◧ Continuous core 4" ID

Water Level
- ▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: DWU
Approved by: MLK

Exploration Log AMW-9

Sheet 2 of 4

NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINTW\PROJECTS\190298_SCHNITZER_NE8TH.GPJ May 20, 2020

Aspect CONSULTING	Schnitzer NE 8th - 190298		Monitoring Well Log	
	Project Address & Site Specific Location 10619 NE 8th St, Bellevue, WA, 98004, NW corner of 10619 Building		*Coordinates (Lat,Lon WGS84)* 47.6172, -122.1984 (est)	*Exploration Number* **AMW-9**
Contractor Cascade Drilling	*Equipment* Sonic - TerraSonic	*Sampling Method* Rotary core	*Ground Surface Elev. (NAVD88)* 157' (est)	
Operator Tim	*Exploration Method(s)* Sonic	*Work Start/Completion Dates* 4/24/2020	*Top of Casing Elev. (NAVD88)* NA	*Depth to Water (Below GS)* 30' (ATD)

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
				AMW-9-51 CVOCs	PID=2.2 Sheen=No sheen Odor=None		SILTY SAND (SM); moist, gray-brown; low plasticity; fine to medium, subangular sand; trace fine, subrounded gravel	
	105						SILT (ML); slightly moist, gray; low plasticity, well compacted, breaks into blocks; trace fine, subrounded gravel	
55			S7				SILTY SAND WITH GRAVEL (SM); moist, gray; low plasticity; fine to medium, subangular sand; fine to medium, subrounded gravel	55
	100				PID=0.2 Sheen=No sheen Odor=None			
60							**GLACIAL OUTWASH**	60
					PID=0.3 Sheen=No sheen Odor=None		GRAVEL WITH SILT AND SAND (GW-GM); slightly moist, light gray; non-plastic; fine to coarse, subangular to subrounded sand; fine to coarse, subangular to subrounded gravel	
	95		S8				SILT (ML); slightly moist; gray; low plasticity; some oxide staining	
							SAND WITH SILT (SP-SM); moist, light brown; non-plastic; fine to medium, subangular sand; interbedded with layers of gray SILT (ML)	
65							SILT (ML); moist, gray; low plasticity	65
	90			AMW-9-67 CVOCs	PID=0.1 Sheen=No sheen Odor=None			
		▽ 4/24/2020					becomes wet	
70			S9					70
	85							
					PID=0.3 Sheen=No sheen Odor=None		SILTY SAND (SM); very moist, gray; low plasticity; fine, subangular sand	

Legend

Sample Type
- ◯ No Soil Sample Recovery
- ◧ Continuous core 4" ID

Water Level
- ▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: DWU
Approved by: MLK

Exploration Log AMW-9

Sheet 3 of 4

NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINTW\PROJECTS\190298_SCHNITZER_NE8TH.GPJ May 20, 2020

Aspect CONSULTING	Schnitzer NE 8th - 190298		Monitoring Well Log	
	Project Address & Site Specific Location 10619 NE 8th St, Bellevue, WA, 98004, NW corner of 10619 Building		*Coordinates (Lat,Lon WGS84)* 47.6172, -122.1984 (est)	*Exploration Number* **AMW-9**
Contractor Cascade Drilling	*Equipment* Sonic - TerraSonic	*Sampling Method* Rotary core	*Ground Surface Elev. (NAVD88)* 157' (est)	
Operator Tim	*Exploration Method(s)* Sonic	*Work Start/Completion Dates* 4/24/2020	*Top of Casing Elev. (NAVD88)* NA	*Depth to Water (Below GS)* 30' (ATD)

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
80	80		S9		PID=0.2 Sheen=No sheen Odor=None		SILT (ML); moist, gray; low plasticity SILTY SAND (SM); very moist, gray; low plasticity; fine, subangular sand SAND WITH SILT (SP-SM); very moist, gray; low plasticity; fine, subangular sand	80
85	75		S10		PID=0.3 Sheen=No sheen Odor=None		SANDY SILT (ML); wet. gray; low plasticity; fine, subangular sand	85
90	70				PID=0.2 Sheen=No sheen Odor=None		Bottom of exploration at 90 ft. bgs.	90
95	65							95
	60							

Legend

Sample Type
- No Soil Sample Recovery
- Continuous core 4" ID

Water Level
- Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: DWU
Approved by: MLK

Exploration Log AMW-9
Sheet 4 of 4

NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINTW\PROJECTS\190298_SCHNITZER_NE8TH.GPJ May 20, 2020

APPENDIX B

Laboratory Reports and Chain-of-Custody Documentation

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

August 21, 2019

Jessica Smith, Project Manager
Aspect Consulting, LLC
710 2nd Ave S, Suite 550
Seattle, WA 98104

Dear Ms Smith:

Included are the results from the testing of material submitted on August 16, 2019 from the NE 8th & 106 PO 160298, F&BI 908335 project. There are 14 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 have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Data Aspect, Meilani Lanier-Kamaha'o
ASP0821R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on August 16, 2019 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC NE 8th & 106 PO 160298, F&BI 908335 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
908335 -01	B4/MW-4-081519
908335 -02	URS-MW-8-081519
908335 -03	MW-20-081519
908335 -04	MW-19-081519
908335 -05	B2/MW-2-081519
908335 -06	Trip Blank

All quality control requirements were acceptable.

Date of Report: 08/21/19
Date Received: 08/16/19
Project: NE 8th & 106 PO 160298, F&BI 908335
Date Extracted: 08/19/19
Date Analyzed: 08/19/19

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 51-134)
MW-20-081519 908335-03	<100	107
Method Blank 09-1962 MB	<100	110

Date of Report: 08/21/19
Date Received: 08/16/19
Project: NE 8th & 106 PO 160298, F&BI 908335
Date Extracted: 08/19/19
Date Analyzed: 08/19/19

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 47-140)
MW-20-081519 908335-03	70 x	<250	106
Method Blank 09-2048 MB	<50	<250	106

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	B4/MW-4-081519	Client:	Aspect Consulting, LLC
Date Received:	08/16/19	Project:	NE 8th & 106 PO 160298
Date Extracted:	08/16/19	Lab ID:	908335-01
Date Analyzed:	08/16/19	Data File:	081638.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MS/AEN

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	57	121
Toluene-d8	99	63	127
4-Bromofluorobenzene	92	60	133

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

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	URS-MW-8-081519	Client:	Aspect Consulting, LLC
Date Received:	08/16/19	Project:	NE 8th & 106 PO 160298
Date Extracted:	08/16/19	Lab ID:	908335-02
Date Analyzed:	08/16/19	Data File:	081639.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MS/AEN

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	94	60	133

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

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-20-081519	Client:	Aspect Consulting, LLC
Date Received:	08/16/19	Project:	NE 8th & 106 PO 160298
Date Extracted:	08/16/19	Lab ID:	908335-03
Date Analyzed:	08/16/19	Data File:	081640.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MS/AEN

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	94	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	2.9
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<50	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Hexane	<1	o-Xylene	<1
Methylene chloride	<5	Styrene	<1
Methyl t-butyl ether (MTBE)	<1	Isopropylbenzene	<1
trans-1,2-Dichloroethene	<1	Bromoform	<1
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	<1
2-Butanone (MEK)	<10	1,2,3-Trichloropropane	<1
1,2-Dichloroethane (EDC)	<1	2-Chlorotoluene	<1
1,1,1-Trichloroethane	<1	4-Chlorotoluene	<1
1,1-Dichloropropene	<1	tert-Butylbenzene	<1
Carbon tetrachloride	<1	1,2,4-Trimethylbenzene	<1
Benzene	<0.35	sec-Butylbenzene	<1
Trichloroethene	<1	p-Isopropyltoluene	<1
1,2-Dichloropropane	<1	1,3-Dichlorobenzene	<1
Bromodichloromethane	<1	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	<1	1,2,4-Trichlorobenzene	<1
Toluene	<1	Hexachlorobutadiene	<1
trans-1,3-Dichloropropene	<1	Naphthalene	<1
1,1,2-Trichloroethane	<1	1,2,3-Trichlorobenzene	<1
2-Hexanone	<10		

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-19-081519	Client:	Aspect Consulting, LLC
Date Received:	08/16/19	Project:	NE 8th & 106 PO 160298
Date Extracted:	08/16/19	Lab ID:	908335-04
Date Analyzed:	08/16/19	Data File:	081641.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MS/AEN

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	99	63	127
4-Bromofluorobenzene	92	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	5.8
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<50	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Hexane	<1	o-Xylene	<1
Methylene chloride	<5	Styrene	<1
Methyl t-butyl ether (MTBE)	<1	Isopropylbenzene	<1
trans-1,2-Dichloroethene	<1	Bromoform	<1
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	<1
2-Butanone (MEK)	<10	1,2,3-Trichloropropane	<1
1,2-Dichloroethane (EDC)	<1	2-Chlorotoluene	<1
1,1,1-Trichloroethane	<1	4-Chlorotoluene	<1
1,1-Dichloropropene	<1	tert-Butylbenzene	<1
Carbon tetrachloride	<1	1,2,4-Trimethylbenzene	<1
Benzene	<0.35	sec-Butylbenzene	<1
Trichloroethene	<1	p-Isopropyltoluene	<1
1,2-Dichloropropane	<1	1,3-Dichlorobenzene	<1
Bromodichloromethane	<1	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	<1	1,2,4-Trichlorobenzene	<1
Toluene	<1	Hexachlorobutadiene	<1
trans-1,3-Dichloropropene	<1	Naphthalene	<1
1,1,2-Trichloroethane	<1	1,2,3-Trichlorobenzene	<1
2-Hexanone	<10		

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	B2/MW-2-081519	Client:	Aspect Consulting, LLC
Date Received:	08/16/19	Project:	NE 8th & 106 PO 160298
Date Extracted:	08/16/19	Lab ID:	908335-05
Date Analyzed:	08/16/19	Data File:	081642.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MS/AEN

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	100	63	127
4-Bromofluorobenzene	93	60	133

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

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	NE 8th & 106 PO 160298
Date Extracted:	08/16/19	Lab ID:	09-1883 mb
Date Analyzed:	08/16/19	Data File:	081625.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MS/AEN

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	95	60	133

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

Date of Report: 08/21/19
Date Received: 08/16/19
Project: NE 8th & 106 PO 160298, F&BI 908335

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TPH AS GASOLINE USING METHOD NWTPH-Gx

Laboratory Code: 908315-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	ug/L (ppb)	1,000	94	69-134

Date of Report: 08/21/19
Date Received: 08/16/19
Project: NE 8th & 106 PO 160298, F&BI 908335

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	80	88	61-133	10

Date of Report: 08/21/19
Date Received: 08/16/19
Project: NE 8th & 106 PO 160298, F&BI 908335

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

Laboratory Code: 908315-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Dichlorodifluoromethane	ug/L (ppb)	50	<1	107	10-172
Chloromethane	ug/L (ppb)	50	<10	109	25-166
Vinyl chloride	ug/L (ppb)	50	<0.2	115	36-166
Bromomethane	ug/L (ppb)	50	<1	115	47-169
Chloroethane	ug/L (ppb)	50	<1	106	46-160
Trichlorofluoromethane	ug/L (ppb)	50	<1	116	44-165
Acetone	ug/L (ppb)	250	<50	56	10-182
1,1-Dichloroethene	ug/L (ppb)	50	<1	118	60-136
Hexane	ug/L (ppb)	50	<1	93	52-150
Methylene chloride	ug/L (ppb)	50	<5	105	67-132
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	<1	115	74-127
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	113	72-129
1,1-Dichloroethane	ug/L (ppb)	50	<1	109	70-128
2,2-Dichloropropane	ug/L (ppb)	50	<1	96	36-154
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	113	71-127
Chloroform	ug/L (ppb)	50	<1	109	65-132
2-Butanone (MEK)	ug/L (ppb)	250	<10	68	10-129
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	102	48-149
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	111	60-146
1,1-Dichloropropene	ug/L (ppb)	50	<1	108	69-133
Carbon tetrachloride	ug/L (ppb)	50	<1	114	56-152
Benzene	ug/L (ppb)	50	<0.35	102	76-125
Trichloroethene	ug/L (ppb)	50	<1	108	66-135
1,2-Dichloropropane	ug/L (ppb)	50	<1	100	78-125
Bromodichloromethane	ug/L (ppb)	50	<1	105	61-150
Dibromomethane	ug/L (ppb)	50	<1	104	66-141
4-Methyl-2-pentanone	ug/L (ppb)	250	<10	105	10-185
cis-1,3-Dichloropropene	ug/L (ppb)	50	<1	100	72-132
Toluene	ug/L (ppb)	50	<1	96	76-122
trans-1,3-Dichloropropene	ug/L (ppb)	50	<1	94	76-130
1,1,2-Trichloroethane	ug/L (ppb)	50	<1	100	68-131
2-Hexanone	ug/L (ppb)	250	<10	75	10-185
1,3-Dichloropropane	ug/L (ppb)	50	<1	97	71-128
Tetrachloroethene	ug/L (ppb)	50	<1	101	10-226
Dibromochloromethane	ug/L (ppb)	50	<1	103	70-139
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	<1	96	69-134
Chlorobenzene	ug/L (ppb)	50	<1	99	77-122
Ethylbenzene	ug/L (ppb)	50	<1	99	69-135
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	<1	107	73-137
m,p-Xylene	ug/L (ppb)	100	<2	100	69-135
o-Xylene	ug/L (ppb)	50	<1	101	60-140
Styrene	ug/L (ppb)	50	<1	99	71-133
Isopropylbenzene	ug/L (ppb)	50	<1	101	65-142
Bromoform	ug/L (ppb)	50	<1	107	65-142
n-Propylbenzene	ug/L (ppb)	50	<1	98	58-144
Bromobenzene	ug/L (ppb)	50	<1	99	75-124
1,3,5-Trimethylbenzene	ug/L (ppb)	50	<1	98	66-137
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	<1	99	51-154
1,2,3-Trichloropropane	ug/L (ppb)	50	<1	95	53-150
2-Chlorotoluene	ug/L (ppb)	50	<1	97	66-127
4-Chlorotoluene	ug/L (ppb)	50	<1	98	65-130
tert-Butylbenzene	ug/L (ppb)	50	<1	97	65-137
1,2,4-Trimethylbenzene	ug/L (ppb)	50	<1	97	59-146
sec-Butylbenzene	ug/L (ppb)	50	<1	97	64-140
p-Isopropyltoluene	ug/L (ppb)	50	<1	98	65-141
1,3-Dichlorobenzene	ug/L (ppb)	50	<1	104	72-123
1,4-Dichlorobenzene	ug/L (ppb)	50	<1	101	69-126
1,2-Dichlorobenzene	ug/L (ppb)	50	<1	104	69-128
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	<10	103	32-164
1,2,4-Trichlorobenzene	ug/L (ppb)	50	<1	116	66-136
Hexachlorobutadiene	ug/L (ppb)	50	<1	100	60-143
Naphthalene	ug/L (ppb)	50	<1	110	44-164
1,2,3-Trichlorobenzene	ug/L (ppb)	50	<1	113	69-148

Date of Report: 08/21/19
Date Received: 08/16/19
Project: NE 8th & 106 PO 160298, F&BI 908335

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

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)	50	97	97	25-158	0
Chloromethane	ug/L (ppb)	50	101	101	45-156	0
Vinyl chloride	ug/L (ppb)	50	103	107	50-154	4
Bromomethane	ug/L (ppb)	50	104	108	55-143	4
Chloroethane	ug/L (ppb)	50	97	101	58-146	4
Trichlorofluoromethane	ug/L (ppb)	250	108	112	50-150	4
Acetone	ug/L (ppb)	250	56	56	53-131	0
1,1-Dichloroethene	ug/L (ppb)	50	109	113	67-136	4
Hexane	ug/L (ppb)	50	97	97	57-137	0
Methylene chloride	ug/L (ppb)	50	98	100	39-148	2
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	110	111	64-147	1
trans-1,2-Dichloroethene	ug/L (ppb)	50	107	109	68-128	2
1,1-Dichloroethane	ug/L (ppb)	50	104	107	79-121	3
2,2-Dichloropropane	ug/L (ppb)	50	102	107	55-143	5
cis-1,2-Dichloroethene	ug/L (ppb)	50	107	111	80-123	4
Chloroform	ug/L (ppb)	50	104	107	80-121	3
2-Butanone (MEK)	ug/L (ppb)	250	73	73	57-149	0
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	101	104	73-132	3
1,1,1-Trichloroethane	ug/L (ppb)	50	107	109	81-125	2
1,1-Dichloropropene	ug/L (ppb)	50	106	107	77-129	1
Carbon tetrachloride	ug/L (ppb)	50	108	112	75-158	4
Benzene	ug/L (ppb)	50	100	102	69-134	2
Trichloroethene	ug/L (ppb)	50	106	108	79-113	2
1,2-Dichloropropane	ug/L (ppb)	50	101	103	77-123	2
Bromodichloromethane	ug/L (ppb)	50	105	107	81-133	2
Dibromomethane	ug/L (ppb)	50	105	108	82-125	3
4-Methyl-2-pentanone	ug/L (ppb)	250	109	111	65-138	2
cis-1,3-Dichloropropene	ug/L (ppb)	50	104	107	82-132	3
Toluene	ug/L (ppb)	50	95	97	72-122	2
trans-1,3-Dichloropropene	ug/L (ppb)	50	100	101	80-136	1
1,1,2-Trichloroethane	ug/L (ppb)	50	100	103	75-124	3
2-Hexanone	ug/L (ppb)	250	80	81	60-136	1
1,3-Dichloropropane	ug/L (ppb)	50	99	100	76-126	1
Tetrachloroethene	ug/L (ppb)	50	100	102	76-121	2
Dibromochloromethane	ug/L (ppb)	50	104	105	84-133	1
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	97	99	82-115	2
Chlorobenzene	ug/L (ppb)	50	99	100	83-114	1
Ethylbenzene	ug/L (ppb)	50	99	101	77-124	2
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	103	106	84-127	3
m,p-Xylene	ug/L (ppb)	100	99	101	81-112	2
o-Xylene	ug/L (ppb)	50	98	101	81-121	3
Styrene	ug/L (ppb)	50	101	104	84-119	3
Isopropylbenzene	ug/L (ppb)	50	100	102	80-117	2
Bromoform	ug/L (ppb)	50	106	109	74-136	3
n-Propylbenzene	ug/L (ppb)	50	100	101	74-126	1
Bromobenzene	ug/L (ppb)	50	100	101	80-121	1
1,3,5-Trimethylbenzene	ug/L (ppb)	50	99	99	78-123	0
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	101	102	66-126	1
1,2,3-Trichloropropane	ug/L (ppb)	50	96	96	67-124	0
2-Chlorotoluene	ug/L (ppb)	50	98	98	77-127	0
4-Chlorotoluene	ug/L (ppb)	50	100	101	78-128	1
tert-Butylbenzene	ug/L (ppb)	50	97	99	80-123	2
1,2,4-Trimethylbenzene	ug/L (ppb)	50	97	98	79-122	1
sec-Butylbenzene	ug/L (ppb)	50	99	100	80-116	1
p-Isopropyltoluene	ug/L (ppb)	50	99	100	81-123	1
1,3-Dichlorobenzene	ug/L (ppb)	50	103	105	83-113	2
1,4-Dichlorobenzene	ug/L (ppb)	50	100	102	83-107	2
1,2-Dichlorobenzene	ug/L (ppb)	50	102	103	84-112	1
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	100	102	57-141	2
1,2,4-Trichlorobenzene	ug/L (ppb)	50	110	112	72-130	2
Hexachlorobutadiene	ug/L (ppb)	50	98	100	53-141	2
Naphthalene	ug/L (ppb)	50	105	108	64-133	3
1,2,3-Trichlorobenzene	ug/L (ppb)	50	108	109	65-136	1

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. 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 lowest calibration standard. 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.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

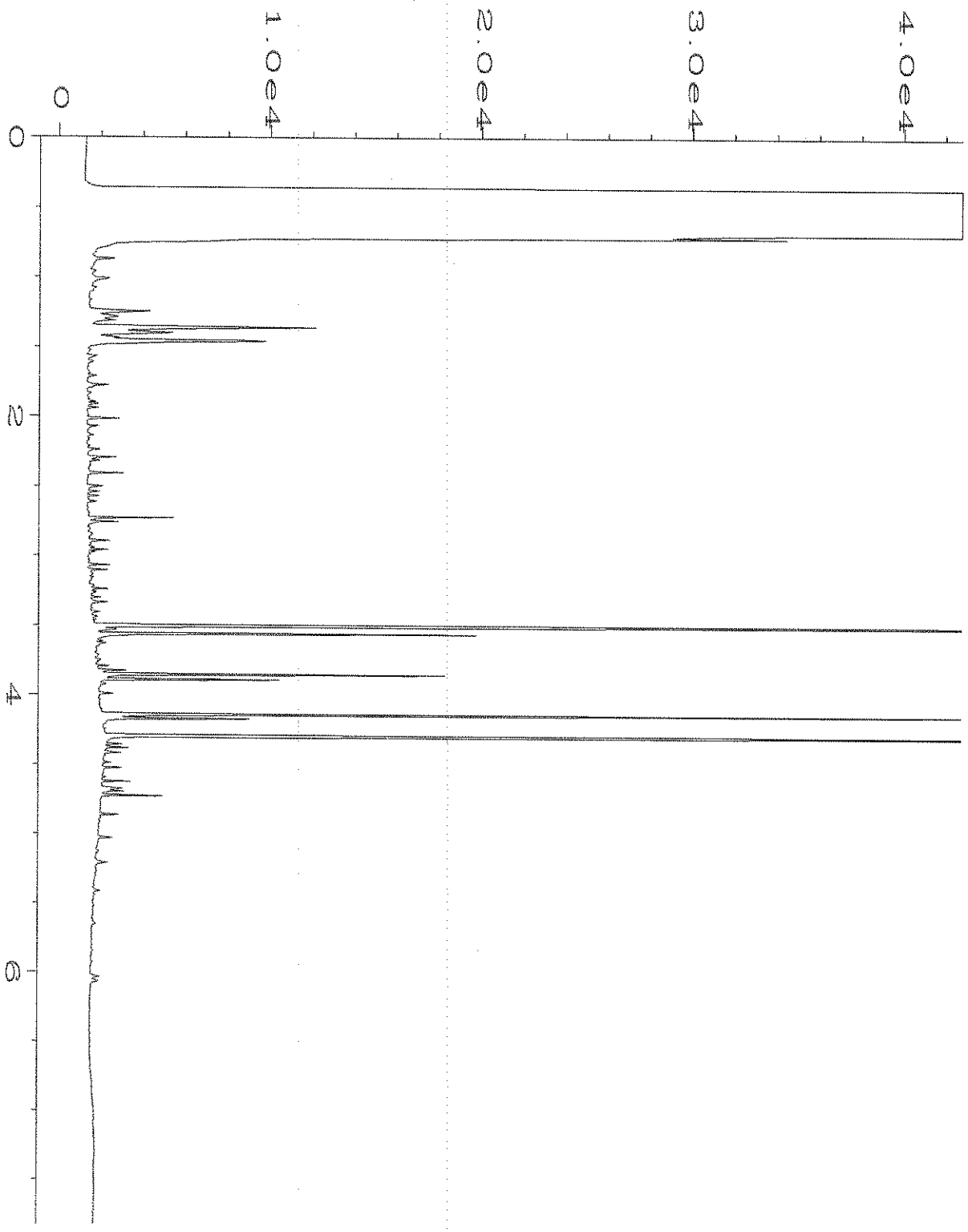
nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

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.

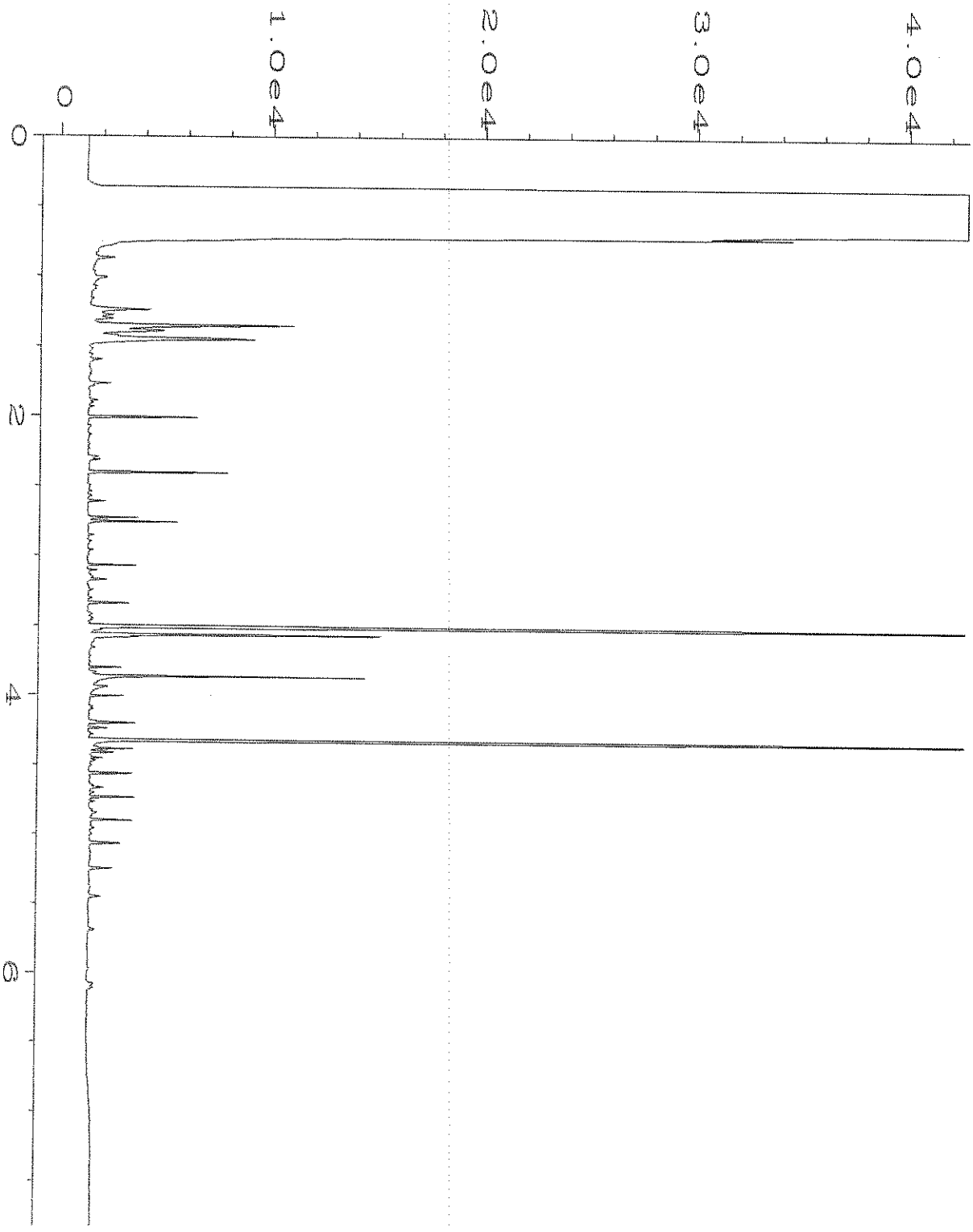
vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.



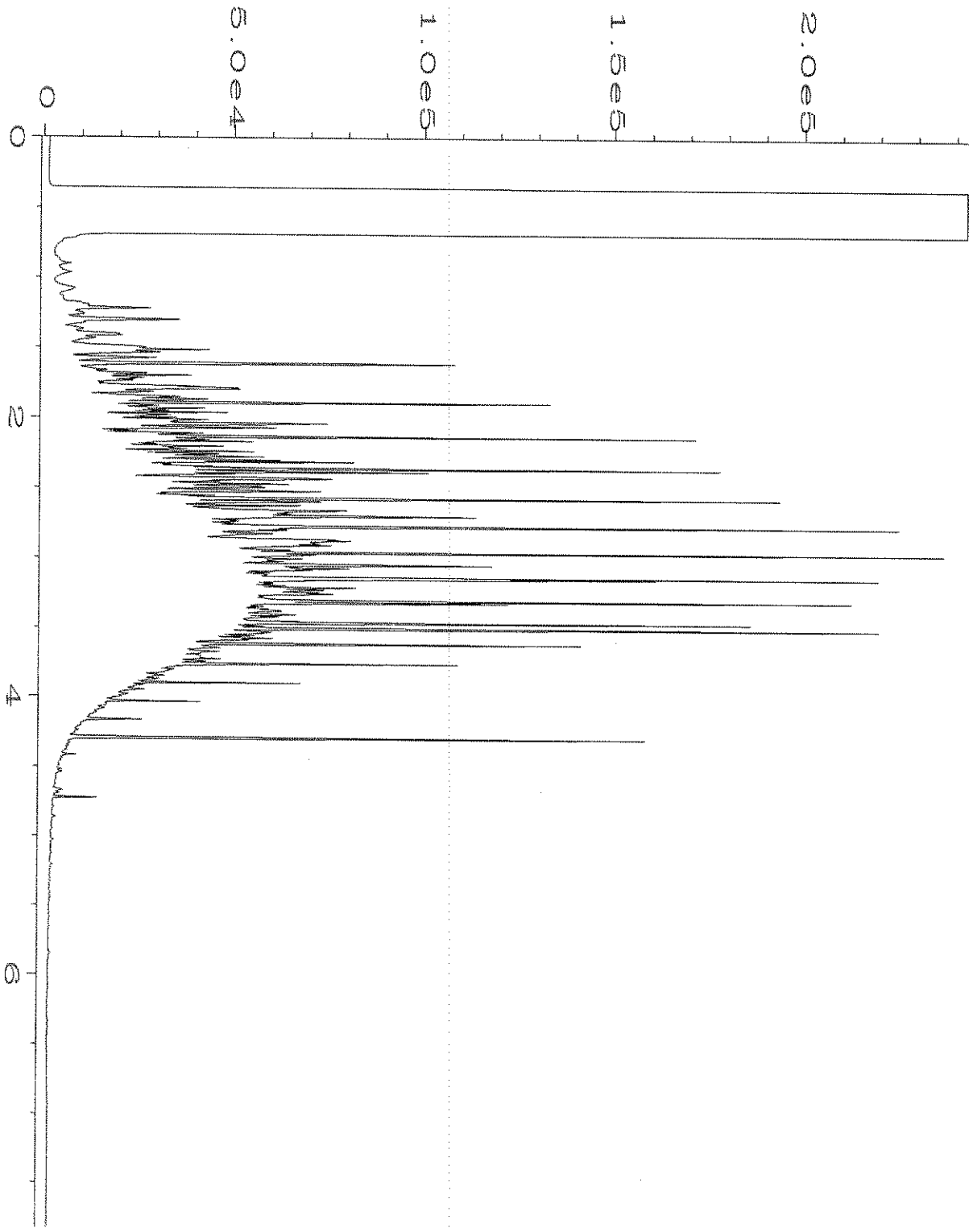
Data File Name : C:\HPCHEM\4\DATA\08-19-19\035F0601.D
Operator : TL
Instrument : GC#4
Sample Name : 908335-03
Run Time Bar Code:
Acquired on : 19 Aug 19 02:46 PM
Report Created on: 20 Aug 19 07:46 AM

Page Number : 1
Vial Number : 35
Injection Number : 1
Sequence Line : 6
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH



Data File Name : C:\HPCHEM\4\DATA\08-19-19\027F0601.D
Operator : TL
Instrument : GC#4
Sample Name : 09-2048 mb
Run Time Bar Code:
Acquired on : 19 Aug 19 01:08 PM
Report Created on: 20 Aug 19 07:42 AM

Page Number : 1
Vial Number : 27
Injection Number : 1
Sequence Line : 6
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH



Data File Name : C:\HPCHEM\4\DATA\08-19-19\005F0901.D
Operator : TL
Instrument : GC#4
Sample Name : 1000 Dx 57-78B
Run Time Bar Code:
Acquired on : 19 Aug 19 03:49 PM
Report Created on: 20 Aug 19 07:46 AM

Page Number : 1
Vial Number : 5
Injection Number : 1
Sequence Line : 9
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH

908335

SAMPLE CHAIN OF CUSTODY

ME 08/16/19 VS3 VM3/GC, D22

Page # ____ of ____

Report To Jessica Smith; Meikani Lanier-Kaanehoa

Company Aspect Consulting

Address 710 2nd Ave, Suite 550

City, State, ZIP Seattle WA 98104

Phone ____ Email jsmith@aspectconsulting.com

SAMPLERS (signature)

PROJECT NAME: NE 8th +106

PO #: 190298

REMARKS

INVOICE TO: AP

TURNAROUND TIME
- ☑ Standard Turnaround
- ☐ RUSH 3 DAY TAT
- Rush charges authorized by: ____

SAMPLE DISPOSAL
- ☑ Dispose after 30 days
- ☐ Archive Samples
- ☐ Other ____

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	TPH-HCID	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260 (*)	SVOCs by 8270D	PAHs 8270D SIM					Notes
B4 | MW-4-081519	01 A-C	8/15/19	1040	water	3					X							(*) 3 day TAT
URS-MW-8-081519	02 A-C		1225		3					X							
MW-20-081519	03 A-G		1335		7		X	X		X							
MW-19-081519	04 A-C		1455		3					X							
B2 | MW-2-081519	05 A-C		1650		3					X							
Trip Blank	06 A-D	—	—	water	4											*	added at kb (NP) 8/16/19

Samples received at 2 °C

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Amelia C. Gates	Aspect	8/16/19	1049
Received by:	Liza Radford	FBI	8/16/19	1049
Relinquished by:				
Received by:				

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
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(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

August 21, 2019

Jessica Smith, Project Manager
Aspect Consulting, LLC
710 2nd Ave S, Suite 550
Seattle, WA 98104

Dear Ms Smith:

Included are the results from the testing of material submitted on August 15, 2019 from the NE 8th Ave Bellevue 190298, F&BI 908315 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 have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Data Aspect, Meilani Lanier-Kamaha'o
ASP0821R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on August 15, 2019 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC NE 8th Ave Bellevue 190298, F&BI 908315 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
908315 -01	URS-MW-1-081419
908315 -02	URS-MW-3-081419
908315 -03	B3-MW-3-081419
908315 -04	MW-100-081419

All quality control requirements were acceptable.

Date of Report: 08/21/19
Date Received: 08/15/19
Project: NE 8th Ave Bellevue 190298, F&BI 908315
Date Extracted: 08/19/19
Date Analyzed: 08/19/19

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 51-134)
URS-MW-1-081419 908315-01	<100	111
URS-MW-3-081419 908315-02	<100	109
B3-MW-3-081419 908315-03	<100	110
MW-100-081419 908315-04	<100	108
Method Blank 09-1962 MB	<100	110

Date of Report: 08/21/19
Date Received: 08/15/19
Project: NE 8th Ave Bellevue 190298, F&BI 908315
Date Extracted: 08/16/19
Date Analyzed: 08/16/19 and 08/19/19

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 41-152)
URS-MW-1-081419 908315-01	<50	<250	109
URS-MW-3-081419 908315-02	<50	<250	113
B3-MW-3-081419 908315-03	<50	<250	95
MW-100-081419 908315-04	<50	<250	100
Method Blank 09-2001 MB2	<50	<250	108

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	URS-MW-1-081419	Client:	Aspect Consulting, LLC
Date Received:	08/15/19	Project:	NE 8th Ave Bellevue 190298, F&BI 908315
Date Extracted:	08/16/19	Lab ID:	908315-01
Date Analyzed:	08/16/19	Data File:	081634.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MS/AEN

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	57	121
Toluene-d8	99	63	127
4-Bromofluorobenzene	94	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	45
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<50	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Hexane	<1	o-Xylene	<1
Methylene chloride	<5	Styrene	<1
Methyl t-butyl ether (MTBE)	<1	Isopropylbenzene	<1
trans-1,2-Dichloroethene	<1	Bromoform	<1
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	<1
2-Butanone (MEK)	<10	1,2,3-Trichloropropane	<1
1,2-Dichloroethane (EDC)	<1	2-Chlorotoluene	<1
1,1,1-Trichloroethane	<1	4-Chlorotoluene	<1
1,1-Dichloropropene	<1	tert-Butylbenzene	<1
Carbon tetrachloride	<1	1,2,4-Trimethylbenzene	<1
Benzene	<0.35	sec-Butylbenzene	<1
Trichloroethene	<1	p-Isopropyltoluene	<1
1,2-Dichloropropane	<1	1,3-Dichlorobenzene	<1
Bromodichloromethane	<1	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	<1	1,2,4-Trichlorobenzene	<1
Toluene	<1	Hexachlorobutadiene	<1
trans-1,3-Dichloropropene	<1	Naphthalene	<1
1,1,2-Trichloroethane	<1	1,2,3-Trichlorobenzene	<1
2-Hexanone	<10		

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	URS-MW-3-081419	Client:	Aspect Consulting, LLC
Date Received:	08/15/19	Project:	NE 8th Ave Bellevue 190298, F&BI 908315
Date Extracted:	08/16/19	Lab ID:	908315-02
Date Analyzed:	08/16/19	Data File:	081635.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MS/AEN

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	94	60	133

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

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	B3-MW-3-081419	Client:	Aspect Consulting, LLC
Date Received:	08/15/19	Project:	NE 8th Ave Bellevue 190298, F&BI 908315
Date Extracted:	08/16/19	Lab ID:	908315-03
Date Analyzed:	08/16/19	Data File:	081636.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MS/AEN

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	94	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	33
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<50	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Hexane	<1	o-Xylene	<1
Methylene chloride	<5	Styrene	<1
Methyl t-butyl ether (MTBE)	<1	Isopropylbenzene	<1
trans-1,2-Dichloroethene	<1	Bromoform	<1
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	<1
2-Butanone (MEK)	<10	1,2,3-Trichloropropane	<1
1,2-Dichloroethane (EDC)	<1	2-Chlorotoluene	<1
1,1,1-Trichloroethane	<1	4-Chlorotoluene	<1
1,1-Dichloropropene	<1	tert-Butylbenzene	<1
Carbon tetrachloride	<1	1,2,4-Trimethylbenzene	<1
Benzene	<0.35	sec-Butylbenzene	<1
Trichloroethene	<1	p-Isopropyltoluene	<1
1,2-Dichloropropane	<1	1,3-Dichlorobenzene	<1
Bromodichloromethane	<1	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	<1	1,2,4-Trichlorobenzene	<1
Toluene	<1	Hexachlorobutadiene	<1
trans-1,3-Dichloropropene	<1	Naphthalene	<1
1,1,2-Trichloroethane	<1	1,2,3-Trichlorobenzene	<1
2-Hexanone	<10		

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-100-081419	Client:	Aspect Consulting, LLC
Date Received:	08/15/19	Project:	NE 8th Ave Bellevue 190298, F&BI 908315
Date Extracted:	08/16/19	Lab ID:	908315-04
Date Analyzed:	08/16/19	Data File:	081637.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MS/AEN

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	57	121
Toluene-d8	100	63	127
4-Bromofluorobenzene	94	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	32
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<50	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Hexane	<1	o-Xylene	<1
Methylene chloride	<5	Styrene	<1
Methyl t-butyl ether (MTBE)	<1	Isopropylbenzene	<1
trans-1,2-Dichloroethene	<1	Bromoform	<1
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	<1
2-Butanone (MEK)	<10	1,2,3-Trichloropropane	<1
1,2-Dichloroethane (EDC)	<1	2-Chlorotoluene	<1
1,1,1-Trichloroethane	<1	4-Chlorotoluene	<1
1,1-Dichloropropene	<1	tert-Butylbenzene	<1
Carbon tetrachloride	<1	1,2,4-Trimethylbenzene	<1
Benzene	<0.35	sec-Butylbenzene	<1
Trichloroethene	<1	p-Isopropyltoluene	<1
1,2-Dichloropropane	<1	1,3-Dichlorobenzene	<1
Bromodichloromethane	<1	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	<1	1,2,4-Trichlorobenzene	<1
Toluene	<1	Hexachlorobutadiene	<1
trans-1,3-Dichloropropene	<1	Naphthalene	<1
1,1,2-Trichloroethane	<1	1,2,3-Trichlorobenzene	<1
2-Hexanone	<10		

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	NE 8th Ave Bellevue 190298, F&BI 908315
Date Extracted:	08/16/19	Lab ID:	09-1883 mb
Date Analyzed:	08/16/19	Data File:	081625.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MS/AEN

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	95	60	133

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

Date of Report: 08/21/19
Date Received: 08/15/19
Project: NE 8th Ave Bellevue 190298, F&BI 908315

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TPH AS GASOLINE USING METHOD NWTPH-Gx

Laboratory Code: 908315-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	ug/L (ppb)	1,000	94	69-134

Date of Report: 08/21/19
Date Received: 08/15/19
Project: NE 8th Ave Bellevue 190298, F&BI 908315

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	80	84	61-133	5

Date of Report: 08/21/19
Date Received: 08/15/19
Project: NE 8th Ave Bellevue 190298, F&BI 908315

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

Laboratory Code: 908315-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Dichlorodifluoromethane	ug/L (ppb)	50	<1	107	10-172
Chloromethane	ug/L (ppb)	50	<10	109	25-166
Vinyl chloride	ug/L (ppb)	50	<0.2	115	36-166
Bromomethane	ug/L (ppb)	50	<1	115	47-169
Chloroethane	ug/L (ppb)	50	<1	106	46-160
Trichlorofluoromethane	ug/L (ppb)	50	<1	116	44-165
Acetone	ug/L (ppb)	250	<50	56	10-182
1,1-Dichloroethene	ug/L (ppb)	50	<1	118	60-136
Hexane	ug/L (ppb)	50	<1	93	52-150
Methylene chloride	ug/L (ppb)	50	<5	105	67-132
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	<1	115	74-127
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	113	72-129
1,1-Dichloroethane	ug/L (ppb)	50	<1	109	70-128
2,2-Dichloropropane	ug/L (ppb)	50	<1	96	36-154
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	113	71-127
Chloroform	ug/L (ppb)	50	<1	109	65-132
2-Butanone (MEK)	ug/L (ppb)	250	<10	68	10-129
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	102	48-149
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	111	60-146
1,1-Dichloropropene	ug/L (ppb)	50	<1	108	69-133
Carbon tetrachloride	ug/L (ppb)	50	<1	114	56-152
Benzene	ug/L (ppb)	50	<0.35	102	76-125
Trichloroethene	ug/L (ppb)	50	<1	108	66-135
1,2-Dichloropropane	ug/L (ppb)	50	<1	100	78-125
Bromodichloromethane	ug/L (ppb)	50	<1	105	61-150
Dibromomethane	ug/L (ppb)	50	<1	104	66-141
4-Methyl-2-pentanone	ug/L (ppb)	250	<10	105	10-185
cis-1,3-Dichloropropene	ug/L (ppb)	50	<1	100	72-132
Toluene	ug/L (ppb)	50	<1	96	76-122
trans-1,3-Dichloropropene	ug/L (ppb)	50	<1	94	76-130
1,1,2-Trichloroethane	ug/L (ppb)	50	<1	100	68-131
2-Hexanone	ug/L (ppb)	250	<10	75	10-185
1,3-Dichloropropane	ug/L (ppb)	50	<1	97	71-128
Tetrachloroethene	ug/L (ppb)	50	<1	101	10-226
Dibromochloromethane	ug/L (ppb)	50	<1	103	70-139
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	<1	96	69-134
Chlorobenzene	ug/L (ppb)	50	<1	99	77-122
Ethylbenzene	ug/L (ppb)	50	<1	99	69-135
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	<1	107	73-137
m,p-Xylene	ug/L (ppb)	100	<2	100	69-135
o-Xylene	ug/L (ppb)	50	<1	101	60-140
Styrene	ug/L (ppb)	50	<1	99	71-133
Isopropylbenzene	ug/L (ppb)	50	<1	101	65-142
Bromoform	ug/L (ppb)	50	<1	107	65-142
n-Propylbenzene	ug/L (ppb)	50	<1	98	58-144
Bromobenzene	ug/L (ppb)	50	<1	99	75-124
1,3,5-Trimethylbenzene	ug/L (ppb)	50	<1	98	66-137
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	<1	99	51-154
1,2,3-Trichloropropane	ug/L (ppb)	50	<1	95	53-150
2-Chlorotoluene	ug/L (ppb)	50	<1	97	66-127
4-Chlorotoluene	ug/L (ppb)	50	<1	98	65-130
tert-Butylbenzene	ug/L (ppb)	50	<1	97	65-137
1,2,4-Trimethylbenzene	ug/L (ppb)	50	<1	97	59-146
sec-Butylbenzene	ug/L (ppb)	50	<1	97	64-140
p-Isopropyltoluene	ug/L (ppb)	50	<1	98	65-141
1,3-Dichlorobenzene	ug/L (ppb)	50	<1	104	72-123
1,4-Dichlorobenzene	ug/L (ppb)	50	<1	101	69-126
1,2-Dichlorobenzene	ug/L (ppb)	50	<1	104	69-128
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	<10	103	32-164
1,2,4-Trichlorobenzene	ug/L (ppb)	50	<1	116	66-136
Hexachlorobutadiene	ug/L (ppb)	50	<1	100	60-143
Naphthalene	ug/L (ppb)	50	<1	110	44-164
1,2,3-Trichlorobenzene	ug/L (ppb)	50	<1	113	69-148

Date of Report: 08/21/19
Date Received: 08/15/19
Project: NE 8th Ave Bellevue 190298, F&BI 908315

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

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)	50	97	97	25-158	0
Chloromethane	ug/L (ppb)	50	101	101	45-156	0
Vinyl chloride	ug/L (ppb)	50	103	107	50-154	4
Bromomethane	ug/L (ppb)	50	104	108	55-143	4
Chloroethane	ug/L (ppb)	50	97	101	58-146	4
Trichlorofluoromethane	ug/L (ppb)	250	108	112	50-150	4
Acetone	ug/L (ppb)	250	56	56	53-131	0
1,1-Dichloroethene	ug/L (ppb)	50	109	113	67-136	4
Hexane	ug/L (ppb)	50	97	97	57-137	0
Methylene chloride	ug/L (ppb)	50	98	100	39-148	2
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	110	111	64-147	1
trans-1,2-Dichloroethene	ug/L (ppb)	50	107	109	68-128	2
1,1-Dichloroethane	ug/L (ppb)	50	104	107	79-121	3
2,2-Dichloropropane	ug/L (ppb)	50	102	107	55-143	5
cis-1,2-Dichloroethene	ug/L (ppb)	50	107	111	80-123	4
Chloroform	ug/L (ppb)	50	104	107	80-121	3
2-Butanone (MEK)	ug/L (ppb)	250	73	73	57-149	0
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	101	104	73-132	3
1,1,1-Trichloroethane	ug/L (ppb)	50	107	109	81-125	2
1,1-Dichloropropene	ug/L (ppb)	50	106	107	77-129	1
Carbon tetrachloride	ug/L (ppb)	50	108	112	75-158	4
Benzene	ug/L (ppb)	50	100	102	69-134	2
Trichloroethene	ug/L (ppb)	50	106	108	79-113	2
1,2-Dichloropropane	ug/L (ppb)	50	101	103	77-123	2
Bromodichloromethane	ug/L (ppb)	50	105	107	81-133	2
Dibromomethane	ug/L (ppb)	50	105	108	82-125	3
4-Methyl-2-pentanone	ug/L (ppb)	250	109	111	65-138	2
cis-1,3-Dichloropropene	ug/L (ppb)	50	104	107	82-132	3
Toluene	ug/L (ppb)	50	95	97	72-122	2
trans-1,3-Dichloropropene	ug/L (ppb)	50	100	101	80-136	1
1,1,2-Trichloroethane	ug/L (ppb)	50	100	103	75-124	3
2-Hexanone	ug/L (ppb)	250	80	81	60-136	1
1,3-Dichloropropane	ug/L (ppb)	50	99	100	76-126	1
Tetrachloroethene	ug/L (ppb)	50	100	102	76-121	2
Dibromochloromethane	ug/L (ppb)	50	104	105	84-133	1
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	97	99	82-115	2
Chlorobenzene	ug/L (ppb)	50	99	100	83-114	1
Ethylbenzene	ug/L (ppb)	50	99	101	77-124	2
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	103	106	84-127	3
m,p-Xylene	ug/L (ppb)	100	99	101	81-112	2
o-Xylene	ug/L (ppb)	50	98	101	81-121	3
Styrene	ug/L (ppb)	50	101	104	84-119	3
Isopropylbenzene	ug/L (ppb)	50	100	102	80-117	2
Bromoform	ug/L (ppb)	50	106	109	74-136	3
n-Propylbenzene	ug/L (ppb)	50	100	101	74-126	1
Bromobenzene	ug/L (ppb)	50	100	101	80-121	1
1,3,5-Trimethylbenzene	ug/L (ppb)	50	99	99	78-123	0
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	101	102	66-126	1
1,2,3-Trichloropropane	ug/L (ppb)	50	96	96	67-124	0
2-Chlorotoluene	ug/L (ppb)	50	98	98	77-127	0
4-Chlorotoluene	ug/L (ppb)	50	100	101	78-128	1
tert-Butylbenzene	ug/L (ppb)	50	97	99	80-123	2
1,2,4-Trimethylbenzene	ug/L (ppb)	50	97	98	79-122	1
sec-Butylbenzene	ug/L (ppb)	50	99	100	80-116	1
p-Isopropyltoluene	ug/L (ppb)	50	99	100	81-123	1
1,3-Dichlorobenzene	ug/L (ppb)	50	103	105	83-113	2
1,4-Dichlorobenzene	ug/L (ppb)	50	100	102	83-107	2
1,2-Dichlorobenzene	ug/L (ppb)	50	102	103	84-112	1
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	100	102	57-141	2
1,2,4-Trichlorobenzene	ug/L (ppb)	50	110	112	72-130	2
Hexachlorobutadiene	ug/L (ppb)	50	98	100	53-141	2
Naphthalene	ug/L (ppb)	50	105	108	64-133	3
1,2,3-Trichlorobenzene	ug/L (ppb)	50	108	109	65-136	1

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. 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 lowest calibration standard. 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.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

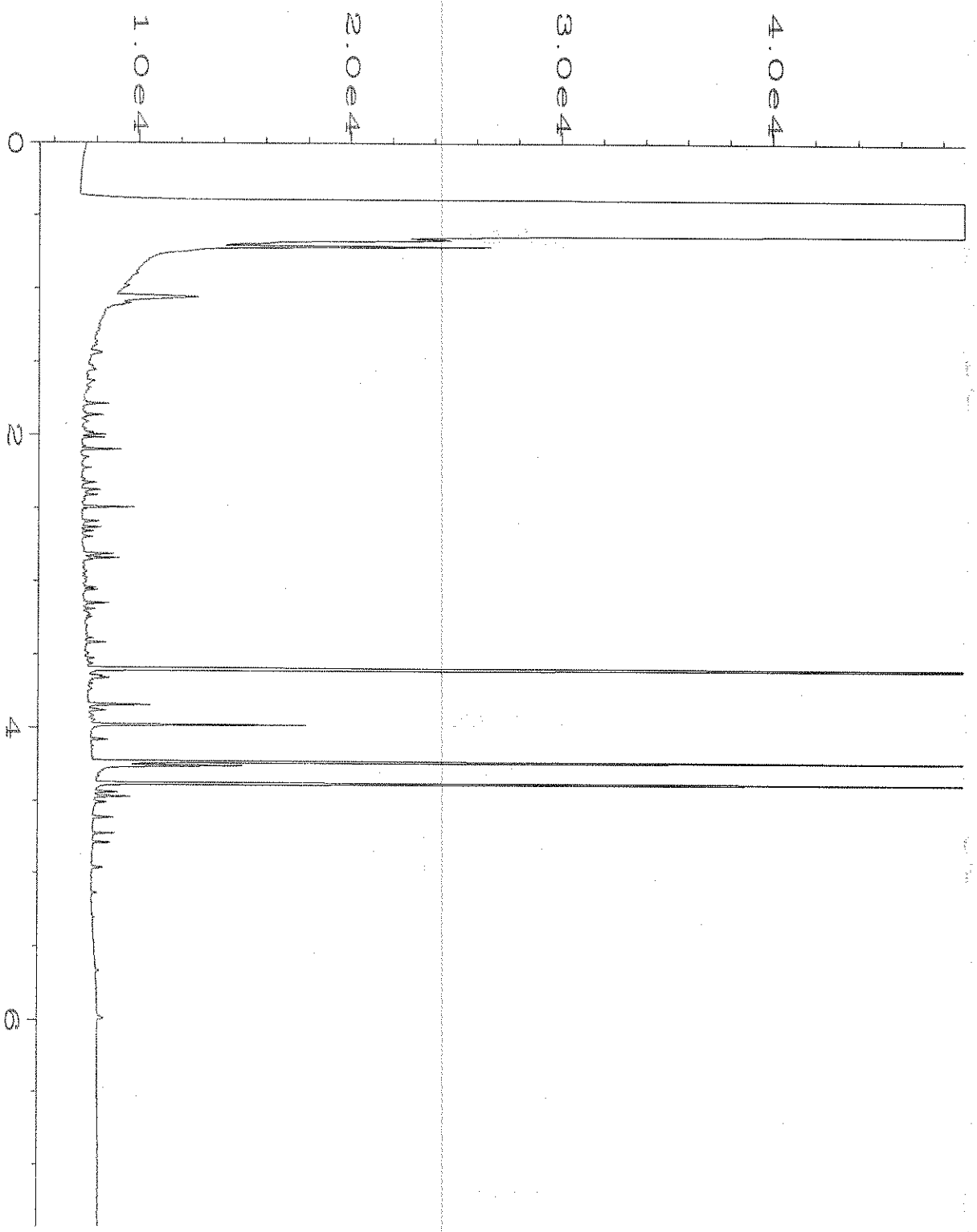
nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

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.

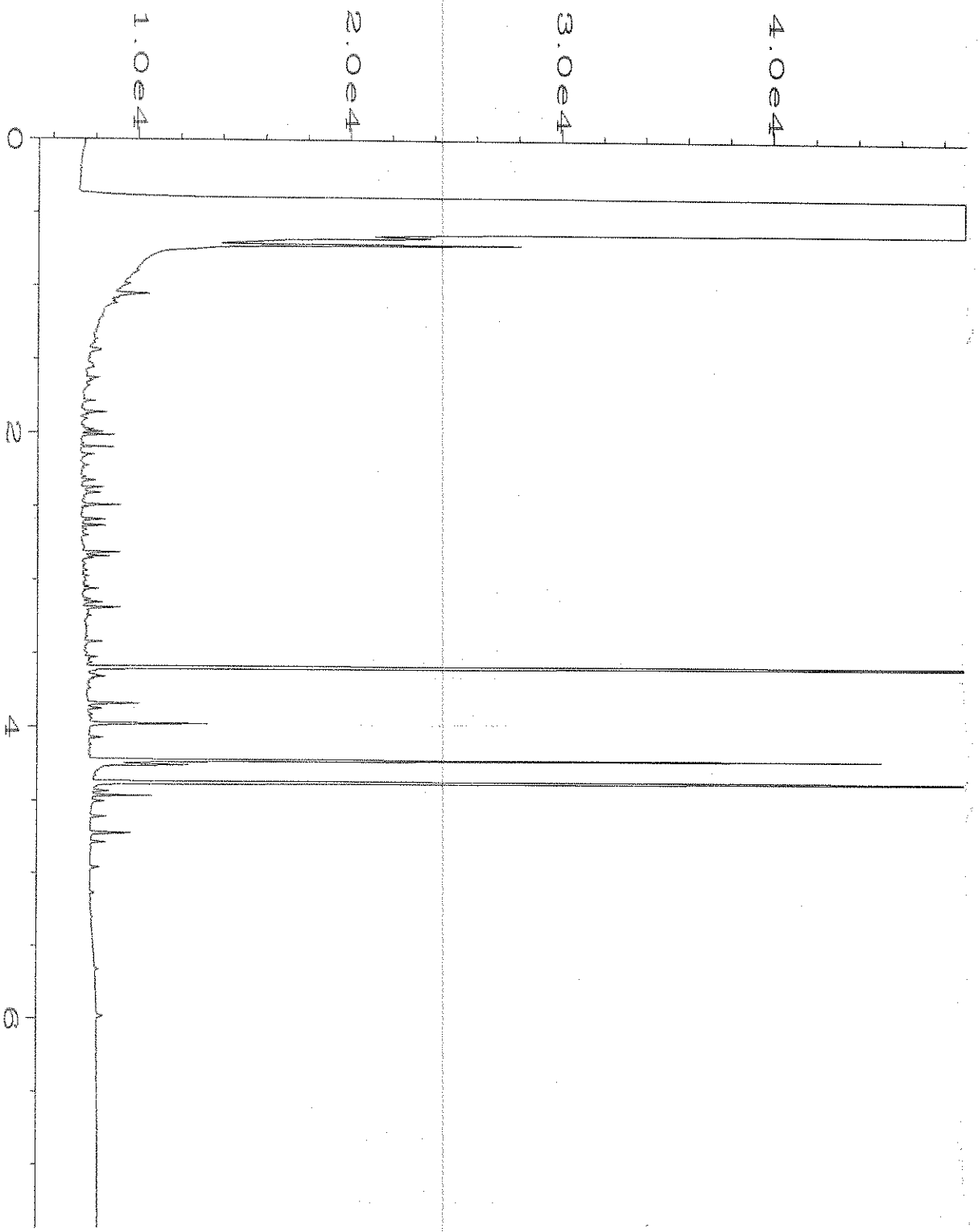
ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

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.



Data File Name	: C:\HPCHEM\1\DATA\08-16-19\031F0901.D		
Operator	: TL	Page Number	: 1
Instrument	: GC1	Vial Number	: 31
Sample Name	: 908315-01	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 9
Acquired on	: 16 Aug 19 05:16 PM	Instrument Method	: DX.MTH
Report Created on	: 19 Aug 19 10:21 AM	Analysis Method	: DEFAULT.MTH



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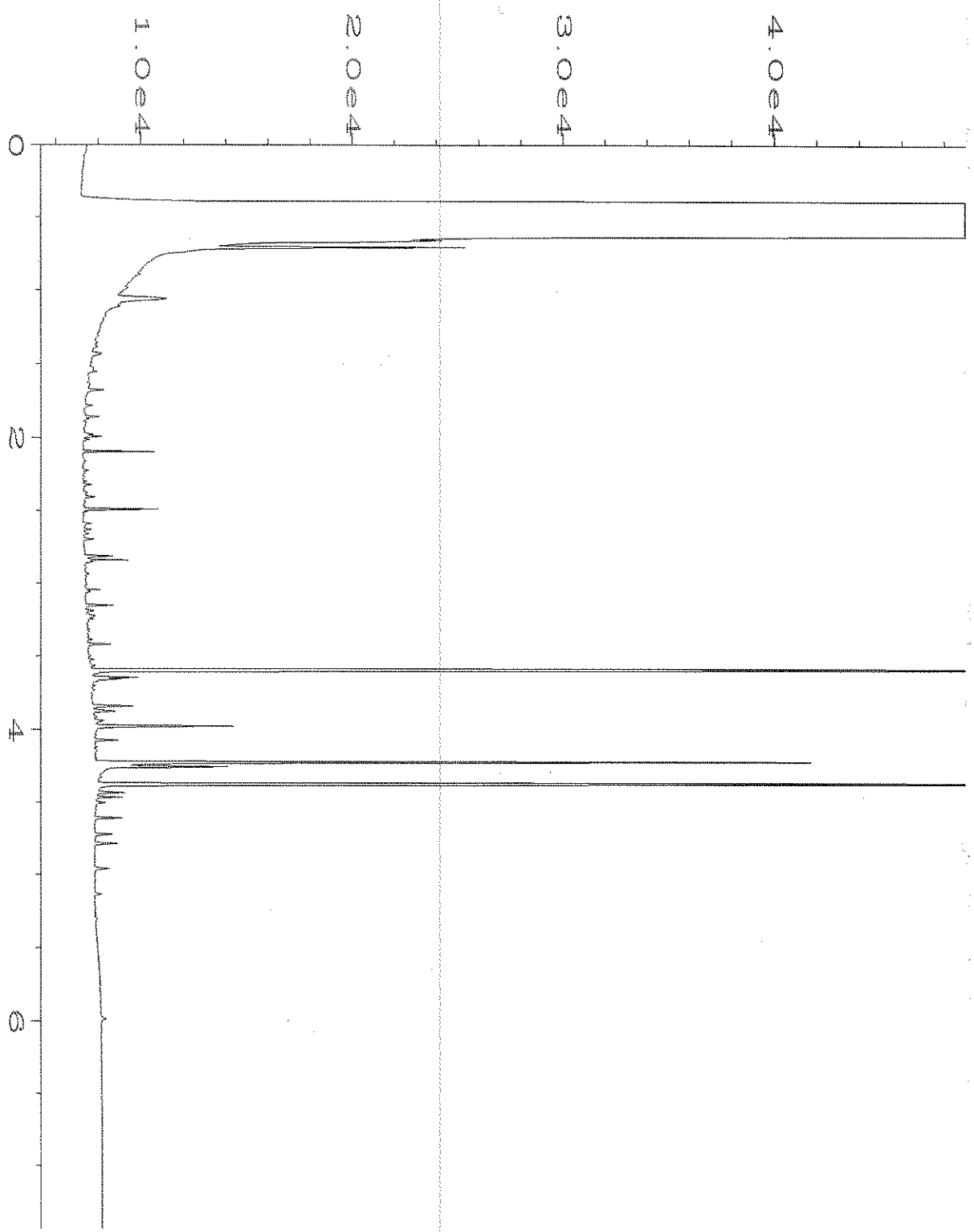
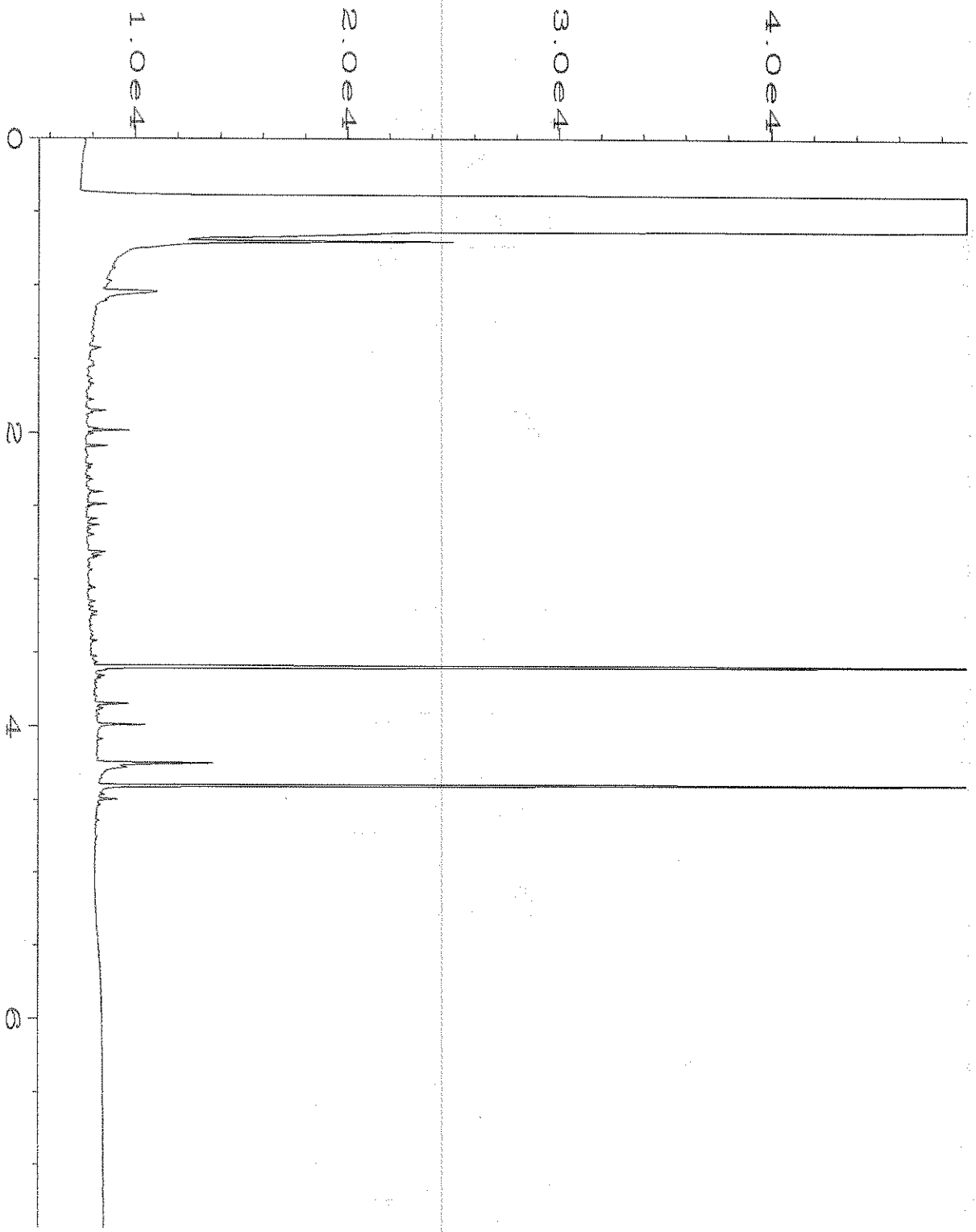
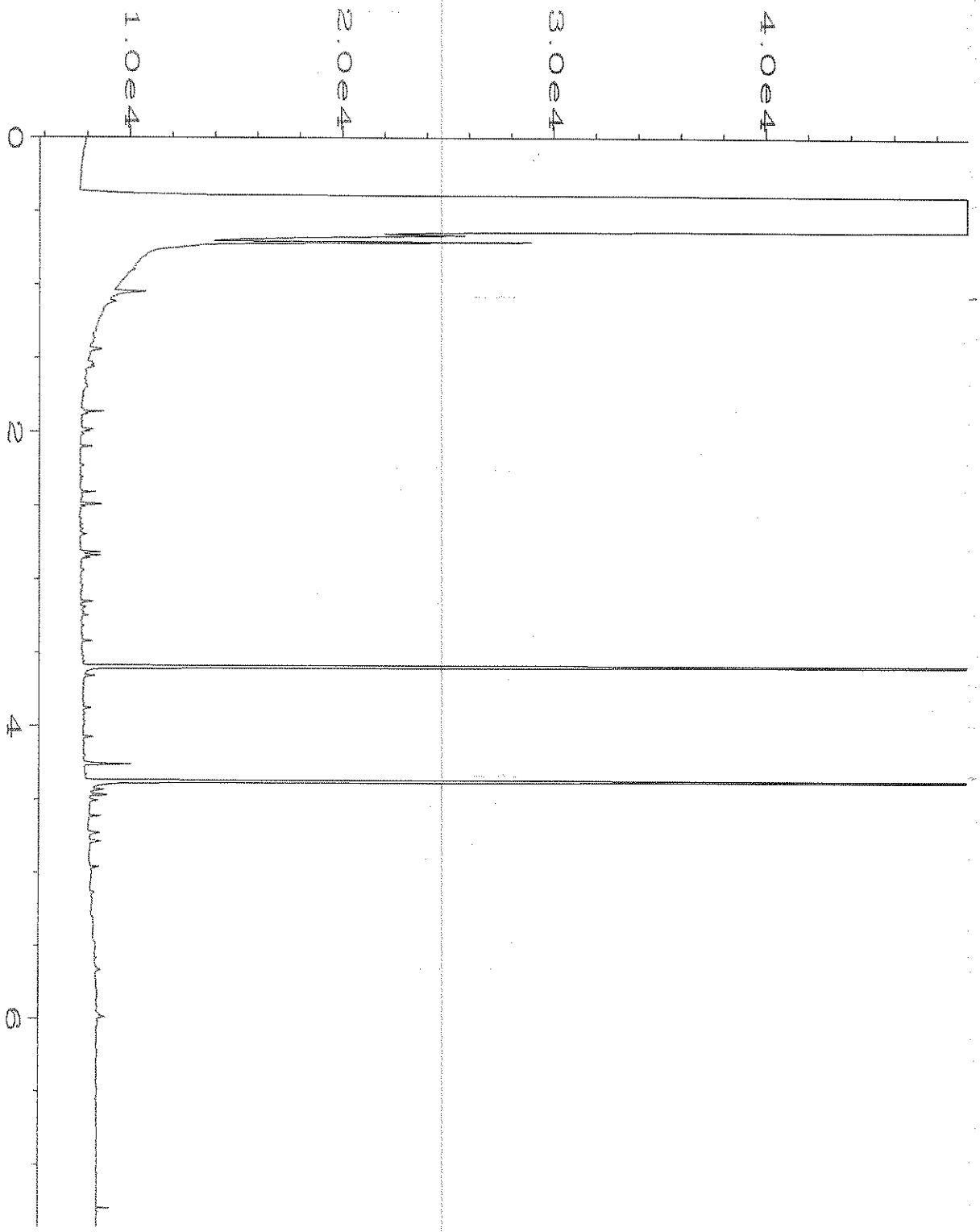
Operator	: TL	Page Number	: 1
Instrument	: GC1	Vial Number	: 32
Sample Name	: 908315-02	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 9
Acquired on	: 16 Aug 19 05:27 PM	Instrument Method	: DX.MTH
Report Created on	: 19 Aug 19 10:21 AM	Analysis Method	: DEFAULT.MTH



Data File Name	: C:\HPCHEM\1\DATA\08-16-19\033F0901.D		
Operator	: TL	Page Number	: 1
Instrument	: GC1	Vial Number	: 33
Sample Name	: 908315-03	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 9
Acquired on	: 16 Aug 19 05:39 PM	Instrument Method	: DX.MTH
Report Created on	: 19 Aug 19 10:22 AM	Analysis Method	: DEFAULT.MTH

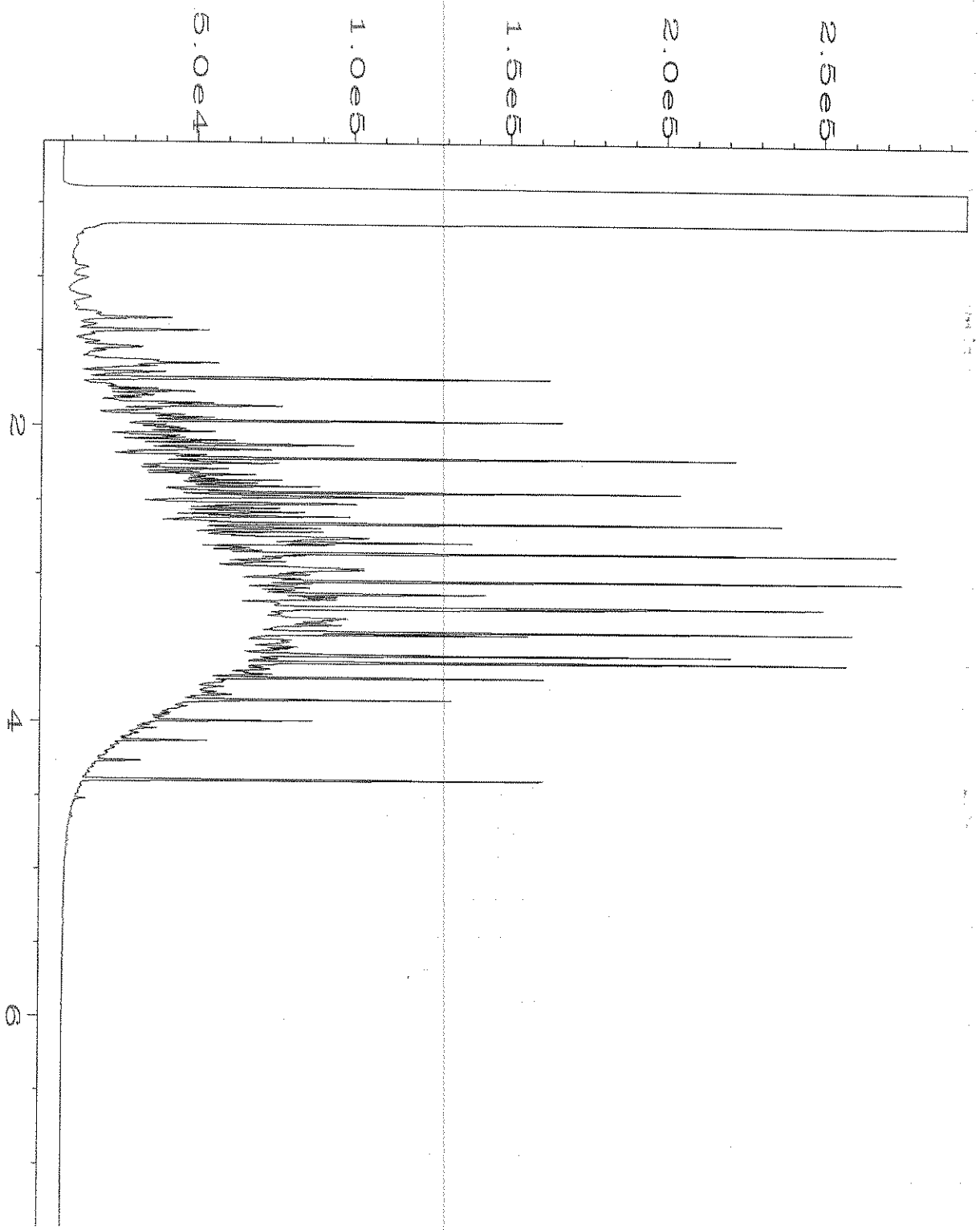


Data File Name	: C:\HPCHEM\1\DATA\08-19-19\033F0301.D		
Operator	: TL	Page Number	: 1
Instrument	: GC1	Vial Number	: 33
Sample Name	: 908315-04 rr	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 3
Acquired on	: 19 Aug 19 02:16 PM	Instrument Method	: DX.MTH
Report Created on	: 20 Aug 19 08:58 AM	Analysis Method	: DEFAULT.MTH



Data File Name : C:\HPCHEM\1\DATA\08-16-19\016F0701.D
Operator : TL
Instrument : GC1
Sample Name : 09-2001 mb2
Run Time Bar Code:
Acquired on : 16 Aug 19 01:37 PM
Report Created on: 19 Aug 19 10:20 AM

Page Number : 1
Vial Number : 16
Injection Number : 1
Sequence Line : 7
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH



Data File Name	: C:\HPCHEM\1\DATA\08-16-19\005F0801.D		
Operator	: TL	Page Number	: 1
Instrument	: GC1	Vial Number	: 5
Sample Name	: 1000 Dx 57-78B	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 8
Acquired on	: 16 Aug 19 02:57 PM	Instrument Method	: DX.MTH
Report Created on	: 19 Aug 19 10:21 AM	Analysis Method	: DEFAULT.MTH

908315

SAMPLE CHAIN OF CUSTODY

ME 08/15/19 VW3/COC1

Page # 1 of 1

Report To Jessica Smith; Meilani Lanter-Kamahao

Company Aspect

Address 710 2nd AVE Suite 550

City, State, ZIP Seattle WA 98104

Phone 585-613-5158 Email jsmith mlkamahao@aspectconsulting.com

SAMPLERS (*signature*) Amelia Oates

PROJECT NAME: NE 8th AVE - Bellevue

PO #: 190298

REMARKS

INVOICE TO: A.P.

TURNAROUND TIME
- ☑ Standard Turnaround + 3 DAY TAT
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☑ Dispose after 30 days
- ☐ Archive Samples
- ☐ Other

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	TPH-HCID	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260C (*)	SVOCs by 8270D	PAHs 8270D SIM					Notes
URS-MW-1-081419	01A-6	8/14/19	0955	water	7		X	X		X							(*) Please run
URS-MW-3-081419	02		1215		7		X	X		X							VOCs on
B3/MW-3-081419	03		1340		7		X	X		X							3day TAT
MW-100-081419	04		1400		7		X	X		X							

Samples received at 6 °C

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: Amelia C. Oates	Amelia C. Oates	Aspect	8/14/19	1515
Received by: Wes Herring	WES HERRING	Fed Ex	8/15/19	1504
Relinquished by:				
Received by: Liza Radford	Liza Radford	FBI	8/15/19	1625

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

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fbi@isomedia.com
www.friedmanandbruya.com

October 10, 2019

Meilani Lanier-Kamaha'o, Project Manager
Aspect Consulting, LLC
710 2nd Ave S, Suite 550
Seattle, WA 98104

Dear Ms Lanier-Kamaha'o:

Included are the results from the testing of material submitted on October 8, 2019 from the NE 8th Bellevue 190298, F&BI 910154 project. There are 7 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Data Aspect, Jessica Smith
ASP1010R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on October 8, 2019 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC NE 8th Bellevue 190298, F&BI 910154 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
910154 -01	AMW-4D-100819
910154 -02	AMW-3D-100819
910154 -03	Decon-composite

All quality control requirements were acceptable.

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	AMW-4D-100819	Client:	Aspect Consulting, LLC
Date Received:	10/08/19	Project:	NE 8th Bellevue 190298, F&BI 910154
Date Extracted:	10/08/19	Lab ID:	910154-01
Date Analyzed:	10/09/19	Data File:	100854.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	57	121
Toluene-d8	103	63	127
4-Bromofluorobenzene	101	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	1.3

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	AMW-3D-100819	Client:	Aspect Consulting, LLC
Date Received:	10/08/19	Project:	NE 8th Bellevue 190298, F&BI 910154
Date Extracted:	10/08/19	Lab ID:	910154-02
Date Analyzed:	10/09/19	Data File:	100855.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	104	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	101	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Decon-composite	Client:	Aspect Consulting, LLC
Date Received:	10/08/19	Project:	NE 8th Bellevue 190298, F&BI 910154
Date Extracted:	10/08/19	Lab ID:	910154-03
Date Analyzed:	10/09/19	Data File:	100856.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	57	121
Toluene-d8	102	63	127
4-Bromofluorobenzene	101	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	NE 8th Bellevue 190298, F&BI 910154
Date Extracted:	10/08/19	Lab ID:	09-2447 mb
Date Analyzed:	10/08/19	Data File:	100810.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	99	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Date of Report: 10/10/19
Date Received: 10/08/19
Project: NE 8th Bellevue 190298, F&BI 910154

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

Laboratory Code: 910002-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Vinyl chloride	ug/L (ppb)	50	<0.2	110	36-166
Chloroethane	ug/L (ppb)	50	<1	113	46-160
1,1-Dichloroethene	ug/L (ppb)	50	<1	110	60-136
Methylene chloride	ug/L (ppb)	50	<5	106	67-132
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	103	72-129
1,1-Dichloroethane	ug/L (ppb)	50	<1	105	70-128
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	105	71-127
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	99	48-149
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	107	60-146
Trichloroethene	ug/L (ppb)	50	<1	97	66-135
Tetrachloroethene	ug/L (ppb)	50	<1	98	10-226

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	ug/L (ppb)	50	121	126	50-154	4
Chloroethane	ug/L (ppb)	50	128	130	58-146	2
1,1-Dichloroethene	ug/L (ppb)	50	118	123	67-136	4
Methylene chloride	ug/L (ppb)	50	119	125	39-148	5
trans-1,2-Dichloroethene	ug/L (ppb)	50	113	118	68-128	4
1,1-Dichloroethane	ug/L (ppb)	50	110	114	79-121	4
cis-1,2-Dichloroethene	ug/L (ppb)	50	111	115	80-123	4
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	98	96	73-132	2
1,1,1-Trichloroethane	ug/L (ppb)	50	115	120	81-125	4
Trichloroethene	ug/L (ppb)	50	98	96	79-113	2
Tetrachloroethene	ug/L (ppb)	50	105	103	76-121	2

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. 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 lowest calibration standard. 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.

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.

910154

SAMPLE CHAIN OF CUSTODY

ME 10/8/19

UW3

Page # 1 of 1

Report To Meilani Lanier-Kamahele cc Jess Smith

Company Aspect Consulting

Address 710 2nd Ave, Ste. 550

City, State, ZIP Seattle, WA, 98104

Phone (206) 413-5408 Email mlKamahele@aspectconsulting.com

SAMPLERS (*signature*) David Unruh

PROJECT NAME NE 8th Bellevue 190298

PO #

REMARKS 24-hour TAT

Project specific RLs? - Yes / No

INVOICE TO AP

TURNAROUND TIME

☐ Standard turnaround

☒ RUSH 24 hour

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	cVOCs				Notes
AMW-4D-100819	01 A-C	10/8/19	1245	Water	3								X				
AMW-3D-100819	02 A-C	↓	1125		4								X				
~~AMW-3S-100819~~ DU													X	DU			
Decon-composite	03 A-C	10/8/19	1335	↓	3								X				

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: David Unruh	David Unruh	Aspect Consulting	10/8/19	1436
Received by: Nhan Phan	Nhan Phan	FCBT	10/8/19	1435
Relinquished by:				
Received by:		Samples received at 3 °C		

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

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Seattle, WA 98119-2029
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fbi@isomedia.com
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October 24, 2019

Jessica Smith, Project Manager
Aspect Consulting, LLC
710 2nd Ave S, Suite 550
Seattle, WA 98104

Dear Ms Smith:

Included is the amended report from the testing of material submitted on October 3, 2019 from the NE 8th St, F&BI 910083 project. Per your request, sample ID AMW-35-100219 was changed to AMW-3S-100219.

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

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Data Aspect, Meilani Lanier-Kamaha'o
ASP1023R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

October 23, 2019

Jessica Smith, Project Manager
Aspect Consulting, LLC
710 2nd Ave S, Suite 550
Seattle, WA 98104

Dear Ms Smith:

Included are the results from the testing of material submitted on October 3, 2019 from the NE 8th St, F&BI 910083 project. There are 5 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Data Aspect, Meilani Lanier-Kamaha'o
ASP1023R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on October 3, 2019 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC NE 8th St, F&BI 910083project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
910083 -01	AMW-4D-100219
910083 -02	AMW-3D-100219
910083 -03	AMW-17-100219
910083 -04	AMW-18-100219
910083 -05	AMW-3S-100219

Upon receipt, the 40 ml VOA vials were placed in the freezer, cracking the containers. Fresh VOAs were decanted from the provided amber liter and the data were flagged accordingly.

All other quality control requirements were acceptable.

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	AMW-3S-100219 pc	Client:	Aspect Consulting, LLC
Date Received:	10/03/19	Project:	NE 8th St, F&BI 910083
Date Extracted:	10/04/19	Lab ID:	910083-05
Date Analyzed:	10/04/19	Data File:	100426.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	AEN/MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	106	93	107
Toluene-d8	102	87	110
4-Bromofluorobenzene	106	85	112

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	1.3

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	NE 8th St, F&BI 910083
Date Extracted:	10/04/19	Lab ID:	09-2401 mb
Date Analyzed:	10/04/19	Data File:	100418.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	AEN/MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	106	93	107
Toluene-d8	101	91	108
4-Bromofluorobenzene	112 vo	90	108

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Date of Report: 10/23/19
Date Received: 10/03/19
Project: NE 8th St, F&BI 910083

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

Laboratory Code: 910032-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Vinyl chloride	ug/L (ppb)	50	<0.2	106	61-139
Chloroethane	ug/L (ppb)	50	<1	107	55-149
1,1-Dichloroethene	ug/L (ppb)	50	<1	98	71-123
Methylene chloride	ug/L (ppb)	50	<5	72	61-126
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	89	72-122
1,1-Dichloroethane	ug/L (ppb)	50	<1	93	79-113
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	95	63-126
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	101	70-119
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	90	75-121
Trichloroethene	ug/L (ppb)	50	<1	93	73-122
Tetrachloroethene	ug/L (ppb)	50	5.5	97	40-155

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	ug/L (ppb)	50	112	107	70-128	5
Chloroethane	ug/L (ppb)	50	113	112	66-149	1
1,1-Dichloroethene	ug/L (ppb)	50	107	109	72-121	2
Methylene chloride	ug/L (ppb)	50	92	94	63-132	2
trans-1,2-Dichloroethene	ug/L (ppb)	50	95	94	76-118	1
1,1-Dichloroethane	ug/L (ppb)	50	99	98	77-119	1
cis-1,2-Dichloroethene	ug/L (ppb)	50	98	96	76-119	2
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	108	107	75-116	1
1,1,1-Trichloroethane	ug/L (ppb)	50	96	96	80-116	0
Trichloroethene	ug/L (ppb)	50	99	98	72-119	1
Tetrachloroethene	ug/L (ppb)	50	101	102	78-109	1

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. 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 lowest calibration standard. 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.

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.

910083

SAMPLE CHAIN OF CUSTODY

ME 10/3/19 VW1/ C05

Page # 1 of 1

Report To Jessica Smith
Company Aspect Consulting
Address Seattle
City, State, ZIP
Phone Email On File

SAMPLERS (*signature*) Matthew M. Lewis

PROJECT NAME: N 85th St
PO #:

REMARKS: Hold Dx+Gx per ML 10/4/19 ME
INVOICE TO:

TURNAROUND TIME
☐ Standard Turnaround
☒ RUSH 24 hr
Rush charges authorized by: Jessica Smith

SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Archive Samples
☐ Other

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	TPH-HCID	~~Hold~~ TPH-Diesel	~~Hold~~ TPH-Gasoline	BTEX by 8021B	~~cVOCs~~ VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM					Notes
AMW-4D-100219	01 A-C	10/2/19	1040	GW	6		X	X		X							
AMW-3D-100319	02	10/3/19	1210														~~800~~ NTUs turbid
MW-17-100319	03		1330														
MW-18-100319	04		1440														
AMW-3S-100319	05		1530							⊗							71000 NTUs
																	⊗ - only report cVOCs in -05
																	10/23/19 per MLK ME

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: Matthew M. Lewis	Matthew M. Lewis	Aspect	10/03/19	1700
Received by: Khoi Hoang	Khoi Hoang	FBI	10/03/19	17:00
Relinquished by:				
Received by:				

Samples received at 2 °C

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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Seattle, WA 98119-2029
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fbi@isomedia.com
www.friedmanandbruya.com

October 1, 2019

Jessica Smith, Project Manager
Aspect Consulting, LLC
710 2nd Ave S, Suite 550
Seattle, WA 98104

Dear Ms Smith:

Included are the results from the testing of material submitted on September 27, 2019 from the 190298, F&BI 909485 project. There are 8 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 have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Data Aspect, Meilani Lanier-Kamaha'o
ASP1001R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on September 27, 2019 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC 190298, F&BI 909485 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
909485 -01	AMW-2-88
909485 -02	AMW-2-81
909485 -03	AMW-2-78
909485 -04	AMW-2-72
909485 -05	AMW-2-69
909485 -06	AMW-2-65
909485 -07	AMW-2-59
909485 -08	AMW-2-54
909485 -09	AMW-2-46
909485 -10	AMW-2-43
909485 -11	AMW-2-34
909485 -12	AMW-4S-5.0
909485 -13	AMW-4S-10.0
909485 -14	AMW-4S-15.0
909485 -15	AMW-4S-20.0
909485 -16	AMW-4S-22.5
909485 -17	AMW-4S-25.0
909485 -18	AMW-4S-27.5
909485 -19	AMW-4S-30.0
909485 -20	AMW-4S-32.5
909485 -21	AMW-4S-35.0
909485 -22	AMW-4S-37.5
909485 -23	AMW-4S-40
909485 -24	AMW-4S-42.5
909485 -25	AMW-4S-45.0
909485 -26	AMW-2-37

All quality control requirements were acceptable.

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	AMW-2-81	Client:	Aspect Consulting, LLC
Date Received:	09/27/19	Project:	190298, F&BI 909485
Date Extracted:	09/30/19	Lab ID:	909485-02
Date Analyzed:	09/30/19	Data File:	093013.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS/AEN

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	90	50	150
Toluene-d8	98	50	150
4-Bromofluorobenzene	104	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	AMW-2-72	Client:	Aspect Consulting, LLC
Date Received:	09/27/19	Project:	190298, F&BI 909485
Date Extracted:	09/30/19	Lab ID:	909485-04
Date Analyzed:	09/30/19	Data File:	093014.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS/AEN

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	95	50	150
Toluene-d8	95	50	150
4-Bromofluorobenzene	121 J	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	AMW-2-65	Client:	Aspect Consulting, LLC
Date Received:	09/27/19	Project:	190298, F&BI 909485
Date Extracted:	09/30/19	Lab ID:	909485-06
Date Analyzed:	09/30/19	Data File:	093015.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS/AEN

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	50	150
Toluene-d8	95	50	150
4-Bromofluorobenzene	118 J	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	0.034
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	0.13

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	AMW-2-54	Client:	Aspect Consulting, LLC
Date Received:	09/27/19	Project:	190298, F&BI 909485
Date Extracted:	09/30/19	Lab ID:	909485-08
Date Analyzed:	09/30/19	Data File:	093016.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS/AEN

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	50	150
Toluene-d8	96	50	150
4-Bromofluorobenzene	105	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	190298, F&BI 909485
Date Extracted:	09/30/19	Lab ID:	09-2357 mb
Date Analyzed:	09/30/19	Data File:	093010.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS/AEN

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	50	150
Toluene-d8	98	50	150
4-Bromofluorobenzene	97	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Date of Report: 10/01/19
Date Received: 09/27/19
Project: 190298, F&BI 909485

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260C DIRECT SPARGE

Laboratory Code: 909484-07 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet wt)	Duplicate Result (Wet wt)	RPD (Limit 20)
Vinyl chloride	mg/kg (ppm)	<0.005	<0.005	nm
Chloroethane	mg/kg (ppm)	<0.05	<0.05	nm
1,1-Dichloroethene	mg/kg (ppm)	<0.005	<0.005	nm
Methylene chloride	mg/kg (ppm)	<0.05	<0.05	nm
trans-1,2-Dichloroethene	mg/kg (ppm)	<0.005	<0.005	nm
1,1-Dichloroethane	mg/kg (ppm)	<0.005	<0.005	nm
cis-1,2-Dichloroethene	mg/kg (ppm)	<0.005	<0.005	nm
1,2-Dichloroethane (EDC)	mg/kg (ppm)	<0.005	<0.005	nm
1,1,1-Trichloroethane	mg/kg (ppm)	<0.005	<0.005	nm
Trichloroethene	mg/kg (ppm)	<0.003	<0.003	nm
Tetrachloroethene	mg/kg (ppm)	<0.005	<0.005	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	mg/kg (ppm)	0.05	96	98	50-158	2
Chloroethane	mg/kg (ppm)	0.05	101	96	48-179	5
1,1-Dichloroethene	mg/kg (ppm)	0.05	98	96	63-144	2
Methylene chloride	mg/kg (ppm)	0.05	97	85	17-179	13
trans-1,2-Dichloroethene	mg/kg (ppm)	0.05	101	96	70-130	5
1,1-Dichloroethane	mg/kg (ppm)	0.05	98	95	70-130	3
cis-1,2-Dichloroethene	mg/kg (ppm)	0.05	98	95	70-130	3
1,2-Dichloroethane (EDC)	mg/kg (ppm)	0.05	96	96	69-137	0
1,1,1-Trichloroethane	mg/kg (ppm)	0.05	100	97	71-140	3
Trichloroethene	mg/kg (ppm)	0.05	96	95	70-130	1
Tetrachloroethene	mg/kg (ppm)	0.05	102	100	35-176	2

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. 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 lowest calibration standard. 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.

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.

909485

SAMPLE CHAIN OF CUSTODY ME 09/27/19

Page # 1 of 2 3

Report To Aspect

Company Jessica Smith

Address jsmith@aspectconsulting.com

City, State, ZIP

Phone Email

SAMPLERS (*signature*) NP

PROJECT NAME

PO # 190298

REMARKS

INVOICE TO

TURNAROUND TIME
- ☐ Standard Turnaround
- ☒ RUSH 24 hr TAT per ML ME
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Archive Samples
- ☐ Other

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type (NP 9/27)	# of Jars	ANALYSES REQUESTED: TPH-HCID	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	cVOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM					Notes (X - per ML 9/27/19 ME)
AMW-2-88	01 A-E		14:45	Soil	5												HOLD
AMW-2-81	02		14:40		5					X							
AMW-2-78	03		14:05		5												
AMW-2-72	04		1400		5					X							
AMW-2-69	05		1335		5												
AMW-2-65	06		1330		5					X							
AMW-2-59	07		1300		5												
AMW-2-54	08		1240		5					X							
AMW-2-46	09		1225		5												
AMW-2-43	10		1135		5												

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Matthew VanDyke	Aspect	9/27/19	1105
Received by:	~~FBI~~ VNH	FBI	9/27/19	1105
Relinquished by:				
Received by:		Samples received at 3 °C		

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

(NP) 408-909485

SAMPLE CHAIN OF CUSTODY ME 09/27/19

BOA / VJS

Page # 2 of 3

Report To Jessica Smith

Company jsmith@aspectconsulting.com

Address

City, State, ZIP

Phone Email

SAMPLERS (*signature*) MC

PROJECT NAME

PO # 190298

REMARKS

INVOICE TO

TURNAROUND TIME
- ☐ Standard Turnaround
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Archive Samples
- ☐ Other

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	TPH-HCID	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM					Notes
AMW-2-34	11 AE	9/26	11:00	Soil	5												HOLD
AMW-45-5.0	12		1335		5												
AMW-45-10.0	13		1345		5												
AMW-45-15.0	14		1355		5												
AMW-45-20.0	15		1405		5												
AMW-45-22.5	16		1410		5												
AMW-45-25.0	17		1415		5												
AMW-45-27.5	18		1425		5												
AMW-45-30.0	19		1435		5												
AMW-45-32.5	20		1440		5												

ANALYSES REQUESTED

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Matthew Vanda Ahe	Aspect	9/27/19	1405
Received by:	VINA	FBI	9/27/19	1105
Relinquished by:				
Received by:		Samples received at 3 °C		

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

909485

SAMPLE CHAIN OF CUSTODY

ME 09/27/19

DOY/USS

Page # 3 of 3

Report To Jessica Smith

Company Aspect

Address

City, State, ZIP

Phone Email JSmith@aspectconsulting.com

SAMPLERS (*signature*)

PROJECT NAME: NE 8th + 106th

PO #: 190298

REMARKS

INVOICE TO: AP

TURNAROUND TIME
- ☐ Standard Turnaround
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Archive Samples
- ☐ Other

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: TPH-HCID	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM					Notes
AMW-45-35.0	21 A-E	9/26/19	1450	Soil	5												HOLD
AMW-45-37.5	22		1500		5												
AMW-45-40	23		1505		5												
AMW-45-42.5	24		1525		5												
AMW-45-45.0	25		1530		5												
AMW-2-37	26	9/26/19	11:10	Soil	5												Added at lab (NP) 9/27

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Matthew Vanderlek	Aspect	9/27/19	11:05
Received by:	~~FBI~~ VINH	FBI	9/27/19	11:05
Relinquished by:				
Received by:		Samples received at 3 °C		

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

October 14, 2019

Jessica Smith, Project Manager
Aspect Consulting, LLC
710 2nd Ave S, Suite 550
Seattle, WA 98104

Dear Ms Smith:

Included are the additional results from the testing of material submitted on September 27, 2019 from the 190298, F&BI 909492 project. There are 8 pages included in this report.

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

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Data Aspect, Meilani Lanier-Kamaha'o
ASP1014R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on September 27, 2019 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC 190298, F&BI 909492 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
909492 -01	AMW-3S-5
909492 -02	AMW-3S-10
909492 -03	AMW-3S-15
909492 -04	AMW-3S-20
909492 -05	AMW-3S-22.5
909492 -06	AMW-3S-25
909492 -07	AMW-3S-27.5
909492 -08	AMW-3S-30
909492 -09	AMW-3S-32.5
909492 -10	AMW-3S-35
909492 -11	AMW-3S-37.5
909492 -12	AMW-3S-40
909492 -13	AMW-5-40
909492 -14	AMW-5-37.5
909492 -15	AMW-5-35
909492 -16	AMW-5-32.5
909492 -17	AMW-5-30
909492 -18	AMW-5-25
909492 -19	AMW-5-22.5
909492 -20	AMW-5-20
909492 -21	AMW-5-15
909492 -22	AMW-5-10
909492 -23	AMW-5-5
909492 -24	AMW-4D-50.0
909492 -25	AMW-4D-55.0
909492 -26	AMW-4D-60.0
909492 -27	AMW-4D-63.5
909492 -28	AMW-4D-69.5
909492 -29	AMW-4D-75.0
909492 -30	AMW-4D-80.0
909492 -31	AMW-4D-85.0
909492 -32	AMW-4D-89.0

Methylene chloride was detected in sample AMW-4D-89.0. The data were flagged as due to laboratory contamination.

All other quality control requirements were acceptable.

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	AMW-5-15	Client:	Aspect Consulting, LLC
Date Received:	09/27/19	Project:	190298, F&BI 909492
Date Extracted:	10/10/19	Lab ID:	909492-21
Date Analyzed:	10/10/19	Data File:	101027.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	AEN/MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	50	150
Toluene-d8	96	50	150
4-Bromofluorobenzene	98	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	AMW-5-5	Client:	Aspect Consulting, LLC
Date Received:	09/27/19	Project:	190298, F&BI 909492
Date Extracted:	10/09/19	Lab ID:	909492-23
Date Analyzed:	10/10/19	Data File:	100965.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	AEN/MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	50	150
Toluene-d8	98	50	150
4-Bromofluorobenzene	98	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	AMW-4D-89.0	Client:	Aspect Consulting, LLC
Date Received:	09/27/19	Project:	190298, F&BI 909492
Date Extracted:	10/09/19	Lab ID:	909492-32
Date Analyzed:	10/10/19	Data File:	100966.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	AEN/MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	96	50	150
Toluene-d8	94	50	150
4-Bromofluorobenzene	112	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	0.076 lc
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	190298, F&BI 909492
Date Extracted:	10/10/19	Lab ID:	09-2454 mb2
Date Analyzed:	10/10/19	Data File:	101024.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	AEN/MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	50	150
Toluene-d8	103	50	150
4-Bromofluorobenzene	90	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	190298, F&BI 909492
Date Extracted:	10/09/19	Lab ID:	09-2454 mb
Date Analyzed:	10/10/19	Data File:	100959.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	AEN/MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	50	150
Toluene-d8	97	50	150
4-Bromofluorobenzene	98	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Date of Report: 10/14/19
Date Received: 09/27/19
Project: 190298, F&BI 909492

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260C DIRECT SPARGE

Laboratory Code: 909517-07 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet wt)	Duplicate Result (Wet wt)	RPD (Limit 20)
Vinyl chloride	mg/kg (ppm)	<0.005	<0.005	nm
Chloroethane	mg/kg (ppm)	<0.05	<0.05	nm
1,1-Dichloroethene	mg/kg (ppm)	<0.005	<0.005	nm
Methylene chloride	mg/kg (ppm)	0.13 lc	<0.05	nm
trans-1,2-Dichloroethene	mg/kg (ppm)	<0.005	<0.005	nm
1,1-Dichloroethane	mg/kg (ppm)	<0.005	<0.005	nm
cis-1,2-Dichloroethene	mg/kg (ppm)	<0.005	<0.005	nm
1,2-Dichloroethane (EDC)	mg/kg (ppm)	<0.005	<0.005	nm
1,1,1-Trichloroethane	mg/kg (ppm)	<0.005	<0.005	nm
Trichloroethene	mg/kg (ppm)	<0.003	<0.003	nm
Tetrachloroethene	mg/kg (ppm)	<0.005	<0.005	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	mg/kg (ppm)	0.05	90	87	60-136	3
Chloroethane	mg/kg (ppm)	0.05	96	80	65-132	18
1,1-Dichloroethene	mg/kg (ppm)	0.05	92	87	70-130	6
Methylene chloride	mg/kg (ppm)	0.05	81	83	52-150	2
trans-1,2-Dichloroethene	mg/kg (ppm)	0.05	92	92	70-130	0
1,1-Dichloroethane	mg/kg (ppm)	0.05	94	95	70-130	1
cis-1,2-Dichloroethene	mg/kg (ppm)	0.05	91	92	70-130	1
1,2-Dichloroethane (EDC)	mg/kg (ppm)	0.05	92	96	70-130	4
1,1,1-Trichloroethane	mg/kg (ppm)	0.05	97	96	70-130	1
Trichloroethene	mg/kg (ppm)	0.05	94	94	70-130	0
Tetrachloroethene	mg/kg (ppm)	0.05	93	93	70-130	0

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. 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 lowest calibration standard. 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.

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.

909492

SAMPLE CHAIN OF CUSTODY ME 09/27/19 VSS/BO5

Page # ____ of ____ 4

Report To Jessica Smith

Company Aspect Consulting

Address jsmith@aspectconsulting.com

City, State, ZIP

Phone ____ Email ____

SAMPLERS (signature)

PROJECT NAME

PO # 190298

REMARKS

INVOICE TO

TURNAROUND TIME
- ☐ Standard Turnaround
- ☒ RUSH 24hr TAT

Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Archive Samples
- ☐ Other

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	TPH-HCID	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260C (chlorinated)	SVOCs by 8270D	PAHs 8270D SIM					Notes
AMW-3S-5	01 A-E	9/4/19	1210	Soil	5												Hold
AMW-3S-10	02		1215														
-15	03		1230														
-20	04		1245														
-22.5	05		1250														
-25	06		1300														
-27.5	07		1305							X							
-30	08		1310														
-32.5	09		1315														
-35	10		1335							X							

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Ariel Davis	Aspect	9/27/19	1700
Received by:		Eric Young	FeB	9/27/19	1700
Relinquished by:					
Received by:			Samples received at 4 °C		

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

909497 2

SAMPLE CHAIN OF CUSTODY ME 09/27/19 [redacted]

VSS / BDS

Page # 2 of 4

Report To Jessica Smith

Company Aspect

Address jsmith@aspectconsulting.com

City, State, ZIP

Phone ______ Email ______

SAMPLERS (signature) [signature]

PROJECT NAME

PO # 190278

REMARKS

INVOICE TO

TURNAROUND TIME
- ☐ Standard Turnaround
- ☐ RUSH
- Rush charges authorized by

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Archive Samples
- ☐ Other

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	TPH-HCID	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	chlorinated VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM					Notes
AMW-3.5'-37.5	11 A-E	9/27/19	1340	Soil	5												Hold
-40	12	"	1350														
AMW-5 -40	13		0915														
-37.5	14		0910														
-35	15		0905							X							
-32.5	16		0900														
-30	17		0855														
-25	18		0835														
-22.5	19		0830														
-20	20		0825							X							

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: [signature]	matthew [illegible]	Aspect	9/27/19	1700
Received by: [signature]	Eric [illegible]	FEB	9/27/19	1700
Relinquished by:				
Received by:		Samples received at 4 °C		

9094982

SAMPLE CHAIN OF CUSTODY

ME 09/27/19 VSS/BDS

Page # 3 of 4

Report To Jessica Smith

Company Aspect

Address JSmith@aspectconsulting.com

City, State, ZIP

Phone Email

SAMPLERS (signature)	
PROJECT NAME	PO # 190298
REMARKS: 24-hr TAT	INVOICE TO

TURNAROUND TIME
- ☐ Standard Turnaround
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Archive Samples
- ☐ Other

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	TPH-HCID	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	Halogenated VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM					Notes
AMW-5 -15	21A-E	9/27/19	0815	Soil	5					X							~~HOLD~~
-10	22		0810		1					X							↓
AMW-5 -5	23		0805		1					X							

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Amelia C	Aspect	9/27/19	1700
Received by:	Eric Chan	FedEx	9/27/19	AM
Relinquished by:				
Received by:		Samples received at 4 °C		

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

909492

SAMPLE CHAIN OF CUSTODY ME 09/27/19 USS/BPS

Page # 4 of 4

Report To Jessica Smith

Company Aspect

Address

City, State, ZIP

Phone Email jsmith@aspectconsulting.com 24hr TAT

SAMPLERS (signature)

PROJECT NAME: NE 8th + 10th

PO #: 190298

REMARKS

INVOICE TO: AP

TURNAROUND TIME
- ☐ Standard Turnaround
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Archive Samples
- ☐ Other

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	TPH-HCID	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	Chlorinated VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM					Notes
AMW-4D-[redacted]50.0	24A-E	9/27/19	1215	Soil	5												HOLD
AMW-4D-55.0	25		1230		5												
AMW-4D-60.0	26		1255		5					X							
AMW-4D-63.5	27		1310		5												
AMW-4D-69.5	28		1315		5					X							
AMW-4D-75.0	29		1320		5												
AMW-4D-80.0	30		1410		5					X							
AMW-4D-85.0	31		1425		5												
AMW-4D-89.0	32		1435		5					X							

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Anne C. Park	Aspect	9/27/19	1700
Received by:	Eric Nam	FSP	9/27/19	1700
Relinquished by:				
Received by:		Samples received at 4 °C		

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

October 4, 2019

Jessica Smith, Project Manager
Aspect Consulting, LLC
710 2nd Ave S, Suite 550
Seattle, WA 98104

Dear Ms Smith:

Included are the results from the testing of material submitted on September 27, 2019 from the 190298, F&BI 909492 project. There are 16 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Data Aspect, Meilani Lanier-Kamaha'o
ASP1004R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on September 27, 2019 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC 190298, F&BI 909492 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
909492 -01	AMW-3S-5
909492 -02	AMW-3S-10
909492 -03	AMW-3S-15
909492 -04	AMW-3S-20
909492 -05	AMW-3S-22.5
909492 -06	AMW-3S-25
909492 -07	AMW-3S-27.5
909492 -08	AMW-3S-30
909492 -09	AMW-3S-32.5
909492 -10	AMW-3S-35
909492 -11	AMW-3S-37.5
909492 -12	AMW-3S-40
909492 -13	AMW-5-40
909492 -14	AMW-5-37.5
909492 -15	AMW-5-35
909492 -16	AMW-5-32.5
909492 -17	AMW-5-30
909492 -18	AMW-5-25
909492 -19	AMW-5-22.5
909492 -20	AMW-5-20
909492 -21	AMW-5-15
909492 -22	AMW-5-10
909492 -23	AMW-5-5
909492 -24	AMW-4D-50.0
909492 -25	AMW-4D-55.0
909492 -26	AMW-4D-60.0
909492 -27	AMW-4D-63.5
909492 -28	AMW-4D-69.5
909492 -29	AMW-4D-75.0
909492 -30	AMW-4D-80.0
909492 -31	AMW-4D-85.0
909492 -32	AMW-4D-89.0

Methylene chloride was detected in samples AMW-5-20, AMW-4D-55.0, AMW-4D-60.0, AMW-4D-69.5, and AMW-4D-80.0. The data were flagged as due to laboratory contamination.

All other quality control requirements were acceptable.

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	AMW-3S-27.5	Client:	Aspect Consulting, LLC
Date Received:	09/27/19	Project:	190298, F&BI 909492
Date Extracted:	10/02/19	Lab ID:	909492-07
Date Analyzed:	10/02/19	Data File:	100216.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS/AEN

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	104	50	150
Toluene-d8	104	50	150
4-Bromofluorobenzene	100	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	AMW-3S-35	Client:	Aspect Consulting, LLC
Date Received:	09/27/19	Project:	190298, F&BI 909492
Date Extracted:	10/02/19	Lab ID:	909492-10
Date Analyzed:	10/02/19	Data File:	100217.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS/AEN

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	106	50	150
Toluene-d8	108	50	150
4-Bromofluorobenzene	105	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	AMW-5-35	Client:	Aspect Consulting, LLC
Date Received:	09/27/19	Project:	190298, F&BI 909492
Date Extracted:	10/02/19	Lab ID:	909492-15
Date Analyzed:	10/02/19	Data File:	100218.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS/AEN

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	108	50	150
Toluene-d8	113	50	150
4-Bromofluorobenzene	110	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	AMW-5-20	Client:	Aspect Consulting, LLC
Date Received:	09/27/19	Project:	190298, F&BI 909492
Date Extracted:	10/02/19	Lab ID:	909492-20
Date Analyzed:	10/02/19	Data File:	100219.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS/AEN

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	115	50	150
Toluene-d8	120	50	150
4-Bromofluorobenzene	114	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	0.14 lc
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	AMW-5-10	Client:	Aspect Consulting, LLC
Date Received:	09/27/19	Project:	190298, F&BI 909492
Date Extracted:	10/02/19	Lab ID:	909492-22
Date Analyzed:	10/02/19	Data File:	100225.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	AEN/MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	94	50	150
Toluene-d8	84	50	150
4-Bromofluorobenzene	94	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	AMW-4D-50.0	Client:	Aspect Consulting, LLC
Date Received:	09/27/19	Project:	190298, F&BI 909492
Date Extracted:	10/03/19	Lab ID:	909492-24
Date Analyzed:	10/03/19	Data File:	100269.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	AEN/MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	50	150
Toluene-d8	90	50	150
4-Bromofluorobenzene	71	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	AMW-4D-55.0	Client:	Aspect Consulting, LLC
Date Received:	09/27/19	Project:	190298, F&BI 909492
Date Extracted:	10/03/19	Lab ID:	909492-25
Date Analyzed:	10/03/19	Data File:	100270.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	AEN/MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	50	150
Toluene-d8	65	50	150
4-Bromofluorobenzene	117 J	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	0.18 lc
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	AMW-4D-60.0	Client:	Aspect Consulting, LLC
Date Received:	09/27/19	Project:	190298, F&BI 909492
Date Extracted:	10/02/19	Lab ID:	909492-26
Date Analyzed:	10/02/19	Data File:	100221.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS/AEN

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	134	50	150
Toluene-d8	135	50	150
4-Bromofluorobenzene	131 J	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	0.21 lc
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	0.014

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	AMW-4D-63.5	Client:	Aspect Consulting, LLC
Date Received:	09/27/19	Project:	190298, F&BI 909492
Date Extracted:	10/03/19	Lab ID:	909492-27
Date Analyzed:	10/03/19	Data File:	100271.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	AEN/MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	50	150
Toluene-d8	90	50	150
4-Bromofluorobenzene	82	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	0.12

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	AMW-4D-69.5	Client:	Aspect Consulting, LLC
Date Received:	09/27/19	Project:	190298, F&BI 909492
Date Extracted:	10/02/19	Lab ID:	909492-28
Date Analyzed:	10/02/19	Data File:	100226.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	AEN/MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	50	150
Toluene-d8	88	50	150
4-Bromofluorobenzene	80	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	0.064 lc
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	AMW-4D-80.0	Client:	Aspect Consulting, LLC
Date Received:	09/27/19	Project:	190298, F&BI 909492
Date Extracted:	10/02/19	Lab ID:	909492-30
Date Analyzed:	10/03/19	Data File:	100227.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	AEN/MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	104	50	150
Toluene-d8	92	50	150
4-Bromofluorobenzene	105	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	0.056 lc
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	190298, F&BI 909492
Date Extracted:	10/02/19	Lab ID:	09-2393 mb
Date Analyzed:	10/02/19	Data File:	100224.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	AEN/MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	50	150
Toluene-d8	93	50	150
4-Bromofluorobenzene	85	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	190298, F&BI 909492
Date Extracted:	10/03/19	Lab ID:	09-2393 mb2
Date Analyzed:	10/03/19	Data File:	100268.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	AEN/MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	50	150
Toluene-d8	95	50	150
4-Bromofluorobenzene	70	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Date of Report: 10/04/19
Date Received: 09/27/19
Project: 190298, F&BI 909492

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260C DIRECT SPARGE

Laboratory Code: 909517-07 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet wt)	Duplicate Result (Wet wt)	RPD (Limit 20)
Vinyl chloride	mg/kg (ppm)	<0.005	<0.005	nm
Chloroethane	mg/kg (ppm)	<0.05	<0.05	nm
1,1-Dichloroethene	mg/kg (ppm)	<0.005	<0.005	nm
Methylene chloride	mg/kg (ppm)	0.13	<0.05	nm
trans-1,2-Dichloroethene	mg/kg (ppm)	<0.005	<0.005	nm
1,1-Dichloroethane	mg/kg (ppm)	<0.005	<0.005	nm
cis-1,2-Dichloroethene	mg/kg (ppm)	<0.005	<0.005	nm
1,2-Dichloroethane (EDC)	mg/kg (ppm)	<0.005	<0.005	nm
1,1,1-Trichloroethane	mg/kg (ppm)	<0.005	<0.005	nm
Trichloroethene	mg/kg (ppm)	<0.003	<0.003	nm
Tetrachloroethene	mg/kg (ppm)	<0.005	<0.005	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	mg/kg (ppm)	0.05	90	87	60-136	3
Chloroethane	mg/kg (ppm)	0.05	96	80	65-132	18
1,1-Dichloroethene	mg/kg (ppm)	0.05	92	87	70-130	6
Methylene chloride	mg/kg (ppm)	0.05	81	83	52-150	2
trans-1,2-Dichloroethene	mg/kg (ppm)	0.05	92	92	70-130	0
1,1-Dichloroethane	mg/kg (ppm)	0.05	94	95	70-130	1
cis-1,2-Dichloroethene	mg/kg (ppm)	0.05	91	92	70-130	1
1,2-Dichloroethane (EDC)	mg/kg (ppm)	0.05	92	96	70-130	4
1,1,1-Trichloroethane	mg/kg (ppm)	0.05	97	96	70-130	1
Trichloroethene	mg/kg (ppm)	0.05	94	94	70-130	0
Tetrachloroethene	mg/kg (ppm)	0.05	93	93	70-130	0

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. 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 lowest calibration standard. 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.

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.

909492

SAMPLE CHAIN OF CUSTODY

ME 09/27/19 USS/B04

Page # ____ of 3

Report To Jessica Smith

Company Aspect Consulting

Address jsmith@aspectconsulting.com

City, State, ZIP

Phone ____ Email ____

SAMPLERS (signature)	
PROJECT NAME	PO # 190298
REMARKS	INVOICE TO

TURNAROUND TIME
- ☐ Standard Turnaround
- ☒ RUSH 24 hr TAT
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Archive Samples
- ☐ Other

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	TPH-HCID	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	Chlorinated VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM					Notes
AMW-3S-5	01 A-E	9/27/19	1210	Soil	5												Hold
AMW-3S-10	02		1215														
-15	03		1230														
-20	04		1245														
-22.5	05		1250														
-25	06		1300														
-27.5	07		1305							X							
-30	08		1310														
-32.5	09		1315														
-35	10		1335							X							

Friedman & Bruya, Inc.

3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	[signature]	Amelia Oates	Aspect	9/27/19	1400
Received by:	[signature]	Eric Young	FoB	9/27/19	1700
Relinquished by:					
Received by:			Samples received at 4 °C		

9094972

SAMPLE CHAIN OF CUSTODY

ME 09/27/19

VSS / BDS

Page # 2 of 4

Report To Jessica Smith

Company Aspect

Address jsmith@aspectconsulting.com

City, State, ZIP

Phone Email

SAMPLERS (*signature*)

PROJECT NAME

PO # 190298

REMARKS

INVOICE TO

TURNAROUND TIME
- ☐ Standard Turnaround
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Archive Samples
- ☐ Other

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	TPH-HCID	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	chlor. VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM	Notes
AMW-3 5'-37.5	11A-E	9/27/19	1340	Soil	5								~~1 to 1~~
-40	12	"	1350										
AMW-5 -40	13		0915										
-37.5	14		0910										
-35	15		0905							X			
-32.5	16		0900										
-30	17		0855										
-25	18		0835										
-22.5	19		0830										
-20	20		0825							X			

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Matthew Vanden Ahe	Aspect	9/27/19	1700
Received by:	Eric Flom	FCS	9/27/19	1750
Relinquished by:				
Received by:		Samples received at 4 °C		

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

9094982

SAMPLE CHAIN OF CUSTODY

ME 09/27/19 VSS/BOS

Page # 3 of 3

Report To Jessie Smith

Company Aspect

Address JSmith@Aspectconsulting.com

City, State, ZIP

Phone Email

SAMPLERS (*signature*)

PROJECT NAME

PO # 190276

REMARKS

INVOICE TO

TURNAROUND TIME

☐ Standard Turnaround

☐ RUSH

Rush charges authorized by:

SAMPLE DISPOSAL

☐ Dispose after 30 days

☐ Archive Samples

☐ Other

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	TPH-HCID	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	chlorinated VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM					Notes
AMW-5-15	21A-E	9/21/19	0815	SOIL	5												~~HOLD~~
-10	22		0810							X							↓
-5	23		0805														

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Amelia Cole	Aspect	9/27/19	1700
Received by:	Eric Fan	FedEx	9/27/19	
Relinquished by:				
Received by:		Samples received at 4 °C		

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

909492

SAMPLE CHAIN OF CUSTODY

ME 09/27/19 USS/DOS

Page # 4 of 4

Report To Jessica Smith

Company Aspect

Address

City, State, ZIP

Phone Email jsmith@aspectconsulting.com

SAMPLERS (*signature*)

PROJECT NAME NE 8th + 10th

PO # 190298

REMARKS

INVOICE TO AP

TURNAROUND TIME
- ☐ Standard Turnaround
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Archive Samples
- ☐ Other

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	TPH-HCID	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260C Chlorinated	SVOCs by 8270D	PAHs 8270D SIM					⊗-per ML 10/2/19 Notes ML
AMW-4D-[redacted]50.0	24A-S	9/27/19	1215	Soil	5					⊗							HOLD
AMW-4D-55.0	25		1230		5					⊗							
AMW-4D-60.0	26		1255		5					X							
AMW-4D-63.5	27		1310		5					⊗							
AMW-4D-69.5	28		1315		5					X							
AMW-4D-75.0	29		1320		5												
AMW-4D-80.0	30		1410		5					X							
AMW-4D-85.0	31		1425		5												
AMW-4D-89.0	32		1435		5												

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Anel C. Post	Aspect	9/27/19	1700
Received by:	Eric Carr	FEDEX	9/27/19	17-0
Relinquished by:				
Received by:		Samples received at 4 °C		

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

October 14, 2019

Jessica Smith, Project Manager
Aspect Consulting, LLC
710 2nd Ave S, Suite 550
Seattle, WA 98104

Dear Ms Smith:

Included are the additional results from the testing of material submitted on September 27, 2019 from the NE 8th + 106th 190298, F&BI 909484 project. There are 9 pages included in this report.

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

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Data Aspect
ASP1014R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on September 27, 2019 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC NE 8th + 106th 190298, F&BI 909484 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
909484 -01	AMW-4D-5.5
909484 -02	AMW-4D-10.0
909484 -03	AMW-4D-15.0
909484 -04	AMW-4D-20.0
909484 -05	AMW-4D-25.0
909484 -06	AMW-4D-30.0
909484 -07	AMW-4D-35.0
909484 -08	AMW-4D-40.0
909484 -09	AMW-4D-45.0

Methylene chloride was detected in sample AMW-4D-20.0. The data were flagged as due to laboratory contamination.

All other quality control requirements were acceptable.

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	AMW-4D-5.5	Client:	Aspect Consulting, LLC
Date Received:	09/27/19	Project:	NE 8th + 106th 190298, F&BI 909484
Date Extracted:	10/10/19	Lab ID:	909484-01
Date Analyzed:	10/10/19	Data File:	101026.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	AEN/MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	96	50	150
Toluene-d8	92	50	150
4-Bromofluorobenzene	99	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	AMW-4D-20.0	Client:	Aspect Consulting, LLC
Date Received:	09/27/19	Project:	NE 8th + 106th 190298, F&BI 909484
Date Extracted:	10/09/19	Lab ID:	909484-04
Date Analyzed:	10/10/19	Data File:	100961.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	AEN/MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	95	50	150
Toluene-d8	94	50	150
4-Bromofluorobenzene	98	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	0.065 lc
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	AMW-4D-30.0	Client:	Aspect Consulting, LLC
Date Received:	09/27/19	Project:	NE 8th + 106th 190298, F&BI 909484
Date Extracted:	10/09/19	Lab ID:	909484-06
Date Analyzed:	10/10/19	Data File:	100962.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	AEN/MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	50	150
Toluene-d8	98	50	150
4-Bromofluorobenzene	99	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	NE 8th + 106th 190298, F&BI 909484
Date Extracted:	10/10/19	Lab ID:	09-2454 mb2
Date Analyzed:	10/10/19	Data File:	101024.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	AEN/MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	50	150
Toluene-d8	103	50	150
4-Bromofluorobenzene	90	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	NE 8th + 106th 190298, F&BI 909484
Date Extracted:	10/09/19	Lab ID:	09-2454 mb
Date Analyzed:	10/10/19	Data File:	100959.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	AEN/MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	50	150
Toluene-d8	97	50	150
4-Bromofluorobenzene	98	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Date of Report: 10/14/19
Date Received: 09/27/19
Project: NE 8th + 106th 190298, F&BI 909484

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260C DIRECT SPARGE

Laboratory Code: 909484-04 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet wt)	Duplicate Result (Wet wt)	RPD (Limit 20)
Vinyl chloride	mg/kg (ppm)	<0.005	<0.005	nm
Chloroethane	mg/kg (ppm)	<0.05	<0.05	nm
1,1-Dichloroethene	mg/kg (ppm)	<0.005	<0.005	nm
Methylene chloride	mg/kg (ppm)	0.059 lc	0.060 lc	2
trans-1,2-Dichloroethene	mg/kg (ppm)	<0.005	<0.005	nm
1,1-Dichloroethane	mg/kg (ppm)	<0.005	<0.005	nm
cis-1,2-Dichloroethene	mg/kg (ppm)	<0.005	<0.005	nm
1,2-Dichloroethane (EDC)	mg/kg (ppm)	<0.005	<0.005	nm
1,1,1-Trichloroethane	mg/kg (ppm)	<0.005	<0.005	nm
Trichloroethene	mg/kg (ppm)	<0.003	<0.003	nm
Tetrachloroethene	mg/kg (ppm)	<0.005	<0.005	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	mg/kg (ppm)	0.05	96	94	60-136	2
Chloroethane	mg/kg (ppm)	0.05	94	94	65-132	0
1,1-Dichloroethene	mg/kg (ppm)	0.05	94	95	70-130	1
Methylene chloride	mg/kg (ppm)	0.05	74	75	52-150	1
trans-1,2-Dichloroethene	mg/kg (ppm)	0.05	96	97	70-130	1
1,1-Dichloroethane	mg/kg (ppm)	0.05	96	97	70-130	1
cis-1,2-Dichloroethene	mg/kg (ppm)	0.05	95	96	70-130	1
1,2-Dichloroethane (EDC)	mg/kg (ppm)	0.05	91	92	70-130	1
1,1,1-Trichloroethane	mg/kg (ppm)	0.05	95	96	70-130	1
Trichloroethene	mg/kg (ppm)	0.05	94	92	70-130	2
Tetrachloroethene	mg/kg (ppm)	0.05	94	93	70-130	1

Date of Report: 10/14/19
Date Received: 09/27/19
Project: NE 8th + 106th 190298, F&BI 909484

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260C DIRECT SPARGE

Laboratory Code: 909484-04 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet wt)	Duplicate Result (Wet wt)	RPD (Limit 20)
Vinyl chloride	mg/kg (ppm)	<0.005	<0.005	nm
Chloroethane	mg/kg (ppm)	<0.05	<0.05	nm
1,1-Dichloroethene	mg/kg (ppm)	<0.005	<0.005	nm
Methylene chloride	mg/kg (ppm)	0.059 lc	0.060 lc	2
trans-1,2-Dichloroethene	mg/kg (ppm)	<0.005	<0.005	nm
1,1-Dichloroethane	mg/kg (ppm)	<0.005	<0.005	nm
cis-1,2-Dichloroethene	mg/kg (ppm)	<0.005	<0.005	nm
1,2-Dichloroethane (EDC)	mg/kg (ppm)	<0.005	<0.005	nm
1,1,1-Trichloroethane	mg/kg (ppm)	<0.005	<0.005	nm
Trichloroethene	mg/kg (ppm)	<0.003	<0.003	nm
Tetrachloroethene	mg/kg (ppm)	<0.005	<0.005	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	mg/kg (ppm)	0.05	96	94	60-136	2
Chloroethane	mg/kg (ppm)	0.05	94	94	65-132	0
1,1-Dichloroethene	mg/kg (ppm)	0.05	94	95	70-130	1
Methylene chloride	mg/kg (ppm)	0.05	74	75	52-150	1
trans-1,2-Dichloroethene	mg/kg (ppm)	0.05	96	97	70-130	1
1,1-Dichloroethane	mg/kg (ppm)	0.05	96	97	70-130	1
cis-1,2-Dichloroethene	mg/kg (ppm)	0.05	95	96	70-130	1
1,2-Dichloroethane (EDC)	mg/kg (ppm)	0.05	91	92	70-130	1
1,1,1-Trichloroethane	mg/kg (ppm)	0.05	95	96	70-130	1
Trichloroethene	mg/kg (ppm)	0.05	94	92	70-130	2
Tetrachloroethene	mg/kg (ppm)	0.05	94	93	70-130	1

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. 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 lowest calibration standard. 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.

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.

909484

SAMPLE CHAIN OF CUSTODY ME 9/27/19 B03/K53

Report To Jessica Smith

Company Aspect

Address

City, State, ZIP

Phone Email jsmith@aspectconsulting.com

SAMPLERS (*signature*)

PROJECT NAME: NE 8th + 106th

PO #: 190298

REMARKS

INVOICE TO: AP

Page # of

TURNAROUND TIME
- ☐ Standard Turnaround
- ☒ RUSH 24hr TAT
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Archive Samples
- ☐ Other

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	TPH-HCID	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM					Notes
						ANALYSES REQUESTED											X-per ML 9/27/19 ME
AMW-4D-5.5	01 AE	9/27/19	0845	Soil	5					⊗							HOLD
AMW-4D-10.0	02		0850		5												
AMW-4D-15.0	03		0900		5												
AMW-4D-20.0	04		0910		5					⊗							
AMW-4D-25.0	05		0930		5												
AMW-4D-30.0	06		0940		5					⊗							
AMW-4D-35.0	07		1025		5					X							
AMW-4D-40.0	08		1030		5												
AMW-4D-45.0	09		1040		5												
												Samples received at 3 °C					

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Matthew Worden	Aspect	9/27/19	11:05
Received by:	VINT	FBI	9/27/19	11:05
Relinquished by:				
Received by:				

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

October 1, 2019

Jessica Smith, Project Manager
Aspect Consulting, LLC
710 2nd Ave S, Suite 550
Seattle, WA 98104

Dear Ms Smith:

Included are the results from the testing of material submitted on September 27, 2019 from the NE 8th + 106th 190298, F&BI 909484 project. There are 5 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Data Aspect, Meilani Lanier-Kamaha'o
ASP1001R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on September 27, 2019 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC NE 8th + 106th 190298, F&BI 909484 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
909484 -01	AMW-4D-5.5
909484 -02	AMW-4D-10.0
909484 -03	AMW-4D-15.0
909484 -04	AMW-4D-20.0
909484 -05	AMW-4D-25.0
909484 -06	AMW-4D-30.0
909484 -07	AMW-4D-35.0
909484 -08	AMW-4D-40.0
909484 -09	AMW-4D-45.0

All quality control requirements were acceptable.

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	AMW-4D-35.0	Client:	Aspect Consulting, LLC
Date Received:	09/27/19	Project:	NE 8th + 106th 190298, F&BI 909484
Date Extracted:	09/30/19	Lab ID:	909484-07
Date Analyzed:	09/30/19	Data File:	093011.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS/AEN

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	50	150
Toluene-d8	98	50	150
4-Bromofluorobenzene	99	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	NE 8th + 106th 190298, F&BI 909484
Date Extracted:	09/30/19	Lab ID:	09-2357 mb
Date Analyzed:	09/30/19	Data File:	093010.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS/AEN

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	50	150
Toluene-d8	98	50	150
4-Bromofluorobenzene	97	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Date of Report: 10/01/19
Date Received: 09/27/19
Project: NE 8th + 106th 190298, F&BI 909484

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260C DIRECT SPARGE

Laboratory Code: 909484-07 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet wt)	Duplicate Result (Wet wt)	RPD (Limit 20)
Vinyl chloride	mg/kg (ppm)	<0.005	<0.005	nm
Chloroethane	mg/kg (ppm)	<0.05	<0.05	nm
1,1-Dichloroethene	mg/kg (ppm)	<0.005	<0.005	nm
Methylene chloride	mg/kg (ppm)	<0.05	<0.05	nm
trans-1,2-Dichloroethene	mg/kg (ppm)	<0.005	<0.005	nm
1,1-Dichloroethane	mg/kg (ppm)	<0.005	<0.005	nm
cis-1,2-Dichloroethene	mg/kg (ppm)	<0.005	<0.005	nm
1,2-Dichloroethane (EDC)	mg/kg (ppm)	<0.005	<0.005	nm
1,1,1-Trichloroethane	mg/kg (ppm)	<0.005	<0.005	nm
Trichloroethene	mg/kg (ppm)	<0.003	<0.003	nm
Tetrachloroethene	mg/kg (ppm)	<0.005	<0.005	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	mg/kg (ppm)	0.05	96	98	50-158	2
Chloroethane	mg/kg (ppm)	0.05	101	96	48-179	5
1,1-Dichloroethene	mg/kg (ppm)	0.05	98	96	63-144	2
Methylene chloride	mg/kg (ppm)	0.05	97	85	17-179	13
trans-1,2-Dichloroethene	mg/kg (ppm)	0.05	101	96	70-130	5
1,1-Dichloroethane	mg/kg (ppm)	0.05	98	95	70-130	3
cis-1,2-Dichloroethene	mg/kg (ppm)	0.05	98	95	70-130	3
1,2-Dichloroethane (EDC)	mg/kg (ppm)	0.05	96	96	69-137	0
1,1,1-Trichloroethane	mg/kg (ppm)	0.05	100	97	71-140	3
Trichloroethene	mg/kg (ppm)	0.05	96	95	70-130	1
Tetrachloroethene	mg/kg (ppm)	0.05	102	100	35-176	2

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. 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 lowest calibration standard. 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.

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.

909484

SAMPLE CHAIN OF CUSTODY ME 9/27/19 B03/LS3

Page # ___ of ___

Report To Jessica Smith

Company Aspect

Address

City, State, ZIP

Phone ___ Email jsmith@aspectconsulting.com

SAMPLERS (*signature*)

PROJECT NAME: NE 8th + 106th

PO #: 190298

REMARKS

INVOICE TO: AP

TURNAROUND TIME
- ☐ Standard Turnaround
- ☒ RUSH 24hTAT

Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Archive Samples
- ☐ Other

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	TPH-HCID	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	cVOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM					Notes
						ANALYSES REQUESTED											X-per ML 9/27/19 ME
AMW-4D-5.5	01 AE	9/27/19	0845	Soil	5												HOLD
AMW-4D-10.0	02		0850		5												
AMW-4D-15.0	03		0908		5												
AMW-4D-20.0	04		0910		5												
AMW-4D-25.0	05		0930		5												
AMW-4D-30.0	06		0948		5												
AMW-4D-35.0	07		1025		5					X							
AMW-4D-40.0	08		1030		5												
AMW-4D-45.0	09		1040		5												Samples received at 3 °C

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Matthew Ardery	Aspect	9/27/19	11:05
Received by:	VINT	FBI	9/27/19	11:05
Relinquished by:				
Received by:				

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

October 1, 2019

Jessica Smith, Project Manager
Aspect Consulting, LLC
710 2nd Ave S, Suite 550
Seattle, WA 98104

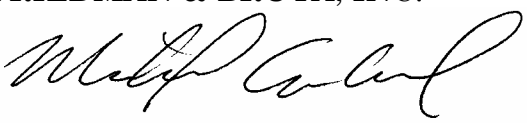
Dear Ms Smith:

Included are the results from the testing of material submitted on September 26, 2019 from the NE 8th and 106th 190298, F&BI 909450 project. There are 12 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 have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
c: Data Aspect, Meilani Lanier-Kamaha'o
ASP1001R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on September 26, 2019 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC NE 8th and 106th 190298, F&BI 909450 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
909450 -01	AMW-1-5.0
909450 -02	AMW-1-10.0
909450 -03	AMW-1-15.0
909450 -04	AMW-1-20.0
909450 -05	AMW-1-22.5
909450 -06	AMW-1-25.0
909450 -07	AMW-1-27.5
909450 -08	AMW-1-30.0
909450 -09	AMW-1-32.5
909450 -10	AMW-1-35.0
909450 -11	AMW-1-37.5
909450 -12	AMW-1-40.0
909450 -13	AMW-1-42.5
909450 -14	AMW-1-45.0
909450 -15	AMW-2-5
909450 -16	AMW-2-11
909450 -17	AMW-2-14
909450 -18	AMW-2-19
909450 -19	AMW-2-24
909450 -20	AMW-2-29

All quality control requirements were acceptable.

Date of Report: 10/01/19
Date Received: 09/26/19
Project: NE 8th and 106th 190298, F&BI 909450
Date Extracted: 09/26/19
Date Analyzed: 09/26/19

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

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

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 58-139)
AMW-1-15.0 909450-03	<5	93
AMW-1-37.5 909450-11	<5	91
AMW-1-45.0 909450-14	<5	90
AMW-2-19 909450-18	<5	89
Method Blank 09-2315 MB	<5	92

Date of Report: 10/01/19
Date Received: 09/26/19
Project: NE 8th and 106th 190298, F&BI 909450
Date Extracted: 09/26/19
Date Analyzed: 09/26/19

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 53-144)
AMW-1-15.0 909450-03	<50	<250	95
AMW-1-37.5 909450-11	<50	<250	99
AMW-1-45.0 909450-14	<50	<250	94
Method Blank 09-2375 MB	<50	<250	105

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	AMW-1-15.0	Client:	Aspect Consulting, LLC
Date Received:	09/26/19	Project:	NE 8th and 106th 190298
Date Extracted:	09/26/19	Lab ID:	909450-03
Date Analyzed:	09/26/19	Data File:	092622.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS/AEN

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	50	150
Toluene-d8	96	50	150
4-Bromofluorobenzene	97	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	AMW-1-37.5	Client:	Aspect Consulting, LLC
Date Received:	09/26/19	Project:	NE 8th and 106th 190298
Date Extracted:	09/26/19	Lab ID:	909450-11
Date Analyzed:	09/26/19	Data File:	092623.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS/AEN

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	50	150
Toluene-d8	97	50	150
4-Bromofluorobenzene	97	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	AMW-1-45.0	Client:	Aspect Consulting, LLC
Date Received:	09/26/19	Project:	NE 8th and 106th 190298
Date Extracted:	09/26/19	Lab ID:	909450-14
Date Analyzed:	09/26/19	Data File:	092624.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS/AEN

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	50	150
Toluene-d8	98	50	150
4-Bromofluorobenzene	99	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	AMW-2-19	Client:	Aspect Consulting, LLC
Date Received:	09/26/19	Project:	NE 8th and 106th 190298
Date Extracted:	09/26/19	Lab ID:	909450-18
Date Analyzed:	09/26/19	Data File:	092625.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS/AEN

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	50	150
Toluene-d8	111	50	150
4-Bromofluorobenzene	135	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	NE 8th and 106th 190298
Date Extracted:	09/27/19	Lab ID:	09-2347 mb
Date Analyzed:	09/27/19	Data File:	092710.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS/AEN

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	50	150
Toluene-d8	99	50	150
4-Bromofluorobenzene	99	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Date of Report: 10/01/19
Date Received: 09/26/19
Project: NE 8th and 106th 190298, F&BI 909450

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TPH AS GASOLINE USING METHOD NWTPH-Gx

Laboratory Code: 909450-11 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Gasoline	mg/kg (ppm)	<5	<5	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	mg/kg (ppm)	20	85	61-153

Date of Report: 10/01/19
Date Received: 09/26/19
Project: NE 8th and 106th 190298, F&BI 909450

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

Laboratory Code: 909440-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	102	102	64-133	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	100	58-147

Date of Report: 10/01/19
Date Received: 09/26/19
Project: NE 8th and 106th 190298, F&BI 909450

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260C DIRECT SPARGE

Laboratory Code: 909450-03 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet wt)	Duplicate Result (Wet wt)	RPD (Limit 20)
Vinyl chloride	mg/kg (ppm)	<0.005	<0.005	nm
Chloroethane	mg/kg (ppm)	<0.05	<0.05	nm
1,1-Dichloroethene	mg/kg (ppm)	<0.005	<0.005	nm
Methylene chloride	mg/kg (ppm)	<0.05	<0.05	nm
trans-1,2-Dichloroethene	mg/kg (ppm)	<0.005	<0.005	nm
1,1-Dichloroethane	mg/kg (ppm)	<0.005	<0.005	nm
cis-1,2-Dichloroethene	mg/kg (ppm)	<0.005	<0.005	nm
1,2-Dichloroethane (EDC)	mg/kg (ppm)	<0.005	<0.005	nm
1,1,1-Trichloroethane	mg/kg (ppm)	<0.005	<0.005	nm
Trichloroethene	mg/kg (ppm)	<0.003	<0.003	nm
Tetrachloroethene	mg/kg (ppm)	<0.005	<0.005	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	mg/kg (ppm)	0.05	99	89	50-158	11
Chloroethane	mg/kg (ppm)	0.05	99	97	48-179	2
1,1-Dichloroethene	mg/kg (ppm)	0.05	95	98	63-144	3
Methylene chloride	mg/kg (ppm)	0.05	99	97	17-179	2
trans-1,2-Dichloroethene	mg/kg (ppm)	0.05	96	99	70-130	3
1,1-Dichloroethane	mg/kg (ppm)	0.05	94	97	70-130	3
cis-1,2-Dichloroethene	mg/kg (ppm)	0.05	94	97	70-130	3
1,2-Dichloroethane (EDC)	mg/kg (ppm)	0.05	93	99	69-137	6
1,1,1-Trichloroethane	mg/kg (ppm)	0.05	97	100	71-140	3
Trichloroethene	mg/kg (ppm)	0.05	93	101	70-130	8
Tetrachloroethene	mg/kg (ppm)	0.05	98	101	35-176	3

9

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. 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 lowest calibration standard. 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.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

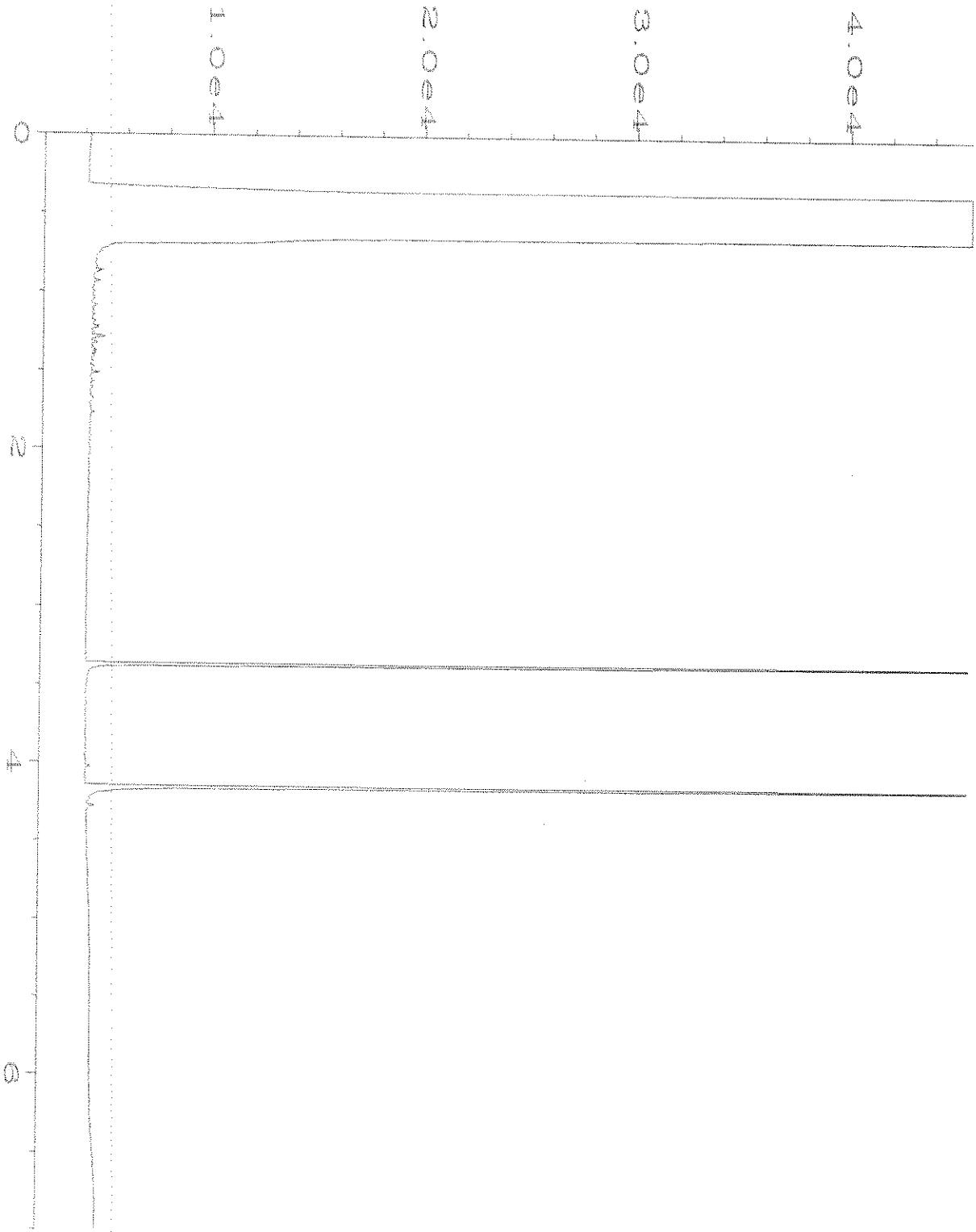
nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

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.



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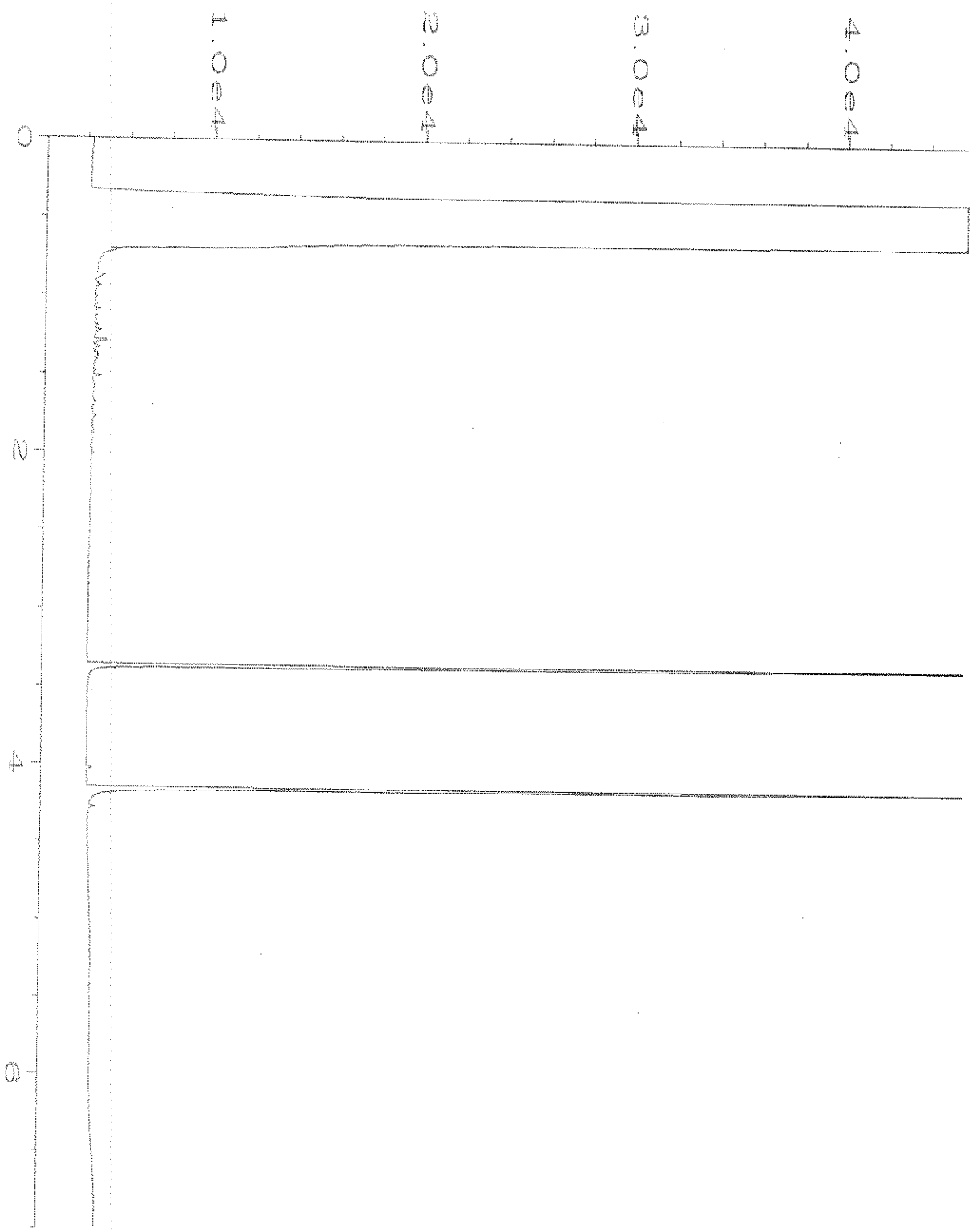
Operator	: TL	Page Number	: 1
Instrument	: GC6	Vial Number	: 42
Sample Name	: 909450-03	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 11
Acquired on	: 26 Sep 19 07:01 PM	Instrument Method	: DX.MTH
Report Created on	: 27 Sep 19 10:17 AM	Analysis Method	: DEFAULT.MTH



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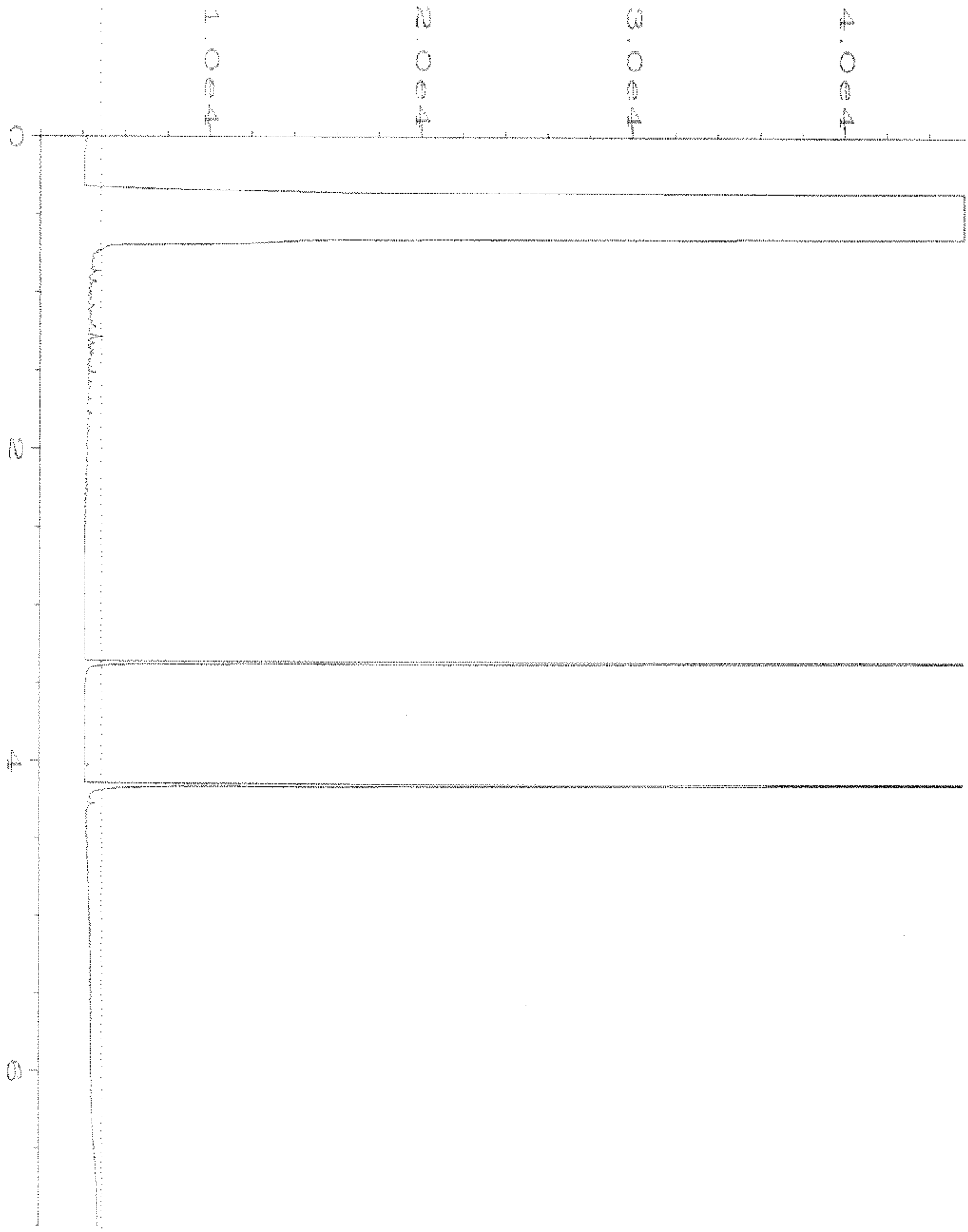
Operator : TL
Instrument : GC6
Sample Name : 909450-11
Run Time Bar Code:
Acquired on : 26 Sep 19 07:12 PM
Report Created on: 27 Sep 19 10:18 AM

Page Number : 1
Vial Number : 43
Injection Number : 1
Sequence Line : 11
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH



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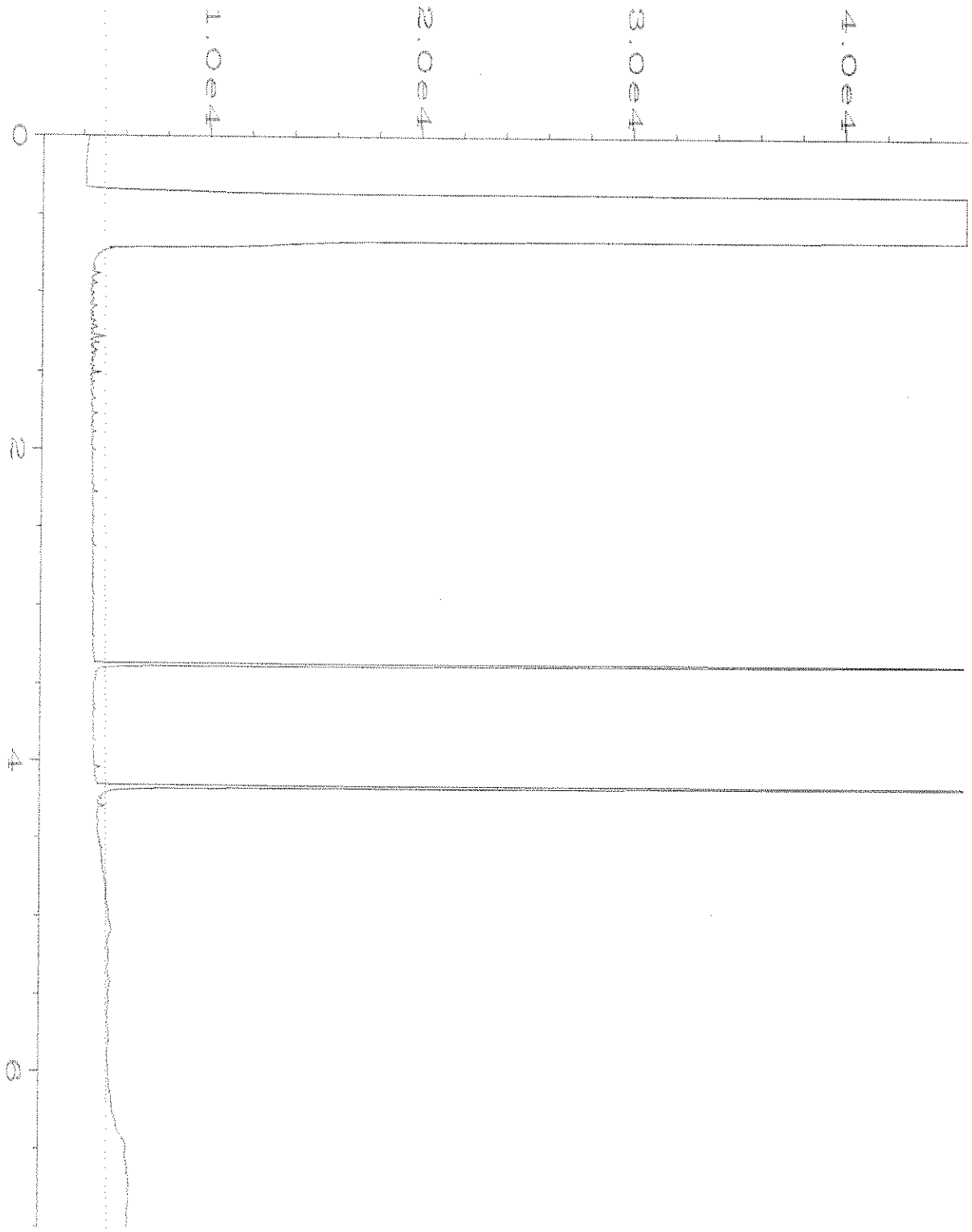
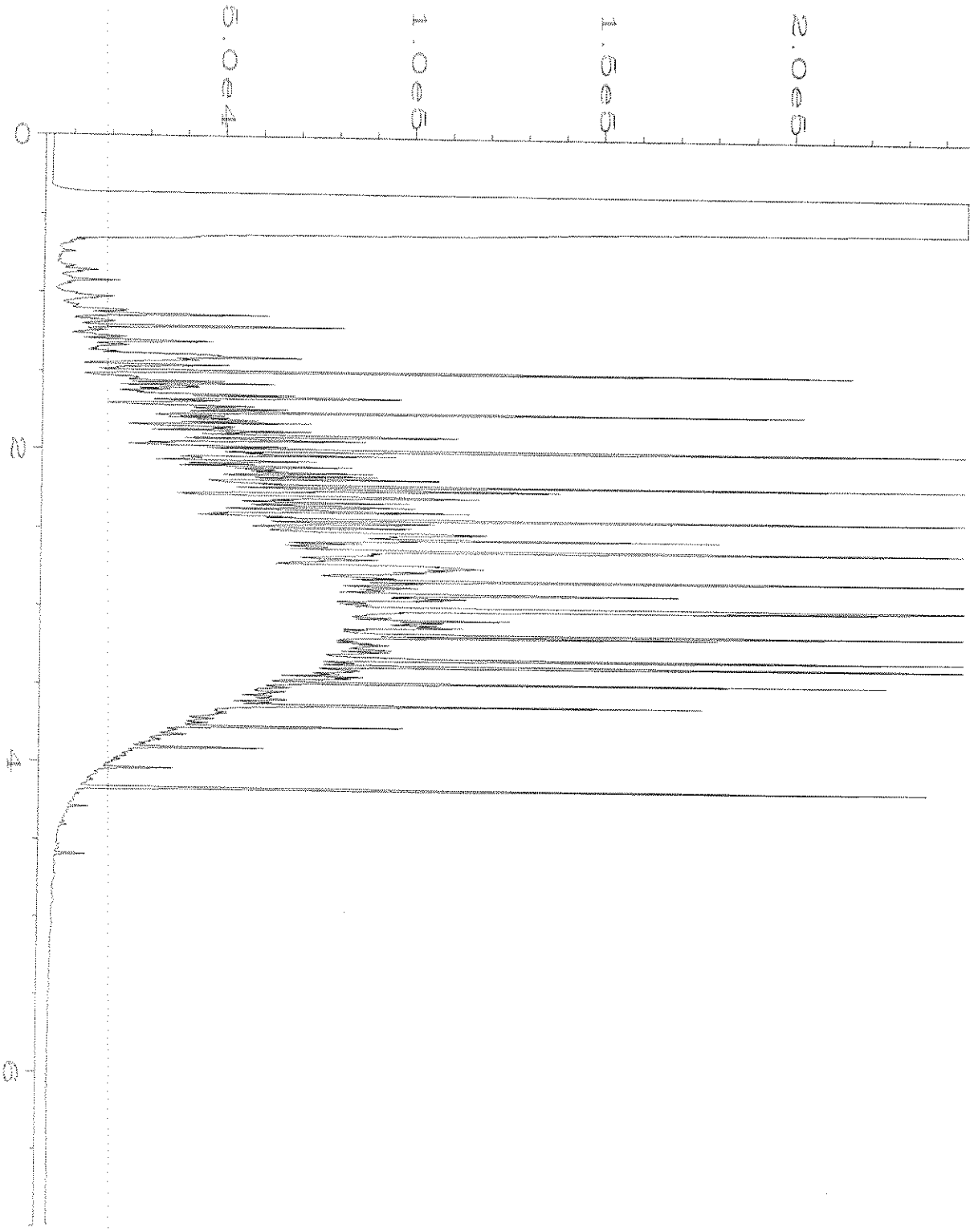
Operator	: TL	Page Number	: 1
Instrument	: GC6	Vial Number	: 44
Sample Name	: 909450-14	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 11
Acquired on	: 26 Sep 19 07:23 PM	Instrument Method	: DX.MTH
Report Created on	: 27 Sep 19 10:18 AM	Analysis Method	: DEFAULT.MTH



Data File Name	: C:\HPCHEM\6\DATA\09-26-19\006F0601.D		
Operator	: TL	Page Number	: 1
Instrument	: GC6	Vial Number	: 6
Sample Name	: 09-2375 mb	Injection Number	: 1
Run Time Bar Code	:	Sequence Line	: 6
Acquired on	: 26 Sep 19 11:32 AM	Instrument Method	: DX.MTH
Report Created on	: 27 Sep 19 10:19 AM	Analysis Method	: DEFAULT.MTH



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Operator	: TL	Page Number	: 1
Instrument	: GC6	Vial Number	: 5
Sample Name	: 1000 Dx 57-78B	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 7
Acquired on	: 26 Sep 19 02:59 PM	Instrument Method	: DX.MTH
Report Created on	: 27 Sep 19 10:16 AM	Analysis Method	: DEFAULT.MTH

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

October 24, 2019

Jessica Smith, Project Manager
Aspect Consulting, LLC
710 2nd Ave S, Suite 550
Seattle, WA 98104

Dear Ms Smith:

Included is the amended report from the testing of material submitted on October 3, 2019 from the NE 8th St, F&BI 910083 project. Per your request, sample ID AMW-35-100219 was changed to AMW-3S-100219.

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

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Data Aspect, Meilani Lanier-Kamaha'o
ASP1023R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

October 23, 2019

Jessica Smith, Project Manager
Aspect Consulting, LLC
710 2nd Ave S, Suite 550
Seattle, WA 98104

Dear Ms Smith:

Included are the results from the testing of material submitted on October 3, 2019 from the NE 8th St, F&BI 910083 project. There are 5 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Data Aspect, Meilani Lanier-Kamaha'o
ASP1023R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on October 3, 2019 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC NE 8th St, F&BI 910083project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
910083 -01	AMW-4D-100219
910083 -02	AMW-3D-100219
910083 -03	AMW-17-100219
910083 -04	AMW-18-100219
910083 -05	AMW-3S-100219

Upon receipt, the 40 ml VOA vials were placed in the freezer, cracking the containers. Fresh VOAs were decanted from the provided amber liter and the data were flagged accordingly.

All other quality control requirements were acceptable.

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	AMW-3S-100219 pc	Client:	Aspect Consulting, LLC
Date Received:	10/03/19	Project:	NE 8th St, F&BI 910083
Date Extracted:	10/04/19	Lab ID:	910083-05
Date Analyzed:	10/04/19	Data File:	100426.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	AEN/MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	106	93	107
Toluene-d8	102	87	110
4-Bromofluorobenzene	106	85	112

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	1.3

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	NE 8th St, F&BI 910083
Date Extracted:	10/04/19	Lab ID:	09-2401 mb
Date Analyzed:	10/04/19	Data File:	100418.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	AEN/MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	106	93	107
Toluene-d8	101	91	108
4-Bromofluorobenzene	112 vo	90	108

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Date of Report: 10/23/19
Date Received: 10/03/19
Project: NE 8th St, F&BI 910083

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

Laboratory Code: 910032-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Vinyl chloride	ug/L (ppb)	50	<0.2	106	61-139
Chloroethane	ug/L (ppb)	50	<1	107	55-149
1,1-Dichloroethene	ug/L (ppb)	50	<1	98	71-123
Methylene chloride	ug/L (ppb)	50	<5	72	61-126
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	89	72-122
1,1-Dichloroethane	ug/L (ppb)	50	<1	93	79-113
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	95	63-126
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	101	70-119
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	90	75-121
Trichloroethene	ug/L (ppb)	50	<1	93	73-122
Tetrachloroethene	ug/L (ppb)	50	5.5	97	40-155

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	ug/L (ppb)	50	112	107	70-128	5
Chloroethane	ug/L (ppb)	50	113	112	66-149	1
1,1-Dichloroethene	ug/L (ppb)	50	107	109	72-121	2
Methylene chloride	ug/L (ppb)	50	92	94	63-132	2
trans-1,2-Dichloroethene	ug/L (ppb)	50	95	94	76-118	1
1,1-Dichloroethane	ug/L (ppb)	50	99	98	77-119	1
cis-1,2-Dichloroethene	ug/L (ppb)	50	98	96	76-119	2
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	108	107	75-116	1
1,1,1-Trichloroethane	ug/L (ppb)	50	96	96	80-116	0
Trichloroethene	ug/L (ppb)	50	99	98	72-119	1
Tetrachloroethene	ug/L (ppb)	50	101	102	78-109	1

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. 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 lowest calibration standard. 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.

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.

910083

SAMPLE CHAIN OF CUSTODY

ME 10/3/19 VW1/ C05

Page # 1 of 1

Report To Jessica Smith
Company Aspect Consulting
Address Seattle
City, State, ZIP
Phone Email On File

SAMPLERS (*signature*) Matthew M. Lewis

PROJECT NAME: N 85th St
PO #:

REMARKS: Hold Dx+Gx per ML 10/4/19 ME
INVOICE TO:

TURNAROUND TIME
☐ Standard Turnaround
☒ RUSH 24 hr
Rush charges authorized by: Jessica Smith

SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Archive Samples
☐ Other

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	TPH-HCID	~~Hold~~ TPH-Diesel	~~Hold~~ TPH-Gasoline	BTEX by 8021B	~~cVOCs~~ VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM					Notes
AMW-4D-100219	01 A-C	10/2/19	1040	GW	6		X	X		X							
AMW-3D-100319	02	10/3/19	1210														~~800~~ NTUs turbid
MW-17-100319	03		1330														
MW-18-100319	04		1440														
AMW-3S-100319	05		1530							⊗							71000 NTUs
																	⊗ - only report cVOCs in -05
																	10/23/19 per MLK ME

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: Matthew M. Lewis	Matthew M. Lewis	Aspect	10/03/19	1700
Received by: Khoi Hoang	Khoi Hoang	FBI	10/03/19	17:00
Relinquished by:				
Received by:				

Samples received at 2 °C

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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October 23, 2019

Jessica Smith, Project Manager
Aspect Consulting, LLC
710 2nd Ave S, Suite 550
Seattle, WA 98104

Dear Ms Smith:

Included are the results from the testing of material submitted on October 3, 2019 from the NE 8th St, F&BI 910083 project. There are 5 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Data Aspect, Meilani Lanier-Kamaha'o
ASP1023R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on October 3, 2019 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC NE 8th St, F&BI 910083project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
910083 -01	AMW-4D-100219
910083 -02	AMW-3D-100219
910083 -03	AMW-17-100219
910083 -04	AMW-18-100219
910083 -05	AMW-35-100219

Upon receipt, the 40 ml VOA vials were placed in the freezer, cracking the containers. Fresh VOAs were decanted from the provided amber liter and the data were flagged accordingly.

All other quality control requirements were acceptable.

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	AMW-35-100219 pc	Client:	Aspect Consulting, LLC
Date Received:	10/03/19	Project:	NE 8th St, F&BI 910083
Date Extracted:	10/04/19	Lab ID:	910083-05
Date Analyzed:	10/04/19	Data File:	100426.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	AEN/MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	106	93	107
Toluene-d8	102	87	110
4-Bromofluorobenzene	106	85	112

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	1.3

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	NE 8th St, F&BI 910083
Date Extracted:	10/04/19	Lab ID:	09-2401 mb
Date Analyzed:	10/04/19	Data File:	100418.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	AEN/MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	106	93	107
Toluene-d8	101	91	108
4-Bromofluorobenzene	112 vo	90	108

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Date of Report: 10/23/19
Date Received: 10/03/19
Project: NE 8th St, F&BI 910083

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

Laboratory Code: 910032-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Vinyl chloride	ug/L (ppb)	50	<0.2	106	61-139
Chloroethane	ug/L (ppb)	50	<1	107	55-149
1,1-Dichloroethene	ug/L (ppb)	50	<1	98	71-123
Methylene chloride	ug/L (ppb)	50	<5	72	61-126
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	89	72-122
1,1-Dichloroethane	ug/L (ppb)	50	<1	93	79-113
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	95	63-126
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	101	70-119
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	90	75-121
Trichloroethene	ug/L (ppb)	50	<1	93	73-122
Tetrachloroethene	ug/L (ppb)	50	5.5	97	40-155

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	ug/L (ppb)	50	112	107	70-128	5
Chloroethane	ug/L (ppb)	50	113	112	66-149	1
1,1-Dichloroethene	ug/L (ppb)	50	107	109	72-121	2
Methylene chloride	ug/L (ppb)	50	92	94	63-132	2
trans-1,2-Dichloroethene	ug/L (ppb)	50	95	94	76-118	1
1,1-Dichloroethane	ug/L (ppb)	50	99	98	77-119	1
cis-1,2-Dichloroethene	ug/L (ppb)	50	98	96	76-119	2
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	108	107	75-116	1
1,1,1-Trichloroethane	ug/L (ppb)	50	96	96	80-116	0
Trichloroethene	ug/L (ppb)	50	99	98	72-119	1
Tetrachloroethene	ug/L (ppb)	50	101	102	78-109	1

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. 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 lowest calibration standard. 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.

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.

910083

SAMPLE CHAIN OF CUSTODY

ME 10/3/19 VW1/ C05

Page # 1 of 1

Report To Jessica Smith
Company Aspect Consulting
Address Seattle
City, State, ZIP
Phone Email On File

SAMPLERS (*signature*) Matthew M. Lewis

PROJECT NAME: N 85th St
PO #:

REMARKS: Hold Dx+Gx per ML 10/4/19 ME
INVOICE TO:

TURNAROUND TIME
☐ Standard Turnaround
☒ RUSH 24 hr
Rush charges authorized by: Jessica Smith

SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Archive Samples
☐ Other

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	TPH-HCID	~~Hold~~ TPH-Diesel	~~Hold~~ TPH-Gasoline	BTEX by 8021B	~~cVOCs~~ VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM					Notes
AMW-4D-100219	01 A-C	10/2/19	1040	GW	6		X	X		X							
AMW-3D-100319	02	10/3/19	1210														~~800~~ NTUs turbid
MW-17-100319	03		1330														
MW-18-100319	04		1440														
AMW-3S-100319	05		1530							⊗							71000 NTUs
																	⊗ - only report cVOCs in -05
																	10/23/19 per MLK ME

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: Matthew M. Lewis	Matthew M. Lewis	Aspect	10/03/19	1700
Received by: Khoi Hoang	Khoi Hoang	FBI	10/03/19	17:00
Relinquished by:				
Received by:				

Samples received at 2 °C

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ENVIRONMENTAL CHEMISTS

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Eric Young, B.S.

3012 16th Avenue West
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fbi@isomedia.com
www.friedmanandbruya.com

October 4, 2019

Jessica Smith, Project Manager
Aspect Consulting, LLC
710 2nd Ave S, Suite 550
Seattle, WA 98104

Dear Ms Smith:

Included are the results from the testing of material submitted on September 30, 2019 from the NE 8th+106th 190298, F&BI 909517 project. There are 7 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Data Aspect
ASP1004R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on September 30, 2019 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC NE 8th+106th 190298 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
909517 -01	AMW-3D-5.0
909517 -02	AMW-3D-10.0
909517 -03	AMW-3D-15.0
909517 -04	AMW-3D-20.0
909517 -05	AMW-3D-25.0
909517 -06	AMW-3D-30.0
909517 -07	AMW-3D-35.0
909517 -08	AMW-3D-40.0
909517 -09	AMW-3D-45.0
909517 -10	AMW-3D-50.0
909517 -11	AMW-3D-55.0
909517 -12	AMW-3D-57.5
909517 -13	AMW-3D-65.0
909517 -14	AMW-3D-70.0

The presence of the methylene chloride indicated in samples AMW-3D-35.0 and AMW-3D-55.0 is likely due to laboratory. The data were flagged accordingly.

All other quality control requirements were acceptable.

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	AMW-3D-35.0	Client:	Aspect Consulting, LLC
Date Received:	09/30/19	Project:	NE 8th+106th 190298, F&BI 909517
Date Extracted:	10/02/19	Lab ID:	909517-07
Date Analyzed:	10/03/19	Data File:	100229.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	AEN/MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	93	50	150
Toluene-d8	88	50	150
4-Bromofluorobenzene	100	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	0.15 lc
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	AMW-3D-45.0	Client:	Aspect Consulting, LLC
Date Received:	09/30/19	Project:	NE 8th+106th 190298, F&BI 909517
Date Extracted:	10/02/19	Lab ID:	909517-09
Date Analyzed:	10/03/19	Data File:	100230.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	AEN/MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	94	50	150
Toluene-d8	91	50	150
4-Bromofluorobenzene	120	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	0.019

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	AMW-3D-55.0	Client:	Aspect Consulting, LLC
Date Received:	09/30/19	Project:	NE 8th+106th 190298, F&BI 909517
Date Extracted:	10/02/19	Lab ID:	909517-11
Date Analyzed:	10/03/19	Data File:	100231.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	AEN/MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	50	150
Toluene-d8	93	50	150
4-Bromofluorobenzene	105	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	0.11 lc
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	NE 8th+106th 190298, F&BI 909517
Date Extracted:	10/02/19	Lab ID:	09-2393 mb
Date Analyzed:	10/02/19	Data File:	100224.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	AEN/MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	50	150
Toluene-d8	93	50	150
4-Bromofluorobenzene	85	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Date of Report: 10/04/19
Date Received: 09/30/19
Project: NE 8th+106th 190298, F&BI 909517

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260C DIRECT SPARGE

Laboratory Code: 909517-07 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet wt)	Duplicate Result (Wet wt)	RPD (Limit 20)
Vinyl chloride	mg/kg (ppm)	<0.005	<0.005	nm
Chloroethane	mg/kg (ppm)	<0.05	<0.05	nm
1,1-Dichloroethene	mg/kg (ppm)	<0.005	<0.005	nm
Methylene chloride	mg/kg (ppm)	0.13 lc	<0.05	nm
trans-1,2-Dichloroethene	mg/kg (ppm)	<0.005	<0.005	nm
1,1-Dichloroethane	mg/kg (ppm)	<0.005	<0.005	nm
cis-1,2-Dichloroethene	mg/kg (ppm)	<0.005	<0.005	nm
1,2-Dichloroethane (EDC)	mg/kg (ppm)	<0.005	<0.005	nm
1,1,1-Trichloroethane	mg/kg (ppm)	<0.005	<0.005	nm
Trichloroethene	mg/kg (ppm)	<0.003	<0.003	nm
Tetrachloroethene	mg/kg (ppm)	<0.005	<0.005	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	mg/kg (ppm)	0.05	90	87	60-136	3
Chloroethane	mg/kg (ppm)	0.05	96	80	65-132	18
1,1-Dichloroethene	mg/kg (ppm)	0.05	92	87	70-130	6
Methylene chloride	mg/kg (ppm)	0.05	81	83	52-150	2
trans-1,2-Dichloroethene	mg/kg (ppm)	0.05	92	92	70-130	0
1,1-Dichloroethane	mg/kg (ppm)	0.05	94	95	70-130	1
cis-1,2-Dichloroethene	mg/kg (ppm)	0.05	91	92	70-130	1
1,2-Dichloroethane (EDC)	mg/kg (ppm)	0.05	92	96	70-130	4
1,1,1-Trichloroethane	mg/kg (ppm)	0.05	97	96	70-130	1
Trichloroethene	mg/kg (ppm)	0.05	94	94	70-130	0
Tetrachloroethene	mg/kg (ppm)	0.05	93	93	70-130	0

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. 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 lowest calibration standard. 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.

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.

909517

SAMPLE CHAIN OF CUSTODY

ME 09-30-19

Page # 1 of 2

VS3 B03

Report To Jessica Smith

Company Aspect

Address

City, State, ZIP

Phone Email jsmith@aspectconsulting.com

SAMPLERS (*signature*)

PROJECT NAME: NE 8th + 106th

PO #: 190298

REMARKS

INVOICE TO: AP

TURNAROUND TIME
- ☐ Standard Turnaround
- ☒ RUSH 24 hr TAT per ML 10/2/19
- Rush charges authorized by: ME

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Archive Samples
- ☐ Other

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	TPH-HCID	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM	cVOCs				X-per ML 10/2/19 ME Notes
AMW-3D-5.0	01A-E	9/30/19	0830	Soil	5												~~HOLD~~
AMW-3D-10.0	02		0835														
AMW-3D-15.0	03		0840														
AMW-3D-20.0	04		0850														
AMW-3D-25.0	05		0920														
AMW-3D-30.0	06		0925														
AMW-3D-35.0	07		1000										X				
AMW-3D-40.0	08		1015														
AMW-3D-45.0	09		1025										X				
AMW-3D-50.0	10	↓	1205	↓	↓												

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Amelia Oakes	Aspect	9/30/19	1345
Received by:	Eric Jaime	FedEx	9/30/19	1345
Relinquished by:				
Received by:		Samples received at 4 °C		

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

909517

SAMPLE CHAIN OF CUSTODY

ME 09-30-19

Page # 2 of 2

VS3 B03

Report To Jess Smith

Company

Address

City, State, ZIP

Phone Email

SAMPLERS (*signature*)

PROJECT NAME: NE 8th

PO #: 170218

REMARKS

INVOICE TO: AP

TURNAROUND TIME
- ☐ Standard Turnaround
- ☐ RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Archive Samples
- ☐ Other

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	TPH-HCID	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM	cVOC				Notes
AMW-3D-55.0	11	9/30/19	1215	Soil	5								X				~~HOLD~~
AMW-3D-57.5	12		1230										~~X~~	hold pa	ML		
AMW-3D-65.0	13		1310												10/2 ML		
AMW-3D-70.0	14		1315	↓	↓												↓

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Amelia Oakes	Aspect	9/30/19	1345
Received by:	Eric Young	F&B	9/30/19	1345
Relinquished by:				
Received by:				

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
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fbi@isomedia.com
www.friedmanandbruya.com

October 8, 2019

Jessica Smith, Project Manager
Aspect Consulting, LLC
710 2nd Ave S, Suite 550
Seattle, WA 98104

Dear Ms Smith:

Included are the results from the testing of material submitted on October 1, 2019 from the NE 8th+106th 190298, F&BI 910019 project. There are 8 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 have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Data Aspect
ASP1008R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on October 1, 2019 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC NE 8th+106th 190298, F&BI 910019 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
910019 -01	AMW-3D-75.0
910019 -02	AMW-3D-80.0
910019 -03	AMW-3D-85.0
910019 -04	AMW-3D-90.0
910019 -05	AMW-2-093019

All quality control requirements were acceptable.

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	AMW-3D-75.0	Client:	Aspect Consulting, LLC
Date Received:	10/01/19	Project:	NE 8th+106th 190298, F&BI 910019
Date Extracted:	10/02/19	Lab ID:	910019-01
Date Analyzed:	10/03/19	Data File:	100232.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	AEN/MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	104	50	150
Toluene-d8	73	50	150
4-Bromofluorobenzene	106	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	NE 8th+106th 190298, F&BI 910019
Date Extracted:	10/02/19	Lab ID:	09-2393 mb
Date Analyzed:	10/02/19	Data File:	100224.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	AEN/MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	50	150
Toluene-d8	93	50	150
4-Bromofluorobenzene	85	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	AMW-2-093019	Client:	Aspect Consulting, LLC
Date Received:	10/01/19	Project:	NE 8th+106th 190298, F&BI 910019
Date Extracted:	10/02/19	Lab ID:	910019-05
Date Analyzed:	10/03/19	Data File:	100257.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	AEN/MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	105	93	107
Toluene-d8	103	91	108
4-Bromofluorobenzene	99	90	108

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	NE 8th+106th 190298, F&BI 910019
Date Extracted:	10/02/19	Lab ID:	09-2392 mb
Date Analyzed:	10/03/19	Data File:	100254.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	AEN/MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	107	93	107
Toluene-d8	100	91	108
4-Bromofluorobenzene	100	90	108

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Date of Report: 10/08/19
Date Received: 10/01/19
Project: NE 8th+106th 190298, F&BI 910019

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260C DIRECT SPARGE

Laboratory Code: 909517-07 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet wt)	Duplicate Result (Wet wt)	RPD (Limit 20)
Vinyl chloride	mg/kg (ppm)	<0.005	<0.005	nm
Chloroethane	mg/kg (ppm)	<0.05	<0.05	nm
1,1-Dichloroethene	mg/kg (ppm)	<0.005	<0.005	nm
Methylene chloride	mg/kg (ppm)	0.13 lc	<0.05	nm
trans-1,2-Dichloroethene	mg/kg (ppm)	<0.005	<0.005	nm
1,1-Dichloroethane	mg/kg (ppm)	<0.005	<0.005	nm
cis-1,2-Dichloroethene	mg/kg (ppm)	<0.005	<0.005	nm
1,2-Dichloroethane (EDC)	mg/kg (ppm)	<0.005	<0.005	nm
1,1,1-Trichloroethane	mg/kg (ppm)	<0.005	<0.005	nm
Trichloroethene	mg/kg (ppm)	<0.003	<0.003	nm
Tetrachloroethene	mg/kg (ppm)	<0.005	<0.005	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	mg/kg (ppm)	0.05	90	87	60-136	3
Chloroethane	mg/kg (ppm)	0.05	96	80	65-132	18
1,1-Dichloroethene	mg/kg (ppm)	0.05	92	87	70-130	6
Methylene chloride	mg/kg (ppm)	0.05	81	83	52-150	2
trans-1,2-Dichloroethene	mg/kg (ppm)	0.05	92	92	70-130	0
1,1-Dichloroethane	mg/kg (ppm)	0.05	94	95	70-130	1
cis-1,2-Dichloroethene	mg/kg (ppm)	0.05	91	92	70-130	1
1,2-Dichloroethane (EDC)	mg/kg (ppm)	0.05	92	96	70-130	4
1,1,1-Trichloroethane	mg/kg (ppm)	0.05	97	96	70-130	1
Trichloroethene	mg/kg (ppm)	0.05	94	94	70-130	0
Tetrachloroethene	mg/kg (ppm)	0.05	93	93	70-130	0

Date of Report: 10/08/19
Date Received: 10/01/19
Project: NE 8th+106th 190298, F&BI 910019

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	ug/L (ppb)	50	108	103	70-128	5
Chloroethane	ug/L (ppb)	50	106	102	66-149	4
1,1-Dichloroethene	ug/L (ppb)	50	117	110	72-121	6
Methylene chloride	ug/L (ppb)	50	103	100	63-132	3
trans-1,2-Dichloroethene	ug/L (ppb)	50	104	99	76-118	5
1,1-Dichloroethane	ug/L (ppb)	50	104	101	77-119	3
cis-1,2-Dichloroethene	ug/L (ppb)	50	104	99	76-119	5
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	105	106	75-116	1
1,1,1-Trichloroethane	ug/L (ppb)	50	102	101	80-116	1
Trichloroethene	ug/L (ppb)	50	98	98	72-119	0
Tetrachloroethene	ug/L (ppb)	50	100	100	78-109	0

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. 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 lowest calibration standard. 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.

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.

910019

SAMPLE CHAIN OF CUSTODY

ME 10/01/19 VSI/VW/CO2 ~~BO2~~

Page # 1 of 1

Report To Jessica Smith

Company Aspect

Address

City, State, ZIP

Phone Email jsmith@aspectconsulting.com

SAMPLERS (*signature*)

PROJECT NAME: NE 8th + 106th

PO #: 190298

REMARKS

INVOICE TO: AP

TURNAROUND TIME
- ☐ Standard Turnaround
- ~~☐ RUSH 24 hr TAT~~
- Rush charges authorized by: 48hr TAT not ME 10/2/19

SAMPLE DISPOSAL
- ☐ Dispose after 30 days
- ☐ Archive Samples
- ☐ Other

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	TPH-HCID	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM	CVOCs				⊗ - per ML 10/2/19 Notes MC
AMW-30-75.0	01 A-E	9/30/19	1325	Soil	5								⊗				HOLD
AMW-30-80.0	02		1335														
AMW-30-85.0	03		1430														
AMW-30-90.0	04		1435														
AMW-2-093019	05 A-F	09/30/19	1440	Water	5 (6) (MP)								X				
													Samples received at 4 °C				

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Amelia Oakes	Aspect	10/01/19	0650
Received by:	Wes Herring	Fed Ex	10/1/19	1045
Relinquished by:				
Received by:	Nhan Phan	FEBI	10/1/19	1045

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

May 8, 2020

Ali Cochrane, Project Manager
Aspect Consulting, LLC
710 2nd Ave S, Suite 550
Seattle, WA 98104

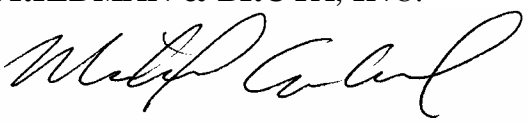
Dear Ms Cochrane:

Included are the results from the testing of material submitted on May 4, 2020 from the Schnitzer NE 8th 190298, F&BI 005035 project. There are 7 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
c: Data Aspect
ASP0508R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on May 4, 2020 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Schnitzer NE 8th 190298, F&BI 005035 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
005035 -01	B4/MW-4-050420
005035 -02	AMW-6D-050420
005035 -03	URS-MW-8-050420

All quality control requirements were acceptable.

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	B4/MW-4-050420	Client:	Aspect Consulting, LLC
Date Received:	05/04/20	Project:	Schnitzer NE 8th 190298
Date Extracted:	05/05/20	Lab ID:	005035-01
Date Analyzed:	05/06/20	Data File:	050614.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	57	121
Toluene-d8	106	63	127
4-Bromofluorobenzene	102	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	AMW-6D-050420	Client:	Aspect Consulting, LLC
Date Received:	05/04/20	Project:	Schnitzer NE 8th 190298
Date Extracted:	05/05/20	Lab ID:	005035-02
Date Analyzed:	05/06/20	Data File:	050615.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	57	121
Toluene-d8	106	63	127
4-Bromofluorobenzene	100	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	URS-MW-8-050420	Client:	Aspect Consulting, LLC
Date Received:	05/04/20	Project:	Schnitzer NE 8th 190298
Date Extracted:	05/05/20	Lab ID:	005035-03
Date Analyzed:	05/06/20	Data File:	050616.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	105	57	121
Toluene-d8	107	63	127
4-Bromofluorobenzene	98	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Schnitzer NE 8th 190298
Date Extracted:	05/05/20	Lab ID:	00-993 mb
Date Analyzed:	05/05/20	Data File:	050528.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	57	121
Toluene-d8	108	63	127
4-Bromofluorobenzene	100	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Date of Report: 05/08/20
Date Received: 05/04/20
Project: Schnitzer NE 8th 190298, F&BI 005035

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

Laboratory Code: 005035-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Vinyl chloride	ug/L (ppb)	50	<0.2	102	36-166
Chloroethane	ug/L (ppb)	50	<1	104	46-160
1,1-Dichloroethene	ug/L (ppb)	50	<1	106	60-136
Methylene chloride	ug/L (ppb)	50	<5	102	67-132
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	101	72-129
1,1-Dichloroethane	ug/L (ppb)	50	<1	102	70-128
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	100	71-127
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	100	48-149
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	107	60-146
Trichloroethene	ug/L (ppb)	50	<1	96	66-135
Tetrachloroethene	ug/L (ppb)	50	2.2	90	10-226

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	ug/L (ppb)	50	102	108	50-154	6
Chloroethane	ug/L (ppb)	50	109	115	58-146	5
1,1-Dichloroethene	ug/L (ppb)	50	110	115	67-136	4
Methylene chloride	ug/L (ppb)	50	105	111	39-148	6
trans-1,2-Dichloroethene	ug/L (ppb)	50	104	111	68-128	7
1,1-Dichloroethane	ug/L (ppb)	50	103	108	74-135	5
cis-1,2-Dichloroethene	ug/L (ppb)	50	104	109	74-136	5
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	95	100	66-129	5
1,1,1-Trichloroethane	ug/L (ppb)	50	108	115	74-142	6
Trichloroethene	ug/L (ppb)	50	94	100	67-133	6
Tetrachloroethene	ug/L (ppb)	50	91	97	76-121	6

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. 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 lowest calibration standard. 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.

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.

005035

SAMPLE CHAIN OF CUSTODY

ME 05/04/20

Page # 1 of 1 VW1

Report To Al: Cochrane

Company Aspect Consulting

Address 710 2nd Ave Suite 550

City, State, ZIP Seattle, WA, 98104

Phone 2069497478 Email acochrane@aspectconsulting.com

SAMPLERS (*signature*) B Call

PROJECT NAME Schnitzer NE 8th

PO # 190298

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

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

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

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082					Notes
BH/MW-4-050420	01A-C	5/4/20	0945	GW	3					X							CVOCs per AC 5/6/20 ME
AMW-6D-050420	02	↓	1145	↓	↓					↓							
URS-MW-8-050420	03	↓	1420	↓	↓					↓							
																	Samples received at 3 °C

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: B Call	Baxter Call	Aspect	5/4/20	1545
Received by: M D. M-B	Liz Webber-B	F?B1	5/4/20	1545
Relinquished by:				
Received by:				

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
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www.friedmanandbruya.com

July 30, 2020

Ali Cochrane, Project Manager
Aspect Consulting, LLC
710 2nd Ave S, Suite 550
Seattle, WA 98104

Dear Ms Cochrane:

Included are the results from the testing of material submitted on July 23, 2020 from the Schnitzer NE8 PO 192980, F&BI 007397 project. There are 7 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Data Aspect
ASP0730R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on July 23, 2020 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Schnitzer NE8 PO 192980, F&BI 007397 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
007397 -01	URS-MW-7-072320
007397 -02	MW17-01-072320
007397 -03	URS-MW-6-072320
007397 -04	Trip Blank

The 8260D laboratory control sample and laboratory control sample duplicate failed the relative percent difference for methylene chloride. The analyte was not detected in the samples therefore the data were acceptable.

All other quality control requirements were acceptable.

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	URS-MW-7-072320	Client:	Aspect Consulting, LLC
Date Received:	07/23/20	Project:	Schnitzer NE8 PO 192980
Date Extracted:	07/27/20	Lab ID:	007397-01
Date Analyzed:	07/27/20	Data File:	072732.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	92	50	150
Toluene-d8	100	50	150
4-Bromofluorobenzene	98	50	150

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	1.0
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	6.9

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	MW17-01-072320	Client:	Aspect Consulting, LLC
Date Received:	07/23/20	Project:	Schnitzer NE8 PO 192980
Date Extracted:	07/27/20	Lab ID:	007397-02
Date Analyzed:	07/27/20	Data File:	072733.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	50	150
Toluene-d8	98	50	150
4-Bromofluorobenzene	98	50	150

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	1.9

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	URS-MW-6-072320	Client:	Aspect Consulting, LLC
Date Received:	07/23/20	Project:	Schnitzer NE8 PO 192980
Date Extracted:	07/27/20	Lab ID:	007397-03
Date Analyzed:	07/27/20	Data File:	072734.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	50	150
Toluene-d8	99	50	150
4-Bromofluorobenzene	98	50	150

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Schnitzer NE8 PO 192980
Date Extracted:	07/27/20	Lab ID:	00-1634 mb
Date Analyzed:	07/27/20	Data File:	072720.D
Matrix:	Water	Instrument:	GCMS13
Units:	ug/L (ppb)	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	50	150
Toluene-d8	98	50	150
4-Bromofluorobenzene	102	50	150

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Date of Report: 07/30/20
Date Received: 07/23/20
Project: Schnitzer NE8 PO 192980, F&BI 007397

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

Laboratory Code: 007443-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Vinyl chloride	ug/L (ppb)	10	<0.2	102	70-130
Chloroethane	ug/L (ppb)	10	<1	118	70-130
1,1-Dichloroethene	ug/L (ppb)	10	<1	92	70-130
Methylene chloride	ug/L (ppb)	10	<5	86	70-130
trans-1,2-Dichloroethene	ug/L (ppb)	10	<1	99	70-130
1,1-Dichloroethane	ug/L (ppb)	10	<1	101	70-130
cis-1,2-Dichloroethene	ug/L (ppb)	10	<1	99	70-130
1,2-Dichloroethane (EDC)	ug/L (ppb)	10	<1	94	70-130
1,1,1-Trichloroethane	ug/L (ppb)	10	<1	112	70-130
Trichloroethene	ug/L (ppb)	10	<1	94	70-130
Tetrachloroethene	ug/L (ppb)	10	<1	95	70-130

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	ug/L (ppb)	10	97	100	70-130	3
Chloroethane	ug/L (ppb)	10	114	116	70-130	2
1,1-Dichloroethene	ug/L (ppb)	10	88	91	70-130	3
Methylene chloride	ug/L (ppb)	10	71	88	70-130	21 vo
trans-1,2-Dichloroethene	ug/L (ppb)	10	95	99	70-130	4
1,1-Dichloroethane	ug/L (ppb)	10	97	99	70-130	2
cis-1,2-Dichloroethene	ug/L (ppb)	10	97	98	70-130	1
1,2-Dichloroethane (EDC)	ug/L (ppb)	10	91	94	70-130	3
1,1,1-Trichloroethane	ug/L (ppb)	10	108	111	70-130	3
Trichloroethene	ug/L (ppb)	10	89	92	70-130	3
Tetrachloroethene	ug/L (ppb)	10	88	95	70-130	8

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. 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 lowest calibration standard. 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.

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

007397 ME 07-23-20 VW2

Report To Ali Cochrane
Company Aspect Consulting
Address
City, State, ZIP
Phone 316.617.0499 Email acochrane@aspectconsulting.com

SAMPLERS (*signature*)

PROJECT NAME	PO #
Schnitzer NE8	192980
REMARKS Project specific RLs? - Yes / No	INVOICE TO

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 chlorinated	PAHs EPA 8270	PCBs EPA 8082					Notes
URS-MW-7-072320	01A-C	7/23/20	1125	water	3					X							~~Hold All~~
MW17-01-072320	02	↓	1133	↓	↓					X							analyze for
URS-MW-6-072320	03	↓	1254	↓	↓					X							cVOCs per AC
																	7/24/20 ME
Trip Blank	04A-B																

ANALYSES REQUESTED

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: Dylan Branscum	Dylan Branscum	Aspect	7/23/20	~~1650~~ 17
Received by:	Isaac Lessig	FTB1	7/23/2	17:28
Relinquished by:				
Received by:		Samples received at 2 °C		

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

May 14, 2020

Ali Cochrane, Project Manager
Aspect Consulting, LLC
710 2nd Ave S, Suite 550
Seattle, WA 98104

Dear Ms Cochrane:

Included are the results from the testing of material submitted on May 7, 2020 from the Schnitzer West NW 8th 190298, F&BI 005089 project. There are 8 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 have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Data Aspect
ASP0514R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on May 7, 2020 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Schnitzer West NW 8th 190298, F&BI 005089 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
005089 -01	B3/MW-3-050720
005089 -02	URS-MW-1-050720
005089 -03	B1/MW-1-050720
005089 -04	AMW-9-050720

All quality control requirements were acceptable.

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	B3/MW-3-050720	Client:	Aspect Consulting, LLC
Date Received:	05/07/20	Project:	Schnitzer West NW 8th 190298
Date Extracted:	05/12/20	Lab ID:	005089-01
Date Analyzed:	05/12/20	Data File:	051228.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	57	121
Toluene-d8	105	63	127
4-Bromofluorobenzene	99	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	24

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	URS-MW-1-050720	Client:	Aspect Consulting, LLC
Date Received:	05/07/20	Project:	Schnitzer West NW 8th 190298
Date Extracted:	05/12/20	Lab ID:	005089-02
Date Analyzed:	05/12/20	Data File:	051229.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	57	121
Toluene-d8	105	63	127
4-Bromofluorobenzene	99	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	38

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	B1/MW-1-050720	Client:	Aspect Consulting, LLC
Date Received:	05/07/20	Project:	Schnitzer West NW 8th 190298
Date Extracted:	05/12/20	Lab ID:	005089-03
Date Analyzed:	05/12/20	Data File:	051230.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	104	57	121
Toluene-d8	105	63	127
4-Bromofluorobenzene	99	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	AMW-9-050720	Client:	Aspect Consulting, LLC
Date Received:	05/07/20	Project:	Schnitzer West NW 8th 190298
Date Extracted:	05/12/20	Lab ID:	005089-04
Date Analyzed:	05/12/20	Data File:	051231.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	104	57	121
Toluene-d8	105	63	127
4-Bromofluorobenzene	97	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	71

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Schnitzer West NW 8th 190298
Date Extracted:	05/12/20	Lab ID:	00-1009 mb
Date Analyzed:	05/12/20	Data File:	051209.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	57	121
Toluene-d8	103	63	127
4-Bromofluorobenzene	98	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Date of Report: 05/14/20
Date Received: 05/07/20
Project: Schnitzer West NW 8th 190298, F&BI 005089

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

Laboratory Code: 005108-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Vinyl chloride	ug/L (ppb)	50	<0.2	124	36-166
Chloroethane	ug/L (ppb)	50	<1	117	46-160
1,1-Dichloroethene	ug/L (ppb)	50	<1	120	60-136
Methylene chloride	ug/L (ppb)	50	<5	116	67-132
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	120	72-129
1,1-Dichloroethane	ug/L (ppb)	50	<1	114	70-128
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	115	71-127
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	106	48-149
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	120	60-146
Trichloroethene	ug/L (ppb)	50	<1	97	66-135
Tetrachloroethene	ug/L (ppb)	50	<1	102	10-226

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	ug/L (ppb)	50	121	114	50-154	6
Chloroethane	ug/L (ppb)	50	116	112	58-146	4
1,1-Dichloroethene	ug/L (ppb)	50	117	115	67-136	2
Methylene chloride	ug/L (ppb)	50	115	111	39-148	4
trans-1,2-Dichloroethene	ug/L (ppb)	50	119	117	68-128	2
1,1-Dichloroethane	ug/L (ppb)	50	113	111	74-135	2
cis-1,2-Dichloroethene	ug/L (ppb)	50	114	111	74-136	3
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	104	105	66-129	1
1,1,1-Trichloroethane	ug/L (ppb)	50	120	117	74-142	3
Trichloroethene	ug/L (ppb)	50	97	96	67-133	1
Tetrachloroethene	ug/L (ppb)	50	103	102	76-121	1

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. 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 lowest calibration standard. 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.

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.

005089

SAMPLE CHAIN OF CUSTODY

ME 05/07/20 VW2

Report To Ali Cochrane
Company Aspect Consulting
Address 710 2nd Ave, Suite 550
City, State, ZIP Seattle, WA 98104
Phone _____ Email acochrane@aspectconsulting.com

SAMPLERS (*signature*) Dylan Branscum

PROJECT NAME: Schnitzer, West NE 8th
PO #: 190298

REMARKS: Project specific RLs? - Yes / No
INVOICE TO: A.P.

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	cVOC				Notes
B3/MW-3-050720	01A-C	5/7/20	0925	water	3								X				
URS-MW-1-050720	02	"	0823	"	"								X				
B1/MW-1-050720	03	"	1121	"	"								X				
AMW-9-050720	04	"	1250	"	"								X				
													Samples received at 2 °C				

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Dylan Branscum	Aspect	5/7/20	1442
Received by:	Nhan Phan	FedEx	5/7/20	1442
Relinquished by:				
Received by:				

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

May 12, 2020

Ali Cochrane, Project Manager
Aspect Consulting, LLC
710 2nd Ave S, Suite 550
Seattle, WA 98104

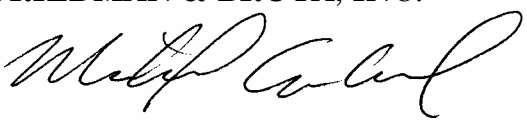
Dear Ms Cochrane:

Included are the results from the testing of material submitted on May 5, 2020 from the Schnitzer West-NE 8th 190298, F&BI 005055 project. There are 7 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
c: Data Aspect
ASP0512R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on May 5, 2020 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Schnitzer West-NE 8th 190298, F&BI 005055 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
005055 -01	AMW-4D-050520
005055 -02	AMW-7-050520
005055 -03	AMW-8-050520

All quality control requirements were acceptable.

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	AMW-4D-050520	Client:	Aspect Consulting, LLC
Date Received:	05/05/20	Project:	Schnitzer West-NE 8th 190298
Date Extracted:	05/06/20	Lab ID:	005055-01
Date Analyzed:	05/06/20	Data File:	050642.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	104	57	121
Toluene-d8	108	63	127
4-Bromofluorobenzene	96	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	AMW-7-050520	Client:	Aspect Consulting, LLC
Date Received:	05/05/20	Project:	Schnitzer West-NE 8th 190298
Date Extracted:	05/06/20	Lab ID:	005055-02
Date Analyzed:	05/06/20	Data File:	050643.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	57	121
Toluene-d8	107	63	127
4-Bromofluorobenzene	98	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	AMW-8-050520	Client:	Aspect Consulting, LLC
Date Received:	05/05/20	Project:	Schnitzer West-NE 8th 190298
Date Extracted:	05/06/20	Lab ID:	005055-03
Date Analyzed:	05/06/20	Data File:	050644.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	57	121
Toluene-d8	109	63	127
4-Bromofluorobenzene	97	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Schnitzer West-NE 8th 190298
Date Extracted:	05/06/20	Lab ID:	00-996 mb
Date Analyzed:	05/06/20	Data File:	050612.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	57	121
Toluene-d8	107	63	127
4-Bromofluorobenzene	102	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Date of Report: 05/12/20
Date Received: 05/05/20
Project: Schnitzer West-NE 8th 190298, F&BI 005055

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

Laboratory Code: 005049-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Vinyl chloride	ug/L (ppb)	50	<0.2	49	36-166
Chloroethane	ug/L (ppb)	50	<1	76	46-160
1,1-Dichloroethene	ug/L (ppb)	50	<1	91	60-136
Methylene chloride	ug/L (ppb)	50	<5	100	67-132
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	96	72-129
1,1-Dichloroethane	ug/L (ppb)	50	<1	102	70-128
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	103	71-127
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	102	48-149
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	109	60-146
Trichloroethene	ug/L (ppb)	50	<1	99	66-135
Tetrachloroethene	ug/L (ppb)	50	<1	95	10-226

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	ug/L (ppb)	50	104	110	50-154	6
Chloroethane	ug/L (ppb)	50	107	113	58-146	5
1,1-Dichloroethene	ug/L (ppb)	50	108	115	67-136	6
Methylene chloride	ug/L (ppb)	50	103	109	39-148	6
trans-1,2-Dichloroethene	ug/L (ppb)	50	103	109	68-128	6
1,1-Dichloroethane	ug/L (ppb)	50	101	108	74-135	7
cis-1,2-Dichloroethene	ug/L (ppb)	50	102	108	74-136	6
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	95	100	66-129	5
1,1,1-Trichloroethane	ug/L (ppb)	50	107	114	74-142	6
Trichloroethene	ug/L (ppb)	50	95	101	67-133	6
Tetrachloroethene	ug/L (ppb)	50	90	96	76-121	6

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. 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 lowest calibration standard. 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.

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.

0095055

SAMPLE CHAIN OF CUSTODY ME 5/5/20 VW2

Page # 1 of 1

Report To Ali Cochrane

Company Aspect Consulting

Address 710 2nd Ave, Suite 550

City, State, ZIP Seattle WA 98104

Phone _____ Email acochrane@aspectconsulting.com

SAMPLERS (*signature*) [signature]

PROJECT NAME: Schnitzer West - NE 84th

PO #: 190298

REMARKS: Project specific RLs? - Yes / No

INVOICE TO: A.P.

TURNAROUND TIME
- ☑ Standard turnaround
- ☐ RUSH
- Rush charges authorized by:

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

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082					Notes
AMW-4D-050520	01 A-C	05/05/20	0935	groundwater	3					X							cVOCs per
AMW-7-050520	02	↓	1130	↓	3					X							AC 5/6/20
AMW-8-050520	03	↓	1340	↓	3					X							ME
																	Samples received at 4 °C

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: [signature]	Amelia C. Oates	Aspect	05/05/20	1546
Received by: [signature]	HONG NGUYEN	FBI		
Relinquished by:				
Received by:				

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

May 14, 2020

Ali Cochrane, Project Manager
Aspect Consulting, LLC
710 2nd Ave S, Suite 550
Seattle, WA 98104

Dear Ms Cochrane:

Included are the results from the testing of material submitted on May 6, 2020 from the Schnitzer, West NE 8th, F&BI 005071 project. There are 11 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 have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Data Aspect
ASP0514R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on May 6, 2020 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Schnitzer, West NE 8th, F&BI 005071 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
005071 -01	AMW-3D-050620
005071 -02	AMW-3S-050620
005071 -03	URS-MW-3-050620
005071 -04	MW-19-050620
005071 -05	MW-20-050620

All quality control requirements were acceptable.

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	AMW-3D-050620	Client:	Aspect Consulting, LLC
Date Received:	05/06/20	Project:	Schnitzer, West NE 8th, F&BI 005071
Date Extracted:	05/07/20	Lab ID:	005071-01
Date Analyzed:	05/07/20	Data File:	050715.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	104	57	121
Toluene-d8	108	63	127
4-Bromofluorobenzene	97	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	AMW-3S-050620	Client:	Aspect Consulting, LLC
Date Received:	05/06/20	Project:	Schnitzer, West NE 8th, F&BI 005071
Date Extracted:	05/12/20	Lab ID:	005071-02
Date Analyzed:	05/12/20	Data File:	051218.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	57	121
Toluene-d8	106	63	127
4-Bromofluorobenzene	102	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	URS-MW-3-050620	Client:	Aspect Consulting, LLC
Date Received:	05/06/20	Project:	Schnitzer, West NE 8th, F&BI 005071
Date Extracted:	05/12/20	Lab ID:	005071-03
Date Analyzed:	05/12/20	Data File:	051219.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	57	121
Toluene-d8	105	63	127
4-Bromofluorobenzene	99	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	MW-19-050620	Client:	Aspect Consulting, LLC
Date Received:	05/06/20	Project:	Schnitzer, West NE 8th, F&BI 005071
Date Extracted:	05/12/20	Lab ID:	005071-04
Date Analyzed:	05/12/20	Data File:	051220.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	57	121
Toluene-d8	104	63	127
4-Bromofluorobenzene	97	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	11

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	MW-20-050620	Client:	Aspect Consulting, LLC
Date Received:	05/06/20	Project:	Schnitzer, West NE 8th, F&BI 005071
Date Extracted:	05/12/20	Lab ID:	005071-05
Date Analyzed:	05/12/20	Data File:	051221.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	57	121
Toluene-d8	106	63	127
4-Bromofluorobenzene	99	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	2.0

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Schnitzer, West NE 8th, F&BI 005071
Date Extracted:	05/07/20	Lab ID:	00-1000 mb
Date Analyzed:	05/07/20	Data File:	050708.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	57	121
Toluene-d8	109	63	127
4-Bromofluorobenzene	96	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Schnitzer, West NE 8th, F&BI 005071
Date Extracted:	05/12/20	Lab ID:	00-1009 mb
Date Analyzed:	05/12/20	Data File:	051209.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	57	121
Toluene-d8	103	63	127
4-Bromofluorobenzene	98	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Date of Report: 05/14/20
Date Received: 05/06/20
Project: Schnitzer, West NE 8th, F&BI 005071

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

Laboratory Code: 005108-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Vinyl chloride	ug/L (ppb)	50	<0.2	124	36-166
Chloroethane	ug/L (ppb)	50	<1	117	46-160
1,1-Dichloroethene	ug/L (ppb)	50	<1	120	60-136
Methylene chloride	ug/L (ppb)	50	<5	116	67-132
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	120	72-129
1,1-Dichloroethane	ug/L (ppb)	50	<1	114	70-128
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	115	71-127
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	106	48-149
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	120	60-146
Trichloroethene	ug/L (ppb)	50	<1	97	66-135
Tetrachloroethene	ug/L (ppb)	50	<1	102	10-226

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	ug/L (ppb)	50	121	114	50-154	6
Chloroethane	ug/L (ppb)	50	116	112	58-146	4
1,1-Dichloroethene	ug/L (ppb)	50	117	115	67-136	2
Methylene chloride	ug/L (ppb)	50	115	111	39-148	4
trans-1,2-Dichloroethene	ug/L (ppb)	50	119	117	68-128	2
1,1-Dichloroethane	ug/L (ppb)	50	113	111	74-135	2
cis-1,2-Dichloroethene	ug/L (ppb)	50	114	111	74-136	3
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	104	105	66-129	1
1,1,1-Trichloroethane	ug/L (ppb)	50	120	117	74-142	3
Trichloroethene	ug/L (ppb)	50	97	96	67-133	1
Tetrachloroethene	ug/L (ppb)	50	103	102	76-121	1

Date of Report: 05/14/20
Date Received: 05/06/20
Project: Schnitzer, West NE 8th, F&BI 005071

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

Laboratory Code: 005071-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Vinyl chloride	ug/L (ppb)	50	<0.2	74	36-166
Chloroethane	ug/L (ppb)	50	<1	77	46-160
1,1-Dichloroethene	ug/L (ppb)	50	<1	78	60-136
Methylene chloride	ug/L (ppb)	50	<5	72	67-132
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	74	72-129
1,1-Dichloroethane	ug/L (ppb)	50	<1	73	70-128
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	75	71-127
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	71	48-149
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	76	60-146
Trichloroethene	ug/L (ppb)	50	<1	69	66-135
Tetrachloroethene	ug/L (ppb)	50	<1	63	10-226

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	ug/L (ppb)	50	116	112	50-154	4
Chloroethane	ug/L (ppb)	50	122	118	58-146	3
1,1-Dichloroethene	ug/L (ppb)	50	121	119	67-136	2
Methylene chloride	ug/L (ppb)	50	114	114	39-148	0
trans-1,2-Dichloroethene	ug/L (ppb)	50	114	114	68-128	0
1,1-Dichloroethane	ug/L (ppb)	50	113	113	74-135	0
cis-1,2-Dichloroethene	ug/L (ppb)	50	113	115	74-136	2
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	105	106	66-129	1
1,1,1-Trichloroethane	ug/L (ppb)	50	120	119	74-142	1
Trichloroethene	ug/L (ppb)	50	104	107	67-133	3
Tetrachloroethene	ug/L (ppb)	50	96	98	76-121	2

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. 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 lowest calibration standard. 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.

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.

005071

SAMPLE CHAIN OF CUSTODY

ME 05/06/20 VW2

Page # 1 of 1

Report To Ali Cochrane
Company Aspect Consulting
Address 710 2nd Ave, Suite 550
City, State, ZIP Seattle, WA 98104
Phone _____ Email acochrane@aspectconsulting.com

SAMPLERS (*signature*) Dylan Bransom

PROJECT NAME: Schnitzer, West NE 8th
PO #: 190298

REMARKS: Project specific RLs? - Yes / No
INVOICE TO: A.P.

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

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

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082					Notes
AMW-3D-050620	01 A-C	5/6/20	0920	water	3					X							cVOCs per AC
AMW-3S-050620	02		0810		3					X							5/6/20 ME
GRS-MW-3-050620	03		1050		3					X							
MW-19-050620	04		1207		3					X							
MW-20-050620	05		1309		3					X							

Samples received at 4 °C

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: Dylan Bransom	Dylan Bransom	Aspect	5/6/20	1442
Received by:	Eric Power	F-B	5/6/20	1442
Relinquished by:				
Received by:				

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

May 14, 2020

Ali Cochrane, Project Manager
Aspect Consulting, LLC
710 2nd Ave S, Suite 550
Seattle, WA 98104

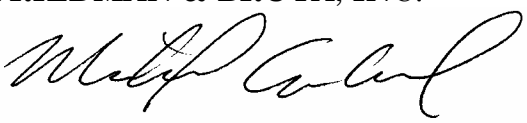
Dear Ms Cochrane:

Included are the results from the testing of material submitted on May 8, 2020 from the Schnitzer, West NE 8th 190298, F&BI 005108 project. There are 8 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 have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
c: Data Aspect
ASP0514R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on May 8, 2020 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Schnitzer, West NE 8th 190298, F&BI 005108 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
005108 -01	B2/MW-2-050820
005108 -02	AMW-2D-050820
005108 -03	MW-18-050820
005108 -04	MW-17-050820

All quality control requirements were acceptable.

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	B2/MW-2-050820	Client:	Aspect Consulting, LLC
Date Received:	05/08/20	Project:	Schnitzer, West NE 8th 190298
Date Extracted:	05/12/20	Lab ID:	005108-01
Date Analyzed:	05/12/20	Data File:	051224.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	57	121
Toluene-d8	106	63	127
4-Bromofluorobenzene	100	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	AMW-2D-050820	Client:	Aspect Consulting, LLC
Date Received:	05/08/20	Project:	Schnitzer, West NE 8th 190298
Date Extracted:	05/12/20	Lab ID:	005108-02
Date Analyzed:	05/12/20	Data File:	051225.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	57	121
Toluene-d8	106	63	127
4-Bromofluorobenzene	100	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	MW-18-050820	Client:	Aspect Consulting, LLC
Date Received:	05/08/20	Project:	Schnitzer, West NE 8th 190298
Date Extracted:	05/12/20	Lab ID:	005108-03
Date Analyzed:	05/12/20	Data File:	051226.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	104	57	121
Toluene-d8	107	63	127
4-Bromofluorobenzene	101	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	1.4
Tetrachloroethene	37

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	MW-17-050820	Client:	Aspect Consulting, LLC
Date Received:	05/08/20	Project:	Schnitzer, West NE 8th 190298
Date Extracted:	05/12/20	Lab ID:	005108-04
Date Analyzed:	05/12/20	Data File:	051227.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	57	121
Toluene-d8	107	63	127
4-Bromofluorobenzene	101	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	5.9

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Schnitzer, West NE 8th 190298
Date Extracted:	05/12/20	Lab ID:	00-1009 mb
Date Analyzed:	05/12/20	Data File:	051209.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	57	121
Toluene-d8	103	63	127
4-Bromofluorobenzene	98	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Date of Report: 05/14/20
Date Received: 05/08/20
Project: Schnitzer, West NE 8th 190298, F&BI 005108

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

Laboratory Code: 005108-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Vinyl chloride	ug/L (ppb)	50	<0.2	124	36-166
Chloroethane	ug/L (ppb)	50	<1	117	46-160
1,1-Dichloroethene	ug/L (ppb)	50	<1	120	60-136
Methylene chloride	ug/L (ppb)	50	<5	116	67-132
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	120	72-129
1,1-Dichloroethane	ug/L (ppb)	50	<1	114	70-128
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	115	71-127
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	106	48-149
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	120	60-146
Trichloroethene	ug/L (ppb)	50	<1	97	66-135
Tetrachloroethene	ug/L (ppb)	50	<1	102	10-226

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	ug/L (ppb)	50	121	114	50-154	6
Chloroethane	ug/L (ppb)	50	116	112	58-146	4
1,1-Dichloroethene	ug/L (ppb)	50	117	115	67-136	2
Methylene chloride	ug/L (ppb)	50	115	111	39-148	4
trans-1,2-Dichloroethene	ug/L (ppb)	50	119	117	68-128	2
1,1-Dichloroethane	ug/L (ppb)	50	113	111	74-135	2
cis-1,2-Dichloroethene	ug/L (ppb)	50	114	111	74-136	3
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	104	105	66-129	1
1,1,1-Trichloroethane	ug/L (ppb)	50	120	117	74-142	3
Trichloroethene	ug/L (ppb)	50	97	96	67-133	1
Tetrachloroethene	ug/L (ppb)	50	103	102	76-121	1

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. 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 lowest calibration standard. 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.

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

005108 ME 05-08-20 VW2

Page # 1 of 1

Report To Ali Cochrane
Company Aspect Consulting
Address 710 2nd Ave, Suite 550
City, State, ZIP Seattle, WA 98104
Phone ____ Email acochrane@aspectconsulting.com

SAMPLERS (*signature*) [signature]

PROJECT NAME: Schnitzer, West NE 8th
PO #: 190298

REMARKS: Project specific RLs? - Yes / No
INVOICE TO: A.P.

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	cVOC				Notes
B2/MW-2-050820	01 A-C	5/8/20	1143	Water	3								X				
AMW-2D-050820	02		1005										X				
MW-18-050820	03		0810										X				
MW-17-050820	04		0902										X				
							√										
																	Samples received at 4 °C

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: [signature]	Dylan Branscum	Aspect	5/8/20	1315
Received by: [signature] D. M-B	Liz Weyber-Bruya	F:B	5/8/20	1315
Relinquished by:				
Received by:				

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

April 29, 2020

Ali Cochrane, Project Manager
Aspect Consulting, LLC
710 2nd Ave S, Suite 550
Seattle, WA 98104

Dear Ms Cochrane:

Included are the results from the testing of material submitted on April 17, 2020 from the Schnitzer NE 8th 190298, F&BI 004202 project. There are 11 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 have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Data Aspect, Jessica Smith
ASP0429R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on April 17, 2020 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Schnitzer NE 8th 190298, F&BI 004202 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
004202 -01	AB-5-7
004202 -02	AB-5-10
004202 -03	AB-5-12
004202 -04	AB-5-20
004202 -05	AB-5-25
004202 -06	AB-5-26
004202 -07	AB-5-33
004202 -08	AB-5-34
004202 -09	AB-5-40
004202 -10	AB-5-42
004202 -11	AB-5-45
004202 -12	AMW-6D-9
004202 -13	AMW-6D-14
004202 -14	AMW-6D-16
004202 -15	AMW-6D-19
004202 -16	AMW-6D-24
004202 -17	AMW-6D-27
004202 -18	AMW-6D-32
004202 -19	AMW-6D-40
004202 -20	AMW-6D-42
004202 -21	AMW-6D-50
004202 -22	AMW-6D-52
004202 -23	AMW-6D-58
004202 -24	AMW-6D-63
004202 -25	AMW-6D-69
004202 -26	AMW-6D-74
004202 -27	AMW-6D-77
004202 -28	AMW-6D-82
004202 -29	Trip Blank

Several compounds in the 8260D laboratory control sample duplicate and the associated relative percent difference exceeded the acceptance criteria. The analyte was not detected in the samples, therefore the data were acceptable.

All other quality control requirements were acceptable.

Analysis For Volatile Compounds By EPA Method 8260D Direct Sparge

Client Sample ID:	AB-5-20	Client:	Aspect Consulting, LLC
Date Received:	04/17/20	Project:	Schnitzer NE 8th 190298
Date Extracted:	04/23/20	Lab ID:	004202-04
Date Analyzed:	04/23/20	Data File:	042323.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	50	150
Toluene-d8	97	50	150
4-Bromofluorobenzene	100	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Analysis For Volatile Compounds By EPA Method 8260D Direct Sparge

Client Sample ID:	AB-5-34	Client:	Aspect Consulting, LLC
Date Received:	04/17/20	Project:	Schnitzer NE 8th 190298
Date Extracted:	04/23/20	Lab ID:	004202-08
Date Analyzed:	04/23/20	Data File:	042324.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	94	50	150
Toluene-d8	97	50	150
4-Bromofluorobenzene	100	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Analysis For Volatile Compounds By EPA Method 8260D Direct Sparge

Client Sample ID:	AB-5-40	Client:	Aspect Consulting, LLC
Date Received:	04/17/20	Project:	Schnitzer NE 8th 190298
Date Extracted:	04/23/20	Lab ID:	004202-09
Date Analyzed:	04/23/20	Data File:	042325.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	94	50	150
Toluene-d8	98	50	150
4-Bromofluorobenzene	103	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Analysis For Volatile Compounds By EPA Method 8260D Direct Sparge

Client Sample ID:	AMW-6D-16	Client:	Aspect Consulting, LLC
Date Received:	04/17/20	Project:	Schnitzer NE 8th 190298
Date Extracted:	04/23/20	Lab ID:	004202-14
Date Analyzed:	04/23/20	Data File:	042326.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	95	50	150
Toluene-d8	98	50	150
4-Bromofluorobenzene	104	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	0.0051

Analysis For Volatile Compounds By EPA Method 8260D Direct Sparge

Client Sample ID:	AMW-6D-52	Client:	Aspect Consulting, LLC
Date Received:	04/17/20	Project:	Schnitzer NE 8th 190298
Date Extracted:	04/23/20	Lab ID:	004202-22
Date Analyzed:	04/23/20	Data File:	042327.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	95	50	150
Toluene-d8	100	50	150
4-Bromofluorobenzene	105	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Analysis For Volatile Compounds By EPA Method 8260D Direct Sparge

Client Sample ID:	AMW-6D-63	Client:	Aspect Consulting, LLC
Date Received:	04/17/20	Project:	Schnitzer NE 8th 190298
Date Extracted:	04/23/20	Lab ID:	004202-24
Date Analyzed:	04/23/20	Data File:	042328.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	50	150
Toluene-d8	98	50	150
4-Bromofluorobenzene	103	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	0.023

Analysis For Volatile Compounds By EPA Method 8260D Direct Sparge

Client Sample ID:	AMW-6D-74	Client:	Aspect Consulting, LLC
Date Received:	04/17/20	Project:	Schnitzer NE 8th 190298
Date Extracted:	04/23/20	Lab ID:	004202-26
Date Analyzed:	04/23/20	Data File:	042329.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	94	50	150
Toluene-d8	98	50	150
4-Bromofluorobenzene	101	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Analysis For Volatile Compounds By EPA Method 8260D Direct Sparge

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Schnitzer NE 8th 190298
Date Extracted:	04/23/20	Lab ID:	00-936 mb
Date Analyzed:	04/23/20	Data File:	042312.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	50	150
Toluene-d8	96	50	150
4-Bromofluorobenzene	98	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Date of Report: 04/29/20
Date Received: 04/17/20
Project: Schnitzer NE 8th 190298, F&BI 004202

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

Laboratory Code: 004230-04 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet wt)	Duplicate Result (Wet wt)	RPD (Limit 20)
Vinyl chloride	mg/kg (ppm)	<0.05	<0.05	nm
Chloroethane	mg/kg (ppm)	<0.5	<0.5	nm
1,1-Dichloroethene	mg/kg (ppm)	<0.05	<0.05	nm
Methylene chloride	mg/kg (ppm)	<0.5	<0.5	nm
trans-1,2-Dichloroethene	mg/kg (ppm)	<0.05	<0.05	nm
1,1-Dichloroethane	mg/kg (ppm)	<0.05	<0.05	nm
cis-1,2-Dichloroethene	mg/kg (ppm)	<0.05	<0.05	nm
1,2-Dichloroethane (EDC)	mg/kg (ppm)	<0.05	<0.05	nm
1,1,1-Trichloroethane	mg/kg (ppm)	<0.05	<0.05	nm
Trichloroethene	mg/kg (ppm)	<0.03	<0.03	nm
Tetrachloroethene	mg/kg (ppm)	<0.025	<0.025	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	mg/kg (ppm)	0.05	105	125	70-130	17
Chloroethane	mg/kg (ppm)	0.05	110	129	70-130	16
1,1-Dichloroethene	mg/kg (ppm)	0.05	109	134 vo	70-130	21 vo
Methylene chloride	mg/kg (ppm)	0.05	92	105	70-130	13
trans-1,2-Dichloroethene	mg/kg (ppm)	0.05	104	120	70-130	14
1,1-Dichloroethane	mg/kg (ppm)	0.05	101	115	70-130	13
cis-1,2-Dichloroethene	mg/kg (ppm)	0.05	102	116	70-130	13
1,2-Dichloroethane (EDC)	mg/kg (ppm)	0.05	93	100	70-130	7
1,1,1-Trichloroethane	mg/kg (ppm)	0.05	101	119	70-130	16
Trichloroethene	mg/kg (ppm)	0.05	94	106	70-130	12
Tetrachloroethene	mg/kg (ppm)	0.05	101	115	70-130	13

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. 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 lowest calibration standard. 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.

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

ME 04-17-20

Page # 1 of 3 DO4

Report To Al Cochrane / Jessica Smith

Company Aspect Consulting

Address 710 2nd Ave Ste. 550

City, State, ZIP Seattle, WA, 98104

Phone (206)838-6594 Email acochrane@aspectconsulting.com

SAMPLERS (*signature*) David Unruh

PROJECT NAME: Schnitzer NE 8th

PO #: 190298

REMARKS: Project specific RLs? - Yes / No

INVOICE TO: AP

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

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

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	X - Hold	cVOCs			X - per AC 4/22/20 ME Notes
AB-5-7	01 A-B	4/16/20	0924	Soil	5								X				4oz jars
AB-5-10	02		0924														labelled "AB-5-"
AB-5-12	03		0948														
AB-5-20	04		1003											X			
AB-5-25	05		1015														
AB-5-26	06		1024														
AB-5-33	07		1100														
AB-5-34	08		1104											X			
AB-5-40	09		1114											X			
AB-5-42	10		1124														

ANALYSES REQUESTED

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: David Unruh	David Unruh	Aspect Consulting	4/17/20	1720
Received by:	VINH	FBI	4/17/20	1720
Relinquished by:				
Received by:				

Samples received at 3 °C

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

004202

SAMPLE CHAIN OF CUSTODY

ME 04-17-20

 D04 VW1

Report To Ali Cochrane / Jessica Smith

Company Aspect Consulting

Address 710 2nd Ave, Ste 550

City, State, ZIP Seattle, WA 98104

Phone (206) 838-5844 Email acochrane@aspectconsulting.com

SAMPLERS (signature) [signature]

PROJECT NAME: Schnitzer NE 8th

PO #: 190248

REMARKS

INVOICE TO: AP

Project specific RLs? - Yes / No

TURNAROUND TIME VS2

X Standard turnaround

☐ RUSH

Rush charges authorized by:

SAMPLE DISPOSAL

☐ Archive samples

☐ Other

Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	Hold	cVOCs			Notes
AB-5-45	11 A-E	4/16/20	1133	Soil	5								X				4oz Jar labelled "AB-3-X"
AMW-6D-9	12	4/17/20	0906	↓	↓								↓				
AMW-6D-14	13	↓	0912														
AMW-6D-16	14		0923											X			
AMW-6D-14	15		0934														
AMW-6D-24	16		1002														
AMW-6D-27	17		1024														
AMW-6D-32	18		1042														
AMW-6D-40	19		1100														
AMW-6D-42	20	↓	1123	↓	↓								↓				

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

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	[signature]	David Unruh	Aspect Consulting	4/17/20	1720
Received by:	[signature]	VINH	FBI	4/17/20	1720
Relinquished by:					
Received by:					

SAMPLE CHAIN OF CUSTODY

004202 ME 04-17-20 D04

Page # 3 of 3

Report To Ali Cochrane Kessra Smith

Company Aspect Consulting

Address 710 2nd Ave, Ste. 550

City, State, ZIP Seattle, WA. 98104

Phone (206) 838-6544 Email acochrane@aspectconsulting.com

SAMPLERS (signature)	
PROJECT NAME: Schnitzer NE 8th	PO #: 190298
REMARKS	INVOICE TO: AP
Project specific RLs? - Yes / No	

TURNAROUND TIME VW1 VS2

X Standard turnaround

☐ RUSH

Rush charges authorized by:

SAMPLE DISPOSAL

☐ Archive samples

☐ Other

Default: Dispose after 30 days

ANALYSES REQUESTED

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	Hold	cVOCs			Notes
AMW-6D-50	21A-E	4/17/20	1416	Soil	5								X				
AMW-6D-52	22	4/17/20	1422											X			
~~AMW-6D-58~~	~~23~~		~~1452~~														
AMW-6D-63	24		1459											X			
AMW-6D-69	25		1531														
AMW-6D-74	26		1535											X			
AMW-6D-77	27		1606														
AMW-6D-82	28		1611														
Trip Blank	29A-B				2												TB 4/20

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

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	David Unruh	Aspect Consulting	4/17/20	1720
Received by:	VINH	FBI	4/17/20	1720
Relinquished by:				
Received by:				

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

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April 28, 2020

Ali Cochrane, Project Manager
Aspect Consulting, LLC
710 2nd Ave S, Suite 550
Seattle, WA 98104

Dear Ms Cochrane:

Included are the results from the testing of material submitted on April 21, 2020 from the Schnitzer NE 8th 190298, F&BI 004230 project. There are 18 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 have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Data Aspect, Jessica Smith
ASP0428R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on April 21, 2020 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Schnitzer NE 8th 190298, F&BI 004230 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
004230 -01	AMW-6D-90
004230 -02	AB-1-5
004230 -03	AB-1-10
004230 -04	AB-1-14
004230 -05	AB-1-16
004230 -06	AB-1-25
004230 -07	AB-1-28
004230 -08	AB-1-32
004230 -09	AB-1-37
004230 -10	AB-1-43
004230 -11	AB-1-50
004230 -12	AB-1-55
004230 -13	AB-1-57
004230 -14	AB-1-65
004230 -15	AB-1-69
004230 -16	AB-1-74
004230 -17	AB-1-79
004230 -18	AB-1-81
004230 -19	AB-1-87
004230 -20	AB-2-10
004230 -21	AB-2-15
004230 -22	AB-2-18
004230 -23	AB-2-24
004230 -24	AB-2-28
004230 -25	AB-2-33
004230 -26	AB-2-39
004230 -27	AB-2-43
004230 -28	AB-2-48
004230 -29	AB-2-53
004230 -30	AB-2-54
004230 -31	AB-2-65
004230 -32	AB-2-69
004230 -33	AB-2-72
004230 -34	AB-2-77
004230 -35	AB-2-84
004230 -36	AB-2-90

CASE NARRATIVE (continued)

Laboratory ID	Aspect Consulting, LLC
004230 -37	Trip Blank

The 8260D laboratory control sample duplicate exceeded the acceptance criteria for several analytes. In addition the relative percent difference exceeded the accetpanec criteria for 1,1-dichloroethene. The compounds were not detected, therefore the data were acceptable.

All other quality control requirements were acceptable.

Date of Report: 04/28/20
Date Received: 04/21/20
Project: Schnitzer NE 8th 190298, F&BI 004230
Date Extracted: 04/23/20
Date Analyzed: 04/23/20

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

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

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
AB-1-5 004230-02	<5	101
AB-2-10 004230-20	<5	100
Method Blank 00-859 MB	<5	103

Date of Report: 04/28/20
Date Received: 04/21/20
Project: Schnitzer NE 8th 190298, F&BI 004230
Date Extracted: 04/23/20
Date Analyzed: 04/23/20

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 53-144)
AB-1-5 004230-02	<50	<250	98
AB-2-10 004230-20	<50	<250	91
Method Blank 00-951 MB	<50	<250	82

Analysis For Volatile Compounds By EPA Method 8260D Direct Sparge

Client Sample ID:	AB-1-5	Client:	Aspect Consulting, LLC
Date Received:	04/21/20	Project:	Schnitzer NE 8th 190298
Date Extracted:	04/23/20	Lab ID:	004230-02
Date Analyzed:	04/23/20	Data File:	042314.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	95	50	150
Toluene-d8	97	50	150
4-Bromofluorobenzene	100	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.05	1,3-Dichloropropane	<0.005
Chloromethane	<0.05	Tetrachloroethene	<0.005
Vinyl chloride	<0.005	Dibromochloromethane	<0.005
Bromomethane	<0.05	1,2-Dibromoethane (EDB)	<0.005
Chloroethane	<0.05	Chlorobenzene	<0.005
Trichlorofluoromethane	<0.05	Ethylbenzene	<0.005
Acetone	<0.05	1,1,1,2-Tetrachloroethane	<0.005
1,1-Dichloroethene	<0.005	m,p-Xylene	<0.01
Hexane	<0.025	o-Xylene	<0.005
Methylene chloride	<0.05	Styrene	<0.005
Methyl t-butyl ether (MTBE)	<0.005	Isopropylbenzene	<0.005
trans-1,2-Dichloroethene	<0.005	Bromoform	<0.005
1,1-Dichloroethane	<0.005	n-Propylbenzene	<0.005
2,2-Dichloropropane	<0.005	Bromobenzene	<0.005
cis-1,2-Dichloroethene	<0.005	1,3,5-Trimethylbenzene	<0.005
Chloroform	<0.005	1,1,2,2-Tetrachloroethane	<0.005
2-Butanone (MEK)	<0.05	1,2,3-Trichloropropane	<0.005
1,2-Dichloroethane (EDC)	<0.005	2-Chlorotoluene	<0.005
1,1,1-Trichloroethane	<0.005	4-Chlorotoluene	<0.005
1,1-Dichloropropene	<0.005	tert-Butylbenzene	<0.005
Carbon tetrachloride	<0.005	1,2,4-Trimethylbenzene	<0.005
Benzene	<0.003	sec-Butylbenzene	<0.005
Trichloroethene	<0.003	p-Isopropyltoluene	<0.005
1,2-Dichloropropane	<0.005	1,3-Dichlorobenzene	<0.005
Bromodichloromethane	<0.005	1,4-Dichlorobenzene	<0.005
Dibromomethane	<0.005	1,2-Dichlorobenzene	<0.005
4-Methyl-2-pentanone	<0.05	1,2-Dibromo-3-chloropropane	<0.05
cis-1,3-Dichloropropene	<0.005	1,2,4-Trichlorobenzene	<0.025
Toluene	<0.005	Hexachlorobutadiene	<0.025
trans-1,3-Dichloropropene	<0.005	Naphthalene	<0.005
1,1,2-Trichloroethane	<0.005	1,2,3-Trichlorobenzene	<0.025
2-Hexanone	<0.05		

Analysis For Volatile Compounds By EPA Method 8260D Direct Sparge

Client Sample ID:	AB-1-14	Client:	Aspect Consulting, LLC
Date Received:	04/21/20	Project:	Schnitzer NE 8th 190298
Date Extracted:	04/23/20	Lab ID:	004230-04
Date Analyzed:	04/23/20	Data File:	042315.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	50	150
Toluene-d8	97	50	150
4-Bromofluorobenzene	101	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Analysis For Volatile Compounds By EPA Method 8260D Direct Sparge

Client Sample ID:	AB-1-65	Client:	Aspect Consulting, LLC
Date Received:	04/21/20	Project:	Schnitzer NE 8th 190298
Date Extracted:	04/23/20	Lab ID:	004230-14
Date Analyzed:	04/23/20	Data File:	042317.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	50	150
Toluene-d8	98	50	150
4-Bromofluorobenzene	101	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Analysis For Volatile Compounds By EPA Method 8260D Direct Sparge

Client Sample ID:	AB-1-74	Client:	Aspect Consulting, LLC
Date Received:	04/21/20	Project:	Schnitzer NE 8th 190298
Date Extracted:	04/23/20	Lab ID:	004230-16
Date Analyzed:	04/23/20	Data File:	042318.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	50	150
Toluene-d8	98	50	150
4-Bromofluorobenzene	103	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Analysis For Volatile Compounds By EPA Method 8260D Direct Sparge

Client Sample ID:	AB-2-10	Client:	Aspect Consulting, LLC
Date Received:	04/21/20	Project:	Schnitzer NE 8th 190298
Date Extracted:	04/23/20	Lab ID:	004230-20
Date Analyzed:	04/23/20	Data File:	042319.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	96	50	150
Toluene-d8	98	50	150
4-Bromofluorobenzene	104	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.05	1,3-Dichloropropane	<0.005
Chloromethane	<0.05	Tetrachloroethene	<0.005
Vinyl chloride	<0.005	Dibromochloromethane	<0.005
Bromomethane	<0.05	1,2-Dibromoethane (EDB)	<0.005
Chloroethane	<0.05	Chlorobenzene	<0.005
Trichlorofluoromethane	<0.05	Ethylbenzene	<0.005
Acetone	<0.05	1,1,1,2-Tetrachloroethane	<0.005
1,1-Dichloroethene	<0.005	m,p-Xylene	<0.01
Hexane	<0.025	o-Xylene	<0.005
Methylene chloride	<0.05	Styrene	<0.005
Methyl t-butyl ether (MTBE)	<0.005	Isopropylbenzene	<0.005
trans-1,2-Dichloroethene	<0.005	Bromoform	<0.005
1,1-Dichloroethane	<0.005	n-Propylbenzene	<0.005
2,2-Dichloropropane	<0.005	Bromobenzene	<0.005
cis-1,2-Dichloroethene	<0.005	1,3,5-Trimethylbenzene	<0.005
Chloroform	<0.005	1,1,2,2-Tetrachloroethane	<0.005
2-Butanone (MEK)	<0.05	1,2,3-Trichloropropane	<0.005
1,2-Dichloroethane (EDC)	<0.005	2-Chlorotoluene	<0.005
1,1,1-Trichloroethane	<0.005	4-Chlorotoluene	<0.005
1,1-Dichloropropene	<0.005	tert-Butylbenzene	<0.005
Carbon tetrachloride	<0.005	1,2,4-Trimethylbenzene	<0.005
Benzene	<0.003	sec-Butylbenzene	<0.005
Trichloroethene	<0.003	p-Isopropyltoluene	<0.005
1,2-Dichloropropane	<0.005	1,3-Dichlorobenzene	<0.005
Bromodichloromethane	<0.005	1,4-Dichlorobenzene	<0.005
Dibromomethane	<0.005	1,2-Dichlorobenzene	<0.005
4-Methyl-2-pentanone	<0.05	1,2-Dibromo-3-chloropropane	<0.05
cis-1,3-Dichloropropene	<0.005	1,2,4-Trichlorobenzene	<0.025
Toluene	<0.005	Hexachlorobutadiene	<0.025
trans-1,3-Dichloropropene	<0.005	Naphthalene	<0.005
1,1,2-Trichloroethane	<0.005	1,2,3-Trichlorobenzene	<0.025
2-Hexanone	<0.05		

Analysis For Volatile Compounds By EPA Method 8260D Direct Sparge

Client Sample ID:	AB-2-33	Client:	Aspect Consulting, LLC
Date Received:	04/21/20	Project:	Schnitzer NE 8th 190298
Date Extracted:	04/23/20	Lab ID:	004230-25
Date Analyzed:	04/23/20	Data File:	042320.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	94	50	150
Toluene-d8	98	50	150
4-Bromofluorobenzene	104	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Analysis For Volatile Compounds By EPA Method 8260D Direct Sparge

Client Sample ID:	AB-2-54	Client:	Aspect Consulting, LLC
Date Received:	04/21/20	Project:	Schnitzer NE 8th 190298
Date Extracted:	04/23/20	Lab ID:	004230-30
Date Analyzed:	04/23/20	Data File:	042321.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	91	50	150
Toluene-d8	97	50	150
4-Bromofluorobenzene	111	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	0.0052

Analysis For Volatile Compounds By EPA Method 8260D Direct Sparge

Client Sample ID:	AB-2-69	Client:	Aspect Consulting, LLC
Date Received:	04/21/20	Project:	Schnitzer NE 8th 190298
Date Extracted:	04/23/20	Lab ID:	004230-32
Date Analyzed:	04/23/20	Data File:	042322.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	96	50	150
Toluene-d8	96	50	150
4-Bromofluorobenzene	110	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Analysis For Volatile Compounds By EPA Method 8260D Direct Sparge

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Schnitzer NE 8th 190298
Date Extracted:	04/23/20	Lab ID:	00-936 mb
Date Analyzed:	04/23/20	Data File:	042312.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	50	150
Toluene-d8	96	50	150
4-Bromofluorobenzene	98	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.05	1,3-Dichloropropane	<0.005
Chloromethane	<0.05	Tetrachloroethene	<0.005
Vinyl chloride	<0.005	Dibromochloromethane	<0.005
Bromomethane	<0.05	1,2-Dibromoethane (EDB)	<0.005
Chloroethane	<0.05	Chlorobenzene	<0.005
Trichlorofluoromethane	<0.05	Ethylbenzene	<0.005
Acetone	<0.05	1,1,1,2-Tetrachloroethane	<0.005
1,1-Dichloroethene	<0.005	m,p-Xylene	<0.01
Hexane	<0.025	o-Xylene	<0.005
Methylene chloride	<0.05	Styrene	<0.005
Methyl t-butyl ether (MTBE)	<0.005	Isopropylbenzene	<0.005
trans-1,2-Dichloroethene	<0.005	Bromoform	<0.005
1,1-Dichloroethane	<0.005	n-Propylbenzene	<0.005
2,2-Dichloropropane	<0.005	Bromobenzene	<0.005
cis-1,2-Dichloroethene	<0.005	1,3,5-Trimethylbenzene	<0.005
Chloroform	<0.005	1,1,2,2-Tetrachloroethane	<0.005
2-Butanone (MEK)	<0.05	1,2,3-Trichloropropane	<0.005
1,2-Dichloroethane (EDC)	<0.005	2-Chlorotoluene	<0.005
1,1,1-Trichloroethane	<0.005	4-Chlorotoluene	<0.005
1,1-Dichloropropene	<0.005	tert-Butylbenzene	<0.005
Carbon tetrachloride	<0.005	1,2,4-Trimethylbenzene	<0.005
Benzene	<0.003	sec-Butylbenzene	<0.005
Trichloroethene	<0.003	p-Isopropyltoluene	<0.005
1,2-Dichloropropane	<0.005	1,3-Dichlorobenzene	<0.005
Bromodichloromethane	<0.005	1,4-Dichlorobenzene	<0.005
Dibromomethane	<0.005	1,2-Dichlorobenzene	<0.005
4-Methyl-2-pentanone	<0.05	1,2-Dibromo-3-chloropropane	<0.05
cis-1,3-Dichloropropene	<0.005	1,2,4-Trichlorobenzene	<0.025
Toluene	<0.005	Hexachlorobutadiene	<0.025
trans-1,3-Dichloropropene	<0.005	Naphthalene	<0.005
1,1,2-Trichloroethane	<0.005	1,2,3-Trichlorobenzene	<0.025
2-Hexanone	<0.05		

Date of Report: 04/28/20
Date Received: 04/21/20
Project: Schnitzer NE 8th 190298, F&BI 004230

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TPH AS GASOLINE USING METHOD NWTPH-Gx

Laboratory Code: 004230-02 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Gasoline	mg/kg (ppm)	<5	<5	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	mg/kg (ppm)	20	110	71-131

Date of Report: 04/28/20
Date Received: 04/21/20
Project: Schnitzer NE 8th 190298, F&BI 004230

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

Laboratory Code: 004230-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	112	108	64-133	4

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	110	58-147

Date of Report: 04/28/20
Date Received: 04/21/20
Project: Schnitzer NE 8th 190298, F&BI 004230

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

Laboratory Code: 004230-04 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet wt)	Duplicate Result (Wet wt)	RPD (Limit 20)
Dichlorodifluoromethane	mg/kg (ppm)	<0.5	<0.5	nm
Chloromethane	mg/kg (ppm)	<0.5	<0.5	nm
Vinyl chloride	mg/kg (ppm)	<0.05	<0.05	nm
Bromomethane	mg/kg (ppm)	<0.5	<0.5	nm
Chloroethane	mg/kg (ppm)	<0.5	<0.5	nm
Trichlorofluoromethane	mg/kg (ppm)	<0.5	<0.5	nm
Acetone	mg/kg (ppm)	<0.5	<0.5	nm
1,1-Dichloroethene	mg/kg (ppm)	<0.05	<0.05	nm
Hexane	mg/kg (ppm)	<0.25	<0.25	nm
Methylene chloride	mg/kg (ppm)	<0.5	<0.5	nm
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	<0.05	<0.05	nm
trans-1,2-Dichloroethene	mg/kg (ppm)	<0.05	<0.05	nm
1,1-Dichloroethane	mg/kg (ppm)	<0.05	<0.05	nm
2,2-Dichloropropane	mg/kg (ppm)	<0.05	<0.05	nm
cis-1,2-Dichloroethene	mg/kg (ppm)	<0.05	<0.05	nm
Chloroform	mg/kg (ppm)	<0.05	<0.05	nm
2-Butanone (MEK)	mg/kg (ppm)	<0.5	<0.5	nm
1,2-Dichloroethane (EDC)	mg/kg (ppm)	<0.05	<0.05	nm
1,1,1-Trichloroethane	mg/kg (ppm)	<0.05	<0.05	nm
1,1-Dichloropropene	mg/kg (ppm)	<0.05	<0.05	nm
Carbon tetrachloride	mg/kg (ppm)	<0.05	<0.05	nm
Benzene	mg/kg (ppm)	<0.03	<0.03	nm
Trichloroethene	mg/kg (ppm)	<0.03	<0.03	nm
1,2-Dichloropropane	mg/kg (ppm)	<0.05	<0.05	nm
Bromodichloromethane	mg/kg (ppm)	<0.05	<0.05	nm
Dibromomethane	mg/kg (ppm)	<0.05	<0.05	nm
4-Methyl-2-pentanone	mg/kg (ppm)	<0.5	<0.5	nm
cis-1,3-Dichloropropene	mg/kg (ppm)	<0.05	<0.05	nm
Toluene	mg/kg (ppm)	<0.05	<0.05	nm
trans-1,3-Dichloropropene	mg/kg (ppm)	<0.05	<0.05	nm
1,1,2-Trichloroethane	mg/kg (ppm)	<0.05	<0.05	nm
2-Hexanone	mg/kg (ppm)	<0.5	<0.5	nm
1,3-Dichloropropane	mg/kg (ppm)	<0.05	<0.05	nm
Tetrachloroethene	mg/kg (ppm)	<0.025	<0.025	nm
Dibromochloromethane	mg/kg (ppm)	<0.05	<0.05	nm
1,2-Dibromoethane (EDB)	mg/kg (ppm)	<0.05	<0.05	nm
Chlorobenzene	mg/kg (ppm)	<0.05	<0.05	nm
Ethylbenzene	mg/kg (ppm)	<0.05	<0.05	nm
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	<0.05	<0.05	nm
m,p-Xylene	mg/kg (ppm)	<0.1	<0.1	nm
o-Xylene	mg/kg (ppm)	<0.05	<0.05	nm
Styrene	mg/kg (ppm)	<0.05	<0.05	nm
Isopropylbenzene	mg/kg (ppm)	<0.05	<0.05	nm
Bromoform	mg/kg (ppm)	<0.05	<0.05	nm
n-Propylbenzene	mg/kg (ppm)	<0.05	<0.05	nm
Bromobenzene	mg/kg (ppm)	<0.05	<0.05	nm
1,3,5-Trimethylbenzene	mg/kg (ppm)	<0.05	<0.05	nm
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	<0.05	<0.05	nm
1,2,3-Trichloropropane	mg/kg (ppm)	<0.05	<0.05	nm
2-Chlorotoluene	mg/kg (ppm)	<0.05	<0.05	nm
4-Chlorotoluene	mg/kg (ppm)	<0.05	<0.05	nm
tert-Butylbenzene	mg/kg (ppm)	<0.05	<0.05	nm
1,2,4-Trimethylbenzene	mg/kg (ppm)	<0.05	<0.05	nm
sec-Butylbenzene	mg/kg (ppm)	<0.05	<0.05	nm
p-Isopropyltoluene	mg/kg (ppm)	<0.05	<0.05	nm
1,3-Dichlorobenzene	mg/kg (ppm)	<0.05	<0.05	nm
1,4-Dichlorobenzene	mg/kg (ppm)	<0.05	<0.05	nm
1,2-Dichlorobenzene	mg/kg (ppm)	<0.05	<0.05	nm
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	<0.5	<0.5	nm
1,2,4-Trichlorobenzene	mg/kg (ppm)	<0.25	<0.25	nm
Hexachlorobutadiene	mg/kg (ppm)	<0.25	<0.25	nm
Naphthalene	mg/kg (ppm)	<0.05	<0.05	nm
1,2,3-Trichlorobenzene	mg/kg (ppm)	<0.25	<0.25	nm

Date of Report: 04/28/20
Date Received: 04/21/20
Project: Schnitzer NE 8th 190298, F&BI 004230

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	mg/kg (ppm)	0.05	117	141 vo	70-130	19
Chloromethane	mg/kg (ppm)	0.05	111	128	70-130	14
Vinyl chloride	mg/kg (ppm)	0.05	105	125	70-130	17
Bromomethane	mg/kg (ppm)	0.05	109	124	70-130	13
Chloroethane	mg/kg (ppm)	0.05	110	129	70-130	16
Trichlorofluoromethane	mg/kg (ppm)	0.05	105	125	70-130	17
Acetone	mg/kg (ppm)	0.25	112	124	70-130	10
1,1-Dichloroethene	mg/kg (ppm)	0.05	109	134 vo	70-130	21 vo
Hexane	mg/kg (ppm)	0.05	99	117	70-130	17
Methylene chloride	mg/kg (ppm)	0.05	92	105	70-130	13
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	0.05	105	113	70-130	7
trans-1,2-Dichloroethene	mg/kg (ppm)	0.05	104	120	70-130	14
1,1-Dichloroethane	mg/kg (ppm)	0.05	101	115	70-130	13
2,2-Dichloropropane	mg/kg (ppm)	0.05	108	127	70-130	16
cis-1,2-Dichloroethene	mg/kg (ppm)	0.05	102	116	70-130	13
Chloroform	mg/kg (ppm)	0.05	98	110	70-130	12
2-Butanone (MEK)	mg/kg (ppm)	0.25	96	102	70-130	6
1,2-Dichloroethane (EDC)	mg/kg (ppm)	0.05	93	100	70-130	7
1,1,1-Trichloroethane	mg/kg (ppm)	0.05	101	119	70-130	16
1,1-Dichloropropene	mg/kg (ppm)	0.05	98	114	70-130	15
Carbon tetrachloride	mg/kg (ppm)	0.05	102	123	70-130	19
Benzene	mg/kg (ppm)	0.05	97	110	70-130	13
Trichloroethene	mg/kg (ppm)	0.05	94	106	70-130	12
1,2-Dichloropropane	mg/kg (ppm)	0.05	96	105	70-130	9
Bromodichloromethane	mg/kg (ppm)	0.05	96	104	70-130	8
Dibromomethane	mg/kg (ppm)	0.05	97	104	70-130	7
4-Methyl-2-pentanone	mg/kg (ppm)	0.25	98	105	70-130	7
cis-1,3-Dichloropropene	mg/kg (ppm)	0.05	93	101	70-130	8
Toluene	mg/kg (ppm)	0.05	101	110	70-130	9
trans-1,3-Dichloropropene	mg/kg (ppm)	0.05	100	104	70-130	4
1,1,2-Trichloroethane	mg/kg (ppm)	0.05	101	105	70-130	4
2-Hexanone	mg/kg (ppm)	0.25	97	102	70-130	5
1,3-Dichloropropane	mg/kg (ppm)	0.05	99	102	70-130	3
Tetrachloroethene	mg/kg (ppm)	0.05	101	115	70-130	13
Dibromochloromethane	mg/kg (ppm)	0.05	105	109	70-130	4
1,2-Dibromoethane (EDB)	mg/kg (ppm)	0.05	101	106	70-130	5
Chlorobenzene	mg/kg (ppm)	0.05	100	107	70-130	7
Ethylbenzene	mg/kg (ppm)	0.05	103	114	70-130	10
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	0.05	113	123	70-130	8
m,p-Xylene	mg/kg (ppm)	0.1	102	112	70-130	9
o-Xylene	mg/kg (ppm)	0.05	108	118	70-130	9
Styrene	mg/kg (ppm)	0.05	104	111	70-130	7
Isopropylbenzene	mg/kg (ppm)	0.05	110	122	70-130	10
Bromoform	mg/kg (ppm)	0.05	110	113	70-130	3
n-Propylbenzene	mg/kg (ppm)	0.05	105	110	70-130	5
Bromobenzene	mg/kg (ppm)	0.05	102	102	70-130	0
1,3,5-Trimethylbenzene	mg/kg (ppm)	0.05	109	113	70-130	4
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	0.05	108	109	70-130	1
1,2,3-Trichloropropane	mg/kg (ppm)	0.05	107	106	70-130	1
2-Chlorotoluene	mg/kg (ppm)	0.05	105	109	70-130	4
4-Chlorotoluene	mg/kg (ppm)	0.05	104	106	70-130	2
tert-Butylbenzene	mg/kg (ppm)	0.05	109	115	70-130	5
1,2,4-Trimethylbenzene	mg/kg (ppm)	0.05	106	110	70-130	4
sec-Butylbenzene	mg/kg (ppm)	0.05	109	116	70-130	6
p-Isopropyltoluene	mg/kg (ppm)	0.05	109	116	70-130	6
1,3-Dichlorobenzene	mg/kg (ppm)	0.05	106	107	70-130	1
1,4-Dichlorobenzene	mg/kg (ppm)	0.05	104	105	70-130	1
1,2-Dichlorobenzene	mg/kg (ppm)	0.05	108	109	70-130	1
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	0.05	115	111	70-130	4
1,2,4-Trichlorobenzene	mg/kg (ppm)	0.05	113	112	70-130	1
Hexachlorobutadiene	mg/kg (ppm)	0.05	114	119	70-130	4
Naphthalene	mg/kg (ppm)	0.05	111	109	70-130	2
1,2,3-Trichlorobenzene	mg/kg (ppm)	0.05	112	111	70-130	1

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. 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 lowest calibration standard. 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.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

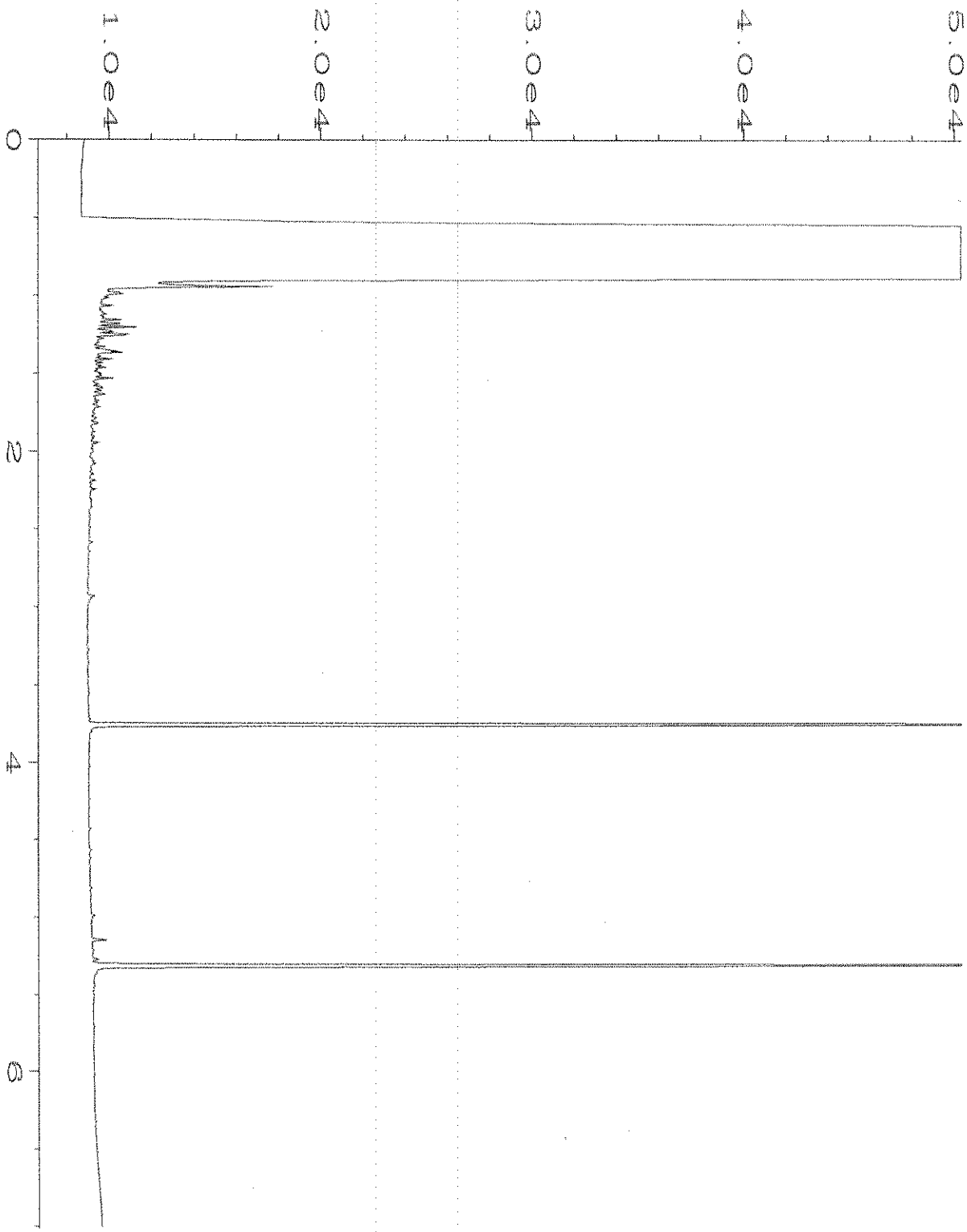
nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

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.

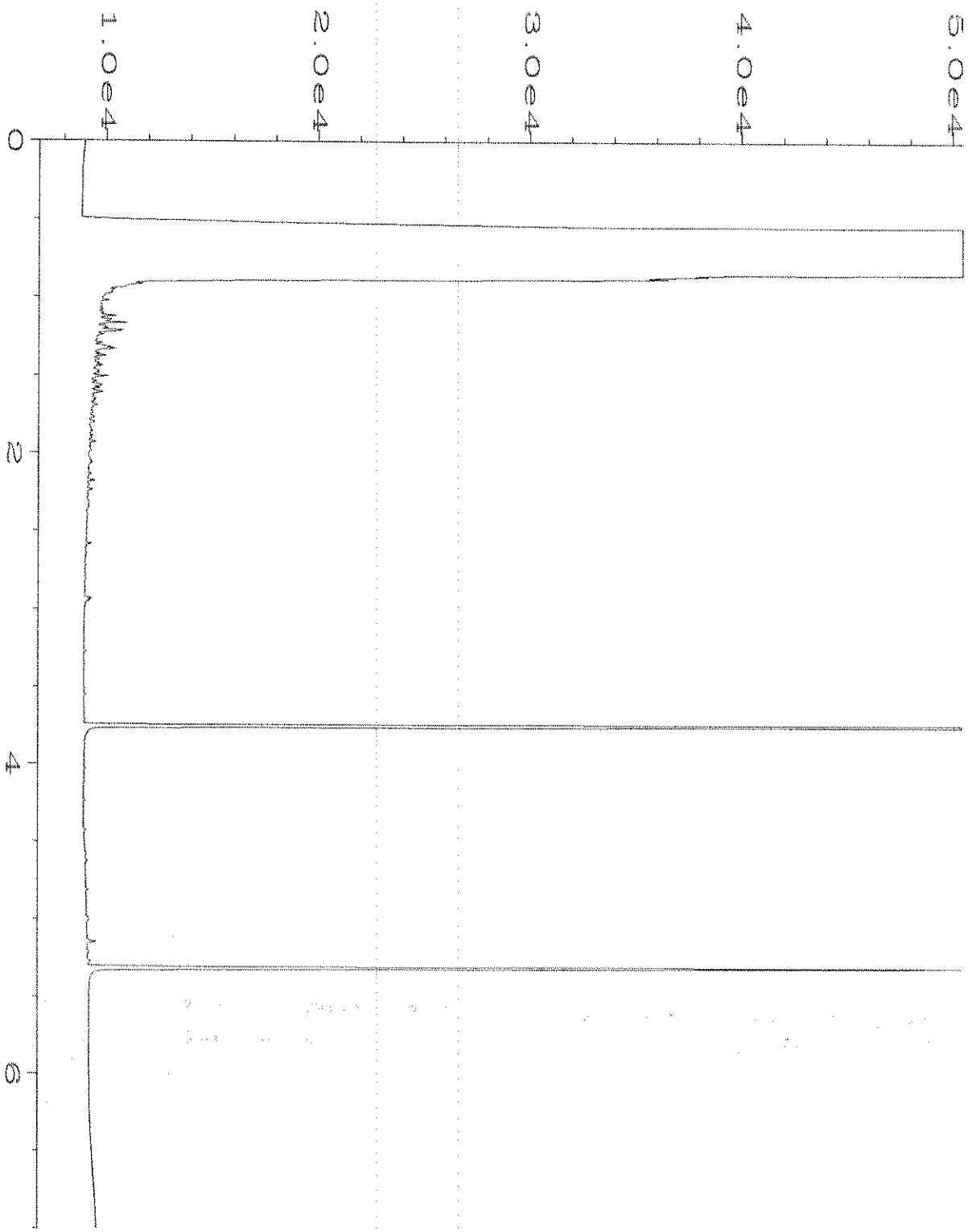
vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

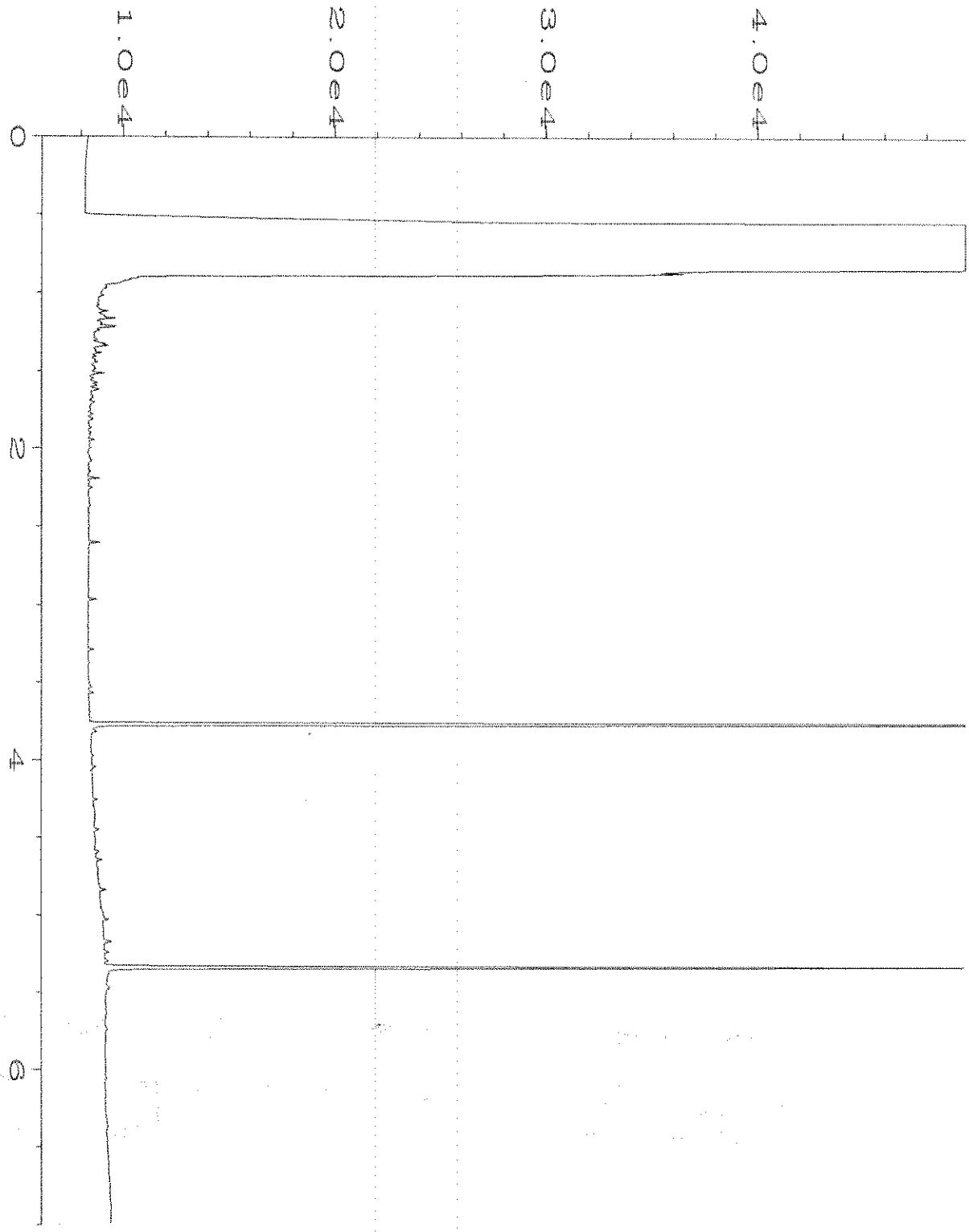


Data File Name : C:\HPCHEM\6\DATA\04-23-20\010F0301.D
Operator : TL
Instrument : GC6
Sample Name : 004230-02
Run Time Bar Code:
Acquired on : 23 Apr 20 09:54 AM
Report Created on: 24 Apr 20 07:18 AM

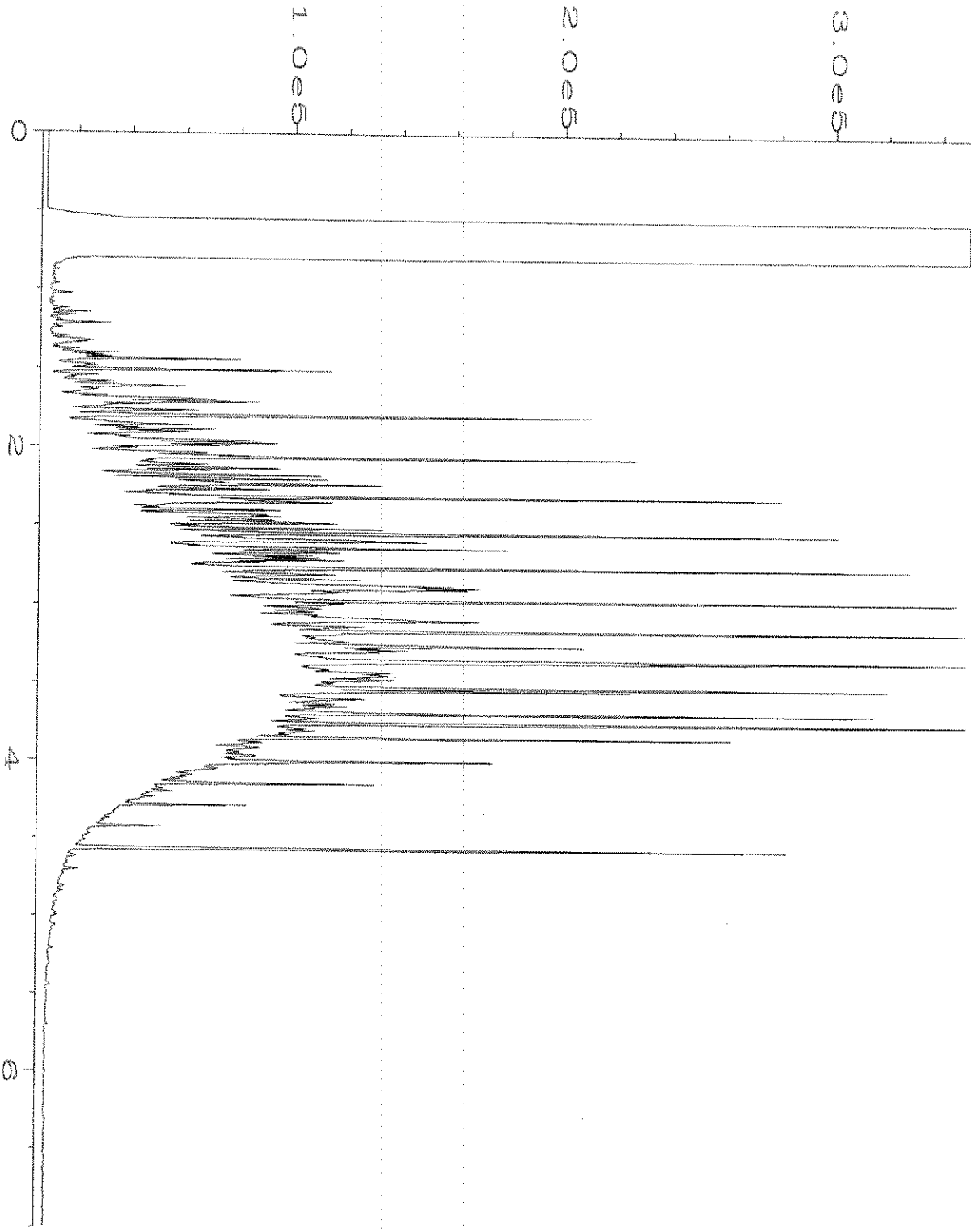
Page Number : 1
Vial Number : 10
Injection Number : 1
Sequence Line : 3
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH



Data File Name	: C:\HPCHEM\6\DATA\04-23-20\011F0301.D		
Operator	: TL	Page Number	: 1
Instrument	: GC6	Vial Number	: 11
Sample Name	: 004230-20	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 3
Acquired on	: 23 Apr 20 10:05 AM	Instrument Method	: DX.MTH
Report Created on	: 24 Apr 20 07:18 AM	Analysis Method	: DEFAULT.MTH



Data File Name	: C:\HPCHEM\6\DATA\04-23-20\006F0301.D		
Operator	: TL	Page Number	: 1
Instrument	: GC6	Vial Number	: 6
Sample Name	: 00-951 mb	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 3
Acquired on	: 23 Apr 20 09:13 AM	Instrument Method	: DX.MTH
Report Created on	: 24 Apr 20 07:18 AM	Analysis Method	: DEFAULT.MTH



Data File Name	: C:\HPCHEM\6\DATA\04-23-20\005F0401.D		
Operator	: TL	Page Number	: 1
Instrument	: GC6	Vial Number	: 5
Sample Name	: 1000 Dx 59-162B	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 4
Acquired on	: 23 Apr 20 02:14 PM	Instrument Method	: DX.MTH
Report Created on	: 24 Apr 20 07:19 AM	Analysis Method	: DEFAULT.MTH

SAMPLE CHAIN OF CUSTODY

004230 ME 04/21/20 DW1/ P03/ VS4

Page # 1 of 4

Report To Ali Cochrane / Jessica Smith

Company Aspect Consulting

Address 710 2nd Ave, Ste. 550

City, State, ZIP Seattle, WA 98104

Phone (206) 838-6594 Email acochrane@aspectconsulting.com

SAMPLERS (signature) [signature]

PROJECT NAME: Schnitzer NE 8th

PO #: 190298

REMARKS: Project specific RLs? - Yes / (No)

INVOICE TO: AP

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

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

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	TPH	cVOCs			Notes
AMW-6D-90	01A-E	4/20/20	0833	Soil	5								X				X-per AC
AB-1-5	02		1101			X	X			X							4/22/20 MC
AB-1-10	03		1115														
AB-1-14	04		1122											X			
AB-1-16	05		1129														
AB-1-25	06		1136														
AB-1-28	07		1142														
AB-1-32	08		1149														
AB-1-37	09		1153														
AB-1-43	10		1200														Samples received at 3 °C

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	[signature]	David Unruh	Aspect Consulting	4/21/20	1662
Received by:	[signature]	HONG NGUYEN	FBI	✓	✓
Relinquished by:					
Received by:					

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

004/230

SAMPLE CHAIN OF CUSTODY ME 04/21/20

VW1/DO3/VS4

Page # 2 of 4

Report To Ali Cochrane / Jessica Smith
Company Aspect Consulting
Address 710 2nd Ave, Ste. 550
City, State, ZIP Seattle, WA, 98104
Phone (206) 838-6544 Email acochrane@aspectconsulting.com

SAMPLERS (signature) David Unruh

PROJECT NAME	PO #
Schnitzer NE 8th	190298
REMARKS	INVOICE TO
Project specific RLs? - Yes / (No)	AP

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	Hold	cVOCs			Notes
AB-1-50	11A-E	4/20/20	1420	Soil	5								X				
AB-1-55	12	4/20/20	1438														
AB-1-57	13		1444														
AB-1-65	14		1506											X			
AB-1-69	15		1527														
AB-1-74	16		1548											X			
AB-1-79	17		1554														
AB-1-81	18		1600														
AB-1-87	19		1605														
AB-2-10	20	4/21/20	0852			X	X			X							

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: David Unruh	David Unruh	Aspect Consulting	4/21/20	1602
Received by: HONG NGUYEN	HONG NGUYEN	FBI	"	"
Relinquished by:				
Received by:		Samples received at 3 °C		

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

004230

SAMPLE CHAIN OF CUSTODY

ME 04/21/20 VW1/DO3/VS4

Page # 3 of 4

Report To Al: Cochrane / Jessica Smith

Company Aspect Consulting

Address 710 2nd Ave, Ste. 550

City, State, ZIP Seattle, WA, 98104

Phone (206) 838-6544 Email

SAMPLERS (*signature*)

PROJECT NAME: Schnitzer NE 8th

PO #: 140248

REMARKS: Project specific RLs? - Yes / No

INVOICE TO: AP

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

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

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	HOLD	cVOCs			Notes
AB-2-15	21A-B	4/21/20	0901	Soil	5								X				
AB-2-18	22		0906														
AB-2-24	23		0914														
AB-2-28	24		0920														
AB-2-33	25		0945											X			
AB-2-39	26		1000														
AB-2-43	27		1006														
AB-2-48	28		1159														
AB-2-53	29		1222														
AB-2-54	30		1328											X			

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		David Uhrich	Aspect Consulting	4/21/20	1602
Received by:		HONG NGUYEN	FBT		
Relinquished by:					
Received by:			Samples received at 3 °C		

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

SAMPLE CHAIN OF CUSTODY

004230 ME 04/21/20 VW1/DO3/VS4

Page # 4 of 4

Report To Attn: Catherine / Jessica Smith
Company Aspect Consulting
Address 710 2nd Ave, Ste. 550
City, State, ZIP Seattle, WA, 98104
Phone (206)838-6544 Email acatherine@aspectconsulting.com

SAMPLERS (signature) David Urick

PROJECT NAME: Schnitzer ME 8th
PO #: 190298

REMARKS
Project specific RLs? - Yes / (No)

INVOICE TO: AP

TURNAROUND TIME
(X) Standard turnaround
( ) RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
( ) Archive samples
( ) Other
Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	Hold	cVOCs			Notes
AB-2-65	31A-E	4/21/20	1335	Soil	5								X				
AB-2-69	32		1355											X			
AB-2-72	33		1402														
AB-2-77	34		1420														
AB-2-84	35		1426														
AB-2-90	36		1433														
Trip Blank	37A-B	—	—	AQ	2												
																	Samples received at 7 °C

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	David Urick	Aspect Consulting	4/21/20	1602
Received by:	HONG NGUYEN	TRT	✓	✓
Relinquished by:				
Received by:				

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

May 7, 2020

Ali Cochrane, Project Manager
Aspect Consulting, LLC
710 2nd Ave S, Suite 550
Seattle, WA 98104

Dear Ms Cochrane:

Included is the amended report from the testing of material submitted on April 23, 2020 from the Schnitzer NE 8th 190298, F&BI 004275 project. Sample ID AMW-7-38 has been amended to AMW-7-68 per the chain of custody.

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

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Data Aspect, Jessica Smith
ASP0504R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

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May 4, 2020

Ali Cochrane, Project Manager
Aspect Consulting, LLC
710 2nd Ave S, Suite 550
Seattle, WA 98104

Dear Ms Cochrane:

Included are the results from the testing of material submitted on April 23, 2020 from the Schnitzer NE 8th 190298, F&BI 004275 project. There are 22 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 have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Data Aspect, Jessica Smith
ASP0504R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on April 23, 2020 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Schnitzer NE 8th 190298, F&BI 004275 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
004275 -01	AMW-7-8
004275 -02	AMW-7-12
004275 -03	AMW-7-16
004275 -04	AMW-7-23
004275 -05	AMW-7-28
004275 -06	AMW-7-33
004275 -07	AMW-7-40
004275 -08	AMW-7-44
004275 -09	AMW-7-49
004275 -10	AMW-7-53
004275 -11	AMW-7-59
004275 -12	AMW-7-62
004275 -13	AMW-7-68
004275 -14	AMW-7-75
004275 -15	AMW-7-77
004275 -16	AMW-7-82
004275 -17	AMW-7-89
004275 -18	AB-4-5
004275 -19	AB-4-8
004275 -20	AB-4-12
004275 -21	AB-4-20
004275 -22	AB-4-23
004275 -23	AB-4-27
004275 -24	AB-4-33
004275 -25	AB-4-37
004275 -26	AB-4-42
004275 -27	AB-4-48
004275 -28	AB-4-55
004275 -29	AB-4-60
004275 -30	AB-4-62
004275 -31	AB-4-67
004275 -32	AB-4-73
004275 -33	AB-4-77
004275 -34	AB-4-82
004275 -35	AB-4-90
004275 -36	Trip Blank

Sample AB-4-5 was extracted from a 4 ounce jar. The data were flagged accordingly.

All other quality control requirements were acceptable.

Date of Report: 05/04/20
Date Received: 04/23/20
Project: Schnitzer NE 8th 190298, F&BI 004275
Date Extracted: 04/27/20
Date Analyzed: 04/27/20

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

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

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 58-139)
AB-4-5 pc 004275-18	<5	95
Method Blank 00-863 MB	<5	96

Date of Report: 05/04/20
Date Received: 04/23/20
Project: Schnitzer NE 8th 190298, F&BI 004275
Date Extracted: 04/24/20
Date Analyzed: 04/24/20

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 53-144)
AB-4-5 004275-18	<50	<250	89
Method Blank 00-954 MB	<50	<250	84

Analysis For Total Metals By EPA Method 6020B

Client ID:	AB-4-5	Client:	Aspect Consulting, LLC
Date Received:	04/23/20	Project:	Schnitzer NE 8th 190298
Date Extracted:	04/28/20	Lab ID:	004275-18
Date Analyzed:	04/28/20	Data File:	004275-18.056
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.35
Cadmium	<1
Chromium	12.3
Lead	1.71
Mercury	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Schnitzer NE 8th 190298
Date Extracted:	04/28/20	Lab ID:	I0-243 mb
Date Analyzed:	04/28/20	Data File:	I0-243 mb.044
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Cadmium	<1
Chromium	<1
Lead	<1
Mercury	<1

Analysis For Semivolatile Compounds By EPA Method 8270E SIM

Client Sample ID:	AB-4-5	Client:	Aspect Consulting, LLC
Date Received:	04/23/20	Project:	Schnitzer NE 8th 190298
Date Extracted:	04/26/20	Lab ID:	004275-18 1/5
Date Analyzed:	04/27/20	Data File:	042712.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	75	31	163
Benzo(a)anthracene-d12	96	24	168

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<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 SIM

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Schnitzer NE 8th 190298
Date Extracted:	04/26/20	Lab ID:	00-958 mb 1/5
Date Analyzed:	04/27/20	Data File:	042705.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	85	31	163
Benzo(a)anthracene-d12	106	24	168

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<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 Volatile Compounds By EPA Method 8260D Direct Sparge

Client Sample ID:	AMW-7-53	Client:	Aspect Consulting, LLC
Date Received:	04/23/20	Project:	Schnitzer NE 8th 190298
Date Extracted:	04/29/20	Lab ID:	004275-10
Date Analyzed:	04/29/20	Data File:	042922.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	105	50	150
Toluene-d8	103	50	150
4-Bromofluorobenzene	121	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Analysis For Volatile Compounds By EPA Method 8260D Direct Sparge

Client Sample ID:	AMW-7-59	Client:	Aspect Consulting, LLC
Date Received:	04/23/20	Project:	Schnitzer NE 8th 190298
Date Extracted:	04/29/20	Lab ID:	004275-11
Date Analyzed:	04/29/20	Data File:	042924.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	96	50	150
Toluene-d8	103	50	150
4-Bromofluorobenzene	108	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	0.034

Analysis For Volatile Compounds By EPA Method 8260D Direct Sparge

Client Sample ID:	AMW-7-68	Client:	Aspect Consulting, LLC
Date Received:	04/23/20	Project:	Schnitzer NE 8th 190298
Date Extracted:	04/29/20	Lab ID:	004275-13
Date Analyzed:	04/29/20	Data File:	042925.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	50	150
Toluene-d8	105	50	150
4-Bromofluorobenzene	106	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Analysis For Volatile Compounds By EPA Method 8260D Direct Sparge

Client Sample ID:	AMW-7-75	Client:	Aspect Consulting, LLC
Date Received:	04/23/20	Project:	Schnitzer NE 8th 190298
Date Extracted:	04/29/20	Lab ID:	004275-14
Date Analyzed:	04/29/20	Data File:	042926.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	50	150
Toluene-d8	102	50	150
4-Bromofluorobenzene	118	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Analysis For Volatile Compounds By EPA Method 8260D Direct Sparge

Client Sample ID:	AB-4-5	Client:	Aspect Consulting, LLC
Date Received:	04/23/20	Project:	Schnitzer NE 8th 190298
Date Extracted:	04/29/20	Lab ID:	004275-18
Date Analyzed:	04/29/20	Data File:	042927.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	50	150
Toluene-d8	105	50	150
4-Bromofluorobenzene	104	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.05	1,3-Dichloropropane	<0.005
Chloromethane	<0.05	Tetrachloroethene	<0.005
Vinyl chloride	<0.005	Dibromochloromethane	<0.005
Bromomethane	<0.05	1,2-Dibromoethane (EDB)	<0.005
Chloroethane	<0.05	Chlorobenzene	<0.005
Trichlorofluoromethane	<0.05	Ethylbenzene	<0.005
Acetone	<0.05	1,1,1,2-Tetrachloroethane	<0.005
1,1-Dichloroethene	<0.005	m,p-Xylene	<0.01
Hexane	<0.025	o-Xylene	<0.005
Methylene chloride	<0.05	Styrene	<0.005
Methyl t-butyl ether (MTBE)	<0.005	Isopropylbenzene	<0.005
trans-1,2-Dichloroethene	<0.005	Bromoform	<0.005
1,1-Dichloroethane	<0.005	n-Propylbenzene	<0.005
2,2-Dichloropropane	<0.005	Bromobenzene	<0.005
cis-1,2-Dichloroethene	<0.005	1,3,5-Trimethylbenzene	<0.005
Chloroform	<0.005	1,1,2,2-Tetrachloroethane	<0.005
2-Butanone (MEK)	<0.05	1,2,3-Trichloropropane	<0.005
1,2-Dichloroethane (EDC)	<0.005	2-Chlorotoluene	<0.005
1,1,1-Trichloroethane	<0.005	4-Chlorotoluene	<0.005
1,1-Dichloropropene	<0.005	tert-Butylbenzene	<0.005
Carbon tetrachloride	<0.005	1,2,4-Trimethylbenzene	<0.005
Benzene	<0.003	sec-Butylbenzene	<0.005
Trichloroethene	<0.003	p-Isopropyltoluene	<0.005
1,2-Dichloropropane	<0.005	1,3-Dichlorobenzene	<0.005
Bromodichloromethane	<0.005	1,4-Dichlorobenzene	<0.005
Dibromomethane	<0.005	1,2-Dichlorobenzene	<0.005
4-Methyl-2-pentanone	<0.05	1,2-Dibromo-3-chloropropane	<0.05
cis-1,3-Dichloropropene	<0.005	1,2,4-Trichlorobenzene	<0.025
Toluene	<0.005	Hexachlorobutadiene	<0.025
trans-1,3-Dichloropropene	<0.005	Naphthalene	<0.005
1,1,2-Trichloroethane	<0.005	1,2,3-Trichlorobenzene	<0.025
2-Hexanone	<0.05		

Analysis For Volatile Compounds By EPA Method 8260D Direct Sparge

Client Sample ID:	AB-4-55	Client:	Aspect Consulting, LLC
Date Received:	04/23/20	Project:	Schnitzer NE 8th 190298
Date Extracted:	04/29/20	Lab ID:	004275-28
Date Analyzed:	04/29/20	Data File:	042928.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	50	150
Toluene-d8	104	50	150
4-Bromofluorobenzene	112	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Analysis For Volatile Compounds By EPA Method 8260D Direct Sparge

Client Sample ID:	AB-4-77	Client:	Aspect Consulting, LLC
Date Received:	04/23/20	Project:	Schnitzer NE 8th 190298
Date Extracted:	04/29/20	Lab ID:	004275-33
Date Analyzed:	04/29/20	Data File:	042929.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	50	150
Toluene-d8	100	50	150
4-Bromofluorobenzene	121	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Analysis For Volatile Compounds By EPA Method 8260D Direct Sparge

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Schnitzer NE 8th 190298
Date Extracted:	04/29/20	Lab ID:	00-949 mb
Date Analyzed:	04/29/20	Data File:	042919.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	50	150
Toluene-d8	103	50	150
4-Bromofluorobenzene	103	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.05	1,3-Dichloropropane	<0.005
Chloromethane	<0.05	Tetrachloroethene	<0.005
Vinyl chloride	<0.005	Dibromochloromethane	<0.005
Bromomethane	<0.05	1,2-Dibromoethane (EDB)	<0.005
Chloroethane	<0.05	Chlorobenzene	<0.005
Trichlorofluoromethane	<0.05	Ethylbenzene	<0.005
Acetone	<0.05	1,1,1,2-Tetrachloroethane	<0.005
1,1-Dichloroethene	<0.005	m,p-Xylene	<0.01
Hexane	<0.025	o-Xylene	<0.005
Methylene chloride	<0.05	Styrene	<0.005
Methyl t-butyl ether (MTBE)	<0.005	Isopropylbenzene	<0.005
trans-1,2-Dichloroethene	<0.005	Bromoform	<0.005
1,1-Dichloroethane	<0.005	n-Propylbenzene	<0.005
2,2-Dichloropropane	<0.005	Bromobenzene	<0.005
cis-1,2-Dichloroethene	<0.005	1,3,5-Trimethylbenzene	<0.005
Chloroform	<0.005	1,1,2,2-Tetrachloroethane	<0.005
2-Butanone (MEK)	<0.05	1,2,3-Trichloropropane	<0.005
1,2-Dichloroethane (EDC)	<0.005	2-Chlorotoluene	<0.005
1,1,1-Trichloroethane	<0.005	4-Chlorotoluene	<0.005
1,1-Dichloropropene	<0.005	tert-Butylbenzene	<0.005
Carbon tetrachloride	<0.005	1,2,4-Trimethylbenzene	<0.005
Benzene	<0.003	sec-Butylbenzene	<0.005
Trichloroethene	<0.003	p-Isopropyltoluene	<0.005
1,2-Dichloropropane	<0.005	1,3-Dichlorobenzene	<0.005
Bromodichloromethane	<0.005	1,4-Dichlorobenzene	<0.005
Dibromomethane	<0.005	1,2-Dichlorobenzene	<0.005
4-Methyl-2-pentanone	<0.05	1,2-Dibromo-3-chloropropane	<0.05
cis-1,3-Dichloropropene	<0.005	1,2,4-Trichlorobenzene	<0.025
Toluene	<0.005	Hexachlorobutadiene	<0.025
trans-1,3-Dichloropropene	<0.005	Naphthalene	<0.005
1,1,2-Trichloroethane	<0.005	1,2,3-Trichlorobenzene	<0.025
2-Hexanone	<0.05		

Date of Report: 05/04/20
Date Received: 04/23/20
Project: Schnitzer NE 8th 190298, F&BI 004275

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TPH AS GASOLINE USING METHOD NWTPH-Gx

Laboratory Code: 004277-34 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Gasoline	mg/kg (ppm)	<5	<5	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	mg/kg (ppm)	20	100	61-153

Date of Report: 05/04/20
Date Received: 04/23/20
Project: Schnitzer NE 8th 190298, F&BI 004275

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

Laboratory Code: 004273-06 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	98	100	64-133	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	104	58-147

Date of Report: 05/04/20
Date Received: 04/23/20
Project: Schnitzer NE 8th 190298, F&BI 004275

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

Laboratory Code: 004278-05 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	11.5	97	97	75-125	0
Cadmium	mg/kg (ppm)	5	<1	103	100	75-125	3
Chromium	mg/kg (ppm)	20	8.24	89	87	75-125	2
Lead	mg/kg (ppm)	10	57.1	97 b	281 b	75-125	97 b
Mercury	mg/kg (ppm	5	<1	90	78	75-125	14

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	89	80-120
Cadmium	mg/kg (ppm)	5	102	80-120
Chromium	mg/kg (ppm)	20	101	80-120
Lead	mg/kg (ppm)	10	96	80-120
Mercury	mg/kg (ppm)	5	99	80-120

Date of Report: 05/04/20
Date Received: 04/23/20
Project: Schnitzer NE 8th 190298, F&BI 004275

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

Laboratory Code: 004182-12 1/5 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Acceptance Criteria
Naphthalene	mg/kg (ppm)	0.17	<0.01	67	44-129
Acenaphthylene	mg/kg (ppm)	0.17	<0.01	75	52-121
Acenaphthene	mg/kg (ppm)	0.17	<0.01	73	51-123
Fluorene	mg/kg (ppm)	0.17	<0.01	79	37-137
Phenanthrene	mg/kg (ppm)	0.17	<0.01	75	34-141
Anthracene	mg/kg (ppm)	0.17	<0.01	78	32-124
Fluoranthene	mg/kg (ppm)	0.17	0.013	87	16-160
Pyrene	mg/kg (ppm)	0.17	0.013	81	10-180
Benz(a)anthracene	mg/kg (ppm)	0.17	<0.01	82	23-144
Chrysene	mg/kg (ppm)	0.17	<0.01	75	32-149
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	0.011	76	23-176
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	<0.01	73	42-139
Benzo(a)pyrene	mg/kg (ppm)	0.17	<0.01	77	21-163
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	<0.01	64	23-170
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	<0.01	63	31-146
Benzo(g,h,i)perylene	mg/kg (ppm)	0.17	<0.01	55	37-133

Laboratory Code: Laboratory Control Sample 1/5

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	mg/kg (ppm)	0.17	78	74	58-121	5
Acenaphthylene	mg/kg (ppm)	0.17	84	80	54-121	5
Acenaphthene	mg/kg (ppm)	0.17	82	79	54-123	4
Fluorene	mg/kg (ppm)	0.17	87	86	56-127	1
Phenanthrene	mg/kg (ppm)	0.17	82	82	55-122	0
Anthracene	mg/kg (ppm)	0.17	82	83	50-120	1
Fluoranthene	mg/kg (ppm)	0.17	87	92	54-129	6
Pyrene	mg/kg (ppm)	0.17	88	85	53-127	3
Benz(a)anthracene	mg/kg (ppm)	0.17	88	90	51-115	2
Chrysene	mg/kg (ppm)	0.17	83	86	55-129	4
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	78	80	56-123	3
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	81	78	54-131	4
Benzo(a)pyrene	mg/kg (ppm)	0.17	76	76	51-118	0
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	83	79	49-148	5
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	82	79	50-141	4
Benzo(g,h,i)perylene	mg/kg (ppm)	0.17	82	79	52-131	4

Date of Report: 05/04/20
Date Received: 04/23/20
Project: Schnitzer NE 8th 190298, F&BI 004275

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

Laboratory Code: 004275-10 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet wt)	Duplicate Result (Wet wt)	RPD (Limit 20)
Dichlorodifluoromethane	mg/kg (ppm)	<0.5	<0.5	nm
Chloromethane	mg/kg (ppm)	<0.5	<0.5	nm
Vinyl chloride	mg/kg (ppm)	<0.05	<0.05	nm
Bromomethane	mg/kg (ppm)	<0.5	<0.5	nm
Chloroethane	mg/kg (ppm)	<0.5	<0.5	nm
Trichlorofluoromethane	mg/kg (ppm)	<0.5	<0.5	nm
Acetone	mg/kg (ppm)	<0.5	<0.5	nm
1,1-Dichloroethene	mg/kg (ppm)	<0.05	<0.05	nm
Hexane	mg/kg (ppm)	<0.25	<0.25	nm
Methylene chloride	mg/kg (ppm)	<0.5	<0.5	nm
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	<0.05	<0.05	nm
trans-1,2-Dichloroethene	mg/kg (ppm)	<0.05	<0.05	nm
1,1-Dichloroethane	mg/kg (ppm)	<0.05	<0.05	nm
2,2-Dichloropropane	mg/kg (ppm)	<0.05	<0.05	nm
cis-1,2-Dichloroethene	mg/kg (ppm)	<0.05	<0.05	nm
Chloroform	mg/kg (ppm)	<0.05	<0.05	nm
2-Butanone (MEK)	mg/kg (ppm)	<0.5	<0.5	nm
1,2-Dichloroethane (EDC)	mg/kg (ppm)	<0.05	<0.05	nm
1,1,1-Trichloroethane	mg/kg (ppm)	<0.05	<0.05	nm
1,1-Dichloropropene	mg/kg (ppm)	<0.05	<0.05	nm
Carbon tetrachloride	mg/kg (ppm)	<0.05	<0.05	nm
Benzene	mg/kg (ppm)	<0.03	<0.03	nm
Trichloroethene	mg/kg (ppm)	<0.03	<0.03	nm
1,2-Dichloropropane	mg/kg (ppm)	<0.05	<0.05	nm
Bromodichloromethane	mg/kg (ppm)	<0.05	<0.05	nm
Dibromomethane	mg/kg (ppm)	<0.05	<0.05	nm
4-Methyl-2-pentanone	mg/kg (ppm)	<0.5	<0.5	nm
cis-1,3-Dichloropropene	mg/kg (ppm)	<0.05	<0.05	nm
Toluene	mg/kg (ppm)	<0.05	<0.05	nm
trans-1,3-Dichloropropene	mg/kg (ppm)	<0.05	<0.05	nm
1,1,2-Trichloroethane	mg/kg (ppm)	<0.05	<0.05	nm
2-Hexanone	mg/kg (ppm)	<0.5	<0.5	nm
1,3-Dichloropropane	mg/kg (ppm)	<0.05	<0.05	nm
Tetrachloroethene	mg/kg (ppm)	<0.025	<0.025	nm
Dibromochloromethane	mg/kg (ppm)	<0.05	<0.05	nm
1,2-Dibromoethane (EDB)	mg/kg (ppm)	<0.05	<0.05	nm
Chlorobenzene	mg/kg (ppm)	<0.05	<0.05	nm
Ethylbenzene	mg/kg (ppm)	<0.05	<0.05	nm
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	<0.05	<0.05	nm
m,p-Xylene	mg/kg (ppm)	<0.1	<0.1	nm
o-Xylene	mg/kg (ppm)	<0.05	<0.05	nm
Styrene	mg/kg (ppm)	<0.05	<0.05	nm
Isopropylbenzene	mg/kg (ppm)	<0.05	<0.05	nm
Bromoform	mg/kg (ppm)	<0.05	<0.05	nm
n-Propylbenzene	mg/kg (ppm)	<0.05	<0.05	nm
Bromobenzene	mg/kg (ppm)	<0.05	<0.05	nm
1,3,5-Trimethylbenzene	mg/kg (ppm)	<0.05	<0.05	nm
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	<0.05	<0.05	nm
1,2,3-Trichloropropane	mg/kg (ppm)	<0.05	<0.05	nm
2-Chlorotoluene	mg/kg (ppm)	<0.05	<0.05	nm
4-Chlorotoluene	mg/kg (ppm)	<0.05	<0.05	nm
tert-Butylbenzene	mg/kg (ppm)	<0.05	<0.05	nm
1,2,4-Trimethylbenzene	mg/kg (ppm)	<0.05	<0.05	nm
sec-Butylbenzene	mg/kg (ppm)	<0.05	<0.05	nm
p-Isopropyltoluene	mg/kg (ppm)	<0.05	<0.05	nm
1,3-Dichlorobenzene	mg/kg (ppm)	<0.05	<0.05	nm
1,4-Dichlorobenzene	mg/kg (ppm)	<0.05	<0.05	nm
1,2-Dichlorobenzene	mg/kg (ppm)	<0.05	<0.05	nm
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	<0.5	<0.5	nm
1,2,4-Trichlorobenzene	mg/kg (ppm)	<0.25	<0.25	nm
Hexachlorobutadiene	mg/kg (ppm)	<0.25	<0.25	nm
Naphthalene	mg/kg (ppm)	<0.05	<0.05	nm
1,2,3-Trichlorobenzene	mg/kg (ppm)	<0.25	<0.25	nm

Date of Report: 05/04/20
Date Received: 04/23/20
Project: Schnitzer NE 8th 190298, F&BI 004275

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	mg/kg (ppm)	0.05	114	119	70-130	4
Chloromethane	mg/kg (ppm)	0.05	108	110	70-130	2
Vinyl chloride	mg/kg (ppm)	0.05	109	110	70-130	1
Bromomethane	mg/kg (ppm)	0.05	104	109	70-130	5
Chloroethane	mg/kg (ppm)	0.05	108	110	70-130	2
Trichlorofluoromethane	mg/kg (ppm)	0.05	106	106	70-130	0
Acetone	mg/kg (ppm)	0.25	110	114	70-130	4
1,1-Dichloroethene	mg/kg (ppm)	0.05	114	114	70-130	0
Hexane	mg/kg (ppm)	0.05	115	118	70-130	3
Methylene chloride	mg/kg (ppm)	0.05	86	92	70-130	7
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	0.05	97	101	70-130	4
trans-1,2-Dichloroethene	mg/kg (ppm)	0.05	106	108	70-130	2
1,1-Dichloroethane	mg/kg (ppm)	0.05	103	107	70-130	4
2,2-Dichloropropane	mg/kg (ppm)	0.05	108	107	70-130	1
cis-1,2-Dichloroethene	mg/kg (ppm)	0.05	101	107	70-130	6
Chloroform	mg/kg (ppm)	0.05	99	104	70-130	5
2-Butanone (MEK)	mg/kg (ppm)	0.25	105	109	70-130	4
1,2-Dichloroethane (EDC)	mg/kg (ppm)	0.05	95	99	70-130	4
1,1,1-Trichloroethane	mg/kg (ppm)	0.05	105	107	70-130	2
1,1-Dichloropropene	mg/kg (ppm)	0.05	109	113	70-130	4
Carbon tetrachloride	mg/kg (ppm)	0.05	110	111	70-130	1
Benzene	mg/kg (ppm)	0.05	104	109	70-130	5
Trichloroethene	mg/kg (ppm)	0.05	104	109	70-130	5
1,2-Dichloropropane	mg/kg (ppm)	0.05	104	110	70-130	6
Bromodichloromethane	mg/kg (ppm)	0.05	102	109	70-130	7
Dibromomethane	mg/kg (ppm)	0.05	100	104	70-130	4
4-Methyl-2-pentanone	mg/kg (ppm)	0.25	108	111	70-130	3
cis-1,3-Dichloropropene	mg/kg (ppm)	0.05	104	113	70-130	8
Toluene	mg/kg (ppm)	0.05	98	105	70-130	7
trans-1,3-Dichloropropene	mg/kg (ppm)	0.05	100	108	70-130	8
1,1,2-Trichloroethane	mg/kg (ppm)	0.05	97	104	70-130	7
2-Hexanone	mg/kg (ppm)	0.25	103	107	70-130	4
1,3-Dichloropropane	mg/kg (ppm)	0.05	98	106	70-130	8
Tetrachloroethene	mg/kg (ppm)	0.05	103	107	70-130	4
Dibromochloromethane	mg/kg (ppm)	0.05	98	107	70-130	9
1,2-Dibromoethane (EDB)	mg/kg (ppm)	0.05	98	106	70-130	8
Chlorobenzene	mg/kg (ppm)	0.05	96	103	70-130	7
Ethylbenzene	mg/kg (ppm)	0.05	100	107	70-130	7
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	0.05	99	105	70-130	6
m,p-Xylene	mg/kg (ppm)	0.1	99	105	70-130	6
o-Xylene	mg/kg (ppm)	0.05	97	103	70-130	6
Styrene	mg/kg (ppm)	0.05	99	106	70-130	7
Isopropylbenzene	mg/kg (ppm)	0.05	101	106	70-130	5
Bromoform	mg/kg (ppm)	0.05	104	111	70-130	7
n-Propylbenzene	mg/kg (ppm)	0.05	103	109	70-130	6
Bromobenzene	mg/kg (ppm)	0.05	96	103	70-130	7
1,3,5-Trimethylbenzene	mg/kg (ppm)	0.05	100	107	70-130	7
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	0.05	101	107	70-130	6
1,2,3-Trichloropropane	mg/kg (ppm)	0.05	100	105	70-130	5
2-Chlorotoluene	mg/kg (ppm)	0.05	97	104	70-130	7
4-Chlorotoluene	mg/kg (ppm)	0.05	98	106	70-130	8
tert-Butylbenzene	mg/kg (ppm)	0.05	102	108	70-130	6
1,2,4-Trimethylbenzene	mg/kg (ppm)	0.05	96	103	70-130	7
sec-Butylbenzene	mg/kg (ppm)	0.05	103	109	70-130	6
p-Isopropyltoluene	mg/kg (ppm)	0.05	101	108	70-130	7
1,3-Dichlorobenzene	mg/kg (ppm)	0.05	96	104	70-130	8
1,4-Dichlorobenzene	mg/kg (ppm)	0.05	94	102	70-130	8
1,2-Dichlorobenzene	mg/kg (ppm)	0.05	94	101	70-130	7
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	0.05	102	103	70-130	1
1,2,4-Trichlorobenzene	mg/kg (ppm)	0.05	94	101	70-130	7
Hexachlorobutadiene	mg/kg (ppm)	0.05	96	104	70-130	8
Naphthalene	mg/kg (ppm)	0.05	96	101	70-130	5
1,2,3-Trichlorobenzene	mg/kg (ppm)	0.05	94	102	70-130	8

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. 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 lowest calibration standard. 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.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

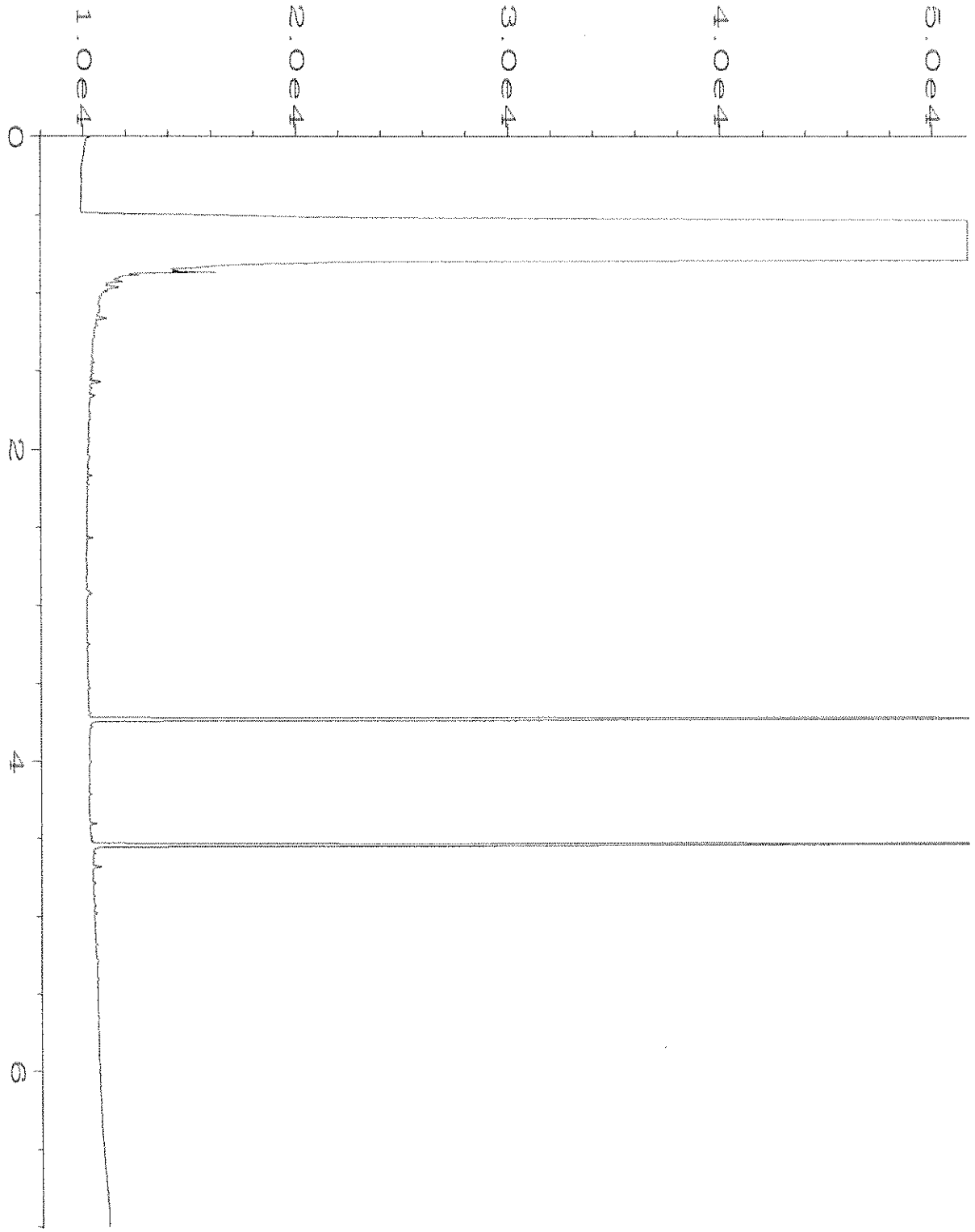
nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

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.

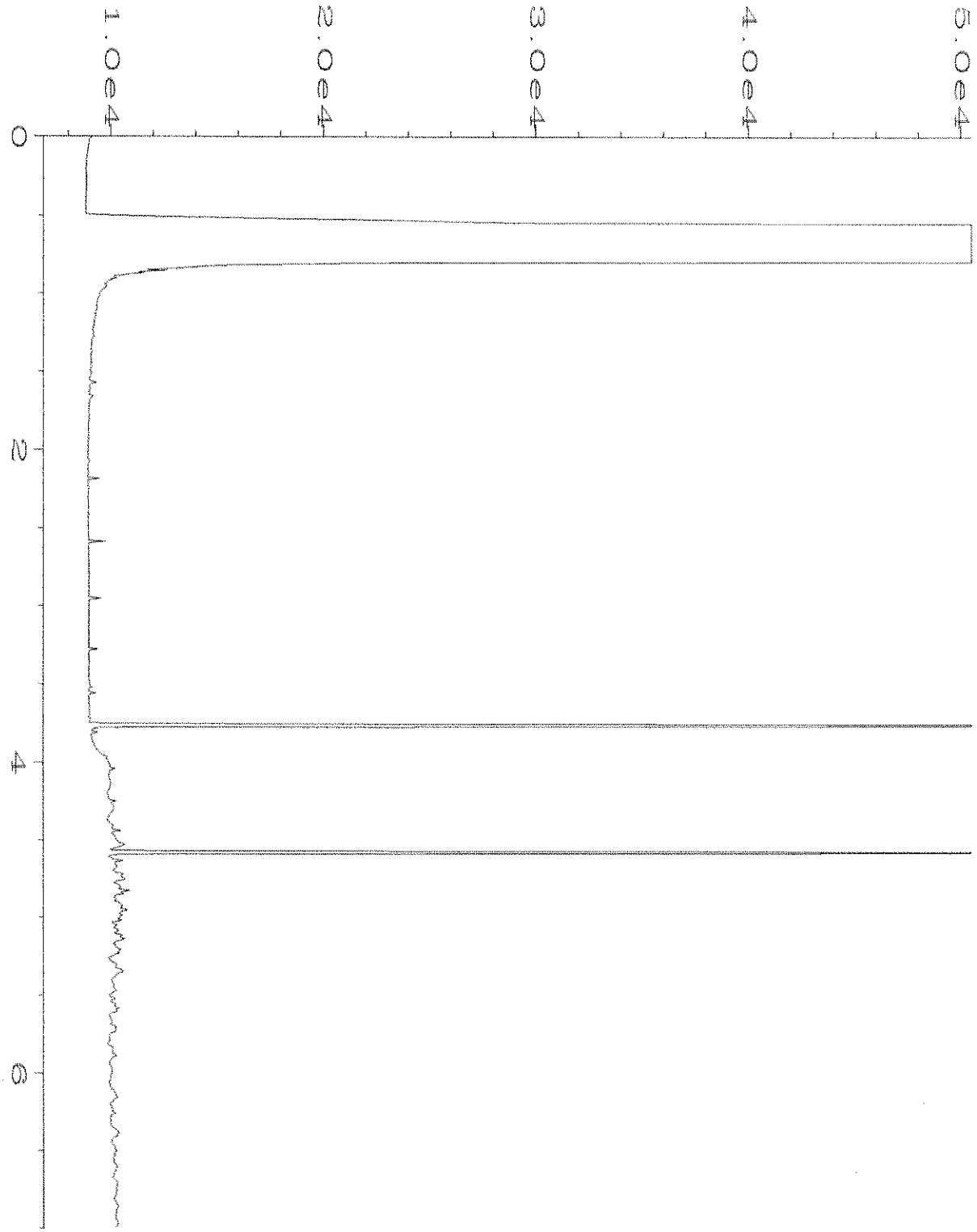
vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.



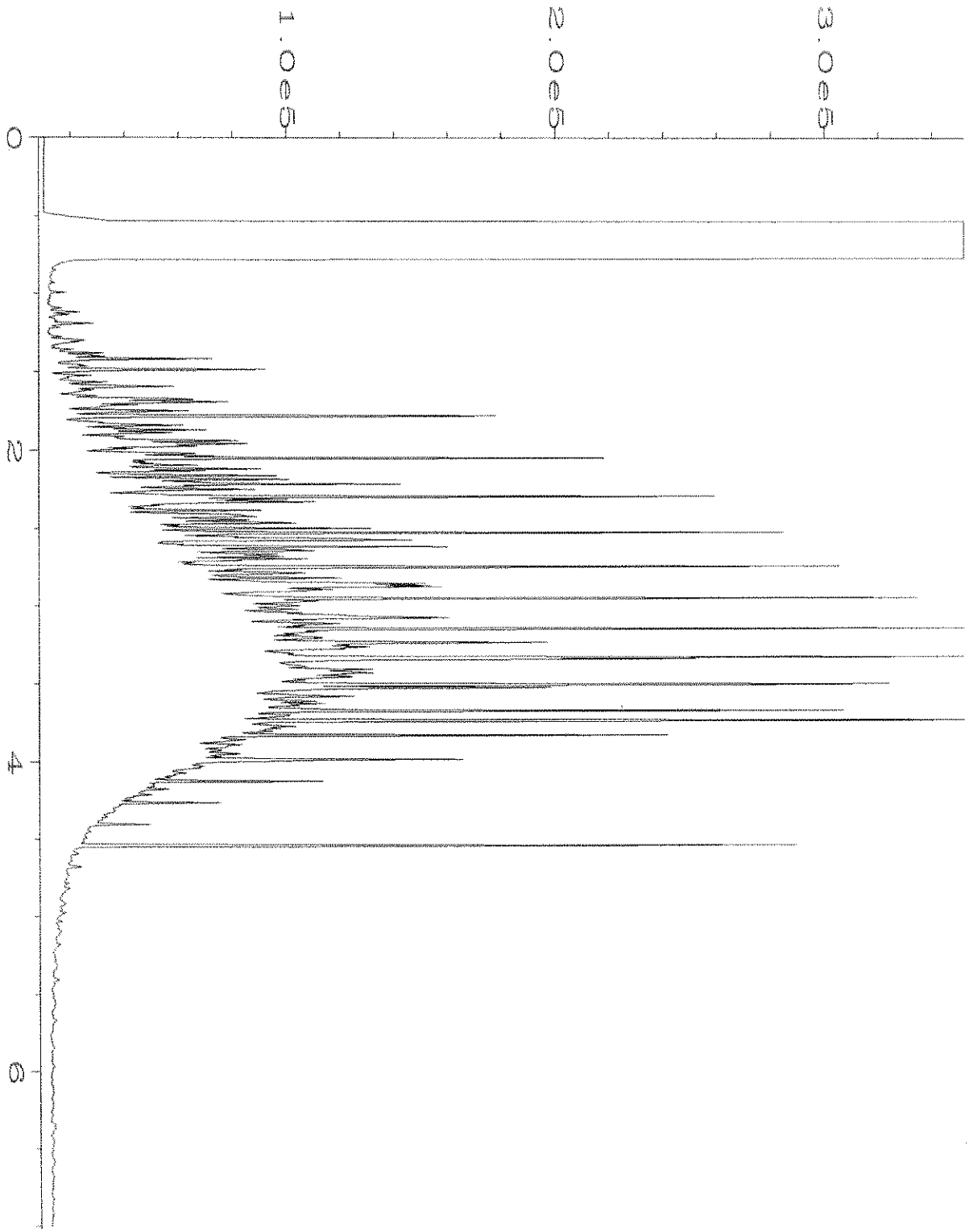
Data File Name : C:\HPCHEM\6\DATA\04-24-20\019F0401.D
Operator : TL
Instrument : GC6
Sample Name : 004275-18
Run Time Bar Code:
Acquired on : 24 Apr 20 02:14 PM
Report Created on: 27 Apr 20 08:35 AM

Page Number : 1
Vial Number : 19
Injection Number : 1
Sequence Line : 4
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH



Data File Name : C:\HPCHEM\6\DATA\04-24-20\006F0401.D
Operator : TL
Instrument : GC6
Sample Name : 00-954 mb
Run Time Bar Code:
Acquired on : 24 Apr 20 09:57 AM
Report Created on: 27 Apr 20 08:33 AM

Page Number : 1
Vial Number : 6
Injection Number : 1
Sequence Line : 4
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH



Data File Name	: C:\HPCHEM\6\DATA\04-24-20\005F0501.D		
Operator	: TL	Page Number	: 1
Instrument	: GC6	Vial Number	: 5
Sample Name	: 1000 Dx 59-162B	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 5
Acquired on	: 24 Apr 20 02:36 PM	Instrument Method	: DX.MTH
Report Created on	: 27 Apr 20 08:33 AM	Analysis Method	: DEFAULT.MTH

004275

SAMPLE CHAIN OF CUSTODY

ME 04-23-20

Page # 4 of 4 DO4

Report To A. Cochrane / Jessica Smith

Company Aspect Consulting

Address 710 2nd Ave. Ste. 550

City, State, ZIP Seattle, WA 98104

Phone (206) 838-6544 Email acochrane@aspectconsulting.com

SAMPLERS (*signature*)

PROJECT NAME: Schnitzer NE 8th

PO #: 140248

REMARKS: Project specific RLs? - Yes / No

INVOICE TO: AP

TURNAROUND TIME
- [X] Standard turnaround USS
- [ ] RUSH UWL
- 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	Total		cVOCs		Notes
AMW-7-8	01A-C	4/23/20	0754	Soil	5								X				⊠-per AC
AMW-7-12	02		0759														4/24/20 ME
AMW-7-16	03		0809														
AMW-7-23	04		0812														
AMW-7-28	05		0824														
AMW-7-33	06		0839														
AMW-7-40	07		0853														
AMW-7-44	08		0858														
AMW-7-49	09		1106														
AMW-7-53	10	↓	1113	↓	↓								↓		X		

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: David Unruh	David Unruh	Aspect Consulting	4/23/20	1622
Received by:	Khoi Hoang	FBI	4/23/20	16:22
Relinquished by:				
Received by:				

Samples received at 4 °C

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

004275

SAMPLE CHAIN OF CUSTODY

ME 04-23-20

Page # 3 of 4 DOY

Report To A. [illegible] / [illegible] Smith

Company Aspect Consulting

Address 710 2nd Ave Ste 550

City, State, ZIP Seattle WA 98104

Phone 206 838-6594 Email [illegible]

SAMPLERS (signature) [signature]

PROJECT NAME	PO #
Schnitzer NEXT	140298
REMARKS	INVOICE TO
Project specific RLs? - Yes / No	AP

TURNAROUND TIME
☒ Standard turnaround US3
☐ RUSH ___ VWI
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	Hold	MTCA 5 Metals	cVOCs		Notes
AMW-7-54	11A-E	4/22/20	1135	soil	5								X		X		
AMW-7-62	12	↓	1152	↓	↓								↓				
AMW-7-68	13		1200												X		
AMW-7-75	14		1306												X		
AMW-7-77	15		1312														
AMW-7-82	16		1317														
AMW-7-89	17	↓	1322														
AB-4-5	18	4/23/20	0843			X	X			X	X			X			
AB-4-8	19	↓	0853														
AB-4-12	20	↓	0858	↓	↓								↓				

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

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	[signature]	David Unruh	Aspect Consulting	4/23/20	1622
Received by:	[signature]	Khoi Hoang	FBI	4/23/20	1622
Relinquished by:					
Received by:					

Samples received at 4 °C

004275

SAMPLE CHAIN OF CUSTODY

ME 04-23-20

Page # 3 of 4

Report To: Ali Cochrane / Jessica Smith

Company: Aspect Consulting

Address: 710 2nd Ave, Ste. 550

City, State, ZIP: Seattle, WA, 98104

Phone: (206) 838-6594 Email: acochrane@aspectconsulting.com

SAMPLERS (signature): [signature]

PROJECT NAME: Schnitzer NE 8th

PO #: 140298

REMARKS:

Project specific RLs? - Yes / No

INVOICE TO: AP

TURNAROUND TIME: X Standard turnaround; RUSH ___; Rush charges authorized by: ___ US3 VWI

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	Hold		cVOCs		Notes
AB-4-20	21A-E	4/23/20	0910	Soil	5								X				
AB-4-23	22	↓	0915	↓	↓								↓				
AB-4-27	23		0923														
AB-4-33	24		0928														
AB-4-37	25		1050														
AB-4-42	26		1031														
AB-4-48	27		1239														
AB-4-55	28		1244												X		
AB-4-60	29		1309														
AB-4-62	30	↓	1338	↓	↓								↓				

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

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	[signature]	David Unruh	Aspect Consulting	4/23/20	1622
Received by:	[signature]	Khoi Hoang	FBI	4/23/20	1622
Relinquished by:					
Received by:					

Samples received at 4 °C

00 4275

SAMPLE CHAIN OF CUSTODY

ME 04-23-20

Page # 4 of 4 PO4

Report To Ali Cochrane / Jessica Smith

Company Aspect Consulting

Address 710 2nd Ave, Ste. 550

City, State, ZIP Seattle, WA, 98104

Phone (206) 838-6594 Email acochrane@aspectconsulting.com

SAMPLERS (signature) David Unruh

PROJECT NAME: Schnitzer NE 8th

PO #: 190298

REMARKS

Project specific RLs? - Yes / No

INVOICE TO: AP

TURNAROUND TIME

X Standard turnaround VS3

☐ RUSH VW1

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	1631		cVOCs		Notes
AB-4-67	31 A-E	4/23/20	1356	Soil	5								X				
AB-4-73	32		1401														
AB-4-77	33		1441												X		
AB-4-82	34		1447														
AB-4-90	35		1455														
Trip Blank	36	—	—	AQ	2												

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: David Unruh	David Unruh	Aspect Consulting	4/23/20	1622
Received by: KM	Khoi Hoang	FBI	4/23/20	1622
Relinquished by:				
Received by:		Samples received at 4 °C		

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
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Michael Erdahl, B.S.
Arina Podnozova, B.S.
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May 6, 2020

Ali Cochrane, Project Manager
Aspect Consulting, LLC
710 2nd Ave S, Suite 550
Seattle, WA 98104

Dear Ms Cochrane:

Included are the results from the testing of material submitted on April 24, 2020 from the Schnitzer NE 8th 190298, F&BI 004296 project. There are 21 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 have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Data Aspect, Jessica Smith
ASP0506R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on April 24, 2020 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Schnitzer NE 8th 190298, F&BI 004296 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
004296 -01	AMW-9-5
004296 -02	AMW-9-7
004296 -03	AMW-9-13
004296 -04	AMW-9-18
004296 -05	AMW-9-23
004296 -06	AMW-9-28
004296 -07	AMW-9-32
004296 -08	AMW-9-35
004296 -09	AMW-9-41
004296 -10	AMW-9-47
004296 -11	AMW-9-51
004296 -12	AMW-9-57
004296 -13	AMW-9-61
004296 -14	AMW-9-67
004296 -15	AMW-9-74
004296 -16	AMW-9-79
004296 -17	AMW-9-82
004296 -18	AMW-9-87
004296 -19	Trip Blank

Sample AMW-9-5 was extracted from a 4 ounce jar. The data were flagged accordingly.

An 8270D internal standard failed the acceptance criteria for sample AMW-9-5. The sample was diluted and reanalyzed with acceptable results. Both data sets were reported.

All other quality control requirements were acceptable.

Date of Report: 05/06/20
Date Received: 04/24/20
Project: Schnitzer NE 8th 190298, F&BI 004296
Date Extracted: 04/30/20
Date Analyzed: 05/01/20

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

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

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
AMW-9-5 pc 004296-01	<5	100
Method Blank 00-869 MB	<5	100

Date of Report: 05/06/20
Date Received: 04/24/20
Project: Schnitzer NE 8th 190298, F&BI 004296
Date Extracted: 04/29/20
Date Analyzed: 04/29/20

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 53-144)
AMW-9-5 004296-01	110 x	420 x	94
Method Blank 00-981 MB	<50	<250	94

Analysis For Total Metals By EPA Method 6020B

Client ID:	AMW-9-5	Client:	Aspect Consulting, LLC
Date Received:	04/24/20	Project:	Schnitzer NE 8th 190298
Date Extracted:	04/30/20	Lab ID:	004296-01
Date Analyzed:	05/01/20	Data File:	004296-01.128
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.47
Cadmium	<1
Chromium	13.9
Lead	4.15
Mercury	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Schnitzer NE 8th 190298
Date Extracted:	04/30/20	Lab ID:	I0-246 mb2
Date Analyzed:	04/30/20	Data File:	I0-246 mb2.086
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Cadmium	<1
Chromium	<1
Lead	<1
Mercury	<1

Analysis For Semivolatile Compounds By EPA Method 8270E SIM

Client Sample ID:	AMW-9-5	Client:	Aspect Consulting, LLC
Date Received:	04/24/20	Project:	Schnitzer NE 8th 190298
Date Extracted:	04/30/20	Lab ID:	004296-01 1/5
Date Analyzed:	05/01/20	Data File:	043031.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	69	31	163
Benzo(a)anthracene-d12	92	24	168

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<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 J
Benzo(b)fluoranthene	<0.01 J
Benzo(k)fluoranthene	<0.01 J
Indeno(1,2,3-cd)pyrene	<0.01 J
Dibenz(a,h)anthracene	<0.01 J
Benzo(g,h,i)perylene	<0.01 J

Analysis For Semivolatile Compounds By EPA Method 8270E SIM

Client Sample ID:	AMW-9-5	Client:	Aspect Consulting, LLC
Date Received:	04/24/20	Project:	Schnitzer NE 8th 190298
Date Extracted:	04/30/20	Lab ID:	004296-01 1/25
Date Analyzed:	05/01/20	Data File:	050111.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	74 d	31	163
Benzo(a)anthracene-d12	86 d	24	168

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<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 SIM

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Schnitzer NE 8th 190298
Date Extracted:	04/30/20	Lab ID:	00-983 mb 1/5
Date Analyzed:	04/30/20	Data File:	043020.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	77	31	163
Benzo(a)anthracene-d12	96	24	168

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<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 Volatile Compounds By EPA Method 8260D Direct Sparge

Client Sample ID:	AMW-9-5	Client:	Aspect Consulting, LLC
Date Received:	04/24/20	Project:	Schnitzer NE 8th 190298
Date Extracted:	04/29/20	Lab ID:	004296-01
Date Analyzed:	04/29/20	Data File:	042931.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	50	150
Toluene-d8	104	50	150
4-Bromofluorobenzene	117	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.05	1,3-Dichloropropane	<0.005
Chloromethane	<0.05	Tetrachloroethene	<0.005
Vinyl chloride	<0.005	Dibromochloromethane	<0.005
Bromomethane	<0.05	1,2-Dibromoethane (EDB)	<0.005
Chloroethane	<0.05	Chlorobenzene	<0.005
Trichlorofluoromethane	<0.05	Ethylbenzene	<0.005
Acetone	<0.1	1,1,1,2-Tetrachloroethane	<0.005
1,1-Dichloroethene	<0.005	m,p-Xylene	<0.01
Hexane	<0.025	o-Xylene	<0.005
Methylene chloride	<0.05	Styrene	<0.005
Methyl t-butyl ether (MTBE)	<0.005	Isopropylbenzene	<0.005
trans-1,2-Dichloroethene	<0.005	Bromoform	<0.005
1,1-Dichloroethane	<0.005	n-Propylbenzene	<0.005
2,2-Dichloropropane	<0.005	Bromobenzene	<0.005
cis-1,2-Dichloroethene	<0.005	1,3,5-Trimethylbenzene	<0.005
Chloroform	<0.005	1,1,2,2-Tetrachloroethane	<0.005
2-Butanone (MEK)	<0.05	1,2,3-Trichloropropane	<0.005
1,2-Dichloroethane (EDC)	<0.005	2-Chlorotoluene	<0.005
1,1,1-Trichloroethane	<0.005	4-Chlorotoluene	<0.005
1,1-Dichloropropene	<0.005	tert-Butylbenzene	<0.005
Carbon tetrachloride	<0.005	1,2,4-Trimethylbenzene	<0.005
Benzene	<0.003	sec-Butylbenzene	<0.005
Trichloroethene	<0.003	p-Isopropyltoluene	0.087
1,2-Dichloropropane	<0.005	1,3-Dichlorobenzene	<0.005
Bromodichloromethane	<0.005	1,4-Dichlorobenzene	<0.005
Dibromomethane	<0.005	1,2-Dichlorobenzene	<0.005
4-Methyl-2-pentanone	<0.05	1,2-Dibromo-3-chloropropane	<0.05
cis-1,3-Dichloropropene	<0.005	1,2,4-Trichlorobenzene	<0.025
Toluene	<0.005	Hexachlorobutadiene	<0.025
trans-1,3-Dichloropropene	<0.005	Naphthalene	<0.005
1,1,2-Trichloroethane	<0.005	1,2,3-Trichlorobenzene	<0.025
2-Hexanone	<0.05		

Analysis For Volatile Compounds By EPA Method 8260D Direct Sparge

Client Sample ID:	AMW-9-28	Client:	Aspect Consulting, LLC
Date Received:	04/24/20	Project:	Schnitzer NE 8th 190298
Date Extracted:	04/29/20	Lab ID:	004296-06
Date Analyzed:	04/29/20	Data File:	042932.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	105	50	150
Toluene-d8	105	50	150
4-Bromofluorobenzene	101	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Analysis For Volatile Compounds By EPA Method 8260D Direct Sparge

Client Sample ID:	AMW-9-35	Client:	Aspect Consulting, LLC
Date Received:	04/24/20	Project:	Schnitzer NE 8th 190298
Date Extracted:	04/29/20	Lab ID:	004296-08
Date Analyzed:	04/29/20	Data File:	042933.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	105	50	150
Toluene-d8	106	50	150
4-Bromofluorobenzene	102	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Analysis For Volatile Compounds By EPA Method 8260D Direct Sparge

Client Sample ID:	AMW-9-51	Client:	Aspect Consulting, LLC
Date Received:	04/24/20	Project:	Schnitzer NE 8th 190298
Date Extracted:	04/29/20	Lab ID:	004296-11
Date Analyzed:	04/29/20	Data File:	042934.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	109	50	150
Toluene-d8	105	50	150
4-Bromofluorobenzene	102	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Analysis For Volatile Compounds By EPA Method 8260D Direct Sparge

Client Sample ID:	AMW-9-67	Client:	Aspect Consulting, LLC
Date Received:	04/24/20	Project:	Schnitzer NE 8th 190298
Date Extracted:	04/29/20	Lab ID:	004296-14
Date Analyzed:	04/29/20	Data File:	042935.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	50	150
Toluene-d8	105	50	150
4-Bromofluorobenzene	105	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Analysis For Volatile Compounds By EPA Method 8260D Direct Sparge

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Schnitzer NE 8th 190298
Date Extracted:	04/29/20	Lab ID:	00-949 mb
Date Analyzed:	04/29/20	Data File:	042919.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	50	150
Toluene-d8	103	50	150
4-Bromofluorobenzene	103	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.05	1,3-Dichloropropane	<0.005
Chloromethane	<0.05	Tetrachloroethene	<0.005
Vinyl chloride	<0.005	Dibromochloromethane	<0.005
Bromomethane	<0.05	1,2-Dibromoethane (EDB)	<0.005
Chloroethane	<0.05	Chlorobenzene	<0.005
Trichlorofluoromethane	<0.05	Ethylbenzene	<0.005
Acetone	<0.1	1,1,1,2-Tetrachloroethane	<0.005
1,1-Dichloroethene	<0.005	m,p-Xylene	<0.01
Hexane	<0.025	o-Xylene	<0.005
Methylene chloride	<0.05	Styrene	<0.005
Methyl t-butyl ether (MTBE)	<0.005	Isopropylbenzene	<0.005
trans-1,2-Dichloroethene	<0.005	Bromoform	<0.005
1,1-Dichloroethane	<0.005	n-Propylbenzene	<0.005
2,2-Dichloropropane	<0.005	Bromobenzene	<0.005
cis-1,2-Dichloroethene	<0.005	1,3,5-Trimethylbenzene	<0.005
Chloroform	<0.005	1,1,2,2-Tetrachloroethane	<0.005
2-Butanone (MEK)	<0.05	1,2,3-Trichloropropane	<0.005
1,2-Dichloroethane (EDC)	<0.005	2-Chlorotoluene	<0.005
1,1,1-Trichloroethane	<0.005	4-Chlorotoluene	<0.005
1,1-Dichloropropene	<0.005	tert-Butylbenzene	<0.005
Carbon tetrachloride	<0.005	1,2,4-Trimethylbenzene	<0.005
Benzene	<0.003	sec-Butylbenzene	<0.005
Trichloroethene	<0.003	p-Isopropyltoluene	<0.005
1,2-Dichloropropane	<0.005	1,3-Dichlorobenzene	<0.005
Bromodichloromethane	<0.005	1,4-Dichlorobenzene	<0.005
Dibromomethane	<0.005	1,2-Dichlorobenzene	<0.005
4-Methyl-2-pentanone	<0.05	1,2-Dibromo-3-chloropropane	<0.05
cis-1,3-Dichloropropene	<0.005	1,2,4-Trichlorobenzene	<0.025
Toluene	<0.005	Hexachlorobutadiene	<0.025
trans-1,3-Dichloropropene	<0.005	Naphthalene	<0.005
1,1,2-Trichloroethane	<0.005	1,2,3-Trichlorobenzene	<0.025
2-Hexanone	<0.05		

Date of Report: 05/06/20
Date Received: 04/24/20
Project: Schnitzer NE 8th 190298, F&BI 004296

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TPH AS GASOLINE USING METHOD NWTPH-Gx

Laboratory Code: 004347-05 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Gasoline	mg/kg (ppm)	<5	<5	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	mg/kg (ppm)	20	100	71-131

Date of Report: 05/06/20
Date Received: 04/24/20
Project: Schnitzer NE 8th 190298, F&BI 004296

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

Laboratory Code: 004296-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	310	101	105	64-133	4

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	108	58-147

Date of Report: 05/06/20
Date Received: 04/24/20
Project: Schnitzer NE 8th 190298, F&BI 004296

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

Laboratory Code: 004327-01 x5 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	17.3	0 b	0 b	75-125	0 b
Cadmium	mg/kg (ppm)	10	<5	95	92	75-125	3
Chromium	mg/kg (ppm)	50	14.2	87	85	75-125	2
Lead	mg/kg (ppm)	50	21.7	74 b	75 b	75-125	1 b
Mercury	mg/kg (ppm	5	<5	92	87	75-125	6

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	83	80-120
Cadmium	mg/kg (ppm)	10	102	80-120
Chromium	mg/kg (ppm)	50	96	80-120
Lead	mg/kg (ppm)	50	95	80-120
Mercury	mg/kg (ppm)	5	99	80-120

Date of Report: 05/06/20
Date Received: 04/24/20
Project: Schnitzer NE 8th 190298, F&BI 004296

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

Laboratory Code: 004296-01 1/5 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Acceptance Criteria
Naphthalene	mg/kg (ppm)	0.17	<0.01	62	44-129
Acenaphthylene	mg/kg (ppm)	0.17	<0.01	68	52-121
Acenaphthene	mg/kg (ppm)	0.17	<0.01	68	51-123
Fluorene	mg/kg (ppm)	0.17	<0.01	72	37-137
Phenanthrene	mg/kg (ppm)	0.17	<0.01	73	34-141
Anthracene	mg/kg (ppm)	0.17	<0.01	74	32-124
Fluoranthene	mg/kg (ppm)	0.17	<0.01	73	16-160
Pyrene	mg/kg (ppm)	0.17	<0.01	121	10-180
Benz(a)anthracene	mg/kg (ppm)	0.17	<0.01	80	23-144
Chrysene	mg/kg (ppm)	0.17	<0.01	75	32-149
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	<0.01 J	93 J	23-176
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	<0.01 J	94 J	42-139
Benzo(a)pyrene	mg/kg (ppm)	0.17	<0.01 J	76 J	21-163
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	<0.01 J	42 J	23-170
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	<0.01 J	44 J	31-146
Benzo(g,h,i)perylene	mg/kg (ppm)	0.17	<0.01 J	38 J	37-133

Laboratory Code: Laboratory Control Sample 1/5

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	mg/kg (ppm)	0.17	80	81	58-121	1
Acenaphthylene	mg/kg (ppm)	0.17	77	78	54-121	1
Acenaphthene	mg/kg (ppm)	0.17	77	79	54-123	3
Fluorene	mg/kg (ppm)	0.17	79	80	56-127	1
Phenanthrene	mg/kg (ppm)	0.17	85	87	55-122	2
Anthracene	mg/kg (ppm)	0.17	81	84	50-120	4
Fluoranthene	mg/kg (ppm)	0.17	86	86	54-129	0
Pyrene	mg/kg (ppm)	0.17	87	87	53-127	0
Benz(a)anthracene	mg/kg (ppm)	0.17	89	94	51-115	5
Chrysene	mg/kg (ppm)	0.17	90	94	55-129	4
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	81	82	56-123	1
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	80	82	54-131	2
Benzo(a)pyrene	mg/kg (ppm)	0.17	74	78	51-118	5
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	73	78	49-148	7
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	77	82	50-141	6
Benzo(g,h,i)perylene	mg/kg (ppm)	0.17	72	78	52-131	8

Date of Report: 05/06/20
Date Received: 04/24/20
Project: Schnitzer NE 8th 190298, F&BI 004296

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

Laboratory Code: 004275-10 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet wt)	Duplicate Result (Wet wt)	RPD (Limit 20)
Dichlorodifluoromethane	mg/kg (ppm)	<0.5	<0.5	nm
Chloromethane	mg/kg (ppm)	<0.5	<0.5	nm
Vinyl chloride	mg/kg (ppm)	<0.05	<0.05	nm
Bromomethane	mg/kg (ppm)	<0.5	<0.5	nm
Chloroethane	mg/kg (ppm)	<0.5	<0.5	nm
Trichlorofluoromethane	mg/kg (ppm)	<0.5	<0.5	nm
Acetone	mg/kg (ppm)	<0.5	<0.5	nm
1,1-Dichloroethene	mg/kg (ppm)	<0.05	<0.05	nm
Hexane	mg/kg (ppm)	<0.25	<0.25	nm
Methylene chloride	mg/kg (ppm)	<0.5	<0.5	nm
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	<0.05	<0.05	nm
trans-1,2-Dichloroethene	mg/kg (ppm)	<0.05	<0.05	nm
1,1-Dichloroethane	mg/kg (ppm)	<0.05	<0.05	nm
2,2-Dichloropropane	mg/kg (ppm)	<0.05	<0.05	nm
cis-1,2-Dichloroethene	mg/kg (ppm)	<0.05	<0.05	nm
Chloroform	mg/kg (ppm)	<0.05	<0.05	nm
2-Butanone (MEK)	mg/kg (ppm)	<0.5	<0.5	nm
1,2-Dichloroethane (EDC)	mg/kg (ppm)	<0.05	<0.05	nm
1,1,1-Trichloroethane	mg/kg (ppm)	<0.05	<0.05	nm
1,1-Dichloropropene	mg/kg (ppm)	<0.05	<0.05	nm
Carbon tetrachloride	mg/kg (ppm)	<0.05	<0.05	nm
Benzene	mg/kg (ppm)	<0.03	<0.03	nm
Trichloroethene	mg/kg (ppm)	<0.03	<0.03	nm
1,2-Dichloropropane	mg/kg (ppm)	<0.05	<0.05	nm
Bromodichloromethane	mg/kg (ppm)	<0.05	<0.05	nm
Dibromomethane	mg/kg (ppm)	<0.05	<0.05	nm
4-Methyl-2-pentanone	mg/kg (ppm)	<0.5	<0.5	nm
cis-1,3-Dichloropropene	mg/kg (ppm)	<0.05	<0.05	nm
Toluene	mg/kg (ppm)	<0.05	<0.05	nm
trans-1,3-Dichloropropene	mg/kg (ppm)	<0.05	<0.05	nm
1,1,2-Trichloroethane	mg/kg (ppm)	<0.05	<0.05	nm
2-Hexanone	mg/kg (ppm)	<0.5	<0.5	nm
1,3-Dichloropropane	mg/kg (ppm)	<0.05	<0.05	nm
Tetrachloroethene	mg/kg (ppm)	<0.025	<0.025	nm
Dibromochloromethane	mg/kg (ppm)	<0.05	<0.05	nm
1,2-Dibromoethane (EDB)	mg/kg (ppm)	<0.05	<0.05	nm
Chlorobenzene	mg/kg (ppm)	<0.05	<0.05	nm
Ethylbenzene	mg/kg (ppm)	<0.05	<0.05	nm
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	<0.05	<0.05	nm
m,p-Xylene	mg/kg (ppm)	<0.1	<0.1	nm
o-Xylene	mg/kg (ppm)	<0.05	<0.05	nm
Styrene	mg/kg (ppm)	<0.05	<0.05	nm
Isopropylbenzene	mg/kg (ppm)	<0.05	<0.05	nm
Bromoform	mg/kg (ppm)	<0.05	<0.05	nm
n-Propylbenzene	mg/kg (ppm)	<0.05	<0.05	nm
Bromobenzene	mg/kg (ppm)	<0.05	<0.05	nm
1,3,5-Trimethylbenzene	mg/kg (ppm)	<0.05	<0.05	nm
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	<0.05	<0.05	nm
1,2,3-Trichloropropane	mg/kg (ppm)	<0.05	<0.05	nm
2-Chlorotoluene	mg/kg (ppm)	<0.05	<0.05	nm
4-Chlorotoluene	mg/kg (ppm)	<0.05	<0.05	nm
tert-Butylbenzene	mg/kg (ppm)	<0.05	<0.05	nm
1,2,4-Trimethylbenzene	mg/kg (ppm)	<0.05	<0.05	nm
sec-Butylbenzene	mg/kg (ppm)	<0.05	<0.05	nm
p-Isopropyltoluene	mg/kg (ppm)	<0.05	<0.05	nm
1,3-Dichlorobenzene	mg/kg (ppm)	<0.05	<0.05	nm
1,4-Dichlorobenzene	mg/kg (ppm)	<0.05	<0.05	nm
1,2-Dichlorobenzene	mg/kg (ppm)	<0.05	<0.05	nm
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	<0.5	<0.5	nm
1,2,4-Trichlorobenzene	mg/kg (ppm)	<0.25	<0.25	nm
Hexachlorobutadiene	mg/kg (ppm)	<0.25	<0.25	nm
Naphthalene	mg/kg (ppm)	<0.05	<0.05	nm
1,2,3-Trichlorobenzene	mg/kg (ppm)	<0.25	<0.25	nm

Date of Report: 05/06/20
Date Received: 04/24/20
Project: Schnitzer NE 8th 190298, F&BI 004296

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	mg/kg (ppm)	0.05	114	119	70-130	4
Chloromethane	mg/kg (ppm)	0.05	108	110	70-130	2
Vinyl chloride	mg/kg (ppm)	0.05	109	110	70-130	1
Bromomethane	mg/kg (ppm)	0.05	104	109	70-130	5
Chloroethane	mg/kg (ppm)	0.05	108	110	70-130	2
Trichlorofluoromethane	mg/kg (ppm)	0.05	106	106	70-130	0
Acetone	mg/kg (ppm)	0.25	110	114	70-130	4
1,1-Dichloroethene	mg/kg (ppm)	0.05	114	114	70-130	0
Hexane	mg/kg (ppm)	0.05	115	118	70-130	3
Methylene chloride	mg/kg (ppm)	0.05	86	92	70-130	7
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	0.05	97	101	70-130	4
trans-1,2-Dichloroethene	mg/kg (ppm)	0.05	106	108	70-130	2
1,1-Dichloroethane	mg/kg (ppm)	0.05	103	107	70-130	4
2,2-Dichloropropane	mg/kg (ppm)	0.05	108	107	70-130	1
cis-1,2-Dichloroethene	mg/kg (ppm)	0.05	101	107	70-130	6
Chloroform	mg/kg (ppm)	0.05	99	104	70-130	5
2-Butanone (MEK)	mg/kg (ppm)	0.25	105	109	70-130	4
1,2-Dichloroethane (EDC)	mg/kg (ppm)	0.05	95	99	70-130	4
1,1,1-Trichloroethane	mg/kg (ppm)	0.05	105	107	70-130	2
1,1-Dichloropropene	mg/kg (ppm)	0.05	109	113	70-130	4
Carbon tetrachloride	mg/kg (ppm)	0.05	110	111	70-130	1
Benzene	mg/kg (ppm)	0.05	104	109	70-130	5
Trichloroethene	mg/kg (ppm)	0.05	104	109	70-130	5
1,2-Dichloropropane	mg/kg (ppm)	0.05	104	110	70-130	6
Bromodichloromethane	mg/kg (ppm)	0.05	102	109	70-130	7
Dibromomethane	mg/kg (ppm)	0.05	100	104	70-130	4
4-Methyl-2-pentanone	mg/kg (ppm)	0.25	108	111	70-130	3
cis-1,3-Dichloropropene	mg/kg (ppm)	0.05	104	113	70-130	8
Toluene	mg/kg (ppm)	0.05	98	105	70-130	7
trans-1,3-Dichloropropene	mg/kg (ppm)	0.05	100	108	70-130	8
1,1,2-Trichloroethane	mg/kg (ppm)	0.05	97	104	70-130	7
2-Hexanone	mg/kg (ppm)	0.25	103	107	70-130	4
1,3-Dichloropropane	mg/kg (ppm)	0.05	98	106	70-130	8
Tetrachloroethene	mg/kg (ppm)	0.05	103	107	70-130	4
Dibromochloromethane	mg/kg (ppm)	0.05	98	107	70-130	9
1,2-Dibromoethane (EDB)	mg/kg (ppm)	0.05	98	106	70-130	8
Chlorobenzene	mg/kg (ppm)	0.05	96	103	70-130	7
Ethylbenzene	mg/kg (ppm)	0.05	100	107	70-130	7
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	0.05	99	105	70-130	6
m,p-Xylene	mg/kg (ppm)	0.1	99	105	70-130	6
o-Xylene	mg/kg (ppm)	0.05	97	103	70-130	6
Styrene	mg/kg (ppm)	0.05	99	106	70-130	7
Isopropylbenzene	mg/kg (ppm)	0.05	101	106	70-130	5
Bromoform	mg/kg (ppm)	0.05	104	111	70-130	7
n-Propylbenzene	mg/kg (ppm)	0.05	103	109	70-130	6
Bromobenzene	mg/kg (ppm)	0.05	96	103	70-130	7
1,3,5-Trimethylbenzene	mg/kg (ppm)	0.05	100	107	70-130	7
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	0.05	101	107	70-130	6
1,2,3-Trichloropropane	mg/kg (ppm)	0.05	100	105	70-130	5
2-Chlorotoluene	mg/kg (ppm)	0.05	97	104	70-130	7
4-Chlorotoluene	mg/kg (ppm)	0.05	98	106	70-130	8
tert-Butylbenzene	mg/kg (ppm)	0.05	102	108	70-130	6
1,2,4-Trimethylbenzene	mg/kg (ppm)	0.05	96	103	70-130	7
sec-Butylbenzene	mg/kg (ppm)	0.05	103	109	70-130	6
p-Isopropyltoluene	mg/kg (ppm)	0.05	101	108	70-130	7
1,3-Dichlorobenzene	mg/kg (ppm)	0.05	96	104	70-130	8
1,4-Dichlorobenzene	mg/kg (ppm)	0.05	94	102	70-130	8
1,2-Dichlorobenzene	mg/kg (ppm)	0.05	94	101	70-130	7
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	0.05	102	103	70-130	1
1,2,4-Trichlorobenzene	mg/kg (ppm)	0.05	94	101	70-130	7
Hexachlorobutadiene	mg/kg (ppm)	0.05	96	104	70-130	8
Naphthalene	mg/kg (ppm)	0.05	96	101	70-130	5
1,2,3-Trichlorobenzene	mg/kg (ppm)	0.05	94	102	70-130	8

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. 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 lowest calibration standard. 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.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

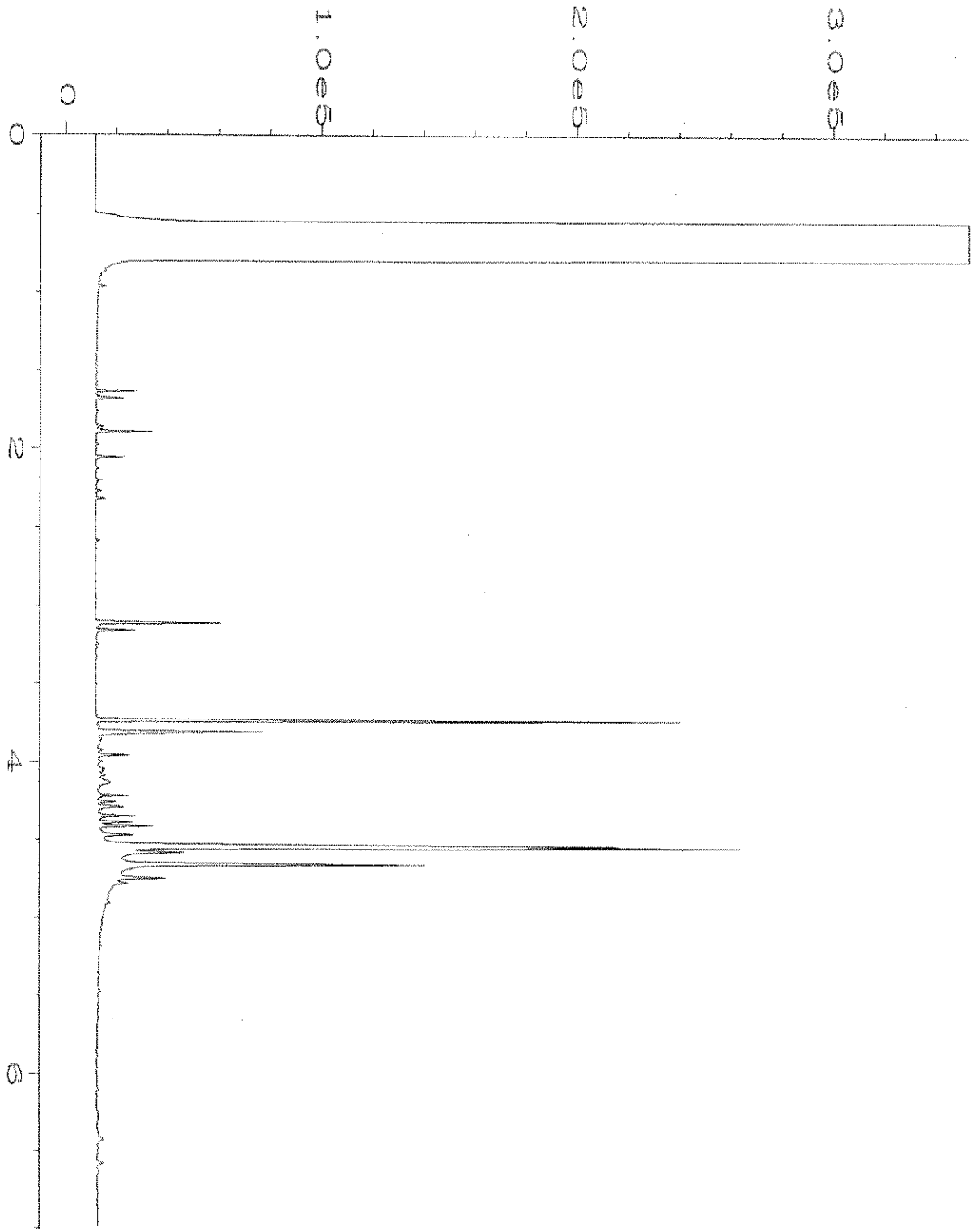
nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

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.

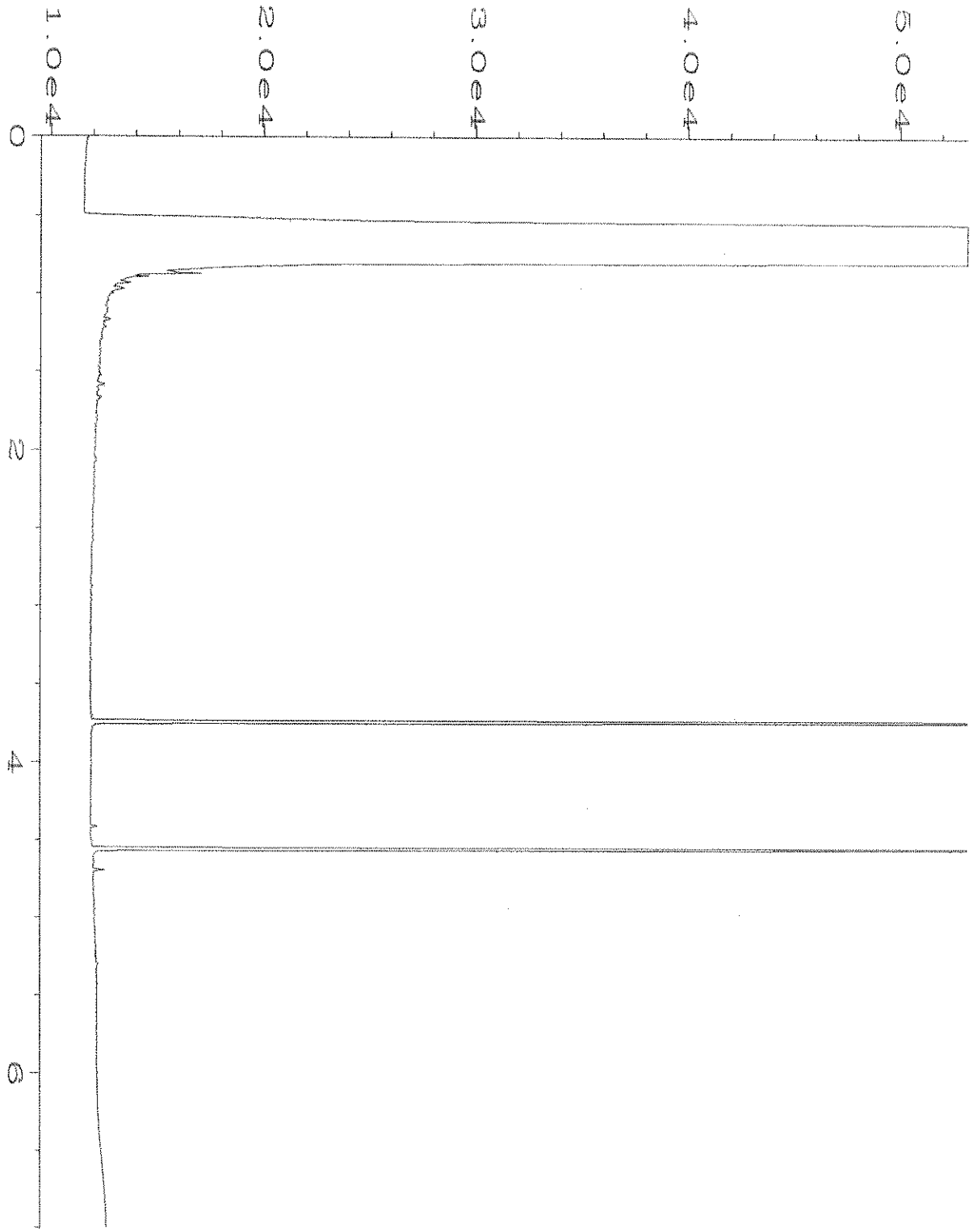
vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

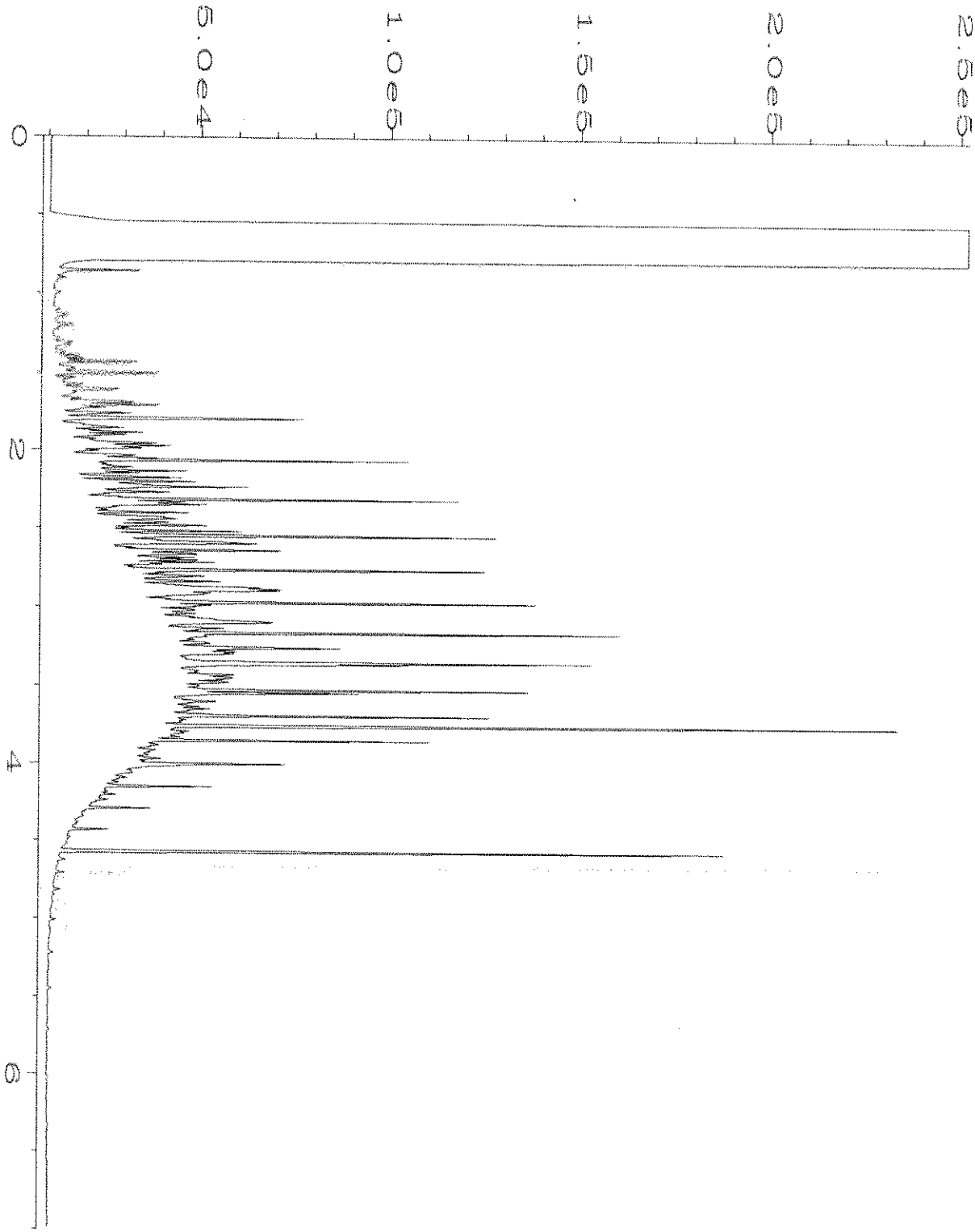


Data File Name : C:\HPCHEM\6\DATA\04-29-20\028F0301.D
Operator : TL
Instrument : GC6
Sample Name : 004296-01
Run Time Bar Code:
Acquired on : 29 Apr 20 02:01 PM
Report Created on: 30 Apr 20 06:42 AM

Page Number : 1
Vial Number : 28
Injection Number : 1
Sequence Line : 3
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH



Data File Name	: C:\HPCHEM\6\DATA\04-29-20\024F0301.D		
Operator	: TL	Page Number	: 1
Instrument	: GC6	Vial Number	: 24
Sample Name	: 00-981 mb	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 3
Acquired on	: 29 Apr 20 01:18 PM	Instrument Method	: DX.MTH
Report Created on:	30 Apr 20 06:46 AM	Analysis Method	: DEFAULT.MTH



Data File Name : C:\HPCHEM\6\DATA\04-29-20\003F0201.D
Operator : TL
Instrument : GC6
Sample Name : 500 Dx 58-146H
Run Time Bar Code:
Acquired on : 29 Apr 20 06:02 AM
Report Created on: 30 Apr 20 06:46 AM

Page Number : 1
Vial Number : 3
Injection Number : 1
Sequence Line : 2
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH

004296 [redacted]

SAMPLE CHAIN OF CUSTODY

ME 04-24-20 [redacted]

Page # 1 of 2 D03

Report To Ali Cochrane/Jessica Smith

Company Aspect Consulting

Address 710 2nd Ave, Ste. 550

City, State, ZIP Seattle, WA 98104

Phone (206) 838-6544 Email acochrane@aspectconsulting.com

SAMPLERS (*signature*) [signature]

PROJECT NAME: Schnitzer NE 8th

PO #: 140248

REMARKS

Project specific RLs? - Yes / (No)

INVOICE TO: AP

TURNAROUND TIME
- X Standard turnaround
- ☐ RUSH
- Rush charges authorized by:

UWI
VS5

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	Hold	MTCA 5 Metals	cVOCs		Notes
AMW-9-5	01 A-E	4/24/20	0759	Soil	5	X	X			X	X		X	X			☒ per AC 4/29/20 ME
AMW-9-7	02	↓	0805	↓	↓								↓				
AMW-9-13	03		0810														
AMW-9-18	04		0817														
AMW-9-23	05		0823														
AMW-9-28	06		0832												X		
AMW-9-32	07		0837														
AMW-9-35	08		0847												X		
AMW-9-41	09		0853														
AMW-9-47	10	↓	1111	↓	↓								↓				

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

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	[signature]	David Unruh	Aspect Consulting	4/24/20	1500
Received by:	[signature]	Nhan Phan	FeBI	4/24/20	1500
Relinquished by:					
Received by:			Samples received at 3 °C		

004296

SAMPLE CHAIN OF CUSTODY

ME 04-24-20

Page # 2 of 2 DO3

Report To Ali Cochrane / Jessica Smith
Company Aspect Consulting
Address 710 2nd Ave, Ste. 550
City, State, ZIP Seattle, WA 98104
Phone (206) 838-6594 Email acochrane@aspectconsulting.com

SAMPLERS (*signature*) David Unruh

PROJECT NAME: Schnitzer NE 8th
PO #: 190248

REMARKS
Project specific RLs? - Yes / (No)

INVOICE TO: AP

TURNAROUND TIME
(X) Standard turnaround VWI
( ) RUSH VSS
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	Hold		cVOCs		Notes
AMW-9-51	11A-B (EB)	4/24/20	1132	SOIL	5								X		X		
AMW-9-57	12		1137														
AMW-9-61	13		1157														
AMW-9-67	14		1245												X		
AMW-9-74	15		1250														
AMW-9-79	16		1255														
AMW-9-82	17		1306														
AMW-9-87	18		1312														
Trip Blank	19A-B	—	—	AQ	2												

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	David Unruh	Aspect Consulting	4/24/20	1500
Received by:	Nhan Phan	FEBI	4/24/20	1500
Relinquished by:				
Received by:				

Friedman & Bruya, Inc.
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Seattle, WA 98119-2029
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

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www.friedmanandbruya.com

May 12, 2020

Ali Cochrane, Project Manager
Aspect Consulting, LLC
710 2nd Ave S, Suite 550
Seattle, WA 98104

Dear Ms Cochrane:

Included are the results from the testing of material submitted on April 28, 2020 from the Schnitzer NE 8th 190298, F&BI 004317 project. There are 32 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 have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Data Aspect, Jessica Smith
ASP0512R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on April 28, 2020 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Schnitzer NE 8th 190298, F&BI 004317 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
004317 -01	AMW-8-4
004317 -02	AMW-8-8
004317 -03	AMW-8-14
004317 -04	AMW-8-16
004317 -05	AMW-8-21
004317 -06	AMW-8-28
004317 -07	AMW-8-34
004317 -08	AMW-8-39
004317 -09	AMW-8-43
004317 -10	AMW-8-47
004317 -11	AMW-8-54
004317 -12	AMW-8-57
004317 -13	AMW-8-64
004317 -14	AMW-8-70
004317 -15	AMW-8-72
004317 -16	AMW-8-77
004317 -17	AMW-8-82
004317 -18	AMW-8-84
004317 -19	AB-3-4
004317 -20	AB-3-9
004317 -21	AB-3-15
004317 -22	AB-3-20
004317 -23	AB-3-24
004317 -24	AB-3-27
004317 -25	AB-3-33
004317 -26	AB-3-39
004317 -27	AB-3-43
004317 -28	AB-3-47
004317 -29	AB-3-52
004317 -30	AB-3-59
004317 -31	AB-3-62
004317 -32	AB-3-67
004317 -33	AB-3-72
004317 -34	AB-3-78
004317 -35	AB-3-82
004317 -36	AB-3-88

CASE NARRATIVE (continued)

The 8260D sample and sample duplicate failed the relative percent difference for several compounds. The laboratory control sample and laboratory control sample duplicate relative percent difference passed the acceptance criteria, therefore the results are likely due to sample inhomogeneity.

The 8260D laboratory control sample exceeded the acceptance criteria for several analytes. The compounds were not detected, therefore the data were acceptable.

Several 8260D compounds in sample AMW-8-4 exceeded the calibration range of the instrument, and were flagged accordingly. The sample was extracted via the methanolic method to reanalyze the sample at a dilution. Both data sets are included.

All other quality control requirements were acceptable.

Date of Report: 05/12/20
Date Received: 04/28/20
Project: Schnitzer NE 8th 190298, F&BI 004317
Date Extracted: 04/30/20
Date Analyzed: 04/30/20

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

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

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 58-139)
AMW-8-4 004317-01 1/20	2,400	119
Method Blank 00-866 MB2	<5	101

Date of Report: 05/12/20
Date Received: 04/28/20
Project: Schnitzer NE 8th 190298, F&BI 004317
Date Extracted: 04/30/20
Date Analyzed: 04/30/20

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 53-144)
AMW-8-4 004317-01	610 x	790	88
Method Blank 00-981 MB2	<50	<250	95

Analysis For Total Metals By EPA Method 6020B

Client ID:	AMW-8-4	Client:	Aspect Consulting, LLC
Date Received:	04/28/20	Project:	Schnitzer NE 8th 190298
Date Extracted:	04/30/20	Lab ID:	004317-01
Date Analyzed:	05/01/20	Data File:	004317-01.129
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.17
Cadmium	<1
Lead	65.1
Mercury	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	AMW-8-4	Client:	Aspect Consulting, LLC
Date Received:	04/28/20	Project:	Schnitzer NE 8th 190298
Date Extracted:	04/30/20	Lab ID:	004317-01
Date Analyzed:	04/30/20	Data File:	004317-01.054
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	17.9

Analysis For Total Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Schnitzer NE 8th 190298
Date Extracted:	04/30/20	Lab ID:	I0-246 mb2
Date Analyzed:	04/30/20	Data File:	I0-246 mb2.086
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Cadmium	<1
Chromium	<1
Lead	<1
Mercury	<1

Analysis For Volatile Compounds By EPA Method 8260D Direct Sparge

Client Sample ID:	AMW-8-4	Client:	Aspect Consulting, LLC
Date Received:	04/28/20	Project:	Schnitzer NE 8th 190298
Date Extracted:	05/05/20	Lab ID:	004317-01
Date Analyzed:	05/05/20	Data File:	050513.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	105	50	150
Toluene-d8	98	50	150
4-Bromofluorobenzene	83	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.05	1,3-Dichloropropane	<0.005
Chloromethane	<0.05	Tetrachloroethene	<0.005
Vinyl chloride	<0.005	Dibromochloromethane	<0.005
Bromomethane	<0.05	1,2-Dibromoethane (EDB)	<0.005
Chloroethane	<0.05	Chlorobenzene	<0.005
Trichlorofluoromethane	<0.05	Ethylbenzene	<0.005
Acetone	<0.1	1,1,1,2-Tetrachloroethane	<0.005
1,1-Dichloroethene	<0.005	m,p-Xylene	0.015
Hexane	<0.025	o-Xylene	0.012
Methylene chloride	<0.05	Styrene	<0.005
Methyl t-butyl ether (MTBE)	<0.005	Isopropylbenzene	0.010
trans-1,2-Dichloroethene	<0.005	Bromoform	<0.005
1,1-Dichloroethane	<0.005	n-Propylbenzene	0.079
2,2-Dichloropropane	<0.005	Bromobenzene	<0.005
cis-1,2-Dichloroethene	<0.005	1,3,5-Trimethylbenzene	0.22 ve
Chloroform	<0.005	1,1,2,2-Tetrachloroethane	<0.005
2-Butanone (MEK)	<0.05	1,2,3-Trichloropropane	<0.005
1,2-Dichloroethane (EDC)	<0.005	2-Chlorotoluene	<0.005
1,1,1-Trichloroethane	<0.005	4-Chlorotoluene	<0.005
1,1-Dichloropropene	<0.005	tert-Butylbenzene	<0.005
Carbon tetrachloride	<0.005	1,2,4-Trimethylbenzene	0.55 ve
Benzene	<0.003	sec-Butylbenzene	0.092
Trichloroethene	<0.003	p-Isopropyltoluene	0.090
1,2-Dichloropropane	<0.005	1,3-Dichlorobenzene	<0.005
Bromodichloromethane	<0.005	1,4-Dichlorobenzene	<0.005
Dibromomethane	<0.005	1,2-Dichlorobenzene	<0.005
4-Methyl-2-pentanone	<0.05	1,2-Dibromo-3-chloropropane	<0.05
cis-1,3-Dichloropropene	<0.005	1,2,4-Trichlorobenzene	<0.025
Toluene	<0.005	Hexachlorobutadiene	<0.025
trans-1,3-Dichloropropene	<0.005	Naphthalene	0.028
1,1,2-Trichloroethane	<0.005	1,2,3-Trichlorobenzene	<0.025
2-Hexanone	<0.05		

Analysis For Volatile Compounds By EPA Method 8260D Direct Sparge

Client Sample ID:	AMW-8-16	Client:	Aspect Consulting, LLC
Date Received:	04/28/20	Project:	Schnitzer NE 8th 190298
Date Extracted:	05/05/20	Lab ID:	004317-04
Date Analyzed:	05/05/20	Data File:	050515.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	94	50	150
Toluene-d8	109	50	150
4-Bromofluorobenzene	107	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Analysis For Volatile Compounds By EPA Method 8260D Direct Sparge

Client Sample ID:	AMW-8-21	Client:	Aspect Consulting, LLC
Date Received:	04/28/20	Project:	Schnitzer NE 8th 190298
Date Extracted:	05/05/20	Lab ID:	004317-05
Date Analyzed:	05/05/20	Data File:	050516.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	50	150
Toluene-d8	109	50	150
4-Bromofluorobenzene	109	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Analysis For Volatile Compounds By EPA Method 8260D Direct Sparge

Client Sample ID:	AMW-8-47	Client:	Aspect Consulting, LLC
Date Received:	04/28/20	Project:	Schnitzer NE 8th 190298
Date Extracted:	05/05/20	Lab ID:	004317-10
Date Analyzed:	05/05/20	Data File:	050517.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	105	50	150
Toluene-d8	109	50	150
4-Bromofluorobenzene	101	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Analysis For Volatile Compounds By EPA Method 8260D Direct Sparge

Client Sample ID:	AMW-8-57	Client:	Aspect Consulting, LLC
Date Received:	04/28/20	Project:	Schnitzer NE 8th 190298
Date Extracted:	05/08/20	Lab ID:	004317-12
Date Analyzed:	05/08/20	Data File:	050843.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	50	150
Toluene-d8	101	50	150
4-Bromofluorobenzene	104	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Analysis For Volatile Compounds By EPA Method 8260D Direct Sparge

Client Sample ID:	AMW-8-64	Client:	Aspect Consulting, LLC
Date Received:	04/28/20	Project:	Schnitzer NE 8th 190298
Date Extracted:	05/05/20	Lab ID:	004317-13
Date Analyzed:	05/05/20	Data File:	050519.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	94	50	150
Toluene-d8	106	50	150
4-Bromofluorobenzene	121	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Analysis For Volatile Compounds By EPA Method 8260D Direct Sparge

Client Sample ID:	AMW-8-70	Client:	Aspect Consulting, LLC
Date Received:	04/28/20	Project:	Schnitzer NE 8th 190298
Date Extracted:	05/05/20	Lab ID:	004317-14
Date Analyzed:	05/05/20	Data File:	050520.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	50	150
Toluene-d8	106	50	150
4-Bromofluorobenzene	114	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Analysis For Volatile Compounds By EPA Method 8260D Direct Sparge

Client Sample ID:	AB-3-27	Client:	Aspect Consulting, LLC
Date Received:	04/28/20	Project:	Schnitzer NE 8th 190298
Date Extracted:	05/05/20	Lab ID:	004317-24
Date Analyzed:	05/05/20	Data File:	050521.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	50	150
Toluene-d8	108	50	150
4-Bromofluorobenzene	102	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Analysis For Volatile Compounds By EPA Method 8260D Direct Sparge

Client Sample ID:	AB-3-52	Client:	Aspect Consulting, LLC
Date Received:	04/28/20	Project:	Schnitzer NE 8th 190298
Date Extracted:	05/05/20	Lab ID:	004317-29
Date Analyzed:	05/05/20	Data File:	050522.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	50	150
Toluene-d8	107	50	150
4-Bromofluorobenzene	113	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Analysis For Volatile Compounds By EPA Method 8260D Direct Sparge

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Schnitzer NE 8th 190298
Date Extracted:	05/08/20	Lab ID:	00-1001 mb
Date Analyzed:	05/08/20	Data File:	050842.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	50	150
Toluene-d8	100	50	150
4-Bromofluorobenzene	99	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Analysis For Volatile Compounds By EPA Method 8260D Direct Sparge

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Schnitzer NE 8th 190298
Date Extracted:	05/05/20	Lab ID:	00-995 mb
Date Analyzed:	05/05/20	Data File:	050512.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	50	150
Toluene-d8	103	50	150
4-Bromofluorobenzene	95	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.05	1,3-Dichloropropane	<0.005
Chloromethane	<0.05	Tetrachloroethene	<0.005
Vinyl chloride	<0.005	Dibromochloromethane	<0.005
Bromomethane	<0.05	1,2-Dibromoethane (EDB)	<0.005
Chloroethane	<0.05	Chlorobenzene	<0.005
Trichlorofluoromethane	<0.05	Ethylbenzene	<0.005
Acetone	<0.1	1,1,1,2-Tetrachloroethane	<0.005
1,1-Dichloroethene	<0.005	m,p-Xylene	<0.01
Hexane	<0.025	o-Xylene	<0.005
Methylene chloride	<0.05	Styrene	<0.005
Methyl t-butyl ether (MTBE)	<0.005	Isopropylbenzene	<0.005
trans-1,2-Dichloroethene	<0.005	Bromoform	<0.005
1,1-Dichloroethane	<0.005	n-Propylbenzene	<0.005
2,2-Dichloropropane	<0.005	Bromobenzene	<0.005
cis-1,2-Dichloroethene	<0.005	1,3,5-Trimethylbenzene	<0.005
Chloroform	<0.005	1,1,2,2-Tetrachloroethane	<0.005
2-Butanone (MEK)	<0.05	1,2,3-Trichloropropane	<0.005
1,2-Dichloroethane (EDC)	<0.005	2-Chlorotoluene	<0.005
1,1,1-Trichloroethane	<0.005	4-Chlorotoluene	<0.005
1,1-Dichloropropene	<0.005	tert-Butylbenzene	<0.005
Carbon tetrachloride	<0.005	1,2,4-Trimethylbenzene	<0.005
Benzene	<0.003	sec-Butylbenzene	<0.005
Trichloroethene	<0.003	p-Isopropyltoluene	<0.005
1,2-Dichloropropane	<0.005	1,3-Dichlorobenzene	<0.005
Bromodichloromethane	<0.005	1,4-Dichlorobenzene	<0.005
Dibromomethane	<0.005	1,2-Dichlorobenzene	<0.005
4-Methyl-2-pentanone	<0.05	1,2-Dibromo-3-chloropropane	<0.05
cis-1,3-Dichloropropene	<0.005	1,2,4-Trichlorobenzene	<0.025
Toluene	<0.005	Hexachlorobutadiene	<0.025
trans-1,3-Dichloropropene	<0.005	Naphthalene	<0.005
1,1,2-Trichloroethane	<0.005	1,2,3-Trichlorobenzene	<0.025
2-Hexanone	<0.05		

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	AMW-8-4	Client:	Aspect Consulting, LLC
Date Received:	04/28/20	Project:	Schnitzer NE 8th 190298
Date Extracted:	05/07/20	Lab ID:	004317-01
Date Analyzed:	05/11/20	Data File:	051115.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	62	145
Toluene-d8	103	55	145
4-Bromofluorobenzene	104	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Hexane	<0.25	o-Xylene	<0.05
Methylene chloride	<0.5	Styrene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Isopropylbenzene	<0.05
trans-1,2-Dichloroethene	<0.05	Bromoform	<0.05
1,1-Dichloroethane	<0.05	n-Propylbenzene	0.057
2,2-Dichloropropane	<0.05	Bromobenzene	<0.05
cis-1,2-Dichloroethene	<0.05	1,3,5-Trimethylbenzene	0.079
Chloroform	<0.05	1,1,2,2-Tetrachloroethane	<0.05
2-Butanone (MEK)	<0.5	1,2,3-Trichloropropane	<0.05
1,2-Dichloroethane (EDC)	<0.05	2-Chlorotoluene	<0.05
1,1,1-Trichloroethane	<0.05	4-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	tert-Butylbenzene	<0.05
Carbon tetrachloride	<0.05	1,2,4-Trimethylbenzene	0.16
Benzene	<0.03	sec-Butylbenzene	0.097
Trichloroethene	<0.02	p-Isopropyltoluene	0.11
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	<0.5	1,2-Dibromo-3-chloropropane	<0.5
cis-1,3-Dichloropropene	<0.05	1,2,4-Trichlorobenzene	<0.25
Toluene	<0.05	Hexachlorobutadiene	<0.25
trans-1,3-Dichloropropene	<0.05	Naphthalene	<0.05
1,1,2-Trichloroethane	<0.05	1,2,3-Trichlorobenzene	<0.25
2-Hexanone	<0.5		

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Schnitzer NE 8th 190298
Date Extracted:	05/07/20	Lab ID:	00-994 mb
Date Analyzed:	05/07/20	Data File:	050709.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	104	62	145
Toluene-d8	112	55	145
4-Bromofluorobenzene	100	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Hexane	<0.25	o-Xylene	<0.05
Methylene chloride	<0.5	Styrene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Isopropylbenzene	<0.05
trans-1,2-Dichloroethene	<0.05	Bromoform	<0.05
1,1-Dichloroethane	<0.05	n-Propylbenzene	<0.05
2,2-Dichloropropane	<0.05	Bromobenzene	<0.05
cis-1,2-Dichloroethene	<0.05	1,3,5-Trimethylbenzene	<0.05
Chloroform	<0.05	1,1,2,2-Tetrachloroethane	<0.05
2-Butanone (MEK)	<0.5	1,2,3-Trichloropropane	<0.05
1,2-Dichloroethane (EDC)	<0.05	2-Chlorotoluene	<0.05
1,1,1-Trichloroethane	<0.05	4-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	tert-Butylbenzene	<0.05
Carbon tetrachloride	<0.05	1,2,4-Trimethylbenzene	<0.05
Benzene	<0.03	sec-Butylbenzene	<0.05
Trichloroethene	<0.02	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	<0.5	1,2-Dibromo-3-chloropropane	<0.5
cis-1,3-Dichloropropene	<0.05	1,2,4-Trichlorobenzene	<0.25
Toluene	<0.05	Hexachlorobutadiene	<0.25
trans-1,3-Dichloropropene	<0.05	Naphthalene	<0.05
1,1,2-Trichloroethane	<0.05	1,2,3-Trichlorobenzene	<0.25
2-Hexanone	<0.5		

Analysis For Semivolatile Compounds By EPA Method 8270E SIM

Client Sample ID:	AMW-8-4	Client:	Aspect Consulting, LLC
Date Received:	04/28/20	Project:	Schnitzer NE 8th 190298
Date Extracted:	04/30/20	Lab ID:	004317-01 1/25
Date Analyzed:	05/01/20	Data File:	043033.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	81 d	31	163
Benzo(a)anthracene-d12	90 d	24	168

Compounds:	Concentration mg/kg (ppm)
Naphthalene	0.35
Acenaphthylene	<0.05
Acenaphthene	1.0
Fluorene	1.3
Phenanthrene	6.7
Anthracene	2.4
Fluoranthene	5.8
Pyrene	5.1
Benz(a)anthracene	2.4
Chrysene	2.0
Benzo(a)pyrene	1.8
Benzo(b)fluoranthene	2.6
Benzo(k)fluoranthene	0.87
Indeno(1,2,3-cd)pyrene	0.48
Dibenz(a,h)anthracene	0.12
Benzo(g,h,i)perylene	0.33

Analysis For Semivolatile Compounds By EPA Method 8270E SIM

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Schnitzer NE 8th 190298
Date Extracted:	04/30/20	Lab ID:	00-983 mb 1/5
Date Analyzed:	04/30/20	Data File:	043020.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	77	31	163
Benzo(a)anthracene-d12	96	24	168

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<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: 05/12/20
Date Received: 04/28/20
Project: Schnitzer NE 8th 190298, F&BI 004317

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TPH AS GASOLINE USING METHOD NWTPH-Gx

Laboratory Code: 004231-05 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Gasoline	mg/kg (ppm)	<5	<5	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	mg/kg (ppm)	20	105	71-131

Date of Report: 05/12/20
Date Received: 04/28/20
Project: Schnitzer NE 8th 190298, F&BI 004317

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

Laboratory Code: 004296-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	310	101	105	64-133	4

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	108	58-147

Date of Report: 05/12/20
Date Received: 04/28/20
Project: Schnitzer NE 8th 190298, F&BI 004317

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

Laboratory Code: 004327-01 x5 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	17.3	0 b	0 b	75-125	0 b
Cadmium	mg/kg (ppm)	10	<5	95	92	75-125	3
Chromium	mg/kg (ppm)	50	14.2	87	85	75-125	2
Lead	mg/kg (ppm)	50	21.7	74 b	75 b	75-125	1 b
Mercury	mg/kg (ppm	5	<5	92	87	75-125	6

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	83	80-120
Cadmium	mg/kg (ppm)	10	102	80-120
Chromium	mg/kg (ppm)	50	96	80-120
Lead	mg/kg (ppm)	50	95	80-120
Mercury	mg/kg (ppm)	5	99	80-120

Date of Report: 05/12/20
Date Received: 04/28/20
Project: Schnitzer NE 8th 190298, F&BI 004317

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

Laboratory Code: 004348-03 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet wt)	Duplicate Result (Wet wt)	RPD (Limit 20)
Vinyl chloride	mg/kg (ppm)	<0.005	<0.005	nm
Chloroethane	mg/kg (ppm)	<0.05	<0.05	nm
1,1-Dichloroethene	mg/kg (ppm)	<0.005	<0.005	nm
Methylene chloride	mg/kg (ppm)	<0.05	0.18	nm
trans-1,2-Dichloroethene	mg/kg (ppm)	<0.005	<0.005	nm
1,1-Dichloroethane	mg/kg (ppm)	<0.005	<0.005	nm
cis-1,2-Dichloroethene	mg/kg (ppm)	<0.005	<0.005	nm
1,2-Dichloroethane (EDC)	mg/kg (ppm)	<0.005	<0.005	nm
1,1,1-Trichloroethane	mg/kg (ppm)	<0.005	<0.005	nm
Trichloroethene	mg/kg (ppm)	<0.003	<0.003	nm
Tetrachloroethene	mg/kg (ppm)	<0.005	<0.005	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	mg/kg (ppm)	0.05	101	103	70-130	2
Chloroethane	mg/kg (ppm)	0.05	100	103	70-130	3
1,1-Dichloroethene	mg/kg (ppm)	0.05	101	103	70-130	2
Methylene chloride	mg/kg (ppm)	0.05	86	89	70-130	3
trans-1,2-Dichloroethene	mg/kg (ppm)	0.05	96	102	70-130	6
1,1-Dichloroethane	mg/kg (ppm)	0.05	99	104	70-130	5
cis-1,2-Dichloroethene	mg/kg (ppm)	0.05	97	105	70-130	8
1,2-Dichloroethane (EDC)	mg/kg (ppm)	0.05	97	103	70-130	6
1,1,1-Trichloroethane	mg/kg (ppm)	0.05	100	102	70-130	2
Trichloroethene	mg/kg (ppm)	0.05	97	104	70-130	7
Tetrachloroethene	mg/kg (ppm)	0.05	88	96	70-130	9

Date of Report: 05/12/20
Date Received: 04/28/20
Project: Schnitzer NE 8th 190298, F&BI 004317

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

Laboratory Code: 004317-01 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet wt)	Duplicate Result (Wet wt)	RPD (Limit 20)
Dichlorodifluoromethane	mg/kg (ppm)	<0.05	<0.05	nm
Chloromethane	mg/kg (ppm)	<0.05	<0.05	nm
Vinyl chloride	mg/kg (ppm)	<0.005	<0.005	nm
Bromomethane	mg/kg (ppm)	<0.05	<0.05	nm
Chloroethane	mg/kg (ppm)	<0.05	<0.05	nm
Trichlorofluoromethane	mg/kg (ppm)	<0.05	<0.05	nm
Acetone	mg/kg (ppm)	<0.1	<0.1	nm
1,1-Dichloroethene	mg/kg (ppm)	<0.005	<0.005	nm
Hexane	mg/kg (ppm)	<0.025	<0.025	nm
Methylene chloride	mg/kg (ppm)	<0.05	<0.05	nm
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	<0.005	<0.005	nm
trans-1,2-Dichloroethene	mg/kg (ppm)	<0.005	<0.005	nm
1,1-Dichloroethane	mg/kg (ppm)	<0.005	<0.005	nm
2,2-Dichloropropane	mg/kg (ppm)	<0.005	<0.005	nm
cis-1,2-Dichloroethene	mg/kg (ppm)	<0.005	<0.005	nm
Chloroform	mg/kg (ppm)	<0.005	<0.005	nm
2-Butanone (MEK)	mg/kg (ppm)	<0.05	<0.05	nm
1,2-Dichloroethane (EDC)	mg/kg (ppm)	<0.005	<0.005	nm
1,1,1-Trichloroethane	mg/kg (ppm)	<0.005	<0.005	nm
1,1-Dichloropropene	mg/kg (ppm)	<0.005	<0.005	nm
Carbon tetrachloride	mg/kg (ppm)	<0.005	<0.005	nm
Benzene	mg/kg (ppm)	<0.003	<0.003	nm
Trichloroethene	mg/kg (ppm)	<0.003	<0.003	nm
1,2-Dichloropropane	mg/kg (ppm)	<0.005	<0.005	nm
Bromodichloromethane	mg/kg (ppm)	<0.005	<0.005	nm
Dibromomethane	mg/kg (ppm)	<0.005	<0.005	nm
4-Methyl-2-pentanone	mg/kg (ppm)	<0.05	<0.05	nm
cis-1,3-Dichloropropene	mg/kg (ppm)	<0.005	<0.005	nm
Toluene	mg/kg (ppm)	<0.005	<0.005	nm
trans-1,3-Dichloropropene	mg/kg (ppm)	<0.005	<0.005	nm
1,1,2-Trichloroethane	mg/kg (ppm)	<0.005	<0.005	nm
2-Hexanone	mg/kg (ppm)	<0.05	<0.05	nm
1,3-Dichloropropane	mg/kg (ppm)	<0.005	<0.005	nm
Tetrachloroethene	mg/kg (ppm)	<0.005	<0.005	nm
Dibromochloromethane	mg/kg (ppm)	<0.005	<0.005	nm
1,2-Dibromoethane (EDB)	mg/kg (ppm)	<0.005	<0.005	nm
Chlorobenzene	mg/kg (ppm)	<0.005	<0.005	nm
Ethylbenzene	mg/kg (ppm)	<0.005	<0.005	nm
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	<0.005	<0.005	nm
m,p-Xylene	mg/kg (ppm)	0.016	<0.01	nm
o-Xylene	mg/kg (ppm)	0.012	<0.005	nm
Styrene	mg/kg (ppm)	<0.005	<0.005	nm
Isopropylbenzene	mg/kg (ppm)	0.010	<0.005	nm
Bromoform	mg/kg (ppm)	<0.005	<0.005	nm
n-Propylbenzene	mg/kg (ppm)	0.079	0.0091	159 vo
Bromobenzene	mg/kg (ppm)	<0.005	<0.005	nm
1,3,5-Trimethylbenzene	mg/kg (ppm)	0.22	0.023	162 vo
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	<0.005	<0.005	nm
1,2,3-Trichloropropane	mg/kg (ppm)	<0.005	<0.005	nm
2-Chlorotoluene	mg/kg (ppm)	<0.005	<0.005	nm
4-Chlorotoluene	mg/kg (ppm)	<0.005	<0.005	nm
tert-Butylbenzene	mg/kg (ppm)	<0.005	<0.005	nm
1,2,4-Trimethylbenzene	mg/kg (ppm)	0.55	0.052	165 vo
sec-Butylbenzene	mg/kg (ppm)	0.092	0.021	126 vo
p-Isopropyltoluene	mg/kg (ppm)	0.090	0.023	119 vo
1,3-Dichlorobenzene	mg/kg (ppm)	<0.005	<0.005	nm
1,4-Dichlorobenzene	mg/kg (ppm)	<0.005	<0.005	nm
1,2-Dichlorobenzene	mg/kg (ppm)	<0.005	<0.005	nm
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	<0.05	<0.05	nm
1,2,4-Trichlorobenzene	mg/kg (ppm)	<0.025	<0.025	nm
Hexachlorobutadiene	mg/kg (ppm)	<0.025	<0.025	nm
Naphthalene	mg/kg (ppm)	0.028	0.0065	125 vo
1,2,3-Trichlorobenzene	mg/kg (ppm)	<0.025	<0.025	nm

Date of Report: 05/12/20
Date Received: 04/28/20
Project: Schnitzer NE 8th 190298, F&BI 004317

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	mg/kg (ppm)	0.05	150 vo	144 vo	70-130	4
Chloromethane	mg/kg (ppm)	0.05	128	121	70-130	6
Vinyl chloride	mg/kg (ppm)	0.05	126	122	70-130	3
Bromomethane	mg/kg (ppm)	0.05	127	123	70-130	3
Chloroethane	mg/kg (ppm)	0.05	127	122	70-130	4
Trichlorofluoromethane	mg/kg (ppm)	0.05	129	123	70-130	5
Acetone	mg/kg (ppm)	0.25	110	111	70-130	1
1,1-Dichloroethene	mg/kg (ppm)	0.05	134 vo	126	70-130	6
Hexane	mg/kg (ppm)	0.05	133 vo	124	70-130	7
Methylene chloride	mg/kg (ppm)	0.05	95	89	70-130	7
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	0.05	106	102	70-130	4
trans-1,2-Dichloroethene	mg/kg (ppm)	0.05	123	117	70-130	5
1,1-Dichloroethane	mg/kg (ppm)	0.05	116	113	70-130	3
2,2-Dichloropropane	mg/kg (ppm)	0.05	127	120	70-130	6
cis-1,2-Dichloroethene	mg/kg (ppm)	0.05	117	114	70-130	3
Chloroform	mg/kg (ppm)	0.05	114	109	70-130	4
2-Butanone (MEK)	mg/kg (ppm)	0.25	103	102	70-130	1
1,2-Dichloroethane (EDC)	mg/kg (ppm)	0.05	106	103	70-130	3
1,1,1-Trichloroethane	mg/kg (ppm)	0.05	122	115	70-130	6
1,1-Dichloropropene	mg/kg (ppm)	0.05	126	119	70-130	6
Carbon tetrachloride	mg/kg (ppm)	0.05	130	123	70-130	6
Benzene	mg/kg (ppm)	0.05	119	114	70-130	4
Trichloroethene	mg/kg (ppm)	0.05	120	116	70-130	3
1,2-Dichloropropane	mg/kg (ppm)	0.05	117	113	70-130	3
Bromodichloromethane	mg/kg (ppm)	0.05	115	112	70-130	3
Dibromomethane	mg/kg (ppm)	0.05	110	107	70-130	3
4-Methyl-2-pentanone	mg/kg (ppm)	0.25	107	106	70-130	1
cis-1,3-Dichloropropene	mg/kg (ppm)	0.05	118	115	70-130	3
Toluene	mg/kg (ppm)	0.05	106	101	70-130	5
trans-1,3-Dichloropropene	mg/kg (ppm)	0.05	102	99	70-130	3
1,1,2-Trichloroethane	mg/kg (ppm)	0.05	99	97	70-130	2
2-Hexanone	mg/kg (ppm)	0.25	95	93	70-130	2
1,3-Dichloropropane	mg/kg (ppm)	0.05	101	97	70-130	4
Tetrachloroethene	mg/kg (ppm)	0.05	113	105	70-130	7
Dibromochloromethane	mg/kg (ppm)	0.05	103	100	70-130	3
1,2-Dibromoethane (EDB)	mg/kg (ppm)	0.05	100	97	70-130	3
Chlorobenzene	mg/kg (ppm)	0.05	104	100	70-130	4
Ethylbenzene	mg/kg (ppm)	0.05	109	103	70-130	6
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	0.05	109	103	70-130	6
m,p-Xylene	mg/kg (ppm)	0.1	109	103	70-130	6
o-Xylene	mg/kg (ppm)	0.05	106	100	70-130	6
Styrene	mg/kg (ppm)	0.05	107	102	70-130	5
Isopropylbenzene	mg/kg (ppm)	0.05	111	104	70-130	7
Bromoform	mg/kg (ppm)	0.05	106	102	70-130	4
n-Propylbenzene	mg/kg (ppm)	0.05	111	103	70-130	7
Bromobenzene	mg/kg (ppm)	0.05	103	98	70-130	5
1,3,5-Trimethylbenzene	mg/kg (ppm)	0.05	108	102	70-130	6
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	0.05	98	94	70-130	4
1,2,3-Trichloropropane	mg/kg (ppm)	0.05	95	92	70-130	3
2-Chlorotoluene	mg/kg (ppm)	0.05	105	98	70-130	7
4-Chlorotoluene	mg/kg (ppm)	0.05	105	100	70-130	5
tert-Butylbenzene	mg/kg (ppm)	0.05	110	104	70-130	6
1,2,4-Trimethylbenzene	mg/kg (ppm)	0.05	105	98	70-130	7
sec-Butylbenzene	mg/kg (ppm)	0.05	111	104	70-130	7
p-Isopropyltoluene	mg/kg (ppm)	0.05	110	103	70-130	7
1,3-Dichlorobenzene	mg/kg (ppm)	0.05	103	98	70-130	5
1,4-Dichlorobenzene	mg/kg (ppm)	0.05	102	97	70-130	5
1,2-Dichlorobenzene	mg/kg (ppm)	0.05	100	95	70-130	5
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	0.05	90	88	70-130	2
1,2,4-Trichlorobenzene	mg/kg (ppm)	0.05	100	95	70-130	5
Hexachlorobutadiene	mg/kg (ppm)	0.05	108	100	70-130	8
Naphthalene	mg/kg (ppm)	0.05	92	89	70-130	3
1,2,3-Trichlorobenzene	mg/kg (ppm)	0.05	98	94	70-130	4

Date of Report: 05/12/20
Date Received: 04/28/20
Project: Schnitzer NE 8th 190298, F&BI 004317

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

Laboratory Code: 005019-02 (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)	2.5	<0.5	30	37	10-142	21 vo
Chloromethane	mg/kg (ppm)	2.5	<0.5	57	64	10-126	12
Vinyl chloride	mg/kg (ppm)	2.5	<0.05	61	68	10-138	11
Bromomethane	mg/kg (ppm)	2.5	<0.5	79	89	10-163	12
Chloroethane	mg/kg (ppm)	2.5	<0.5	71	80	10-176	12
Trichlorofluoromethane	mg/kg (ppm)	2.5	<0.5	72	82	10-176	13
Acetone	mg/kg (ppm)	12.5	<5	80	86	10-163	7
1,1-Dichloroethene	mg/kg (ppm)	2.5	<0.05	82	89	10-160	8
Hexane	mg/kg (ppm)	2.5	<0.25	63	71	10-137	12
Methylene chloride	mg/kg (ppm)	2.5	<0.5	87	93	10-156	7
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	<0.05	92	100	21-145	8
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	85	93	14-137	9
1,1-Dichloroethane	mg/kg (ppm)	2.5	<0.05	88	97	19-140	10
2,2-Dichloropropane	mg/kg (ppm)	2.5	<0.05	93	100	10-158	7
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	92	99	25-135	7
Chloroform	mg/kg (ppm)	2.5	<0.05	92	101	21-145	9
2-Butanone (MEK)	mg/kg (ppm)	12.5	<0.5	85	93	19-147	9
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	<0.05	88	96	12-160	9
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	<0.05	93	101	10-156	8
1,1-Dichloropropene	mg/kg (ppm)	2.5	<0.05	84	91	17-140	8
Carbon tetrachloride	mg/kg (ppm)	2.5	<0.05	94	103	9-164	9
Benzene	mg/kg (ppm)	2.5	<0.03	89	95	29-129	7
Trichloroethene	mg/kg (ppm)	2.5	<0.02	87	94	21-139	8
1,2-Dichloropropane	mg/kg (ppm)	2.5	<0.05	96	103	30-135	7
Bromodichloromethane	mg/kg (ppm)	2.5	<0.05	95	103	23-155	8
Dibromomethane	mg/kg (ppm)	2.5	<0.05	98	105	23-145	7
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	<0.5	100	108	24-155	8
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	<0.05	94	101	28-144	7
Toluene	mg/kg (ppm)	2.5	<0.05	76	81	35-130	6
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	<0.05	79	86	26-149	8
1,1,2-Trichloroethane	mg/kg (ppm)	2.5	<0.05	83	88	10-205	6
2-Hexanone	mg/kg (ppm)	12.5	<0.5	78	84	15-166	7
1,3-Dichloropropane	mg/kg (ppm)	2.5	<0.05	82	88	31-137	7
Tetrachloroethene	mg/kg (ppm)	2.5	<0.025	80	85	20-133	6
Dibromochloromethane	mg/kg (ppm)	2.5	<0.05	86	94	28-150	9
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	<0.05	84	90	28-142	7
Chlorobenzene	mg/kg (ppm)	2.5	<0.05	82	88	32-129	7
Ethylbenzene	mg/kg (ppm)	2.5	<0.05	78	84	32-137	7
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	<0.05	89	95	31-143	7
m,p-Xylene	mg/kg (ppm)	5	<0.1	81	88	34-136	8
o-Xylene	mg/kg (ppm)	2.5	<0.05	81	89	33-134	9
Styrene	mg/kg (ppm)	2.5	<0.05	83	89	35-137	7
Isopropylbenzene	mg/kg (ppm)	2.5	<0.05	81	88	31-142	8
Bromoform	mg/kg (ppm)	2.5	<0.05	87	95	21-156	9
n-Propylbenzene	mg/kg (ppm)	2.5	<0.05	74	80	23-146	8
Bromobenzene	mg/kg (ppm)	2.5	<0.05	76	81	34-130	6
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	<0.05	76	84	18-149	10
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	<0.05	78	85	28-140	9
1,2,3-Trichloropropane	mg/kg (ppm)	2.5	<0.05	76	84	25-144	10
2-Chlorotoluene	mg/kg (ppm)	2.5	<0.05	75	81	31-134	8
4-Chlorotoluene	mg/kg (ppm)	2.5	<0.05	75	81	31-136	8
tert-Butylbenzene	mg/kg (ppm)	2.5	<0.05	76	83	30-137	9
1,2,4-Trimethylbenzene	mg/kg (ppm)	2.5	<0.05	77	83	10-182	7
sec-Butylbenzene	mg/kg (ppm)	2.5	<0.05	77	84	23-145	9
p-Isopropyltoluene	mg/kg (ppm)	2.5	<0.05	80	87	21-149	8
1,3-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	76	83	30-131	9
1,4-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	76	84	29-129	10
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	78	87	31-132	11
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	<0.5	81	91	11-161	12
1,2,4-Trichlorobenzene	mg/kg (ppm)	2.5	<0.25	75	85	22-142	12
Hexachlorobutadiene	mg/kg (ppm)	2.5	<0.25	81	91	10-142	12
Naphthalene	mg/kg (ppm)	2.5	<0.05	76	85	14-157	11
1,2,3-Trichlorobenzene	mg/kg (ppm)	2.5	<0.25	79	88	20-144	11

Date of Report: 05/12/20
Date Received: 04/28/20
Project: Schnitzer NE 8th 190298, F&BI 004317

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)	2.5	67	10-146
Chloromethane	mg/kg (ppm)	2.5	85	27-133
Vinyl chloride	mg/kg (ppm)	2.5	94	22-139
Bromomethane	mg/kg (ppm)	2.5	110	38-114
Chloroethane	mg/kg (ppm)	2.5	102	9-163
Trichlorofluoromethane	mg/kg (ppm)	2.5	107	10-196
Acetone	mg/kg (ppm)	12.5	108	52-141
1,1-Dichloroethene	mg/kg (ppm)	2.5	109	47-128
Hexane	mg/kg (ppm)	2.5	94	43-142
Methylene chloride	mg/kg (ppm)	2.5	109	42-132
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	108	60-123
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	107	67-129
1,1-Dichloroethane	mg/kg (ppm)	2.5	108	68-115
2,2-Dichloropropane	mg/kg (ppm)	2.5	118	52-170
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	110	72-127
Chloroform	mg/kg (ppm)	2.5	109	66-120
2-Butanone (MEK)	mg/kg (ppm)	12.5	98	72-127
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	102	56-135
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	114	62-131
1,1-Dichloropropene	mg/kg (ppm)	2.5	104	69-128
Carbon tetrachloride	mg/kg (ppm)	2.5	119	60-139
Benzene	mg/kg (ppm)	2.5	104	68-114
Trichloroethene	mg/kg (ppm)	2.5	102	64-117
1,2-Dichloropropane	mg/kg (ppm)	2.5	111	72-127
Bromodichloromethane	mg/kg (ppm)	2.5	111	72-130
Dibromomethane	mg/kg (ppm)	2.5	112	70-120
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	114	45-145
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	108	75-136
Toluene	mg/kg (ppm)	2.5	89	66-126
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	93	72-132
1,1,2-Trichloroethane	mg/kg (ppm)	2.5	94	75-113
2-Hexanone	mg/kg (ppm)	12.5	91	33-152
1,3-Dichloropropane	mg/kg (ppm)	2.5	92	72-130
Tetrachloroethene	mg/kg (ppm)	2.5	94	72-114
Dibromochloromethane	mg/kg (ppm)	2.5	104	74-125
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	96	74-132
Chlorobenzene	mg/kg (ppm)	2.5	95	76-111
Ethylbenzene	mg/kg (ppm)	2.5	92	64-123
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	106	69-135
m,p-Xylene	mg/kg (ppm)	5	96	78-122
o-Xylene	mg/kg (ppm)	2.5	97	77-124
Styrene	mg/kg (ppm)	2.5	96	74-126
Isopropylbenzene	mg/kg (ppm)	2.5	95	76-127
Bromoform	mg/kg (ppm)	2.5	110	56-132
n-Propylbenzene	mg/kg (ppm)	2.5	85	74-124
Bromobenzene	mg/kg (ppm)	2.5	86	72-122
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	89	76-126
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	89	56-143
1,2,3-Trichloropropane	mg/kg (ppm)	2.5	87	61-137
2-Chlorotoluene	mg/kg (ppm)	2.5	85	74-121
4-Chlorotoluene	mg/kg (ppm)	2.5	86	75-122
tert-Butylbenzene	mg/kg (ppm)	2.5	87	73-130
1,2,4-Trimethylbenzene	mg/kg (ppm)	2.5	89	76-125
sec-Butylbenzene	mg/kg (ppm)	2.5	89	71-130
p-Isopropyltoluene	mg/kg (ppm)	2.5	91	70-132
1,3-Dichlorobenzene	mg/kg (ppm)	2.5	88	75-121
1,4-Dichlorobenzene	mg/kg (ppm)	2.5	87	74-117
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	90	76-121
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	98	58-138
1,2,4-Trichlorobenzene	mg/kg (ppm)	2.5	88	64-135
Hexachlorobutadiene	mg/kg (ppm)	2.5	93	50-153
Naphthalene	mg/kg (ppm)	2.5	90	63-140
1,2,3-Trichlorobenzene	mg/kg (ppm)	2.5	91	63-138

Date of Report: 05/12/20
Date Received: 04/28/20
Project: Schnitzer NE 8th 190298, F&BI 004317

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

Laboratory Code: 004296-01 1/5 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Acceptance Criteria
Naphthalene	mg/kg (ppm)	0.17	<0.01	62	44-129
Acenaphthylene	mg/kg (ppm)	0.17	<0.01	68	52-121
Acenaphthene	mg/kg (ppm)	0.17	<0.01	68	51-123
Fluorene	mg/kg (ppm)	0.17	<0.01	72	37-137
Phenanthrene	mg/kg (ppm)	0.17	<0.01	73	34-141
Anthracene	mg/kg (ppm)	0.17	<0.01	74	32-124
Fluoranthene	mg/kg (ppm)	0.17	<0.01	73	16-160
Pyrene	mg/kg (ppm)	0.17	<0.01	121	10-180
Benz(a)anthracene	mg/kg (ppm)	0.17	<0.01	80	23-144
Chrysene	mg/kg (ppm)	0.17	<0.01	75	32-149
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	<0.01 J	93 J	23-176
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	<0.01 J	94 J	42-139
Benzo(a)pyrene	mg/kg (ppm)	0.17	<0.01 J	76 J	21-163
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	<0.01 J	42 J	23-170
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	<0.01 J	44 J	31-146
Benzo(g,h,i)perylene	mg/kg (ppm)	0.17	<0.01 J	38 J	37-133

Laboratory Code: Laboratory Control Sample 1/5

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	mg/kg (ppm)	0.17	80	81	58-121	1
Acenaphthylene	mg/kg (ppm)	0.17	77	78	54-121	1
Acenaphthene	mg/kg (ppm)	0.17	77	79	54-123	3
Fluorene	mg/kg (ppm)	0.17	79	80	56-127	1
Phenanthrene	mg/kg (ppm)	0.17	85	87	55-122	2
Anthracene	mg/kg (ppm)	0.17	81	84	50-120	4
Fluoranthene	mg/kg (ppm)	0.17	86	86	54-129	0
Pyrene	mg/kg (ppm)	0.17	87	87	53-127	0
Benz(a)anthracene	mg/kg (ppm)	0.17	89	94	51-115	5
Chrysene	mg/kg (ppm)	0.17	90	94	55-129	4
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	81	82	56-123	1
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	80	82	54-131	2
Benzo(a)pyrene	mg/kg (ppm)	0.17	74	78	51-118	5
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	73	78	49-148	7
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	77	82	50-141	6
Benzo(g,h,i)perylene	mg/kg (ppm)	0.17	72	78	52-131	8

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. 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 lowest calibration standard. 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.

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.

004317

SAMPLE CHAIN OF CUSTODY

ME 4/28/20 D04/VS2 [redacted]

[redacted] Cochrane / Jessica Smith

Company Aspect Consulting

Address 710 2nd Ave, STE. 550

City, State, ZIP Seattle, WA, 98104

Phone (206) 838-6594 Email acochrane@aspectconsulting.com

SAMPLERS (signature) [signature]

PROJECT NAME	PO #
Schnitzer NE 8th	190248
REMARKS	INVOICE TO
Project specific RLs? - Yes / No (No circled)	

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

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

						ANALYSES REQUESTED											
Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	Hold	MTCA 5 Metals	cVOCs		Notes
Amw-8-4	01 A-E	4/27/20	0745	Soil	5	X	X			X	X		X	X			☒ - per AC 4/28/20 ME
Amw-8-8	02	↓	0752	↓	↓								↓				
Amw-8-14	03	↓	0757	↓	↓								↓				
Amw-8-16	04	↓	0803	↓	↓								↓		X		
Amw-8-21	05	↓	0810	↓	↓								↓		X		
Amw-8-28	06	↓	0815	↓	↓								↓				
Amw-8-34	07	↓	0820	↓	↓								↓				
Amw-8-39	08	↓	0841	↓	↓								↓				
Amw-8-43	09	↓	0847	↓	↓								↓				Samples received at 3 °C
Amw-8-47	10	↓	1055	↓	↓								↓		X		

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

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	[signature]	David Unruh	Aspect Consulting	4/28/20	1519
Received by:	[signature]	HONG NGUYEN	FBI	✓	✓
Relinquished by:					
Received by:					

SAMPLE CHAIN OF CUSTODY

ME 4/28/20 D04/452

Page # 2 of 4

004317

Report To Alex Cochrane / Jessica Smith

Company Aspect Consulting

Address 710 2nd Ave, Ste. 550

City, State, ZIP Seattle, WA 98104

Phone (206) 838-6544 Email acochrane@aspectsonsulting.com

SAMPLERS (*signature*) David Unsch

PROJECT NAME: Schnitzer NE 8th

PO #: 180298

REMARKS: Project specific RLs? - Yes / No

INVOICE TO: AP

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

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

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	HOLD	MTCA 5 Metals	cVOCs	Notes
AMW-8-54	11 A-G	4/27/20	1112	Soil	5								X			
AMW-8-57	12		1119												X	
AMW-8-64	13		1141												X	
AMW-8-70	14		1147												X	
AMW-8-72	15		1238													
AMW-8-77	16		1244													
AMW-8-82	17		1258													
AMW-8-84	18		1304													
AB-3-4	19	4/28/20	0746													
AB-3-9	20		0751													

Samples received at 3 °C

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: David Unsch	David Unsch	Aspect Consulting	4/28/20	1519
Received by: Hong Nguyen	HONG NGUYEN	FBI	✓	✓
Relinquished by:				
Received by:				

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

004317

SAMPLE CHAIN OF CUSTODY ME 4/28/20 D04/052

Page # 3 of 4

Report To Al Cochrone / Jessica Smith

Company Aspect Consulting

Address 710 2nd Ave, Ste. 550

City, State, ZIP Seattle, WA, 98104

Phone (206) 838-0466 Email acochrone@aspectconsulting.com

SAMPLERS (signature) David Uhrich

PROJECT NAME: Schnitzer NE 8th

PO #: 140298

REMARKS: Project specific RLs? - Yes / (No)

INVOICE TO: AP

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

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

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	FBI	MTCA 5 Metals	cVOCs		Notes
AB-3-15	21 A-E	4/28/20	0758	Soil	5								X				
AB-3-20	22		0804														
AB-3-24	23		0809														
AB-3-27	24		0817												X		
AB-3-33	25		0822														
AB-3-39	26		0905														
AB-3-43	27		0910														
AB-3-47	28		1119														
AB-3-52	29		1137														
AB-3-59	30		1200														

Samples received [X] at 3 °C

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: David Uhrich	David Uhrich	Aspect Consulting	4/28/20	1519
Received by: Holly Nguyen	HOLLY NGUYEN	FBI	✓	✓
Relinquished by:				
Received by:				

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
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004317

SAMPLE CHAIN OF CUSTODY

ME 4/28/20 D04/ 2

Page # 4 of 4

Report To ochrane / Jessica Smith

Company Aspect Consulting

Address 710 2nd Ave, Ste. 550

City, State, ZIP Seattle, WA, 98104

Phone (206) 838-6594 Email acochrane@aspectconsulting.com

SAMPLERS (signature)

PROJECT NAME: Schnitzer NE 8th

PO #: 140298

REMARKS

INVOICE TO: AP

Project specific RLs? - Yes / No (circled: No)

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

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

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	Hold				Notes
AB-3-62	31 A-E	4/28/20	1202	Soil	5								X				
AB-3-67	32		1301														
AB-3-72	33		1307														
AB-3-78	34		1325														
AB-3-82	35		1336														
AB-3-88	36		1353														

Samples received at 3 °C

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

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	[signature]	David Unruh	Aspect Consulting	4/28/20	1519
Received by:	[signature]	HONG NGUYEN	FBI	✓	✓
Relinquished by:					
Received by:					

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

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fbi@isomedia.com
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May 8, 2020

Ali Cochrane, Project Manager
Aspect Consulting, LLC
710 2nd Ave S, Suite 550
Seattle, WA 98104

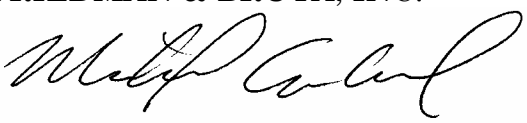
Dear Ms Cochrane:

Included are the results from the testing of material submitted on May 4, 2020 from the Schnitzer NE 8th 190298, F&BI 005035 project. There are 7 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
c: Data Aspect
ASP0508R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on May 4, 2020 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Schnitzer NE 8th 190298, F&BI 005035 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
005035 -01	B4/MW-4-050420
005035 -02	AMW-6D-050420
005035 -03	URS-MW-8-050420

All quality control requirements were acceptable.

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	B4/MW-4-050420	Client:	Aspect Consulting, LLC
Date Received:	05/04/20	Project:	Schnitzer NE 8th 190298
Date Extracted:	05/05/20	Lab ID:	005035-01
Date Analyzed:	05/06/20	Data File:	050614.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	57	121
Toluene-d8	106	63	127
4-Bromofluorobenzene	102	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	AMW-6D-050420	Client:	Aspect Consulting, LLC
Date Received:	05/04/20	Project:	Schnitzer NE 8th 190298
Date Extracted:	05/05/20	Lab ID:	005035-02
Date Analyzed:	05/06/20	Data File:	050615.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	57	121
Toluene-d8	106	63	127
4-Bromofluorobenzene	100	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	URS-MW-8-050420	Client:	Aspect Consulting, LLC
Date Received:	05/04/20	Project:	Schnitzer NE 8th 190298
Date Extracted:	05/05/20	Lab ID:	005035-03
Date Analyzed:	05/06/20	Data File:	050616.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	105	57	121
Toluene-d8	107	63	127
4-Bromofluorobenzene	98	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Schnitzer NE 8th 190298
Date Extracted:	05/05/20	Lab ID:	00-993 mb
Date Analyzed:	05/05/20	Data File:	050528.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	57	121
Toluene-d8	108	63	127
4-Bromofluorobenzene	100	60	133

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Date of Report: 05/08/20
Date Received: 05/04/20
Project: Schnitzer NE 8th 190298, F&BI 005035

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

Laboratory Code: 005035-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Vinyl chloride	ug/L (ppb)	50	<0.2	102	36-166
Chloroethane	ug/L (ppb)	50	<1	104	46-160
1,1-Dichloroethene	ug/L (ppb)	50	<1	106	60-136
Methylene chloride	ug/L (ppb)	50	<5	102	67-132
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	101	72-129
1,1-Dichloroethane	ug/L (ppb)	50	<1	102	70-128
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	100	71-127
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	100	48-149
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	107	60-146
Trichloroethene	ug/L (ppb)	50	<1	96	66-135
Tetrachloroethene	ug/L (ppb)	50	2.2	90	10-226

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	ug/L (ppb)	50	102	108	50-154	6
Chloroethane	ug/L (ppb)	50	109	115	58-146	5
1,1-Dichloroethene	ug/L (ppb)	50	110	115	67-136	4
Methylene chloride	ug/L (ppb)	50	105	111	39-148	6
trans-1,2-Dichloroethene	ug/L (ppb)	50	104	111	68-128	7
1,1-Dichloroethane	ug/L (ppb)	50	103	108	74-135	5
cis-1,2-Dichloroethene	ug/L (ppb)	50	104	109	74-136	5
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	95	100	66-129	5
1,1,1-Trichloroethane	ug/L (ppb)	50	108	115	74-142	6
Trichloroethene	ug/L (ppb)	50	94	100	67-133	6
Tetrachloroethene	ug/L (ppb)	50	91	97	76-121	6

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. 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 lowest calibration standard. 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.

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.

005035

SAMPLE CHAIN OF CUSTODY

ME 05/04/20

Page # 1 of 1 VW1

Report To Al: Cochrane

Company Aspect Consulting

Address 710 2nd Ave Suite 550

City, State, ZIP Seattle, WA, 98104

Phone 2069497478 Email acochrane@aspectconsulting.com

SAMPLERS (*signature*) B Call

PROJECT NAME Schnitzer NE 8th

PO # 190298

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

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

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

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082					Notes
BH/MW-4-050420	01A-C	5/4/20	0945	GW	3					X							CVOCs per AC 5/6/20 ME
AMW-6D-050420	02	↓	1145	↓	↓					↓							
URS-MW-8-050420	03	↓	1420	↓	↓					↓							
																	Samples received at 3 °C

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: B Call	Baxter Call	Aspect	5/4/20	1545
Received by: M D. M-B	Liz Webber-B	F?B1	5/4/20	1545
Relinquished by:				
Received by:				

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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May 4, 2020

Ali Cochrane, Project Manager
Aspect Consulting, LLC
710 2nd Ave S, Suite 550
Seattle, WA 98104

Dear Ms Cochrane:

Included are the additional results from the testing of material submitted on April 15, 2020 from the Schnitzer NE 8th Redevelopment 190298, F&BI 004160 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 have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Data Aspect, Jessica Smith
ASP0504R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on April 15, 2020 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Schnitzer NE 8th Redevelopment 190298, F&BI 004160 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
004160 -01	AMW-7-2.5
004160 -02	AMW-7-4
004160 -03	AB-1-2.5
004160 -04	AB-1-4
004160 -05	AB-2-2.5
004160 -06	AB-2-5
004160 -07	AMW-6D-2.5
004160 -08	AMW-6D-4
004160 -09	AMW-6S-2.5
004160 -10	AMW-6S-4
004160 -11	Trip Blank

Samples AB-1-2.5 and AMW-6S-2.5 were extracted from a 4 ounce jar. The data were flagged accordingly.

All other quality control requirements were acceptable.

Date of Report: 05/04/20
Date Received: 04/15/20
Project: Schnitzer NE 8th Redevelopment 190298, F&BI 004160
Date Extracted: 04/27/20
Date Analyzed: 04/27/20

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

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

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 58-139)
AB-1-2.5 pc 004160-03	<5	96
Method Blank 00-863 MB	<5	96

Date of Report: 05/04/20
Date Received: 04/15/20
Project: Schnitzer NE 8th Redevelopment 190298, F&BI 004160
Date Extracted: 04/24/20
Date Analyzed: 04/24/20

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 53-144)
AB-1-2.5 004160-03	<50	<250	87
Method Blank 00-954 MB	<50	<250	84

Analysis For Volatile Compounds By EPA Method 8260D Direct Sparge

Client Sample ID:	AMW-6S-2.5 pc	Client:	Aspect Consulting, LLC
Date Received:	04/15/20	Project:	Schnitzer NE 8th Redevelopment
Date Extracted:	04/29/20	Lab ID:	004160-09
Date Analyzed:	04/29/20	Data File:	042936.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	50	150
Toluene-d8	105	50	150
4-Bromofluorobenzene	102	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	0.016

Analysis For Volatile Compounds By EPA Method 8260D Direct Sparge

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Schnitzer NE 8th Redevelopment
Date Extracted:	04/29/20	Lab ID:	00-949 mb
Date Analyzed:	04/29/20	Data File:	042919.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	50	150
Toluene-d8	103	50	150
4-Bromofluorobenzene	103	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Analysis For Semivolatile Compounds By EPA Method 8270E SIM

Client Sample ID:	AB-1-2.5	Client:	Aspect Consulting, LLC
Date Received:	04/15/20	Project:	Schnitzer NE 8th Redevelopment
Date Extracted:	04/26/20	Lab ID:	004160-03 1/25
Date Analyzed:	04/27/20	Data File:	042711.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	93 d	31	163
Benzo(a)anthracene-d12	89 d	24	168

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<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 SIM

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Schnitzer NE 8th Redevelopment
Date Extracted:	04/26/20	Lab ID:	00-958 mb 1/5
Date Analyzed:	04/27/20	Data File:	042705.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	85	31	163
Benzo(a)anthracene-d12	106	24	168

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<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: 05/04/20
Date Received: 04/15/20
Project: Schnitzer NE 8th Redevelopment 190298, F&BI 004160

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TPH AS GASOLINE USING METHOD NWTPH-Gx

Laboratory Code: 004277-34 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Gasoline	mg/kg (ppm)	<5	<5	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	mg/kg (ppm)	20	100	61-153

Date of Report: 05/04/20
Date Received: 04/15/20
Project: Schnitzer NE 8th Redevelopment 190298, F&BI 004160

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

Laboratory Code: 004273-06 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	98	100	64-133	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	104	58-147

Date of Report: 05/04/20
Date Received: 04/15/20
Project: Schnitzer NE 8th Redevelopment 190298, F&BI 004160

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

Laboratory Code: 004275-10 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet wt)	Duplicate Result (Wet wt)	RPD (Limit 20)
Vinyl chloride	mg/kg (ppm)	<0.05	<0.05	nm
Chloroethane	mg/kg (ppm)	<0.5	<0.5	nm
1,1-Dichloroethene	mg/kg (ppm)	<0.05	<0.05	nm
Methylene chloride	mg/kg (ppm)	<0.5	<0.5	nm
trans-1,2-Dichloroethene	mg/kg (ppm)	<0.05	<0.05	nm
1,1-Dichloroethane	mg/kg (ppm)	<0.05	<0.05	nm
cis-1,2-Dichloroethene	mg/kg (ppm)	<0.05	<0.05	nm
1,2-Dichloroethane (EDC)	mg/kg (ppm)	<0.05	<0.05	nm
1,1,1-Trichloroethane	mg/kg (ppm)	<0.05	<0.05	nm
Trichloroethene	mg/kg (ppm)	<0.03	<0.03	nm
Tetrachloroethene	mg/kg (ppm)	<0.025	<0.025	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	mg/kg (ppm)	0.05	109	110	70-130	1
Chloroethane	mg/kg (ppm)	0.05	108	110	70-130	2
1,1-Dichloroethene	mg/kg (ppm)	0.05	114	114	70-130	0
Methylene chloride	mg/kg (ppm)	0.05	86	92	70-130	7
trans-1,2-Dichloroethene	mg/kg (ppm)	0.05	106	108	70-130	2
1,1-Dichloroethane	mg/kg (ppm)	0.05	103	107	70-130	4
cis-1,2-Dichloroethene	mg/kg (ppm)	0.05	101	107	70-130	6
1,2-Dichloroethane (EDC)	mg/kg (ppm)	0.05	95	99	70-130	4
1,1,1-Trichloroethane	mg/kg (ppm)	0.05	105	107	70-130	2
Trichloroethene	mg/kg (ppm)	0.05	104	109	70-130	5
Tetrachloroethene	mg/kg (ppm)	0.05	103	107	70-130	4

Date of Report: 05/04/20
Date Received: 04/15/20
Project: Schnitzer NE 8th Redevelopment 190298, F&BI 004160

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

Laboratory Code: 004182-12 1/5 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Acceptance Criteria
Naphthalene	mg/kg (ppm)	0.17	<0.01	67	44-129
Acenaphthylene	mg/kg (ppm)	0.17	<0.01	75	52-121
Acenaphthene	mg/kg (ppm)	0.17	<0.01	73	51-123
Fluorene	mg/kg (ppm)	0.17	<0.01	79	37-137
Phenanthrene	mg/kg (ppm)	0.17	<0.01	75	34-141
Anthracene	mg/kg (ppm)	0.17	<0.01	78	32-124
Fluoranthene	mg/kg (ppm)	0.17	0.013	87	16-160
Pyrene	mg/kg (ppm)	0.17	0.013	81	10-180
Benz(a)anthracene	mg/kg (ppm)	0.17	<0.01	82	23-144
Chrysene	mg/kg (ppm)	0.17	<0.01	75	32-149
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	0.011	76	23-176
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	<0.01	73	42-139
Benzo(a)pyrene	mg/kg (ppm)	0.17	<0.01	77	21-163
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	<0.01	64	23-170
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	<0.01	63	31-146
Benzo(g,h,i)perylene	mg/kg (ppm)	0.17	<0.01	55	37-133

Laboratory Code: Laboratory Control Sample 1/5

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	mg/kg (ppm)	0.17	78	74	58-121	5
Acenaphthylene	mg/kg (ppm)	0.17	84	80	54-121	5
Acenaphthene	mg/kg (ppm)	0.17	82	79	54-123	4
Fluorene	mg/kg (ppm)	0.17	87	86	56-127	1
Phenanthrene	mg/kg (ppm)	0.17	82	82	55-122	0
Anthracene	mg/kg (ppm)	0.17	82	83	50-120	1
Fluoranthene	mg/kg (ppm)	0.17	87	92	54-129	6
Pyrene	mg/kg (ppm)	0.17	88	85	53-127	3
Benz(a)anthracene	mg/kg (ppm)	0.17	88	90	51-115	2
Chrysene	mg/kg (ppm)	0.17	83	86	55-129	4
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	78	80	56-123	3
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	81	78	54-131	4
Benzo(a)pyrene	mg/kg (ppm)	0.17	76	76	51-118	0
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	83	79	49-148	5
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	82	79	50-141	4
Benzo(g,h,i)perylene	mg/kg (ppm)	0.17	82	79	52-131	4

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. 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 lowest calibration standard. 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.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

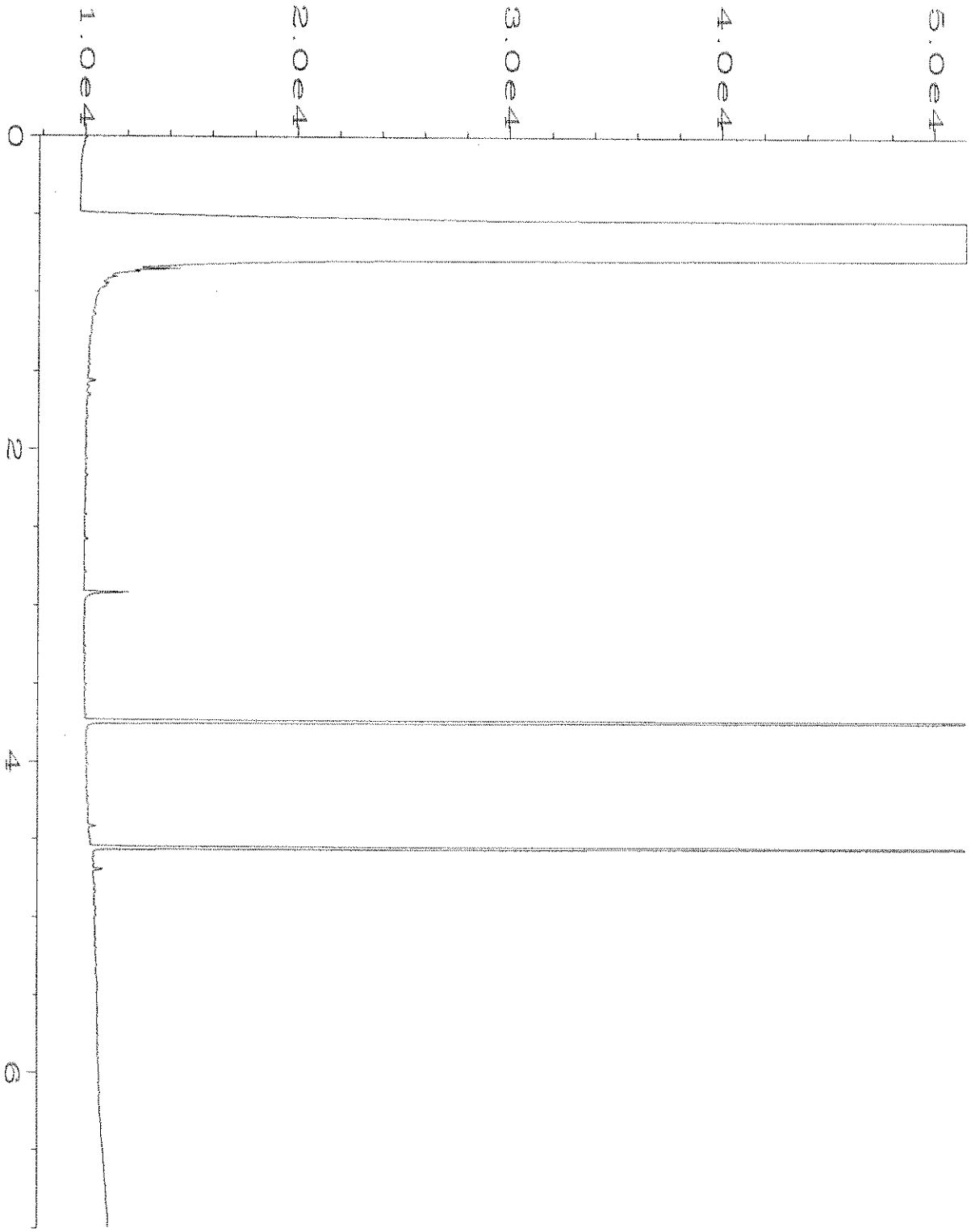
nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

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.

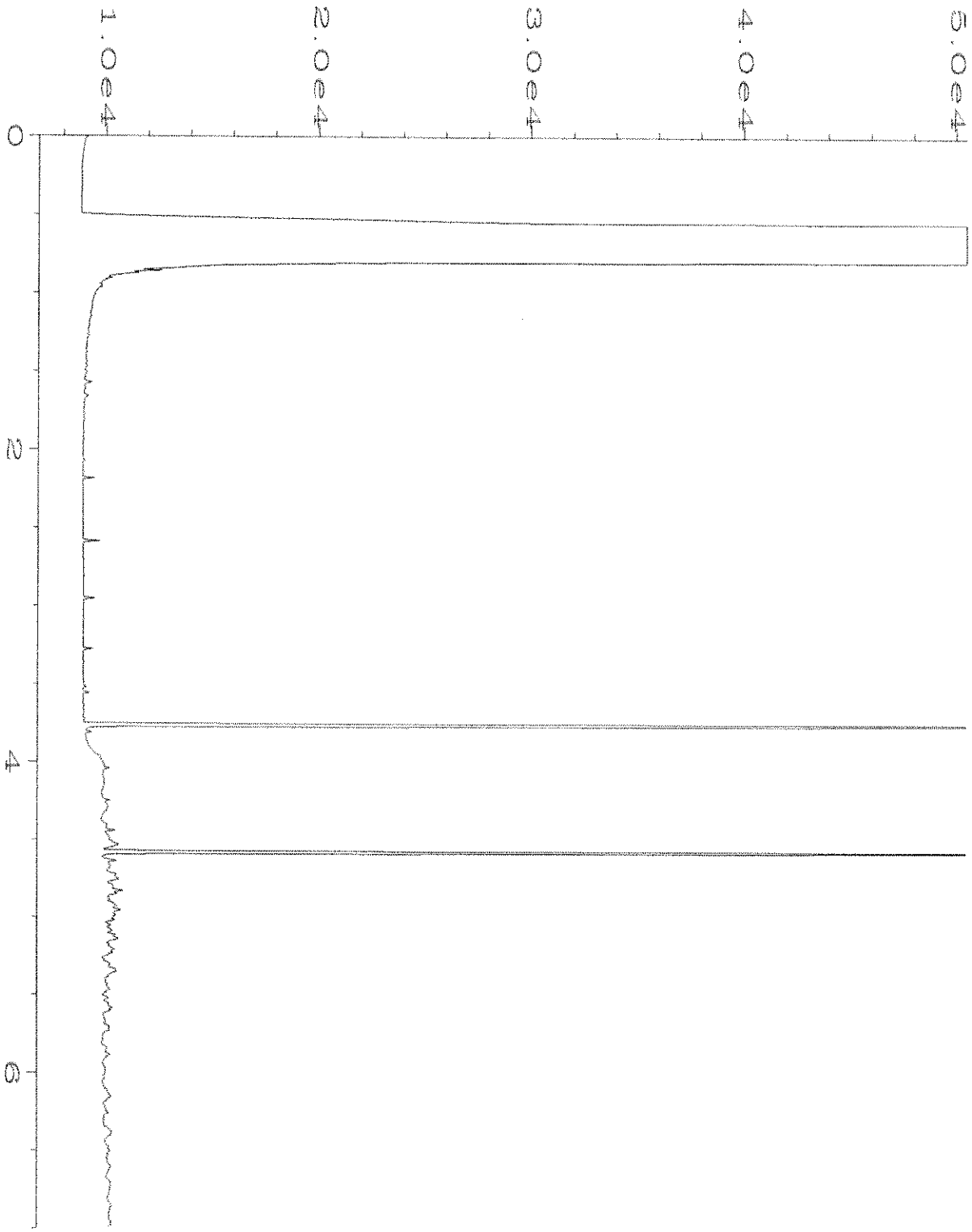
ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

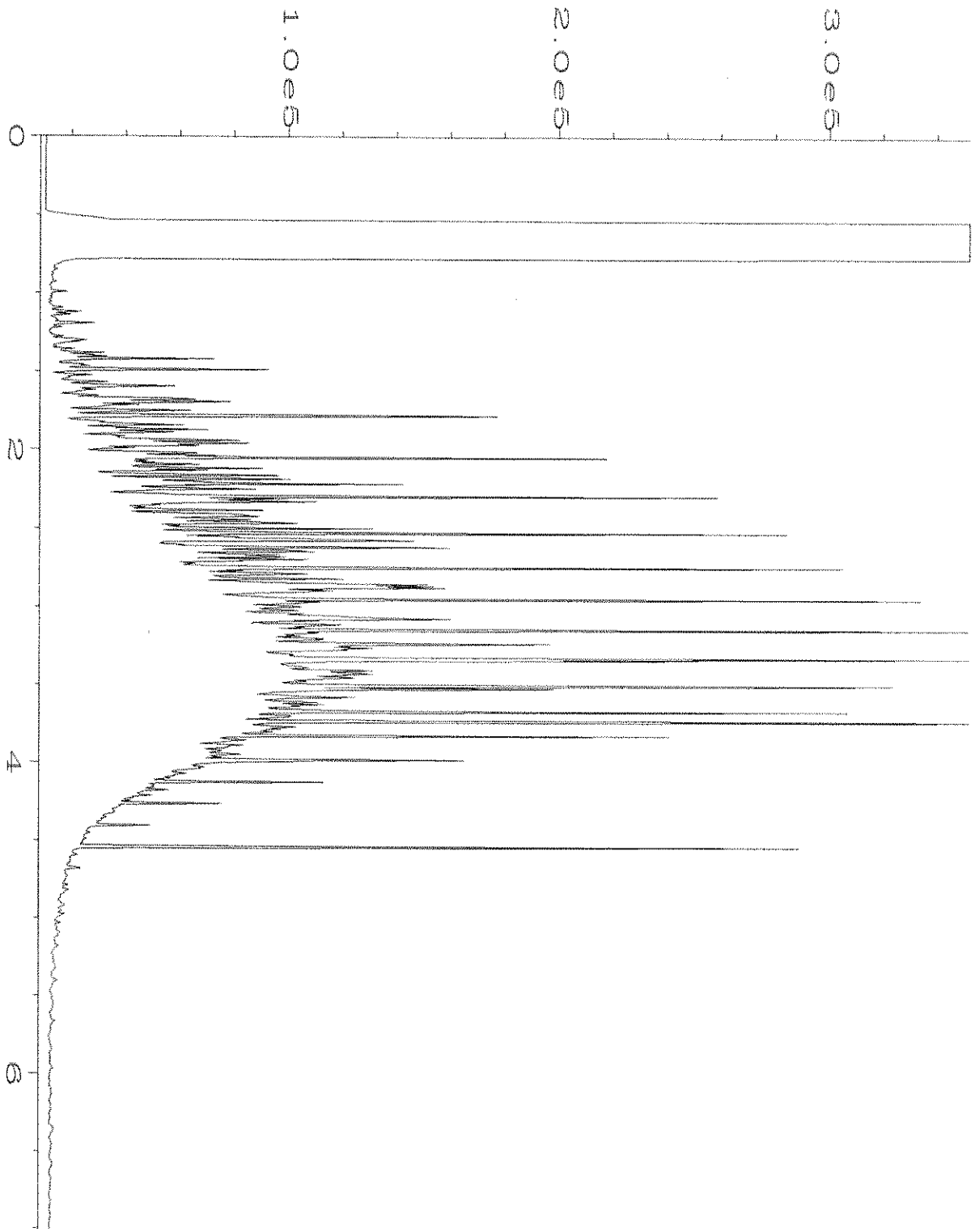
x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.



Data File Name	: C:\HPCHEM\6\DATA\04-24-20\018F0401.D		
Operator	: TL	Page Number	: 1
Instrument	: GC6	Vial Number	: 18
Sample Name	: 004160-03	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 4
Acquired on	: 24 Apr 20 02:06 PM	Instrument Method	: DX.MTH
Report Created on	: 27 Apr 20 08:35 AM	Analysis Method	: DEFAULT.MTH



Data File Name	: C:\HPCHEM\6\DATA\04-24-20\006F0401.D		
Operator	: TL	Page Number	: 1
Instrument	: GC6	Vial Number	: 6
Sample Name	: 00-954 mb	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 4
Acquired on	: 24 Apr 20 09:57 AM	Instrument Method	: DX.MTH
Report Created on	: 27 Apr 20 08:33 AM	Analysis Method	: DEFAULT.MTH



Data File Name	: C:\HPCHEM\6\DATA\04-24-20\005F0501.D		
Operator	: TL	Page Number	: 1
Instrument	: GC6	Vial Number	: 5
Sample Name	: 1000 Dx 59-162B	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 5
Acquired on	: 24 Apr 20 02:36 PM	Instrument Method	: DX.MTH
Report Created on	: 27 Apr 20 08:33 AM	Analysis Method	: DEFAULT.MTH

SAMPLE CHAIN OF CUSTODY

004160

ME 04/15/20 C03/VW1

Page # 1 of 1

Report To Al Cochrane

Company Aspect Consulting

Address 710 2nd Ave. Suite 550

City, State, ZIP Seattle, WA 98104

Phone _____ Email acochrane@aspectconsulting.com

SAMPLERS (signature) B Call

PROJECT NAME Schnitzer NE 85th Redevelopment

PO # 190298

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

TURNAROUND TIME

X Standard turnaround

RUSH

Rush charges authorized by:

SAMPLE DISPOSAL

Archive samples

Other _____

Default: Dispose after 30 days

Sample ID	~~Lab ID~~ Time	Date Sampled	~~Time Sampled~~ Lab ID	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	cVOCs				X-per AC 4/17/20 ME Notes (X)-per AC 4/24/20 ME
AMW-7-2.5	0900	4/15/20	01	Soil	1												~~Hold~~
AMW-7-4	0930		02														
AB-1-2.5	1120		03			(X)	(X)				(X)		X				
AB-1-4	1200		04														
AB-2-2.5	1225		05														
AB-2-5	1255		06														
AMW-6D-2.5	1430		07														
AMW-6D-4	1445		08														
AMW-6S-2.5	1500		09										(X)				
AMW-6S-4	1510		10														

Samples received at 3 °C

11 A-B

Trip Blank TB4110

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: B Call	Baxter Call	Aspect	4/15/20	1655
Received by:	Isaac Lessig	FBI	4/15/20	1655
Relinquished by:				
Received by:				

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

April 24, 2020

Ali Cochrane, Project Manager
Aspect Consulting, LLC
710 2nd Ave S, Suite 550
Seattle, WA 98104

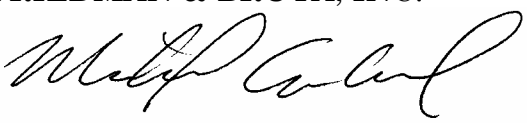
Dear Ms Cochrane:

Included are the results from the testing of material submitted on April 15, 2020 from the Schnitzer NE 8th Redevelopment 190298, F&BI 004160 project. There are 5 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
c: Data Aspect
ASP0424R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on April 15, 2020 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Schnitzer NE 8th Redevelopment 190298, F&BI 004160 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
004160 -01	AMW-7-2.5
004160 -02	AMW-7-4
004160 -03	AB-1-2.5
004160 -04	AB-1-4
004160 -05	AB-2-2.5
004160 -06	AB-2-5
004160 -07	AMW-6D-2.5
004160 -08	AMW-6D-4
004160 -09	AMW-6S-2.5
004160 -10	AMW-6S-4
004160 -11	Trip Blank

Sample AB-1-2.5 was extracted from a 4 ounce jar. The data were flagged accordingly.

All other quality control requirements were acceptable.

Analysis For Volatile Compounds By EPA Method 8260D Direct Sparge

Client Sample ID:	AB-1-2.5 pc	Client:	Aspect Consulting, LLC
Date Received:	04/15/20	Project:	Schnitzer NE 8th Redevelopment
Date Extracted:	04/21/20	Lab ID:	004160-03
Date Analyzed:	04/21/20	Data File:	042144.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	96	50	150
Toluene-d8	98	50	150
4-Bromofluorobenzene	98	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Analysis For Volatile Compounds By EPA Method 8260D Direct Sparge

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Schnitzer NE 8th Redevelopment
Date Extracted:	04/21/20	Lab ID:	00-829 mb
Date Analyzed:	04/21/20	Data File:	042142.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	50	150
Toluene-d8	96	50	150
4-Bromofluorobenzene	99	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.005
Chloroethane	<0.05
1,1-Dichloroethene	<0.005
Methylene chloride	<0.05
trans-1,2-Dichloroethene	<0.005
1,1-Dichloroethane	<0.005
cis-1,2-Dichloroethene	<0.005
1,2-Dichloroethane (EDC)	<0.005
1,1,1-Trichloroethane	<0.005
Trichloroethene	<0.003
Tetrachloroethene	<0.005

Date of Report: 04/24/20
Date Received: 04/15/20
Project: Schnitzer NE 8th Redevelopment 190298, F&BI 004160

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

Laboratory Code: 004172-02 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet wt)	Duplicate Result (Wet wt)	RPD (Limit 20)
Vinyl chloride	mg/kg (ppm)	<0.05	<0.05	nm
Chloroethane	mg/kg (ppm)	<0.5	<0.5	nm
1,1-Dichloroethene	mg/kg (ppm)	<0.05	<0.05	nm
Methylene chloride	mg/kg (ppm)	<0.5	<0.5	nm
trans-1,2-Dichloroethene	mg/kg (ppm)	<0.05	<0.05	nm
1,1-Dichloroethane	mg/kg (ppm)	<0.05	<0.05	nm
cis-1,2-Dichloroethene	mg/kg (ppm)	<0.05	<0.05	nm
1,2-Dichloroethane (EDC)	mg/kg (ppm)	<0.05	<0.05	nm
1,1,1-Trichloroethane	mg/kg (ppm)	<0.05	<0.05	nm
Trichloroethene	mg/kg (ppm)	<0.03	<0.03	nm
Tetrachloroethene	mg/kg (ppm)	<0.025	<0.025	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	mg/kg (ppm)	0.05	71	75	70-130	5
Chloroethane	mg/kg (ppm)	0.05	79	81	70-130	2
1,1-Dichloroethene	mg/kg (ppm)	0.05	78	80	70-130	3
Methylene chloride	mg/kg (ppm)	0.05	72	75	70-130	4
trans-1,2-Dichloroethene	mg/kg (ppm)	0.05	80	83	70-130	4
1,1-Dichloroethane	mg/kg (ppm)	0.05	82	84	70-130	2
cis-1,2-Dichloroethene	mg/kg (ppm)	0.05	85	87	70-130	2
1,2-Dichloroethane (EDC)	mg/kg (ppm)	0.05	87	90	70-130	3
1,1,1-Trichloroethane	mg/kg (ppm)	0.05	79	83	70-130	5
Trichloroethene	mg/kg (ppm)	0.05	81	84	70-130	4
Tetrachloroethene	mg/kg (ppm)	0.05	84	87	70-130	4

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. 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 lowest calibration standard. 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.

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

004160

ME 04/15/20

C03/VW1

Page # 1 of 1

Report To Ali Cochrane

Company Aspect Consulting

Address 710 2nd Ave. Suite 550

City, State, ZIP Seattle, WA 98104

Phone _____ Email acochrane@aspectconsulting.com

SAMPLERS (*signature*) B Call

PROJECT NAME: Schnitzer NE 8th Redevelopment

PO # 190298

REMARKS

Project specific RLs? - Yes / No

INVOICE TO

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

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

Sample ID	~~Lab ID~~ Time	Date Sampled	~~Time Sampled~~ Lab ID	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	cVOCs				X-per AC 4/17/20 ME Notes
AMW-7-2.5	0900	4/15/20	01	Soil	1												~~Hold~~
AMW-7-4	0930		02														
AB-1-2.5	1120		03										X				
AB-1-4	1200		04														
AB-2-2.5	1225		05														
AB-2-5	1255		06														
AMW-6D-2.5	1430		07														
AMW-6D-4	1445		08														
AMW-6S-2.5	1500		09														
AMW-6S-4	1510	↓	10	↓	↓												↓

Samples received at 3 °C

Trip Blank TB4/16 11A-B

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: B Call	Baxter Call	Aspect	4/15/20	1655
Received by:	Isaac Lessig	FBI	4/15/20	1655
Relinquished by:				
Received by:				

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

April 7, 2020

Ali Cochrane, Project Manager
Aspect Consulting, LLC
710 2nd Ave S, Suite 550
Seattle, WA 98104

Dear Ms Cochrane:

Included are the results from the testing of material submitted on March 31, 2020 from the Schnitzer NE 8th 190298, F&BI 003478 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 have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Data Aspect, Jessica Smith
ASP0407R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on March 31, 2020 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Schnitzer NE 8th 190298, F&BI 003478 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
003478 -01	ASG-1-033120
003478 -02	ASG-2-033120
003478 -03	ASG-3-033120
003478 -04	ASG-4-033120
003478 -05	ASG-5-033120
003478 -06	ASG-6-033120
003478 -07	ASG-7-033120

The hexane and toluene concentration for sample ASG-7-033120 exceeded the calibration range. The data were flagged accordingly.

All other quality control requirements were acceptable.

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	ASG-1-033120	Client:	Aspect Consulting, LLC
Date Received:	03/31/20	Project:	Schnitzer NE 8th 190298, F&BI 003478
Date Collected:	03/31/20	Lab ID:	003478-01 1/3.3
Date Analyzed:	04/02/20	Data File:	040222.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat/ms

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	101	70	130

Compounds:	Concentration ug/m3	ppbv
Vinyl chloride	<0.84	<0.33
Chloroethane	<8.7	<3.3
1,1-Dichloroethene	<1.3	<0.33
trans-1,2-Dichloroethene	<1.3	<0.33
Methyl t-butyl ether (MTBE)	<5.9	<1.6
1,1-Dichloroethane	<1.3	<0.33
cis-1,2-Dichloroethene	<1.3	<0.33
Hexane	44	13
1,2-Dichloroethane (EDC)	<0.13	<0.033
1,1,1-Trichloroethane	<1.8	<0.33
Benzene	8.1	2.5
Trichloroethene	<0.89	<0.16
Toluene	<62	<16
1,1,2-Trichloroethane	<0.36	<0.066
Tetrachloroethene	<22	<3.3
1,2-Dibromoethane (EDB)	<0.25	<0.033
Ethylbenzene	3.5	0.81
m,p-Xylene	13	3.1
o-Xylene	5.6	1.3
Naphthalene	<0.86	<0.16

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	ASG-2-033120	Client:	Aspect Consulting, LLC
Date Received:	03/31/20	Project:	Schnitzer NE 8th 190298, F&BI 003478
Date Collected:	03/31/20	Lab ID:	003478-02 1/8.0
Date Analyzed:	04/03/20	Data File:	040227.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat/ms

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	88	70	130

Compounds:	Concentration ug/m3	ppbv
Vinyl chloride	<2	<0.8
Chloroethane	<21	<8
1,1-Dichloroethene	<3.2	<0.8
trans-1,2-Dichloroethene	<3.2	<0.8
Methyl t-butyl ether (MTBE)	<14	<4
1,1-Dichloroethane	<3.2	<0.8
cis-1,2-Dichloroethene	<3.2	<0.8
Hexane	120	35
1,2-Dichloroethane (EDC)	<0.32	<0.08
1,1,1-Trichloroethane	<4.4	<0.8
Benzene	30	9.3
Trichloroethene	<2.1	<0.4
Toluene	<150	<40
1,1,2-Trichloroethane	<0.87	<0.16
Tetrachloroethene	<54	<8
1,2-Dibromoethane (EDB)	<0.61	<0.08
Ethylbenzene	180	42
m,p-Xylene	610	140
o-Xylene	180	41
Naphthalene	<2.1	<0.4

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	ASG-3-033120	Client:	Aspect Consulting, LLC
Date Received:	03/31/20	Project:	Schnitzer NE 8th 190298, F&BI 003478
Date Collected:	03/31/20	Lab ID:	003478-03 1/3.4
Date Analyzed:	04/03/20	Data File:	040224.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat/ms

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	83	70	130

Compounds:	Concentration ug/m3	ppbv
Vinyl chloride	<0.87	<0.34
Chloroethane	<9	<3.4
1,1-Dichloroethene	<1.3	<0.34
trans-1,2-Dichloroethene	<1.3	<0.34
Methyl t-butyl ether (MTBE)	<6.1	<1.7
1,1-Dichloroethane	<1.4	<0.34
cis-1,2-Dichloroethene	<1.3	<0.34
Hexane	13	3.6
1,2-Dichloroethane (EDC)	<0.14	<0.034
1,1,1-Trichloroethane	4.2	0.76
Benzene	4.5	1.4
Trichloroethene	<0.91	<0.17
Toluene	<64	<17
1,1,2-Trichloroethane	<0.37	<0.068
Tetrachloroethene	150	22
1,2-Dibromoethane (EDB)	<0.26	<0.034
Ethylbenzene	35	8.1
m,p-Xylene	120	27
o-Xylene	31	7.3
Naphthalene	<0.89	<0.17

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	ASG-4-033120	Client:	Aspect Consulting, LLC
Date Received:	03/31/20	Project:	Schnitzer NE 8th 190298, F&BI 003478
Date Collected:	03/31/20	Lab ID:	003478-04 1/3.4
Date Analyzed:	04/03/20	Data File:	040225.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat/ms

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	95	70	130

Compounds:	Concentration ug/m3	ppbv
Vinyl chloride	<0.87	<0.34
Chloroethane	<9	<3.4
1,1-Dichloroethene	<1.3	<0.34
trans-1,2-Dichloroethene	<1.3	<0.34
Methyl t-butyl ether (MTBE)	<6.1	<1.7
1,1-Dichloroethane	<1.4	<0.34
cis-1,2-Dichloroethene	<1.3	<0.34
Hexane	35	10
1,2-Dichloroethane (EDC)	<0.14	<0.034
1,1,1-Trichloroethane	<1.9	<0.34
Benzene	22	7.0
Trichloroethene	<0.91	<0.17
Toluene	<64	<17
1,1,2-Trichloroethane	<0.37	<0.068
Tetrachloroethene	49	7.2
1,2-Dibromoethane (EDB)	<0.26	<0.034
Ethylbenzene	30	7.0
m,p-Xylene	110	25
o-Xylene	35	8.0
Naphthalene	1.7	0.33

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	ASG-5-033120	Client:	Aspect Consulting, LLC
Date Received:	03/31/20	Project:	Schnitzer NE 8th 190298, F&BI 003478
Date Collected:	03/31/20	Lab ID:	003478-05 1/5.7
Date Analyzed:	04/03/20	Data File:	040228.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat/ms

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	110	70	130

Compounds:	Concentration ug/m3	ppbv
Vinyl chloride	<1.5	<0.57
Chloroethane	<15	<5.7
1,1-Dichloroethene	<2.3	<0.57
trans-1,2-Dichloroethene	<2.3	<0.57
Methyl t-butyl ether (MTBE)	<10	<2.8
1,1-Dichloroethane	<2.3	<0.57
cis-1,2-Dichloroethene	<2.3	<0.57
Hexane	50	14
1,2-Dichloroethane (EDC)	<0.23	<0.057
1,1,1-Trichloroethane	15	2.7
Benzene	20	6.3
Trichloroethene	<1.5	<0.28
Toluene	<110	<28
1,1,2-Trichloroethane	<0.62	<0.11
Tetrachloroethene	320	46
1,2-Dibromoethane (EDB)	<0.44	<0.057
Ethylbenzene	5.7	1.3
m,p-Xylene	22	5.0
o-Xylene	9.4	2.2
Naphthalene	<1.5	<0.28

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	ASG-6-033120	Client:	Aspect Consulting, LLC
Date Received:	03/31/20	Project:	Schnitzer NE 8th 190298, F&BI 003478
Date Collected:	03/31/20	Lab ID:	003478-06 1/3.4
Date Analyzed:	04/03/20	Data File:	040226.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat/ms

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	96	70	130

Compounds:	Concentration ug/m3	ppbv
Vinyl chloride	<0.87	<0.34
Chloroethane	<9	<3.4
1,1-Dichloroethene	<1.3	<0.34
trans-1,2-Dichloroethene	<1.3	<0.34
Methyl t-butyl ether (MTBE)	<6.1	<1.7
1,1-Dichloroethane	<1.4	<0.34
cis-1,2-Dichloroethene	<1.3	<0.34
Hexane	48	14
1,2-Dichloroethane (EDC)	0.19	0.048
1,1,1-Trichloroethane	<1.9	<0.34
Benzene	9.0	2.8
Trichloroethene	<0.91	<0.17
Toluene	<64	<17
1,1,2-Trichloroethane	<0.37	<0.068
Tetrachloroethene	<23	<3.4
1,2-Dibromoethane (EDB)	<0.26	<0.034
Ethylbenzene	2.9	0.66
m,p-Xylene	8.8	2.0
o-Xylene	3.1	0.72
Naphthalene	<0.89	<0.17

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	ASG-7-033120	Client:	Aspect Consulting, LLC
Date Received:	03/31/20	Project:	Schnitzer NE 8th 190298, F&BI 003478
Date Collected:	03/31/20	Lab ID:	003478-07 1/8.4
Date Analyzed:	04/03/20	Data File:	040229.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat/ms

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	93	70	130

Compounds:	Concentration ug/m3	ppbv
Vinyl chloride	<2.1	<0.84
Chloroethane	<22	<8.4
1,1-Dichloroethene	<3.3	<0.84
trans-1,2-Dichloroethene	<3.3	<0.84
Methyl t-butyl ether (MTBE)	<15	<4.2
1,1-Dichloroethane	<3.4	<0.84
cis-1,2-Dichloroethene	<3.3	<0.84
Hexane	2,200 ve	620 ve
1,2-Dichloroethane (EDC)	<0.34	<0.084
1,1,1-Trichloroethane	<4.6	<0.84
Benzene	9.0	2.8
Trichloroethene	<2.3	<0.42
Toluene	1,200 ve	320 ve
1,1,2-Trichloroethane	<0.92	<0.17
Tetrachloroethene	<57	<8.4
1,2-Dibromoethane (EDB)	<0.65	<0.084
Ethylbenzene	26	6.1
m,p-Xylene	85	20
o-Xylene	19	4.5
Naphthalene	<2.2	<0.42

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Schnitzer NE 8th 190298, F&BI 003478
Date Collected:	Not Applicable	Lab ID:	00-771 mb
Date Analyzed:	04/02/20	Data File:	040215.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat/ms

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	102	70	130

Compounds:	Concentration ug/m3	ppbv
Vinyl chloride	<0.26	<0.1
Chloroethane	<2.6	<1
1,1-Dichloroethene	<0.4	<0.1
trans-1,2-Dichloroethene	<0.4	<0.1
Methyl t-butyl ether (MTBE)	<1.8	<0.5
1,1-Dichloroethane	<0.4	<0.1
cis-1,2-Dichloroethene	<0.4	<0.1
Hexane	<3.5	<1
1,2-Dichloroethane (EDC)	<0.04	<0.01
1,1,1-Trichloroethane	<0.55	<0.1
Benzene	<0.32	<0.1
Trichloroethene	<0.27	<0.05
Toluene	<19	<5
1,1,2-Trichloroethane	<0.11	<0.02
Tetrachloroethene	<6.8	<1
1,2-Dibromoethane (EDB)	<0.077	<0.01
Ethylbenzene	<0.43	<0.1
m,p-Xylene	<0.87	<0.2
o-Xylene	<0.43	<0.1
Naphthalene	<0.26	<0.05

Date of Report: 04/07/20
Date Received: 03/31/20
Project: Schnitzer NE 8th 190298, F&BI 003478

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES FOR VOLATILES BY METHOD TO-15

Laboratory Code: 003478-01 1/3.3 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 30)
Vinyl chloride	ug/m3	<0.84	<0.84	nm
Chloroethane	ug/m3	<8.7	<8.7	nm
1,1-Dichloroethene	ug/m3	<1.3	<1.3	nm
trans-1,2-Dichloroethene	ug/m3	<1.3	<1.3	nm
Methyl t-butyl ether (MTBE)	ug/m3	<5.9	<5.9	nm
1,1-Dichloroethane	ug/m3	<1.3	<1.3	nm
cis-1,2-Dichloroethene	ug/m3	<1.3	<1.3	nm
Hexane	ug/m3	44	47	7
1,2-Dichloroethane (EDC)	ug/m3	<0.13	<0.13	nm
1,1,1-Trichloroethane	ug/m3	<1.8	<1.8	nm
Benzene	ug/m3	8.1	8.6	6
Trichloroethene	ug/m3	<0.89	<0.89	nm
Toluene	ug/m3	<62	<62	nm
1,1,2-Trichloroethane	ug/m3	<0.36	<0.36	nm
Tetrachloroethene	ug/m3	<22	<22	nm
1,2-Dibromoethane (EDB)	ug/m3	<0.25	<0.25	nm
Ethylbenzene	ug/m3	3.5	3.3	6
m,p-Xylene	ug/m3	13	13	0
o-Xylene	ug/m3	5.6	5.3	6
Naphthalene	ug/m3	<0.86	<0.86	nm

Date of Report: 04/07/20
Date Received: 03/31/20
Project: Schnitzer NE 8th 190298, F&BI 003478

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES FOR VOLATILES BY METHOD TO-15

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Vinyl chloride	ug/m3	35	91	70-130
Chloroethane	ug/m3	36	91	70-130
1,1-Dichloroethene	ug/m3	54	98	70-130
trans-1,2-Dichloroethene	ug/m3	54	96	70-130
Methyl t-butyl ether (MTBE)	ug/m3	49	106	70-130
1,1-Dichloroethane	ug/m3	55	94	70-130
cis-1,2-Dichloroethene	ug/m3	54	100	70-130
Hexane	ug/m3	48	103	70-130
1,2-Dichloroethane (EDC)	ug/m3	55	105	70-130
1,1,1-Trichloroethane	ug/m3	74	102	70-130
Benzene	ug/m3	43	95	70-130
Trichloroethene	ug/m3	73	87	70-130
Toluene	ug/m3	51	94	70-130
1,1,2-Trichloroethane	ug/m3	74	86	70-130
Tetrachloroethene	ug/m3	92	88	70-130
1,2-Dibromoethane (EDB)	ug/m3	100	95	70-130
Ethylbenzene	ug/m3	59	101	70-130
m,p-Xylene	ug/m3	120	99	70-130
o-Xylene	ug/m3	59	98	70-130
Naphthalene	ug/m3	71	113	70-130

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. 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 lowest calibration standard. 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.

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.

003 478

SAMPLE CHAIN OF CUSTODY ME 03/31/20

Page # 1 of 1

Report To Ali Cochrane / Jessica Smith
Company Aspect Consulting
Address 710 2nd Ave, Ste. 550
City, State, ZIP Seattle, WA 98104
Phone (206) 838-6594 Email acochrane@aspectconsulting.com

SAMPLERS (signature) David Unruh

PROJECT NAME & ADDRESS: Schnitzer NE 8th, 10605 NE 8th St, Bellevue

PO # 140298

NOTES:

INVOICE TO: AP

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

SAMPLE DISPOSAL
- [X] Default: Clean after 3 days
- [ ] Archive (Fee may apply)

SAMPLE INFORMATION										ANALYSIS REQUESTED						
Sample Name	Lab ID	Canister ID	Flow Cont. ID	Reporting Level: IA=Indoor Air SG=Soil Gas (Circle One)	Date Sampled	Initial Vac. ("Hg)	Field Initial Time	Final Vac. ("Hg)	Field Final Time	TO15 Full Scan	TO15 BTEXN	TO15 cVOCs	APH	Helium	TO-15 Gas target	Notes
ASG-1-033120	01	3671	117	IA / SG	3/31/20	-29	0900	-5	0905			X			X	
ASG-2-033120	02	3347	88	IA / SG		-29	0932	-5	0938							
ASG-3-033120	03	3432	12	IA / SG		-30	1203	-5	1210							
ASG-4-033120	04	3672	111	IA / SG		-30	1242	-5	1247							
ASG-5-033120	05	2296	17	IA / SG		-30	1317	-5	1323							
ASG-6-033120	06	3664	18	IA / SG		-30	1436	-5	1443							
ASG-7-033120	07	4177	229	IA / SG		-30	~~1420~~ DU	~~-5~~ DU	~~1443~~ DU							
				IA / SG			1508	-6	1516							

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: David Unruh	David Unruh	Aspect Consulting	3/31/20	1600
Received by:	Khai Hoang	FBI	3/31/20	1600
Relinquished by:				
Received by:		Samples received at 18 °C		

Friedman & Bruya, Inc.
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Seattle, WA 98119-2029
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Fax (206) 283-5044

APPENDIX C

Historical Data Tables

ASPECT CONSULTING NOTE:
Tables from GeoEngineers, Inc.'s Remedial Investigation/Feasibility Study Report dated December 15, 2014

Table 1

Monitoring Well Groundwater Elevation Data, 2008 - 2011

Sterling Realty Organization Property at 10605 and 10619 NE 8th Street
Bellevue, Washington

SRO Property Well ID	Well Screen Interval (feet, bgs)	Top of Casing Elevation (feet above datum)	Well Screen Elevation (feet above datum)	Groundwater Depth (feet, bgs)										Groundwater Elevation (feet, msl)									
				6/26/08	7/7/08	9/10/08	11/21/08	3/16/10	3/17/10	5/3/10	8/23/10	10/19/11	10/21/11	6/26/08	7/7/08	9/10/08	11/21/08	3/16/10	3/17/10	5/3/10	8/23/10	10/19/2011	10/21/2011
URS-MW-1	20-30	157.87	137.87 - 127.87	NM	NM	26.41	27.21	22.50	22.66	22.49	22.95	NM	24.53	NM	NM	131.46	130.66	135.37	135.21	135.38	134.92	NM	133.34
URS-MW-2	20-30	160.22	140.22 - 130.22	NM	NM	Dry	Dry	24.64	25.05	24.45	25.89	NM	28.61	NM	NM	Dry	Dry	135.58	135.17	135.77	134.33	NM	131.61
URS-MW-3	20-30	153.98	133.98 - 123.98	NM	NM	27.36	28.75	22.28	22.54	22.40	23.24	NM	25.52	NM	NM	126.62	125.23	131.70	131.44	131.58	NM	NM	128.46
URS-MW-4	20-30	152.99	132.99 - 122.99	NM	NM	Dry	Dry	NM	29.87	29.85	30.08	NM	29.89	NM	NM	Dry	Dry	NM	123.12	123.14	122.91	NM	123.10
URS-MW-8	70-80	152.35	82.35 - 72.35	NM	NM	NM	NM	NM	NM	NM	NM	68.62	68.40	NM	NM	NM	NM	NM	NM	NM	NM	83.73	83.95
B1/MW-1	70-90	169.63	99.63 - 79.63	NM	NM	NM	NM	90.77	92.81	NM	NM	NM	85.49	NM	NM	NM	NM	78.86	76.82	NM	NM	NM	84.14
B2/MW-2	70-90	159.02	89.02 - 69.02	74.30	74.62	NM	74.95	75.90	75.97	75.69	75.50	NM	73.15	84.72	84.40	NM	84.07	83.12	83.05	83.33	83.52	NM	85.87
B3/MW-3	20-30	158.89	138.89 - 128.89	23.89	23.93	24.68	28.93	23.45	23.40	23.43	23.70	NM	23.79	135	134.96	134.21	129.96	135.44	135.49	135.46	135.19	NM	135.10
B4/MW-4	70-90	157.06	87.06-67.06	82.31	82.29	NM	79.30	76.58	76.58	76.60	76.61	NM	75.12	123.14	122.91	NM	77.76	80.48	80.48	80.46	80.45	NM	81.94
MW-19	10-30	156.31	146.31-126.31	NM	NM	NM	NM	NM	NM	NM	27.21	NM	29.18	NM	NM	NM	NM	NM	NM	NM	129.10	NM	127.13
MW-20	15-30	152.63	137.63 - 122.63	NM	NM	NM	NM	NM	NM	NM	21.93	NM	23.40	NM	NM	NM	NM	NM	NM	NM	130.70	NM	129.23
Data Source	Farallon[1]	Farallon[1]	Farallon[1]	Farallon[1]	Farallon[1]	URS[2]	URS[2]	URS[2]	URS[2]	Farallon[1]	Farallon[1]	URS[2]	URS[2]	Farallon[1]	Farallon[1]	URS[2]	URS[2]	URS[2]	URS[2]	Farallon[1]	Farallon[1]	URS[2]	URS[2]

Notes:

[1]As reported (SES, 2011)
[2]As reported (URS, 2011B)
bgs = below ground surface
msl = mean sea level
NM = not measured
Vertical datum based on City of Bellevue - NAVD 88
Wells labeled "URS" were completed by URS Corporation.
Wells B1/MW-1, B2/MW-2, B3/MW-3, and B4/MW-4 were completed by Terra Associates.
Wells MW-19 and MW-20 were completed by Farallon.
May 3, 2010 groundwater elevations in perched zone are shown on Figure 7.

ASPECT CONSULTING NOTE:
Tables from GeoEngineers, Inc.'s Remedial Investigation/Feasibility Study Report dated December 15, 2014

Table 2

1990 Soil and Groundwater Data, Preliminary Environmental Site Assessment, Unocal Station Number 4511

Sterling Realty Organization Property at 10605 and 10619 NE 8th Street
Bellevue, Washington

Soil Quality Data[1]

Boring Number	Sample Number	Depth Collected	Benzene[2]	Toluene[2]	Ethyl-Benzene[2]	Total Xylenes[2]	TPH[3]	Purgeable Halogenated Volatile Organics[4]	Sample Jar Headspace Organic Vapor Concentrations[5]
		(ft bgs)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(ppm)
MW-1	MW-1, S-2	7.5	< 0.050	< 0.050	< 0.050	< 0.050	**7.5**	NA	25.2
MW-2	MW-2, S-1	2.5	< 0.050	< 0.050	< 0.050	**0.090**	**810**	NA	28
MW-2	MW-2, S-2	7.5	< 0.050	< 0.050	< 0.050	**0.240**	**203**	NA	20
MW-3	MW-3, S-1	2.5	< 0.050	< 0.050	< 0.050	**0.900**	**87.9**	NA	22
MW-4	MW-4, S-2	7.5	< 0.050	< 0.050	< 0.050	< 0.050	**65.3**	NA	169
MW-5	MW-5, S-2	7.5	< 0.050	< 0.050	< 0.050	< 0.050	**95.0**	< 0.05	255
MTCA Method A Cleaunup Level			**0.03**	**7**	**6**	**9**	**2,000**	**See Table 3**	**--**

Water Quality Data[6]

Boring Well/ Number	Sample Number	Benzene[7]	Toluene[7]	Ethyl-Benzene[7]	Total Xylenes[7]	TPH[3]	Well Headspace Organic Vapor Concentrations[5]
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(ppm)
MW-1	U4511-79-1	< 1	< 1	< 1	< 1	< 1,000	NA[8]
MW-2	U4511-79-2	< 1	< 1	< 1	< 1	< 1,000	
MW-3	U4511-79-3	**3**	< 1	**15**	**14**	< 1,000	
MW-4	U4511-79-4	< 1	< 1	< 1	< 1	< 1,000	
MW-5	Not sampled	--	--	--	--	--	
MTCA Method A Cleaunup Level		**5**	**1,000**	**700**	**1,000**	**500**	**--**

Notes:

[1]Soil samples collected July 12, 13, and 17, 1990 by Sweet-Edwards/EMCON, Inc. Analyses by Sound Analytical, Tacoma, Washington.

[2]Analysis by EPA Method 8020.

[3]TPH = Total Petroleum Hydrocarbons, EPA Method 418.1.

[4]Analysis by EPA Method 8010.

[5]Volatile organic vapor concentrations measured with a photoionization detector (Photovac MP-100 microtip) calibrated to 100 ppm isobutylene. Background reading = < 1 ppm.

[6]Water samples collected July 31, 1990 by Sweet-Edwards/EMCON, Inc. Analyses by Sound Analytical, Tacoma, Washington.

[7]Analysis by EPA Method 8020.

[8]Due to high water vapor (moisture) concentrations in the wellheads, PID measurements were not obtained.

< = Analyte Not Detected at or above the Method Reporting Limit
ft bgs = feet below the ground surface
mg/kg = milligrams per kilogram
MTCA = Model Toxics Cleanup Act
NA = Not Analyzed
ppm = parts per million
µg/L = micrograms per liter
Bolded value indicates analyte detected at the listed concentration.

ASPECT CONSULTING NOTE:
Tables from GeoEngineers, Inc.'s Remedial Investigation/Feasibility Study Report dated December 15, 2014

Table 3

1991-1992 Soil Analytical Data, Underground Storage Tank Closure Assessment, Unocal Station Number 4511

Sterling Realty Organization Property at 10605 and 10619 NE 8th Street
Bellevue, Washington

Sample ID	Date Collected	Benzene[1]	Toluene[1]	Ethyl-benzene[1]	Total Xylenes[1]	TPH as Gasoline[2]	TPH as Diesel[3]	TPH as Other[3]	TPH[4]	Total Lead[5]	Total PCBs[7]	Benzo(a) pyrene[8]	PCE	TCE	cis-1,2 DCE	trans-1,2 DCE	1,1-DCE	1,2-DCA	Vinyl Chloride	Acetone	Methylene Chloride	Sampling Location
													(VOCs)[9]									
		(mg/kg)																				
GTW-N1 Comp.	6/19/1991	< 0.05	< 0.1	< 0.1	< 0.1	< 5	--	--	--	< 3	--	--	--	--	--	--	--	--	--	--	--	N wall gas tank excavation
GTW-S1 Comp.	6/19/1991	< 0.05	< 0.1	< 0.1	**0.3**	< 5	--	--	--	< 3	--	--	--	--	--	--	--	--	--	--	--	S wall gas tank excavation
GTW-E1 Comp.	6/19/1991	< 0.05	**0.3**	**0.5**	**4.7**	**101**	--	--	--	< 3	--	--	--	--	--	--	--	--	--	--	--	E wall gas tank excavation
GTW-W1 Comp.	6/19/1991	< 0.05	< 0.1	< 0.1	< 0.1	< 5	--	--	--	< 3	--	--	--	--	--	--	--	--	--	--	--	W wall gas tank excavation
GTF-TA	6/19/1991	< 0.05	< 0.1	< 0.1	< 0.1	< 5	--	--	--	< 3	--	--	--	--	--	--	--	--	--	--	--	below east tank fill
GTF-TB	6/19/1991	< 0.05	**0.2**	< 0.1	**0.2**	< 5	--	--	--	< 3	--	--	--	--	--	--	--	--	--	--	--	below west tank fill
ET-1	6/19/1991	< 0.05	< 0.1	< 0.1	< 0.1	< 5	--	--	--	< 3	--	--	--	--	--	--	--	--	--	--	--	E product line trench
ST-1	6/19/1991	< 0.05	< 0.1	< 0.1	< 0.1	< 5	--	--	--	< 3	--	--	--	--	--	--	--	--	--	--	--	S product line trench
NPI-1	6/20/1991	< 0.05	< 0.1	< 0.1	< 0.1	< 5	--	--	--	< 3	--	--	--	--	--	--	--	--	--	--	--	below N pump island
NUHOW-1	6/20/1991	--	--	--	--	< 10	< 10	**17,400**	**35,400**	--	--	--	--	--	--	--	--	--	--	--	--	N wall HO/WO tank excavation
EUHOW-1	6/20/1991	ND[11]	ND[11]	ND[11]	ND[11]	< 10	< 10	< 40	**26**	--	--	--	--	--	--	--	--	--	--	--	--	E wall HO/WO tank excavation
W/SUHOW-1	6/20/1991	--	--	--	--	< 10	< 10	< 40	**90**	--	--	--	--	--	--	--	--	--	--	--	--	Comp. W,S walls HO/WO exc.
UOF-1[10]	6/20/1991	< 0.05	< 0.1	< 0.1	< 0.1	< 5	< 10	< 40	< 25	--	< 1	--	--	--	--	--	--	--	--	--	--	below WO tank fill
UOF-2[10]	6/20/1991	< 0.05	< 0.1	< 0.1	< 0.1	< 5	< 10	< 40	**90**	--	< 1	--	--	--	--	--	--	--	--	--	--	below WO tank fill - duplicate
HOF-1[10]	6/20/1991	ND[11]	ND[11]	ND[11]	ND[11]	< 10	< 10	< 40	< 25	--	--	--	--	--	--	--	--	--	--	--	--	below HO tank fill
DW-1[10]	6/20/1991	< 0.05	< 0.05	**0.12**	**2.08**	**1,940**	< 10	< 40	**1,260**	--	< 1	--	< 0.05	< 0.05	< 0.05	< 0.05	< 0.1	< 0.05	< 0.5	< 1	< 0.5	W wall dry well excavation
DW-2[10]	6/20/1991	< 0.05	< 0.05	< 0.05	**1.45**	**2,050**	< 10	< 40	**1,690**	--	< 1	--	< 0.05	< 0.05	< 0.05	< 0.05	< 0.1	< 0.05	< 0.5	< 1	< 0.5	base of dry well excavation
GTW-E2A	6/26/1991	< 0.05	< 0.1	< 0.1	< 0.1	< 5	--	--	< 25	--	--	--	--	--	--	--	--	--	--	--	--	N end of E wall g.t. excavation
GTW-E2B	6/26/1991	< 0.05	< 0.1	< 0.1	< 0.1	< 5	--	--	< 25	--	--	--	--	--	--	--	--	--	--	--	--	S end of E wall g.t. excavation
TP-1A	6/26/1991	<0.005	<0.005	<0.005	0.0072	< 10	< 10	< 40	< 25	--	--	--	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	**0.082**	**0.022**	test pit S of dry well excav.
TP-1B	6/26/1991	<0.005	<0.005	<0.005	<0.005	< 10	< 10	< 40	< 25	--	--	--	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	**0.058**	**0.023**	test pit S of dry well excav.
TP-2A	6/26/1991	<0.005	<0.005	<0.005	<0.005	< 10	< 10	< 40	< 25	--	--	--	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	**0.061**	**0.019**	test pit SW of dry well excav.
TP-3A	6/26/1991	< 0.05	< 0.1	< 0.1	**0.1**	**17**	--	--	< 25	--	--	--	--	--	--	--	--	--	--	--	--	near SW corner of building
TP-3B	6/26/1991	< 0.05	< 0.1	< 0.1	< 0.1	< 5	--	--	**32**	--	--	--	--	--	--	--	--	--	--	--	--	near SW corner of building
TP-4A	6/26/1991	< 0.05	**0.3**	**6.3**	**30.7**	**740**	--	--	**363**	--	--	--	--	--	--	--	--	--	--	--	--	W end of former tank complex
TP-5A	6/26/1991	< 0.05	< 0.1	< 0.1	**0.3**	< 5	--	--	< 25	--	--	--	--	--	--	--	--	--	--	--	--	N of NW corner of building
TP-5B	6/26/1991	< 0.05	< 0.1	< 0.1	< 0.1	< 5	--	--	< 25	--	--	--	--	--	--	--	--	--	--	--	--	N of NW corner of building
TP-6A	6/26/1991	< 0.05	< 0.1	**0.3**	**3.0**	**25**	--	--	**86**	--	--	--	--	--	--	--	--	--	--	--	--	between N pump islands
TP-6B	6/26/1991	< 0.05	< 0.1	< 0.1	< 0.1	< 5	--	--	**74**	--	--	--	--	--	--	--	--	--	--	--	--	between N pump islands
U/D-SS-1[10]	6/26/1991	< 0.014	< 0.014	< 0.014	**0.029**	**77**	< 10	**154**	**431**	--	< 1	--	< 0.014	< 0.014	< 0.014	< 0.014	< 0.014	< 0.014	< 0.014	< 0.136	**0.055**	stockpile sample
SS-1C	6/27/1991	**0.20**	**7.8**	**5.2**	**55.4**	**996**	--	--	**616**	**6**	--	--	--	--	--	--	--	--	--	--	--	stockpile sample
SS-2C	6/27/1991	< 0.05	**0.4**	**0.3**	**10**	**174**	--	--	**307**	**12**	--	--	--	--	--	--	--	--	--	--	--	stockpile sample
STOCKPILE #1	8/8/1991	< 0.05	< 0.05	< 0.05	**0.06**	< 1	--	--	--	**7**	--	--	--	--	--	--	--	--	--	--	--	stockpile sample
STOCKPILE #2	8/8/1991	**0.10**	**0.63**	**2.16**	**18.7**	**406**	--	--	--	**5**	--	--	--	--	--	--	--	--	--	--	--	stockpile sample
STOCKPILE #3	8/8/1991	< 0.05	< 0.05	< 0.05	**0.20**	**5**	--	--	--	**5**	--	--	--	--	--	--	--	--	--	--	--	stockpile sample
STOCKPILE #4	8/8/1991	**5.08**	**110**	**20.2**	**239**	**3,260**	--	--	--	**6**	--	--	--	--	--	--	--	--	--	--	--	stockpile sample
STOCKPILE #5	8/8/1991	< 0.05	< 0.05	**0.16**	**0.61**	**130**	--	--	--	**7**	--	--	--	--	--	--	--	--	--	--	--	stockpile sample
STOCKPILE #6	8/8/1991	**0.24**	**4.07**	**4.50**	**33.1**	**436**	--	--	--	**8**	--	--	--	--	--	--	--	--	--	--	--	stockpile sample
STOCKPILE #7	8/8/1991	< 0.05	**2.35**	**3.56**	**35.9**	**1,350**	--	--	--	**8**	--	--	--	--	--	--	--	--	--	--	--	stockpile sample
STOCKPILE #8	8/8/1991	< 0.05	< 0.05	< 0.05	**0.06**	**23**	--	--	--	**5**	--	--	--	--	--	--	--	--	--	--	--	stockpile sample
HYD-1	8/16/1991	< 0.005	< 0.005	< 0.005	< 0.005	< 10	< 10	< 40	< 25	--	--	--	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.05	< 0.01	base of hoist #1 (alignment)
HYD-2	8/16/1991	< 0.5	< 0.5	**0.8**	**9.0**	**394**	< 10	**261**	**495**	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	< 5	< 0.5	< 5	< 10	< 5	sidewall of hoist excavation
HYD-3A	8/19/1991	< 0.005	< 0.005	< 0.005	< 0.005	< 10	< 10	< 40	< 25	--	--	--	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.05	< 0.01	below E hoist (alignment)
HYD-3B	8/19/1991	< 0.005	< 0.005	< 0.005	< 0.005	< 10	< 10	< 40	< 25	--	--	--	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.05	**0.014**	below E hoist (alignment)
HYD-4	8/19/1991	**1.44**	**18.8**	**5.21**	**23.8**	**162**	< 10	**26,700**	**61,200**	--	--	--	< 0.05	< 0.05	< 0.05	< 0.05	< 0.1	< 0.05	< 0.5	< 1	< 0.5	below middle hoist
HYD-4B	8/19/1991	< 0.5	< 0.5	**1.0**	**8.6**	**899**	< 10	**326**	**1,450**	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	< 5	< 0.5	< 5	< 10	< 5	below middle hoist
HYD-6	8/19/1991	< 0.5	**4.9**	**4.4**	**34**	**6,670**	< 10	**1,030**	**6,460**	--	--	--	< 0.5	< 0.5	< 0.5	< 0.5	< 5	< 0.5	< 5	< 10	< 5	below west hoist
HYD-6B	8/19/1991	< 0.05	< 0.05	**0.28**	**2.76**	**115**	< 10	**238**	**377**	--	--	--	< 0.05	< 0.05	< 0.05	< 0.05	< 0.1	< 0.05	< 0.5	< 1	< 0.5	below west hoist
MTCA Cleanup Levels		**0.03 (A)**	**7 (A)**	**6 (A)**	**9 (A)**	**30 (A)**	**2,000 (A)**	**2,000 (A)**	**2,000 (A)**	**250 (A)**	**1.0 (A)**	**0.1 (A)**	**0.05 (A)**	**0.03 (A)**	**0.076 (B)**	**0.48 (B)**	**0.037 (B)**	**0.0023 (B)**	**0.0012 (B)**	**29 (B)**	**0.02 (A)**	--

ASPECT CONSULTING NOTE:
Tables from GeoEngineers, Inc.'s Remedial Investigation/Feasibility Study Report dated December 15, 2014

Sample ID	Date Collected	Benzene[1]	Toluene[1]	Ethyl-benzene[1]	Total Xylenes[1]	TPH as Gasoline[2]	TPH as Diesel[3]	TPH as Other[3]	TPH[4]	Total Lead[5]	Total PCBs[7]	Benzo(a) pyrene[8]	PCE	TCE	cis-1,2 DCE	trans-1,2 DCE	1,1-DCE	1,2-DCA	Vinyl Chloride	Acetone	Methylene Chloride	Sampling Location
													(VOCs)[9]									
		(mg/kg)																				
MW-11-12.5	8/27/1991	< 0.05	< 0.05	**2.03**	**6.31**	**216**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	sample from boring MW-11
NPUMPE[6]	2/17/1992	< 0.05	< 0.05	< 0.05	**0.06**	**1.0**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	E end of N pump island
NPUMPW[6]	2/17/1992	< 0.05	< 0.05	< 0.05	< 0.05	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	W end of N pump island
OH20	2/17/1992	--	--	--	--	< 10	< 10	< 40	--	--	--	--	--	--	--	--	--	--	--	--	--	below oil/water separator
SS-2	2/17/1992	< 0.05	**0.43**	**0.53**	**4.84**	**202**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	stockpile sample
SS-3	2/17/1992	**0.19**	**2.63**	**3.91**	**20.6**	**541**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	stockpile sample
SS-4	2/17/1992	**0.26**	**2.90**	**3.71**	**20.9**	**481**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	stockpile sample
SS-5	2/17/1992	**1.13**	**11.0**	**7.90**	**26.0**	**900**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	stockpile sample
WPUMPN[6]	2/18/1992	< 0.05	< 0.05	< 0.05	**0.23**	**3**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	N end of W pump island
WPUMPS[6]	2/18/1992	< 0.05	< 0.05	< 0.05	< 0.05	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	S end of W pump island
WPUMPE[6]	2/24/1992	< 0.05	< 0.05	< 0.05	< 0.05	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	base of W pump island excav.
WPUMPEW[6]	2/24/1992	< 0.05	< 0.05	< 0.05	< 0.05	< 1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	E wall of W pump island excav.
BHOISE[6]	2/28/1992	--	--	--	--	ND[11]	ND[11]	ND[11]	--	--	--	--	--	--	--	--	--	--	--	--	--	base of hoist excavation
SHOISW[6]	2/28/1992	--	--	--	--	ND[11]	ND[11]	ND[11]	--	--	--	--	--	--	--	--	--	--	--	--	--	S wall of hoist excavation
WHOISB[6]	3/2/1992	--	--	--	--	ND[11]	ND[11]	ND[11]	--	--	--	--	--	--	--	--	--	--	--	--	--	W wall of hoist excavation
SPILE1	3/2/1992	--	--	--	--	ND[11]	ND[11]	**120**	--	--	< 1	**0.04**	--	--	--	--	--	--	--	--	--	stockpile sample
SPILE2	3/2/1992	--	--	--	--	ND[11]	ND[11]	**40**	--	--	< 1	< 0.01	--	--	--	--	--	--	--	--	--	stockpile sample
SPILE3	3/2/1992	--	--	--	--	ND[11]	ND[11]	**60**	--	--	< 1	< 0.01	--	--	--	--	--	--	--	--	--	stockpile sample
BASE-0421-01[6]	4/21/1992	--	--	--	--	--	< 25	< 100	--	--	--	--	--	--	--	--	--	--	--	--	--	base of dry well excavation
WWALL13-0421-02[6]	4/21/1992	--	--	--	--	--	< 25	< 100	--	--	--	--	--	--	--	--	--	--	--	--	--	W wall of dry well excavation
WWALL17-0421-03[6]	4/21/1992	--	--	--	--	--	< 25	< 100	--	--	--	--	--	--	--	--	--	--	--	--	--	W wall of dry well excavation
NWALL-0421-04[6]	4/21/1992	--	--	--	--	--	< 25	< 100	--	--	--	--	--	--	--	--	--	--	--	--	--	N wall of dry well excavation
MTCA Cleanup Levels		**0.03 (A)**	**7 (A)**	**6 (A)**	**9 (A)**	**30 (A)**	**2,000 (A)**	**2,000 (A)**	**2,000 (A)**	**250 (A)**	**1.0 (A)**	**0.1 (A)**	**0.05 (A)**	**0.03 (A)**	**0.076 (B)**	**0.48 (B)**	**0.037 (B)**	**0.0023 (B)**	**0.0012 (B)**	**29 (B)**	**0.02 (A)**	**--**

Notes:

[1]Benzene, toluene, ethylbenzene, and total xylenes (BTEX) by EPA Method 5030/8020 or EPA Method 8240 (low level)

[2]Volatile fuel hydrocarbons (TPH as gasoline) by EPA Method 5030/8015 Modified

[3]Semi volatile fuel hydrocarbons (TPH as diesel, other) by EPA Method 3550/8015 Modified

[4]Total Petroleum Hydrocarbons (TPH) by EPA Method 418.1

[5]Total lead by EPA Method 7420

[6]Confirmation soil sample collected following soil excavation

[7]Total Polychlorinated Biphenyls (PCBs) by EPA Methods 3540/8080

[8]Polynuclear Aromatic Hydrocarbons (PAHs) by EPA Methods 3540/8310. Additional low level detections of several PAH analytes for samples SPILE 1 and SPILE 3. See lab reports for additional information.

[9]Volatile Organic Compounds (VOCs) by EPA Method 8240. Additional low level detections of several VOC analytes for sample HYD-4. See lab reports for additional information.

[10]Sample analyzed for Toxicity Characteristic Leaching Procedure (TCLP) by EPA Method 1311

[11]Based on our review of the 1992 laboratory data report obtained from Ecology on-line document repository for the Site, data sheets were not available for samples shown as Non Detect (ND) in this table. ND results are from the original data table in EMCON's 1992 report.

-- = analyte not tested

< = Analyte not detected at or above method reporting limit

mg/kg = milligrams per kilogram

MTCA = Model Toxics Control Act (WAC 173-340).

(A) = MTCA Method A Cleanup Level

(B) = MTCA Method B cleanup for the protection of groundwater. See Table 8 for information on basis for cleanup levels.

DCA = dichloroethane

DCE = dichloroethene

PCE = perchloroethene (tetrachloroethene)

TCE = trichloroethene

Bolded value indicates analyte detected at the listed concentration.

Shaded value represents concentration that exceeded the MTCA cleanup level.

ASPECT CONSULTING NOTE:
Tables from GeoEngineers, Inc.'s Remedial Investigation/Feasibility Study Report dated December 15, 2014

Table 4

Chemical Analytical Data for Soil Samples

Sterling Realty Organization Property at 10605 and 10619 NE 8th Street
Bellevue, Washington

Sample ID	Sample Collected By	Sample Date	Depth (ft bgs)	VOCs (mg/kg)[1]											Gasoline-range Petroleum Hydrocarbons (mg/kg)[2]	Diesel-range Petroleum Hydrocarbons (mg/kg)[3]	Oil-range Petroleum Hydrocarbons (mg/kg)[3]	Lead (mg/kg)
				PCE	TCE	cis-1,2 DCE	trans-1,2 DCE	1,1-DCE	1,2-DCA	Vinyl Chloride	Benzene	Toluene	Ethyl-benzene	Xylenes, total				
Soil samples collected in 2000 (URS, 2000)																		
URSSB-OP1	URS	3/11/2000	6	--	--	--	--	--	--	--	< 0.056	< 0.056	< 0.056	< 0.112	< 5.6	< 28	< 56	--
		3/11/2000	18	< 0.056	< 0.056	< 0.056	< 0.056	< 0.056	<0.056	< 0.056	< 0.056	< 0.056	< 0.056	< 0.112	< 5.6	< 28	< 56	--
URSSB-OP2		3/11/2000	12	< 0.054	< 0.054	< 0.054	< 0.054	< 0.054	<0.054	< 0.054	< 0.054	< 0.054	< 0.054	< 0.108	< 5.4	< 27	< 56	--
URSSB-OP3		3/11/2000	6	--	--	--	--	--	--	--	< 0.059	< 0.059	< 0.059	< 0.118	< 5.9	< 29	< 59	--
		3/11/2000	18	--	--	--	--	--	--	--	< 0.056	< 0.056	< 0.056	< 0.112	< 5.6	< 28	< 56	--
URSSB-OP4		3/11/2000	8	--	--	--	--	--	--	--	< 0.054	< 0.054	< 0.054	< 0.108	< 5.4	< 27	< 54	--
URSSB-OP5		3/11/2000	12	< 0.054	< 0.054	< 0.054	< 0.054	< 0.054	<0.054	< 0.054	< 0.054	< 0.054	< 0.054	< 0.108	< 5.4	< 27	< 54	--
URSSB-OP6		3/11/2000	20	< 0.054	< 0.054	< 0.054	< 0.054	< 0.054	<0.054	< 0.054	< 0.054	< 0.054	< 0.054	< 0.108	< 5.4	< 27	< 54	<5.4
URSSB-OP7		3/11/2000	16	--	--	--	--	--	--	--	< 0.054	< 0.054	< 0.054	< 0.108	< 5.4	< 28	**88**	--
URSSB-OP8		3/11/2000	8	--	--	--	--	--	--	--	< 0.056	< 0.056	< 0.056	< 0.112	< 5.6	< 28	< 56	--
		3/11/2000	18	--	--	--	--	--	--	--	< 0.055	< 0.055	< 0.055	< 0.110	< 5.5	< 28	< 55	<5.5
Soil samples collected in 2008 (Terra, 2008; URS, 2008)																		
B2/MW-2	Terra Associates	6/23/2008	5	--	--	--	--	--	--	--	--	--	--	--	<22	<56	<110	--
		6/23/2008	15	--	--	--	--	--	--	--	--	--	--	--	<22	<55	<110	--
		6/23/2008	25	--	--	--	--	--	--	--	--	--	--	--	<22	<54	<110	--
URS-MW-1	URS	8/25/2008	15	< 0.02	<0.03	<0.02	<0.02	<0.05	<0.03	<0.002	< 0.02	< 0.02	< 0.03	< 0.03	<10	--	--	--
		8/25/2008	27.5	**0.41**	<0.03	<0.02	<0.02	<0.05	<0.03	<0.002	< 0.02	< 0.02	< 0.03	< 0.03	<10	--	--	--
URS-MW-2	URS	8/27/2008	15	< 0.02	<0.03	<0.02	<0.02	<0.05	<0.03	<0.002	< 0.02	< 0.02	< 0.03	< 0.03	<10	--	--	--
		8/27/2008	27.5	< 0.02	<0.03	<0.02	<0.02	<0.05	<0.03	<0.002	< 0.02	< 0.02	< 0.03	< 0.03	<10	--	--	--
URS-MW-3	URS	8/26/2008	17.5	< 0.02	<0.03	<0.02	<0.02	<0.05	<0.03	<0.002	< 0.02	< 0.02	< 0.03	< 0.03	<10	--	--	--
		8/26/2008	27.5	< 0.02	<0.03	<0.02	<0.02	<0.05	<0.03	<0.002	< 0.02	< 0.02	< 0.03	< 0.03	<10	--	--	--
URS-MW-4	URS	8/26/2008	12.5	**0.17**	<0.03	<0.02	<0.02	<0.05	<0.03	<0.002	< 0.02	< 0.02	< 0.03	< 0.03	<10	--	--	--
		8/26/2008	30	**0.12**	<0.03	<0.02	<0.02	<0.05	<0.03	<0.002	< 0.02	< 0.02	< 0.03	< 0.03	<10	--	--	--
URS-SB-1	URS	8/25/2008	10	< 0.02	<0.03	<0.02	<0.02	<0.05	<0.03	<0.002	< 0.02	< 0.02	< 0.03	< 0.03	<10	--	--	--
		8/25/2008	30	**0.22**	<0.03	<0.02	<0.02	<0.05	<0.03	<0.002	< 0.02	< 0.02	< 0.03	< 0.03	<10	--	--	--
		8/25/2008	45	**0.05**	<0.03	<0.02	<0.02	<0.05	<0.03	<0.002	< 0.02	< 0.02	< 0.03	< 0.03	<10	--	--	--
		8/25/2008	75	< 0.02	<0.03	<0.02	<0.02	<0.05	<0.03	<0.002	< 0.02	< 0.02	< 0.03	< 0.03	<10	--	--	--
URS-SB-2	URS	8/25/2008	10	< 0.02	<0.03	<0.02	<0.02	<0.05	<0.03	<0.002	< 0.02	< 0.02	< 0.03	< 0.03	<10	--	--	--
		8/25/2008	27.5	**0.07**	<0.03	<0.02	<0.02	<0.05	<0.03	<0.002	< 0.02	< 0.02	< 0.03	< 0.03	<10	--	--	--
URS-SB-3	URS	8/26/2008	17.5	**0.05**	<0.03	<0.02	<0.02	<0.05	<0.03	<0.002	< 0.02	< 0.02	< 0.03	< 0.03	<10	--	--	--
		8/26/2008	22.5	**0.07**	<0.03	<0.02	<0.02	<0.05	<0.03	<0.002	< 0.02	< 0.02	< 0.03	< 0.03	<10	--	--	--
URS-SB-4	URS	8/27/2008	17.5	< 0.02	<0.03	<0.02	<0.02	<0.05	<0.03	<0.002	< 0.02	< 0.02	< 0.03	< 0.03	<10	--	--	--
		8/27/2008	30	< 0.02	<0.03	<0.02	<0.02	<0.05	<0.03	<0.002	< 0.02	< 0.02	< 0.03	< 0.03	<10	--	--	--
URS-SB-8	URS	11/19/2008	21.5	< 0.02	<0.03	<0.02	<0.02	<0.05	<0.03	<0.002	< 0.02	< 0.02	< 0.03	< 0.03	--	--	--	--
		11/19/2008	29	< 0.02	<0.03	<0.02	<0.02	<0.05	<0.03	<0.002	< 0.02	< 0.02	< 0.03	< 0.03	--	--	--	--
		11/19/2008	41.5	< 0.02	<0.03	<0.02	<0.02	<0.05	<0.03	<0.002	< 0.02	< 0.02	< 0.03	< 0.03	--	--	--	--
Soil samples collected in 2010 (Farallon, 2010)																		
MW-19	Farallon	8/5/2010	4.5	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/5/2010	9	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/5/2010	24	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.05	<0.05	<0.1	<2	<50	<250	--
		8/5/2010	29	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
MTCA Method A or B Cleanup Levels				**0.05 (A)**	**0.03 (A)**	**0.076 (B)**	**0.48 (B)**	**0.037 (B)**	**0.0023 (B)**	**0.0012 (B)**	**0.03 (A)**	**7 (A)**	**6 (A)**	**9 (A)**	**100 (A)**	**2,000 (A)**	**2,000 (A)**	**250 (A)**

ASPECT CONSULTING NOTE:
Tables from GeoEngineers, Inc.'s Remedial Investigation/Feasibility Study Report dated December 15, 2014

Sample ID	Sample Collected By	Sample Date	Depth (ft bgs)	VOCs (mg/kg)[1]											Gasoline-range Petroleum Hydrocarbons (mg/kg)[2]	Diesel-range Petroleum Hydrocarbons (mg/kg)[3]	Oil-range Petroleum Hydrocarbons (mg/kg)[3]	Lead (mg/kg)
				PCE	TCE	cis-1,2 DCE	trans-1,2 DCE	1,1-DCE	1,2-DCA	Vinyl Chloride	Benzene	Toluene	Ethyl-benzene	Xylenes, total				
MW-20	Farallon	8/6/2010	4.5	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/6/2010	10	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/6/2010	14.5	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/6/2010	19.5	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/6/2010	25	**0.026**	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.05	<0.05	<0.15	<2	--	--	--
		8/6/2010	29.5	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
SRO-1	Farallon	8/5/2010	1	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.05	<0.05	<0.15	6	--	--	--
		8/5/2010	11	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/5/2010	16	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/5/2010	20	**0.28**	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.05	<0.05	<0.15	<2	<50	<250	--
		8/5/2010	22	**0.43**	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.05	<0.05	<0.15	<2	<50	<250	--
		8/5/2010	26	**0.25**	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
SRO-2	Farallon	8/5/2010	1	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.05	<0.05	<0.15	**3**	**67**	**760**	--
		8/5/2010	5.5	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/5/2010	9	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/5/2010	14	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/5/2010	19	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/5/2010	23.5	**0.12**	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.05	<0.05	<0.15	<2	<50	<250	--
		8/5/2010	27	**0.34**	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
SRO-3	Farallon	8/5/2010	1	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.05	<0.05	<0.15	**610**	**140**	**270**	**5.79**
		8/5/2010	3	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.05	<0.05	<0.15	<2	<50	<250	--
		8/5/2010	7	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/5/2010	13	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/5/2010	18	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/5/2010	21	**0.057**	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.05	<0.05	<0.15	<2	<50	<250	--
		8/5/2010	22.5	**0.06**	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/5/2010	27	**0.17**	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/5/2010	30	**0.16**	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
SRO-4	Farallon	8/6/2010	6	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/6/2010	12	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/6/2010	17	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/6/2010	22	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.05	<0.05	<0.15	<2	<50	<250	--
		8/6/2010	27	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/6/2010	30	**0.038**	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
SRO-5	Farallon	8/6/2010	3	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/6/2010	6	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/6/2010	11	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.05	<0.05	<0.15	**7**	<50	<250	--
		8/6/2010	16	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/6/2010	21	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/6/2010	30	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
SRO-6	Farallon	8/6/2010	5.2	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.05	<0.05	<0.15	<2	<50	<250	--
		8/6/2010	12	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.05	<0.05	<0.15	<2	<50	<250	--
		8/6/2010	15	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.05	<0.05	<0.15	<2	<50	**610**	--
		8/6/2010	17	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.05	<0.05	<0.15	<2	**70**	**870**	--
		8/6/2010	20.5	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.05	<0.05	<0.15	<2	<50	<250	--
		8/6/2010	25	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/6/2010	30	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
MTCA Method A or B Cleanup Levels				**0.05 (A)**	**0.03 (A)**	**0.076 (B)**	**0.48 (B)**	**0.037 (B)**	**0.0023 (B)**	**0.0012 (B)**	**0.03 (A)**	**7 (A)**	**6 (A)**	**9 (A)**	**100 (A)**	**2,000 (A)**	**2,000 (A)**	**250 (A)**

ASPECT CONSULTING NOTE:
Tables from GeoEngineers, Inc.'s Remedial Investigation/Feasibility Study Report dated December 15, 2014

Sample ID	Sample Collected By	Sample Date	Depth (ft bgs)	VOCs (mg/kg)[1]											Gasoline-range Petroleum Hydrocarbons (mg/kg)[2]	Diesel-range Petroleum Hydrocarbons (mg/kg)[3]	Oil-range Petroleum Hydrocarbons (mg/kg)[3]	Lead (mg/kg)
				PCE	TCE	cis-1,2 DCE	trans-1,2 DCE	1,1-DCE	1,2-DCA	Vinyl Chloride	Benzene	Toluene	Ethyl-benzene	Xylenes, total				
SRO-7	Farallon	8/6/2010	9	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.05	<0.05	<0.15	**1,100**	<50	<250	--
		8/6/2010	12.5	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.05	<0.05	<0.15	<2	<50	<250	--
		8/6/2010	19	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/6/2010	22.5	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.05	<0.05	<0.15	<2	--	--	--
		8/6/2010	26	**0.046**	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/6/2010	30	**0.080**	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
SRO-8	Farallon	8/6/2010	4	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/6/2010	8	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/6/2010	13.5	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.05	<0.05	<0.15	**4**	--	--	--
		8/6/2010	14.5	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.05	<0.05	<0.15	<2.0	<50	<250	--
		8/6/2010	18	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.05	<0.05	<0.15	<2.0	-	-	--
		8/6/2010	22	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.05	**0.1**	**0.21**	**3**	<50	<250	--
		8/6/2010	23.5	**0.15**	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/6/2010	26	**0.16**	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/6/2010	29	**0.19**	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
SRO-9	Farallon	8/9/2010	3	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.05	<0.05	<0.15	<2	--	--	--
		8/9/2010	8	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.05	<0.05	<0.15	<2	--	--	--
		8/9/2010	13	<0.625	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/9/2010	17.5	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.05	<0.05	<0.15	<2	--	--	--
		8/9/2010	21.5	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.05	<0.05	<0.15	<2	--	--	--
		8/9/2010	26	**0.037**	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.05	<0.05	<0.15	<2	--	--	--
		8/9/2010	29.5	**0.057**	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.05	<0.05	<0.15	<2	--	--	--
SRO-10	Farallon	8/9/2010	1	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/9/2010	7	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/9/2010	10	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.05	<0.05	<0.15	<2	--	--	--
		8/9/2010	16	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/9/2010	21	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.05	<0.05	<0.15	<2	--	--	--
		8/9/2010	23.5	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/9/2010	29	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.05	<0.05	<0.15	<2	--	--	--
SRO-11	Farallon	8/9/2010	1	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/9/2010	5	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/9/2010	10	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.05	<0.05	<0.15	<2	--	--	--
		8/9/2010	15	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/9/2010	20	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.05	<0.05	<0.15	<2	--	--	--
		8/9/2010	25	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/9/2010	28	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.05	<0.05	<0.15	<2	--	--	--
SRO-12	Farallon	8/9/2010	5	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/9/2010	8	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.05	<0.05	<0.15	<2	--	--	--
		8/9/2010	13	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/9/2010	17	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/9/2010	21	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.05	<0.05	<0.15	<2	--	--	--
		8/9/2010	23.5	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/9/2010	29.5	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.05	<0.0.5	<0.15	<2	--	--	--
SRO-13	Farallon	8/9/2010	0.5	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.05	<0.05	<0.15	<2	**280**	**3,100**	--
		8/9/2010	5.5	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.05	<0.05	<0.15	<2	<50	<250	--
		8/9/2010	11	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.05	<0.05	<0.15	<2	<S0	<250	--
		8/9/2010	15.5	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.05	<0.05	<0.15	<2	<50	**400**	--
		8/9/2010	20.5	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.05	<0.05	<0.15	<2	<S0	<250	--
		8/9/2010	24.5	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/9/2010	29.5	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
MTCA Method A or B Cleanup Levels				**0.05 (A)**	**0.03 (A)**	**0.076 (B)**	**0.48 (B)**	**0.037 (B)**	**0.0023 (B)**	**0.0012 (B)**	**0.03 (A)**	**7 (A)**	**6 (A)**	**9 (A)**	**100 (A)**	**2,000 (A)**	**2,000 (A)**	**250 (A)**

ASPECT CONSULTING NOTE:
Tables from GeoEngineers, Inc.'s Remedial Investigation/Feasibility Study Report dated December 15, 2014

Sample ID	Sample Collected By	Sample Date	Depth (ft bgs)	VOCs (mg/kg)[1]											Gasoline-range Petroleum Hydrocarbons (mg/kg)[2]	Diesel-range Petroleum Hydrocarbons (mg/kg)[3]	Oil-range Petroleum Hydrocarbons (mg/kg)[3]	Lead (mg/kg)
				PCE	TCE	cis-1,2 DCE	trans-1,2 DCE	1,1-DCE	1,2-DCA	Vinyl Chloride	Benzene	Toluene	Ethyl-benzene	Xylenes, total				
SRO-14	Farallon	8/10/2010	1.5	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/10/2010	6.5	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/10/2010	12	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/10/2010	17	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/10/2010	22	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/10/2010	25.2	**0.035**	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/10/2010	29.8	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
SRO-15	Farallon	8/10/2010	1	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/10/2010	5	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/10/2010	10	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/10/2010	15	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/10/2010	20	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/10/2010	25	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/10/2010	29.5	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
SRO-16	Farallon	8/10/2010	2	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/10/2010	7	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/10/2010	12	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/10/2010	17	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/10/2010	22	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/10/2010	25.5	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/10/2010	29.5	**0.039**	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
SRO-17	Farallon	8/10/2010	1.8	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.05	**0.55**	**0.77**	**2,800**	**130**	<250	--
		8/10/2010	5.5	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.05	<0.05	<0.15	2	<50	<250	--
		8/10/2010	10.5	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.05	<0.05	<0.15	<2	<50	<250	--
		8/10/2010	16	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.05	<0.05	<0.15	<2	<50	<250	--
		8/10/2010	21	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.05	<0.05	<0.15	<2	<50	<250	--
		8/10/2010	25	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	<0.03	<0.05	<0.05	<0.15	<2	<50	<250	--
		8/10/2010	30	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
SRO-18	Farallon	8/10/2010	2	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/10/2010	5.5	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
SRO-19	Farallon	8/10/2010	2	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/10/2010	5.5	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
SRO-20	Farallon	8/10/2010	2	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
		8/10/2010	6	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
SRO-21	Farallon	8/10/2010	6.5	<0.025	<0.03	<0.05	<0.05	<0.05	<0.05	<0.05	--	--	--	--	--	--	--	--
Soil samples collected in 2011 (Hart Crowser, 2011; URS, 2011b)																		
HC-1-1	Hart Crowser	8/13/2011	20	<0.05	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	--	--	--	--
HC-1-2		8/13/2011	22.5	**0.092**	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	--	--	--	--
HC-1-3		8/13/2011	25	**0.36**	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	--	--	--	--
HC-1-4		8/13/2011	27.5	**0.46**	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	--	--	--	--
HC-1-5		8/13/2011	30	**0.43**	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	--	--	--	--
HC-1-6		8/13/2011	32.5	**0.74**	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	--	--	--	--
HC-1-7		8/13/2011	35	**0.38**	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	--	--	--	--
HC-1-8		8/13/2011	37.5	**0.92**	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	--	--	--	--
HC-1-9		8/13/2011	40	**1.10**	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<5	<20	<50	1.3
HC-1-10		8/13/2011	42.5	**0.41**	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	--	--	--	--
HC-1-11		8/13/2011	45	**2.30**	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	--	--	--	--
HC-1-12		8/13/2011	47.5	**1.80**	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	--	--	--	--
HC-1-13		8/13/2011	50	**0.07**	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	--	--	--	--
MTCA Method A or B Cleanup Levels				**0.05 (A)**	**0.03 (A)**	**0.076 (B)**	**0.48 (B)**	**0.037 (B)**	**0.0023 (B)**	**0.0012 (B)**	**0.03 (A)**	**7 (A)**	**6 (A)**	**9 (A)**	**100 (A)**	**2,000 (A)**	**2,000 (A)**	**250 (A)**

ASPECT CONSULTING NOTE:
Tables from GeoEngineers, Inc.'s Remedial Investigation/Feasibility Study Report dated December 15, 2014

Sample ID	Sample Collected By	Sample Date	Depth (ft bgs)	VOCs (mg/kg)[1]											Gasoline-range Petroleum Hydrocarbons (mg/kg)[2]	Diesel-range Petroleum Hydrocarbons (mg/kg)[3]	Oil-range Petroleum Hydrocarbons (mg/kg)[3]	Lead (mg/kg)
				PCE	TCE	cis-1,2 DCE	trans-1,2 DCE	1,1-DCE	1,2-DCA	Vinyl Chloride	Benzene	Toluene	Ethyl-benzene	Xylenes, total				
HC-2-1	Hart Crowser	8/13/2011	20	<0.05	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	--	--	--	--
HC-2-2		8/13/2011	22.5	**0.11**	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	--	--	--	--
HC-2-3		8/13/2011	25	**0.29**	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	--	--	--	--
HC-2-4		8/13/2011	27.5	**0.33**	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	--	--	--	--
HC-2-5		8/13/2011	30	**0.31**	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	--	--	--	--
HC-2-6		8/13/2011	32.5	**0.22**	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	--	--	--	--
HC-2-7		8/13/2011	35	**0.23**	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	--	--	--	--
HC-2-8		8/13/2011	37.5	**0.46**	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	--	--	--	--
HC-2-9		8/13/2011	40	**0.60**	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<5	<20	<50	<1
HC-2-10		8/13/2011	42.5	**1.20**	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	--	--	--	--
HC-2-11		8/13/2011	45	**0.58**	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	--	--	--	--
HC-2-12		8/13/2011	47.5	**2.00**	**0.044**	**0.061**	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	--	--	--	--
HC-2-13		8/13/2011	50	**0.11**	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	--	--	--	--
HC-3-1	Hart Crowser	8/13/2011	20	<0.05	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	--	--	--	--
HC-3-2		8/13/2011	22.5	**0.13**	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	--	--	--	--
HC-3-3		8/13/2011	25	**0.16**	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	--	--	--	--
HC-3-4		8/13/2011	27.5	**0.061**	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	--	--	--	--
HC-3-5		8/13/2011	30	**0.18**	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	--	--	--	--
HC-3-6		8/13/2011	32.5	**0.13**	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	--	--	--	--
HC-3-7		8/13/2011	35	**0.10**	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	--	--	--	--
HC-3-8		8/13/2011	37.5	**0.37**	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	--	--	--	--
HC-3-9		8/13/2011	40	**0.27**	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<5	<20	<50	1.3
HC-3-10		8/13/2011	42.5	**0.17**	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	--	--	--	--
HC-3-11		8/13/2011	45	**0.05**	<0.02	**0.067**	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	--	--	--	--
HC-3-12		8/13/2011	47.5	<0.05	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	--	--	--	--
HC-3-13		8/13/2011	50	**0.91**	**0.087**	**0.059**	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	--	--	--	--
URS-SB-9	URS	10/10/2011	50	**0.0218**	<0.0213	**0.00217 J**	<0.0142	<0.0355	<0.0213	<0.00142	<0.0142	<0.0142	<0.0213	<0.0284	--	--	--	--
		10/10/2011	55	**0.276**	**0.00624 J**	**0.00708 J**	<0.0139	<0.0347	<0.0208	<0.00139	<0.0139	<0.0139	<0.0208	<0.0278	--	--	--	--
		10/10/2011	60	**0.000720 J**	<0.0204	<0.0136	<0.0136	<0.0340	<0.0204	<0.00136	<0.0136	<0.0136	<0.0204	<0.0272	--	--	--	--
		10/10/2011	65	<0.0126	<0.0189	<0.0126	<0.0126	<0.0315	<0.0189	<0.00126	<0.0126	<0.0126	<0.0189	<0.0252	--	--	--	--
		10/10/2011	70	<0.0143	<0.0214	<0.0143	<0.0143	<0.0357	<0.0214	<0.00143	<0.0143	<0.0143	<0.0214	<0.0286	--	--	--	--
		10/10/2011	75	<0.0151	<0.0226	<0.0151	<0.0151	<0.0376	<0.0226	<0.00151	<0.0151	<0.0151	<0.0226	<0.0302	--	--	--	--
		10/10/2011	80	<0.0142	<0.0213	<0.0142	<0.0142	<0.0354	<0.0213	<0.00142	<0.0142	<0.0142	<0.0213	<0.0284	--	--	--	--
URS-SB-10	URS	10/11/2011	50	<0.0117	<0.0175	<0.0117	<0.0117	<0.0292	<0.0175	<0.00117	<0.0117	<0.0117	<0.0175	<0.0234	--	--	--	--
		10/11/2011	55	<0.0111	<0.0167	<0.0111	<0.0111	<0.0278	<0.0167	<0.00111	<0.0111	<0.0111	<0.0167	<0.0222	--	--	--	--
		10/11/2011	60	**0.00160 J**	<0.00145	<0.00967	<0.00967	<0.0242	<0.00145	<0.000967	<0.00967	<0.00967	<0.00145	<0.01934	--	--	--	--
		10/11/2011	65	<0.0142	<0.0213	<0.0142	<0.0142	<0.0355	<0.0213	<0.00142	<0.0142	<0.0142	<0.0213	<0.0284	--	--	--	--
		10/11/2011	70	<0.0148	<0.0221	<0.0148	<0.0148	<0.0369	<0.0221	<0.00148	**0.000413 J**	**0.000546 J**	<0.0221	<0.0296	--	--	--	--
		10/11/2011	75	<0.00952	<0.0143	<0.00952	<0.00952	<0.0238	<0.0143	<0.000952	<0.00952	**0.000438 J**	<0.0143	<0.01904	--	--	--	--
URS-MW8 (SB-11)	URS	10/12/2011	35	**0.00148 J**	<0.0190	<0.0126	<0.0126	<0.0316	<0.0190	<0.00126	<0.0126	<0.0126	<0.0190	<0.0252	--	--	--	--
		10/12/2011	40	**0.000383 J**	<0.0164	<0.0109	<0.0109	<0.0273	<0.0164	<0.00109	<0.0109	<0.0109	<0.0164	<0.0218	--	--	--	--
		10/12/2011	45	<0.0112	<0.0168	<0.0112	<0.0112	<0.0280	<0.0168	<0.00112	<0.0112	<0.0112	<0.0168	<0.0224	--	--	--	--
		10/12/2011	50	<0.0124	<0.0186	**0.000497 J**	<0.0124	<0.0311	<0.0186	<0.00124	<0.0124	<0.0124	<0.0186	<0.0248	--	--	--	--
		10/12/2011	55	<0.0124	<0.0186	**0.000867 J**	<0.0124	<0.0310	<0.0186	<0.00124	<0.0124	<0.0124	<0.0186	<0.0248	--	--	--	--
		10/12/2011	60	<0.0105	<0.0158	<0.0105	<0.0105	<0.0264	<0.0158	<0.00105	<0.0105	<0.0105	<0.0158	<0.021	--	--	--	--
		10/12/2011	65	<0.0104	<0.0156	<0.0104	<0.0104	<0.0259	<0.0156	<0.00104	<0.0104	<0.0104	<0.0156	<0.0208	--	--	--	--
		10/12/2011	70	<0.0105	<0.0158	<0.0105	<0.0105	<0.0263	<0.0158	<0.00105	<0.0105	<0.0105	<0.0158	<0.021	--	--	--	--
		10/12/2011	75	<0.0138	<0.0207	<0.0138	<0.0138	<0.0345	<0.0207	<0.00138	<0.0138	<0.0138	<0.0207	<0.0276	--	--	--	--
		10/12/2011	80	<0.0113	<0.0170	<0.0113	<0.0113	<0.0283	<0.0170	<0.00113	<0.0113	<0.0113	<0.0170	<0.0226	--	--	--	--
MTCA Method A or B Cleanup Levels				**0.05 (A)**	**0.03 (A)**	**0.076 (B)**	**0.48 (B)**	**0.037 (B)**	**0.0023 (B)**	**0.0012 (B)**	**0.03 (A)**	**7 (A)**	**6 (A)**	**9 (A)**	**100 (A)**	**2,000 (A)**	**2,000 (A)**	**250 (A)**

ASPECT CONSULTING NOTE:
Tables from GeoEngineers, Inc.'s Remedial Investigation/Feasibility Study Report dated December 15, 2014

Sample ID	Sample Collected By	Sample Date	Depth (ft bgs)	VOCs (mg/kg)[1]											Gasoline-range Petroleum Hydrocarbons (mg/kg)[2]	Diesel-range Petroleum Hydrocarbons (mg/kg)[3]	Oil-range Petroleum Hydrocarbons (mg/kg)[3]	Lead (mg/kg)
				PCE	TCE	cis-1,2 DCE	trans-1,2 DCE	1,1-DCE	1,2-DCA	Vinyl Chloride	Benzene	Toluene	Ethyl-benzene	Xylenes, total				
URS-SB-12	URS	10/12/2011	35	<0.0129	<0.0193	<0.0129	<0.0129	<0.0322	**0.000399 J**	<0.00129	<0.0129	<0.0129	<0.0193	<0.0258	--	--	--	--
		10/12/2011	40	**0.00436 J**	<0.0192	**0.000641 J**	<0.0128	<0.0321	**0.000667 J**	<0.00128	<0.0128	<0.0128	<0.0192	<0.0256	--	--	--	--
		10/12/2011	45	**0.00479 J**	**0.000403 J**	**0.000749 J**	<0.0115	<0.0288	**0.000645 J**	<0.00115	<0.0115	<0.0115	<0.0173	<0.023	--	--	--	--
		10/12/2011	55	**0.00606 J**	**0.000460 J**	**0.000393 J**	<0.00667	<0.0167	<0.0100	<0.000667	<0.00667	<0.00667	<0.0100	<0.01334	--	--	--	--
		10/12/2011	60	**0.00901 J**	**0.00120 J**	**0.00102 J**	<0.00982	<0.0246	<0.0147	<0.000982	<0.00982	<0.00982	<0.0147	<0.01964	--	--	--	--
		10/12/2011	65	<0.0151	<0.0227	**0.00153 J**	<0.0151	<0.0378	<0.0227	<0.00151	<0.0151	<0.0151	<0.0227	<0.0302	--	--	--	--
		10/12/2011	70	<0.0159	<0.0239	<0.0159	<0.0159	<0.0398	<0.0239	<0.00159	<0.0159	<0.0159	<0.0239	<0.0318	--	--	--	--
		10/12/2011	75	<0.0156	<0.0235	<0.0156	<0.0156	<0.0391	<0.0235	<0.00156	<0.0156	<0.0156	<0.0235	<0.0312	--	--	--	--
URS-SB-13	URS	10/13/2011	35	**0.0142**	<0.0175	<0.0117	<0.0117	<0.0292	**0.000548 J**	<0.00117	<0.0117	<0.0117	<0.0175	<0.0234	--	--	--	--
		10/13/2011	40	**0.0140 J**	<0.0210	<0.0140	<0.0140	<0.0351	**0.000842 J**	<0.00140	<0.0140	<0.0140	<0.0210	<0.028	--	--	--	--
		10/13/2011	45	**0.00347 J**	<0.0213	<0.0142	<0.0142	<0.355	**0.00128 J**	<0.00142	<0.0142	<0.0142	<0.0213	<0.0284	--	--	--	--
		10/13/2011	60	**0.0647**	**0.000382 J**	<0.0116	<0.0116	<0.290	**0.000858 J**	<0.00116	<0.0116	**0.000394 J**	<0.0174	<0.0232	--	--	--	--
		10/13/2011	65	**0.0861**	<0.0204	<0.0136	<0.0136	<0.339	<0.0204	<0.00136	<0.0136	<0.0136	<0.0204	<0.0272	--	--	--	--
		10/13/2011	70	<0.0145	<0.0218	<0.0145	<0.0145	<0.0364	<0.0218	<0.00145	<0.0145	<0.0145	<0.0218	<0.029	--	--	--	--
		10/13/2011	75	<0.0149	<0.0223	<0.0149	<0.0149	<0.0372	<0.0223	<0.00149	<0.0149	<0.0149	<0.0223	<0.0298	--	--	--	--
URS-SB-14	URS	10/11/2011	35	<0.00954	<0.0143	<0.00954	<0.00954	<0.0239	<0.0143	<0.000954	<0.00954	<0.00954	<0.0143	<0.01908	--	--	--	--
		10/11/2011	40	**0.0541**	**0.000659 J**	<0.0112	<0.0112	0.0279	<0.0168	<0.00112	<0.0112	<0.0112	<0.0168	<0.0224	--	--	--	--
		10/11/2011	45	**0.0712**	**0.00114 J**	**0.00172 J**	<0.0117	<0.0293	<0.0176	<0.00117	<0.0117	<0.0117	<0.0176	<0.0234	--	--	--	--
		10/11/2011	50	**0.166**	**0.00164 J**	**0.00346 J**	<0.0101	<0.0253	<0.0152	<0.00101	<0.0101	<0.0101	<0.0152	<0.0202	--	--	--	--
		10/11/2011	55	**0.105**	**0.00119 J**	**0.00475 J**	<0.0126	<0.0314	<0.0189	<0.00126	<0.0126	<0.0126	<0.0189	<0.0252	--	--	--	--
		10/11/2011	60	**0.000312 J**	<0.0142	<0.00946	<0.00946	<0.0237	<0.0142	<0.000946	<0.00946	<0.00946	<0.0142	<0.01898	--	--	--	--
		10/11/2011	65	<0.00915	<0.0137	<0.00915	<0.00915	<0.0229	<0.0137	<0.00915	<0.00915	<0.00915	<0.0137	<0.0183	--	--	--	--
		10/11/2011	70	<0.0137	<0.0206	<0.0137	<0.0137	<0.0343	<0.0206	<0.00137	<0.0137	<0.0137	<0.0206	<0.0274	--	--	--	--
		10/11/2011	75	<0.0104	<0.0156	<0.0104	<0.0104	<0.0260	<0.0156	<0.00104	<0.0104	<0.0104	<0.0156	<0.0208	--	--	--	--
URS-SB-15	URS	10/11/2011	35	**0.0331**	<0.0189	<0.0126	<0.0126	<0.0316	<0.0189	<0.00126	<0.0126	<0.0126	<0.0189	<0.0252	--	--	--	--
		10/11/2011	40	**0.00263 J**	<0.0138	<0.00921	<0.00921	<0.0230	<0.0138	<0.000921	<0.00921	<0.00921	<0.0138	<0.01842	--	--	--	--
		10/11/2011	45	<0.0128	<0.0191	<0.0128	<0.0128	<0.0319	<0.0191	<0.00128	<0.0128	<0.0128	<0.0191	<0.0256	--	--	--	--
		10/10/2011	50	<0.0128	<0.0192	<0.0128	<0.0128	<0.0321	<0.0192	<0.00128	<0.0128	<0.0128	<0.0192	<0.0256	--	--	--	--
		10/10/2011	55	<0.00851	<0.0128	<0.00851	<0.00851	<0.0213	<0.0128	<0.000851	<0.00851	<0.00851	<0.0128	<0.01702	--	--	--	--
		10/10/2011	60	<0.0101	<0.0151	<0.0101	<0.0101	<0.0252	<0.0151	<0.00101	<0.0101	<0.0101	<0.0151	<0.0202	--	--	--	--
		10/10/2011	65	<0.0140	<0.0210	<0.0140	<0.0140	<0.0349	<0.0210	<0.00140	<0.0140	<0.0140	<0.0210	<0.028	--	--	--	--
		10/10/2011	70	<0.0127	<0.0190	<0.0127	<0.0127	<0.0317	<0.0190	<0.00127	<0.0127	<0.0127	<0.0190	<0.0254	--	--	--	--
		10/10/2011	75	<0.0119	<0.0179	<0.0119	<0.0119	<0.0298	<0.0179	<0.000119	<0.0119	<0.0119	<0.0179	<0.0238	--	--	--	--
URS-SB-17	URS	11/15/2011	40	<0.00937	<0.0141	<0.00937	<0.00937	<0.0234	<0.0141	<0.000937	--	--	--	--	--	--	--	--
		11/15/2011	45	<0.00915	<0.0137	<0.00915	<0.00915	<0.0229	<0.0137	<0.000915	--	--	--	--	--	--	--	--
		11/15/2011	65	<0.0122	<0.0183	<0.0122	<0.0122	<0.0304	<0.0183	<0.00122	--	--	--	--	--	--	--	--
		11/15/2011	70	<0.0124	<0.0186	<0.0124	<0.0124	<0.0309	<0.0186	<0.00124	--	--	--	--	--	--	--	--
		11/15/2011	75	<0.0156	<0.0234	<0.0156	<0.0156	<0.0390	<0.0234	<0.00156	--	--	--	--	--	--	--	--
URS-SB-21	URS	11/17/2011	30	**0.00590 J**	<0.0218	<0.0145	<0.0145	<0.0364	<0.0218	<0.00145	--	--	--	--	--	--	--	--
		11/17/2011	35	**0.00560 J**	<0.0174	<0.0116	<0.0116	<0.0290	<0.0174	<0.00116	--	--	--	--	--	--	--	--
		11/17/2011	40	<0.0116	<0.0174	<0.0116	<0.0116	<0.290	<0.0174	<0.00116	--	--	--	--	--	--	--	--
		11/17/2011	45	<0.0159	<0.0238	<0.0159	<0.0159	<0.0397	<0.0238	<0.00159	--	--	--	--	--	--	--	--
		11/17/2011	50	<0.0157	<0.0235	<0.0157	<0.0157	<0.0392	<0.0235	<0.00157	--	--	--	--	--	--	--	--
		11/17/2011	60	<0.0104	<0.0156	<0.0104	<0.0104	<0.259	<0.0156	<0.00104	--	--	--	--	--	--	--	--
		11/17/2011	65	<0.0192	<0.0288	<0.0192	<0.0192	<0.0480	<0.0288	<0.00192	--	--	--	--	--	--	--	--
		11/17/2011	70	<0.0203	<0.0304	<0.0203	<0.0203	<0.0507	<0.0304	<0.00203	--	--	--	--	--	--	--	--
		11/17/2011	71.5	<0.0170	<0.0255	<0.0170	<0.0170	<0.0425	<0.0255	<0.00170	--	--	--	--	--	--	--	--
		11/17/2011	73	<0.0156	<0.0234	<0.0156	<0.0156	<0.0391	<0.0234	<0.00156	--	--	--	--	--	--	--	--
		11/17/2011	74.5	<0.0196	<0.0294	<0.0196	<0.0196	<0.0490	<0.0294	<0.00196	--	--	--	--	--	--	--	--
		11/17/2011	80	<0.0143	<0.0214	<0.0143	<0.0143	<0.0356	<0.0214	<0.00143	--	--	--	--	--	--	--	--
MTCA Method A or B Cleanup Levels				**0.05 (A)**	**0.03 (A)**	**0.076 (B)**	**0.48 (B)**	**0.037 (B)**	**0.0023 (B)**	**0.0012 (B)**	**0.03 (A)**	**7 (A)**	**6 (A)**	**9 (A)**	**100 (A)**	**2,000 (A)**	**2,000 (A)**	**250 (A)**

ASPECT CONSULTING NOTE:
Tables from GeoEngineers, Inc.'s Remedial Investigation/Feasibility Study Report dated December 15, 2014

Notes:

Table contains data from 2000 to 2011. Chemical data from the 1990 EMCON PESA and 1992 EMCON UST Closure Report are presented in Table 2 and 3.

Compounds including methylene chloride, chloroform, chloromethane, and MTBE were analyzed for in numerous samples from the Property. These compounds either were not detected, were detected at J-flagged estimated values less than laboratory reporting limits, or detected at concentrations less than cleanup levels.

[1]VOCs = Volatile organic compounds; analyzed by EPA Method 8260B.

[2] Gasoline-range petroleum hydrocarbons were analyzed by Ecology Method NWTPH-Gx

[3] Diesel- and oil-range petroleum hydrocarbons were analyzed by Ecology Method NWTPH-Dx

-- = constituent not analyzed.

< = constituent not detected at or above the stated laboratory practical quantitation limit.

1,1-DCE = 1,1-Dichloroethene

1,1,1-DCE = 1,1,1-dichloroethene

1,2-DCA = 1,2-dichloroethane

bgs = below ground surface

cis-1,2-DCE = cis-1,2-dichloroethene

J = estimated value below laboratory Practical Quantitation Limit (PQL); for purpose of this report J-flagged values are considered not detected.

mg/kg = milligrams per kilogram

MTCA = Model Toxics Control Act (WAC 173-340).

(A) = MTCA Method A Cleanup Level

(B) = MTCA Method B cleanup for the protection of groundwater. See Table 8 for information on basis for cleanup levels.

PCE = Tetrachloroethene

TCE = Trichloroethene

trans 1,2-DCE = trans-1,2-dichloroethene

VOCs = Volatile organic compounds

Bold font indicates that the constituent was detected.

Shading indicates that the concentration exceeds the MTCA cleanup level.

ASPECT CONSULTING NOTE:
Tables from GeoEngineers, Inc.'s Remedial Investigation/Feasibility Study Report dated December 15, 2014

Table 5

Chemical Analytical Data for Groundwater Samples

Sterling Realty Organization Property at 10605 and 10619 NE 8th Street
Bellevue, Washington

Sample ID	Sample Date	Depth (feet bgs)	VOCs (µg/L)[1] PCE	TCE	cis-1,2-DCE	1,1,1-TCA	1,2-DCA	Benzene	Toluene	Ethyl-benzene	Xylenes, total	Gasoline-range Petroleum Hydrocarbons (µg/L)[2]	Diesel-range Petroleum Hydrocarbons (µg/L)[3]	Oil-range Petroleum Hydrocarbons (µg/L)[3]
Samples collected in 2000 (URS, 2000)														
URSSB-OP1	03/11/2000	NA	**2.1**	<1.0	<1.0	--	--	<1.0	<1.0	<1.0	<1.0	<100	<25	<50
URSSB-OP3	03/11/2000	NA	**1.7**	<1.0	<1.0	--	--	<1.0	<1.0	<1.0	<1.0	<100	<25	<50
Samples collected in 2008 and 2010 (Terra, 2008; URS, 2009; URS, 2010; SES, 2011)														
URS-SB-3	08/27/2008	NA	**21**	<1.0	<1.0	--	--	<1.0	<1.0	<1.0	<1.0	<100	--	--
URS-MW-1	09/10/2008	NA	**340**	**3.5**	<1.0	--	--	<1.0	<1.0	<1.0	<1.0	<100	--	--
	11/21/2008	NA	**210**	**3.4**	<1.0	--	--	<1.0	<1.0	<1.0	<1.0	--	--	--
	03/17/2010	NA	**460**	**22**	**11**	--	--	<1.0	<1.0	<1.0	<1.0	<50	--	--
	06/17/2010	NA	**320**	**9.6**	**1.2**	--	--	<1.0	<1.0	<1.0	<1.0	<50	--	--
	08/24/2010	NA	**430**	**10**	**6.1**	--	--	--	--	--	--	--	--	--
URS-MW-2	03/17/2010	NA	<1.0	<1.0	<1.0	--	--	<1.0	<1.0	<1.0	<1.0	<50	--	--
	06/17/2010	NA	<1.0	<1.0	<1.0	--	--	<1.0	<1.0	<1.0	<1.0	<50	--	--
	08/25/2010	NA	<1.0	<1.0	<1.0	--	--	--	--	--	--	--	--	--
URS-MW-3	09/10/2008	NA	<1.0	<1.0	<1.0	--	--	<1.0	<1.0	<1.0	<1.0	<100	--	--
	11/21/2008	NA	**3.9**	<1.0	<1.0	--	--	<1.0	<1.0	<1.0	<1.0	--	--	--
	03/17/2010	NA	<1.0	<1.0	<1.0	--	--	<1.0	<1.0	<1.0	<1.0	<50	--	--
	06/17/2010	NA	<1.0	<0.2	<1.0	--	--	<1.0	<1.0	<1.0	<1.0	<50	--	--
	08/23/2010	NA	<1.0	<0.2	<1.0	--	--	--	--	--	--	--	--	--
MW-19	08/25/2010	NA	**33**	**1.1**	<1.0	--	--	<0.35	<1	<1	<3	<100	<50	<250
MW-20	08/25/2010	NA	**4.6**	<1.0	<1.0	--	--	<0.35	<1	<1	<3	<100	<50	<250
B1/MW1	03/17/2010	NA	<1.0	<1.0	<1.0	--	--	<1.0	<1.0	<1.0	<1.0	<50	--	--
B-2/MW-2	07/07/2008	NA	<0.2	<0.2	--	--	--	<0.2	<0.2	<1.0	<0.6	<100	<250	<500
	11/21/2008	NA	**2.0**	<1.0	<1.0	--	--	<1.0	<1.0	<1.0	<1.0	--	--	--
	03/17/2010	NA	<1.0	<1.0	<1.0	--	--	<1.0	<1.0	<1.0	<1.0	<50	--	--
	06/17/2010	NA	<1.0	<1.0	<1.0	--	--	<1.0	<1.0	<1.0	<1.0	<50	--	--
B-3/MW-3	07/07/2008	NA	**80**	**0.42**	--	--	--	<0.4	<0.4	<2.0	<1.2	<100	<250	<500
	09/10/2008	NA	**88**	<1.0	<1.0	--	--	<1.0	<1.0	<1.0	<1.0	<100	--	--
	11/21/2008	NA	**20**	<1.0	<1.0	--	--	<1.0	<1.0	<1.0	<1.0	--	--	--
	03/17/2010	NA	**68**	<1.0	<1.0	--	--	<1.0	<1.0	<1.0	<1.0	<50	--	--
	06/17/2010	NA	**44**	<1.0	<1.0	--	--	<1.0	<1.0	<1.0	<1.0	<50	--	--
	08/23/2010	NA	**50**	<1.0	<1.0	--	--	--	--	--	--	--	--	--
B-4/MW-4	07/07/2008	NA	<0.2	<0.2	--	--	--	<0.2	<0.2	<1.0	<0.6	<100	<250	<500
	11/21/2008	NA	**1.9**	<1.0	<1.0	--	--	<1.0	<1.0	<1.0	<1.0	--	--	--
	03/17/2010	NA	<1.0	<1.0	<1.0	--	--	<1.0	<1.0	<1.0	<1.0	<50	--	--
	06/17/2010	NA	<1.0	<1.0	<1.0	--	--	<1.0	<1.0	<1.0	<1.0	<50	--	--
Samples collected in 2011 (URS, 2011b)														
URS-MW-1	11/22/2011	29	**114**	**4.36**	**1.47**	<1.0	<1.0	--	--	--	--	--	--	--
URS-MW-2	11/21/2011	28.6	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	--	--	--	--	--
URS-MW-3	11/22/2011	28	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	--	--	--	--	--
URS-MW-8	10/19/2011	73	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	--	--	--	--	--
	10/19/2011	77	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	--	--	--	--	--
	11/22/2011	70	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	--	--	--	--	--
	11/22/2011	73	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	--	--	--	--	--
	11/22/2011	75.5	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	--	--	--	--	--
MW-19	11/21/2011	29.2	**31.0**	**1.08**	**0.140 J**	<1.0	<1.0	--	--	--	--	--	--	--
MW-20	11/22/2011	25	**1.03**	**0.140 J**	<1.0	<1.0	<1.0	--	--	--	--	--	--	--
B1/MW-1	11/29/2011	90	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	--	--	--	--	--
	11/29/2011	95	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	--	--	--	--	--
B2/MW-2	11/29/2011	75	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	--	--	--	--	--
	11/29/2011	80	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	--	--	--	--	--
B3/MW-3	11/22/2011	27	**23.7**	<1.0	<1.0	<1.0	<1.0	--	--	--	--	--	--	--
B4/MW-4	11/29/2011	75	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	--	--	--	--	--
	11/29/2011	80	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	--	--	--	--	--
URS-SB-9	10/10/2011	77	**0.270 J**	<1.0	<1.0	<1.0	<1.0	--	--	--	--	--	--	--
URS-SB-15[4]	10/10/2011	75	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	--	--	--	--	--
URS-SB-21	11/17/2011	74	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	--	--	--	--	--
MTCA Method A or B Cleanup Level			5 (A)	5 (A)	16 (B)	200 (A)	5 (A)	5 (A)	1,000 (A)	700 (A)	1,000 (A)	800 / 1,000[5] (A)	500 (A)	500 (A)

Notes:

Table contains data from 2000 to 2011. Chemical data from the 1990 EMCON PESA is presented in Table 2.

[1]VOCs = Volatile organic compounds; analyzed by EPA Method 8260B.

[2]Gasoline-range petroleum hydrocarbons were analyzed by Ecology Method NWTPH-Gx

[3]Diesel- and oil-range petroleum hydrocarbons were analyzed by Ecology Method NWTPH-Dx

[4]Naphthalene was detected at a trace concentration of 0.23 µg/L (J-flagged estimated value less than PQL). The cleanup level for naphthalenes is 160 µg/L.

[5]The groundwater cleanup level is 1,000 µg/L if benzene is not present. If benzene is present, the cleanup level is 800 µg/L.

-- = constituent not analyzed.

< = constituent not detected at or above the stated laboratory practical quantitation limit.

1,1,1-TCA = 1,1,1-trichloroethane

1,2-DCA = 1,2-dichloroethane

bgs = below ground surface

cis-1,2-DCE = cis-1,2-dichloroethene

DCE = Dichloroethene.

J = estimated value

MTCA = Model Toxics Control Act (WAC 173-340).

(A) = MTCA Method A Cleanup Level

(B) = Standard Method B cleanup levels from CLARC tables. See Table 8 for information on basis for cleanup levels.

NA = not available

PCE = Tetrachloroethene

TCE = Trichloroethene

µg/L = micrograms per liter

Bold font indicates that the constituent was detected.

Shading indicates that the concentration exceeds the MTCA cleanup level.

Groundwater data from the Thinker Toys (source) property shown on Figures 14 and 15 are not included in this table.

ASPECT CONSULTING NOTE:
Tables from GeoEngineers, Inc.'s Remedial Investigation/Feasibility Study Report dated December 15, 2014

Table 6

Low Level Detections–Chemical Analytical Data for Soil Samples

Sterling Realty Organization Property at 10605 and 10619 NE 8th Street
Bellevue, Washington

Sample ID	Sample Collected By	Sample Date	Depth (feet bgs)	Methylene Chloride (mg/kg)	Chloroform (mg/kg)	Chloromethane (mg/kg)	Methyl Tert-Butyl Ether (MTBE) (mg/kg)
URS-SB-9	URS	10/10/2011	50	0.00128 J	< 0.0142	< 0.0426	< 0.0355
		10/10/2011	55	0.00128 J	< 0.0139	< 0.0417	< 0.0347
		10/10/2011	60	0.00122 J	< 0.0136	< 0.0408	< 0.0340
		10/10/2011	65	0.000933 J	< 0.0126	< 0.0378	< 0.0315
		10/10/2011	70	0.00158 J	< 0.0143	< 0.0428	< 0.0357
		10/10/2011	75	0.00129 J	< 0.0151	< 0.0452	< 0.0376
		10/10/2011	80	0.00200 J	< 0.0142	< 0.0425	< 0.0354
URS-SB-10	URS	10/11/2011	50	0.000583 J	< 0.0117	0.000723 J	< 0.0292
		10/11/2011	55	0.000933 J	< 0.0111	< 0.0333	< 0.0278
		10/11/2011	60	0.000803 J	< 0.00967	< 0.0290	< 0.0242
		10/11/2011	65	0.00224 J	< 0.0142	< 0.0426	< 0.0355
		10/11/2011	70	0.00156 J	< 0.0148	< 0.0443	< 0.0369
		10/11/2011	75	0.00106 J	< 0.00952	0.000400 J	< 0.0238
URS-MW8 (SB-11)	URS	10/12/2011	35	0.00152 J	< 0.0126	< 0.0379	< 0.0316
		10/12/2011	40	0.000765 J	< 0.0109	< 0.0328	< 0.0273
		10/12/2011	45	0.000672 J	< 0.0112	< 0.0336	< 0.0280
		10/12/2011	50	0.00116 J	< 0.0124	< 0.0373	< 0.0311
		10/12/2011	55	0.000892 J	< 0.0124	< 0.0372	< 0.0310
		10/12/2011	60	0.000918 J	< 0.0105	< 0.0316	< 0.0264
		10/12/2011	65	0.000633 J	< 0.0104	< 0.0311	< 0.0259
		10/12/2011	70	0.000735 J	< 0.0105	< 0.0315	< 0.0263
		10/12/2011	75	0.00131 J	< 0.0138	< 0.0414	0.000870 J
		10/12/2011	80	0.00102 J	< 0.0113	< 0.0340	< 0.0283
URS-SB-12	URS	10/12/2011	35	0.000952 J	< 0.0129	< 0.0386	< 0.0322
		10/12/2011	40	0.00126 J	< 0.0128	< 0.0385	< 0.0321
		10/12/2011	45	0.00101 J	< 0.0115	< 0.0346	< 0.0288
		10/12/2011	55	0.000393 J	< 0.00667	< 0.0200	< 0.0167
		10/12/2011	60	0.000756 J	< 0.00982	< 0.0295	< 0.0246
		10/12/2011	65	0.00193 J	< 0.0151	< 0.0453	< 0.0378
		10/12/2011	70	0.00199 J	< 0.0159	< 0.0477	< 0.0398
		10/12/2011	75	0.00141 J	< 0.0156	< 0.0469	< 0.0391
URS-SB-13	URS	10/13/2011	35	0.00106 J	< 0.0117	< 0.0350	< 0.0292
		10/13/2011	40	0.00132 J	< 0.0140	< 0.0421	< 0.0351
		10/13/2011	45	0.00108 J	< 0.0142	< 0.0426	< 0.0355
		10/13/2011	60	0.000834 J	< 0.0116	< 0.0348	< 0.0290
		10/13/2011	65	0.00121 J	< 0.0136	< 0.0407	< 0.0339
		10/13/2011	70	0.00156 J	< 0.0145	< 0.0436	< 0.0364
		10/13/2011	75	0.00155 J	< 0.0149	< 0.0447	< 0.0372
URS-SB-14	URS	10/11/2011	35	0.000783 J	< 0.00954	< 0.0286	< 0.0239
		10/11/2011	40	0.00136 J	< 0.0112	< 0.0335	< 0.0279
		10/11/2011	45	0.000468 J	< 0.0117	< 0.0351	< 0.0293
		10/11/2011	50	0.000658 J	< 0.0101	< 0.0304	< 0.0253
		10/11/2011	55	0.000906 J	< 0.0126	< 0.0377	< 0.0314
		10/11/2011	60	0.000662 J	< 0.00946	< 0.0284	< 0.0237
		10/11/2011	65	0.000522 J	< 0.00915	< 0.0275	< 0.0229
		10/11/2011	70	0.00152 J	< 0.0137	< 0.0411	< 0.0343
		10/11/2011	75	0.00128 J	< 0.0104	< 0.0312	< 0.0260
URS-SB-15	URS	10/11/2011	35	0.00121 J	< 0.0126	< 0.0379	< 0.0316
		10/11/2011	40	0.000782 J	< 0.00921	< 0.0276	< 0.0230
		10/11/2011	45	0.00105 J	< 0.0128	< 0.0383	< 0.0319
		10/10/2011	50	0.00106 J	< 0.0128	< 0.0385	< 0.0321
		10/10/2011	55	0.000706 J	< 0.00851	< 0.0255	< 0.0213
		10/10/2011	60	0.000806 J	< 0.0101	< 0.0302	< 0.0252
		10/10/2011	65	0.00112 J	< 0.0140	< 0.0419	< 0.0349
		10/10/2011	70	0.00191 J	< 0.0127	< 0.0380	< 0.0317
		10/10/2011	75	0.00344 J	< 0.0119	< 0.0358	< 0.0298
URS-SB-17	URS	11/15/2011	40	0.000328 J	< 0.00937	< 0.0281	--
		11/15/2011	45	0.000329 J	< 0.00915	< 0.0274	--
		11/15/2011	65	0.000462 J	< 0.0122	< 0.0365	--
		11/15/2011	70	0.000829 J	< 0.0124	< 0.0371	--
		11/15/2011	75	0.00136 J	< 0.0156	< 0.0468	--
URS-SB-21	URS	11/17/2011	30	0.000393 J	< 0.0145	< 0.0436	--
		11/17/2011	35	0.000290 J	0.000290 J	< 0.0348	--
		11/17/2011	40	0.000766 J	0.000290 J	< 0.0348	--
		11/17/2011	45	0.000461 J	0.000270 J	< 0.0477	--
		11/17/2011	50	0.00113 J	< 0.0157	< 0.0470	--
		11/17/2011	60	0.000674 J	< 0.0104	< 0.0311	--
		11/17/2011	65	0.00127 J	< 0.0192	< 0.0576	--
		11/17/2011	70	0.00150 J	< 0.0203	< 0.0608	--
		11/17/2011	71.5	0.00121 J	< 0.0170	< 0.0510	--
		11/17/2011	73	0.00141 J	< 0.0156	< 0.0469	--
		11/17/2011	74.5	0.00192 J	< 0.0196	< 0.0588	--
		11/17/2011	80	0.00117 J	< 0.0143	< 0.0428	--
MTCA Method A or B Cleanup Levels				0.02 (A)	0.0071 (B)	none	0.1 (A)

Notes:

-- = constituent not analyzed.

< = constituent not detected at or above the stated laboratory practical quantitation limit.

bgs = below the ground surface

J = estimated value below laboratory Practical Quantitation Limit (PQL).

mg/kg = milligrams per kilogram

MTCA = Model Toxics Control Act (WAC 173-340).

(A) = MTCA Method A Cleanup Level

(B) = MTCA Method B cleanup for the protection of groundwater. See Table 8 for information on basis for cleanup levels.

ASPECT CONSULTING NOTE:
Tables from GeoEngineers, Inc.'s Remedial Investigation/Feasibility Study Report dated December 15, 2014

Table 7

Low Level Detections–Chemical Analytical Data for Groundwater Samples

Sterling Realty Organization Property at 10605 and 10619 NE 8th Street
Bellevue, Washington

Sample ID	Sample Date	Depth (feet bgs)	Naphthalene (µg/L)	Methylene Chloride (µg/L)	Chloroform (µg/L)	Chlorobenzene (µg/L)
Samples collected in 2011 (URS, 2011b)						
URS-MW-1	11/22/2011	29	< 1.00	< 1.00	< 1.00	0.120 J
URS-MW-2	11/21/2011	28.6	< 1.00	< 1.00	2.38	< 1.00
URS-MW-8 [1]	11/22/2011	75.5	< 1.00	0.190 J	< 1.00	< 1.00
B3/MW-3	11/22/2011	27	< 1.00	< 1.00	0.920 J	< 1.00
URS-SB-15	10/10/2011	75	0.23 J	< 1.00	< 1.00	< 1.00
MTCA Method A or B Cleanup Level			**160 (A)**	**5 (A)**	**14.1 (B)**	**160 (B)**

Notes:

[1] Sample from URS-MW-8 on 10/19/2011 was tested for Methyl Tert-Butyl Ether (MTBE). MTBE was detected at a concentration of 1.0 µg/L (MTCA Method A cleanup level is 20 µg/L).

< = constituent not detected at or above the stated laboratory practical quantitation limit.

bgs = below ground surface

J = estimated value

MTCA = Model Toxics Control Act (WAC 173-340).

(A) = MTCA Method A Cleanup Level

(B) = Standard Method B cleanup levels from CLARC tables. See Table 8 for information on basis for cleanup levels.

µg/L = micrograms per liter

Groundwater data from the Thinker Toys (source) property shown on Figures 15 and 16 are not included in this table.

APPENDIX D

Terrestrial Ecological

Evaluation Form

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: SWB Bellevue II	
Facility/Site Address: 10605, 10629, and 10635 NE8th Street, Bellevue WA	
Facility/Site No: 5569973	VCP Project No.:

Step 2: IDENTIFY EVALUATOR			
Please identify below the person who conducted the evaluation and their contact information.			
Name: Meilani Lanier-Kamaha'o			Title: Geologist
Organization: Aspect Consulting LLC			
Mailing address: 710 2nd Avenue South Suite 510			
City: Seattle		State: WA	Zip code: 98104
Phone: 206.413.5408	Fax:		E-mail: mlkamahao@aspectconsulting.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.

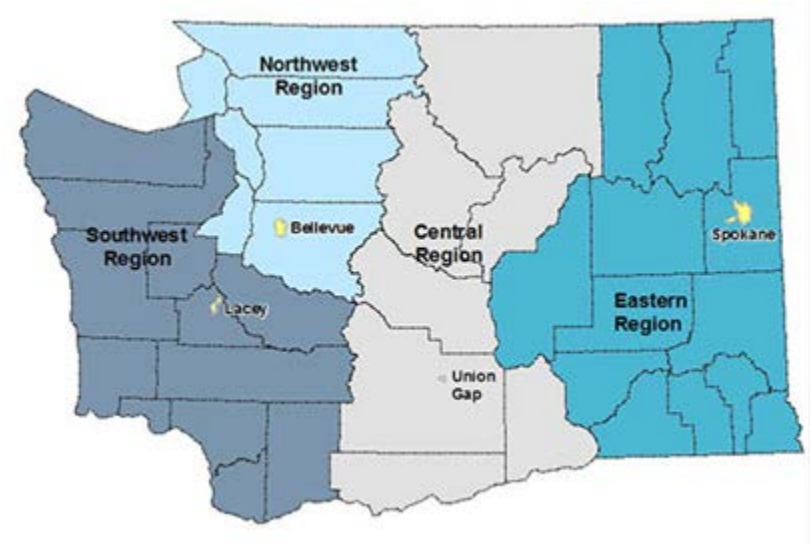
5. Have you already obtained Ecology's approval of both your problem formulation and problem resolution steps?

☐ 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.

APPENDIX E

Report Limitations and Guidelines for Use

REPORT LIMITATIONS AND USE GUIDELINES

Reliance Conditions for Third Parties

This report was prepared for the exclusive use of the Client. No other party may rely on this report or the product of our services without the express written consent of Aspect Consulting, LLC (Aspect). This limitation is to provide our firm with reasonable protection against liability claims by third parties with whom there would otherwise be no contractual conditions or limitations and guidelines governing their use of the report. Within the limitations of scope, schedule and budget, our services have been executed in accordance with our Agreement with the Client and recognized standards of professionals in the same locality and involving similar conditions.

Services for Specific Purposes, Persons and Projects

Aspect has performed the services in general accordance with the scope and limitations of our Agreement. This report has been prepared for the exclusive use of the Client and their authorized third parties, approved in writing by Aspect. This report is not intended for use by others, and the information contained herein is not applicable to other properties.

This report is not, and should not, be construed as a warranty or guarantee regarding the presence or absence of hazardous substances or petroleum products that may affect the subject property. The report is not intended to make any representation concerning title or ownership to the subject property. If real property records were reviewed, they were reviewed for the sole purpose of determining the subject property's historical uses. All findings, conclusions, and recommendations stated in this report are based on the data and information provided to Aspect, current use of the subject property, and observations and conditions that existed on the date and time of the report.

Aspect structures its services to meet the specific needs of our clients. Because each environmental study is unique, each environmental report is unique, prepared solely for the specific client and subject property. This report should not be applied for any purpose or project except the purpose described in the Agreement.

This Report Is Project-Specific

Aspect considered a number of unique, project-specific factors when establishing the Scope of Work for this project and report. You should not rely on this report if it was:

- Not prepared for you
- Not prepared for the specific purpose identified in the Agreement
- Not prepared for the specific real property assessed
- Completed before important changes occurred concerning the subject property, project or governmental regulatory actions

If changes are made to the project or subject property after the date of this report, Aspect should be retained to assess the impact of the changes with respect to the conclusions contained in the report.

Geoscience Interpretations

The geoscience practices (geotechnical engineering, geology, and environmental science) require interpretation of spatial information that can make them less exact than other engineering and natural science disciplines. It is important to recognize this limitation in evaluating the content of the report. If you are unclear how these "Report Limitations and Use Guidelines" apply to your project or site, you should contact Aspect.

Discipline-Specific Reports Are Not Interchangeable

The equipment, techniques and personnel used to perform an environmental study differ significantly from those used to perform a geotechnical or geologic study and vice versa. For that reason, a geotechnical engineering or geologic report does not usually address any environmental findings, conclusions or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. Similarly, environmental reports are not used to address geotechnical or geologic concerns regarding the subject property.

Environmental Regulations Are Not Static

Some hazardous substances or petroleum products may be present near the subject property in quantities or under conditions that may have led, or may lead, to contamination of the subject property, but are not included in current local, state or federal regulatory definitions of hazardous substances or petroleum products or do not otherwise present potential liability. Changes may occur in the standards for appropriate inquiry or regulatory definitions of hazardous substance and petroleum products; therefore, this report has a limited useful life.

Property Conditions Change Over Time

This report is based on conditions that existed at the time the study was performed. The findings and conclusions of this report may be affected by the passage of time (for example, Phase I ESA reports are applicable for 180 days), by events such as a change in property use or occupancy, or by natural events, such as floods, earthquakes, slope failure or groundwater fluctuations. If more than six months have passed since issuance of our report, or if any of the described events may have occurred following the issuance of the report, you should contact Aspect so that we may evaluate whether changed conditions affect the continued reliability or applicability of our conclusions and recommendations.

Phase I ESAs – Uncertainty Remains After Completion

Aspect has performed the services in general accordance with the scope and limitations of our Agreement and the current version of the "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process", ASTM E1527, and U.S. Environmental Protection Agency (EPA)'s Federal Standard 40 CFR Part 312 "Innocent Landowners, Standards for Conducting All Appropriate Inquiries".

No ESA can wholly eliminate uncertainty regarding the potential for recognized environmental conditions in connection with subject property. Performance of an ESA study is intended to reduce, but not eliminate, uncertainty regarding the potential for environmental conditions affecting the subject property. There is always a potential that areas with contamination that were not identified during this ESA exist at the subject property or in the study area. Further evaluation of such potential would require additional research, subsurface exploration, sampling and/or testing.

Historical Information Provided by Others

Aspect has relied upon information provided by others in our description of historical conditions and in our review of regulatory databases and files. The available data does not provide definitive information with regard to all past uses, operations or incidents affecting the subject property or adjacent properties. Aspect makes no warranties or guarantees regarding the accuracy or completeness of information provided or compiled by others.

Exclusion of Mold, Fungus, Radon, Lead, and HBM

Aspect's services do not include the investigation, detection, prevention or assessment of the presence of molds, fungi, spores, bacteria, and viruses, and/or any of their byproducts. Accordingly, this report does not include any interpretations, recommendations, findings, or conclusions regarding the detection, assessment, prevention or abatement of molds, fungi, spores, bacteria, and viruses, and/or any of their byproducts. Aspect's services also do not include the investigation or assessment of hazardous building materials (HBM) such as asbestos, polychlorinated biphenyls (PCBs) in light ballasts, lead based paint, asbestos-containing building materials, urea-formaldehyde insulation in on-site structures or debris or any other HBMs. Aspect's services do not include an evaluation of radon or lead in drinking water, unless specifically requested.