ATLAS GEOSCIENCES NW

April 3, 2019
Project No. 2019-002

Mr. Vinson Latimore
155 Tremont Ave, LLC
436 West Bakerview Road, Suite 102
Bellingham, WA 98226

vbl@gibraltarseniorliving.com

Subject: Supplemental Phase II Subsurface Investigation
Gibraltar Senior Living
10816 18th Avenue East
Tacoma, Washington

Dear Mr. Latimore:

Atlas Geosciences NW, LLC (Atlas) is pleased to provide this letter report presenting the results of our supplemental assessment of subsurface conditions at the Gibraltar Senior Living site, which includes the above-referenced property. The property is occupied by an assisted living facility comprised of a 1920-vintage three-story, 7,529-square-foot building; a 1920-vintage one-story, 2,169-square-foot building; and a 1960-vintage single-story, 2,170-square-foot building on 1.42 acres of land (Pierce County parcel no. 0319034012). The legal description of the property parcel, as provided on the Pierce County Assessor website is:

> BEG ON W LI OF PORTLAND AVE AT A PT 1038 FT N OF S LI OF SEC TH PAR WITH SD S LI N 88 DEG 34 MIN W 337 FT TH N 01 DEG 42 MIN E 229.41 FT TH S 88 DEG 34 MIN E 78.55 FT TH S 64 DEG 48 MIN E 115 FT TH S 87 DEG 48 MIN E 153 FT TO SD W LI OF PORTLAND AVE TH S 01 DEG 42 MIN W 181 FT TO BEG EXC W 25 FT THEREOF EASE OF RECORD

Atlas understands that the client is contemplating the sale or redevelopment of the property, the location of which is shown on Figure 1, "Site Vicinity Map."

1.0 BACKGROUND

In July and September 2011, STS/Filco Services (STS)/Filco conducted the removal of three underground storage tanks (USTs) at the subject property (in separate excavations), including a 1,000-gallon and two 675-gallon heating oil USTs. The 1,000-gallon UST (UST #1) was located in the east portion of the delivery receiving area near the northwest corner of the main building. One of the 675-gallon USTs was located to the west of the northwest wing of the building (UST #2); the other 675-gallon UST was located south of the southernmost wing of the building (UST #3). Figure 2 is a "Site Plan" that indicates the approximate locations of the property parcel boundary and associated structures, USTs, drive-lanes, and streets.

Releases were identified within all three UST basins. A total of 302.76 tons of petroleum-contaminated soil (PCS) were excavated and removed from the site. However, some PCS was not accessible due to the presence of building foundations and was left in-place, the locations of which are discussed further below.

The site has been enrolled into the Washington Department of Ecology's (Ecology's) Voluntary Cleanup Program (VCP) in order to obtain a No Further Action (NFA) determination from Ecology. Several subsurface investigations have since been performed at the site, which included soil, groundwater, sub-slab vapor, and crawlspace air sampling activities. Limited soils with residual elevated diesel-range total petroleum hydrocarbons (TPH) concentrations identified during UST removal activities may remain on the site; however, the concentrations observed during those activities have not been duplicated in subsequent investigations. In addition, adversely-affected groundwater has been identified on the south-adjoining property but not on the Gibraltar Senior Living property. Sub-slab vapor and crawlspace air samples have indicated elevated naphthalene concentrations may be present; however, the sampling had not proven conclusive due to the presence of a school bus transportation facility west-adjoining and upwind of the site that is suspected to be at least contributing to the naphthalene concentrations detected.

The client recently received an "NFA Likely" letter from Ecology, dated June 1, 2018. In the letter, Ecology requested clarifications on some items (e.g., the locations of the Gibraltar Senior Living property parcel boundaries); indicated that limited additional site characterization activities may be needed in some areas of the site; and suggested that a Feasibility Study with a Disproportionate Cost Analysis may be needed before the NFA is issued. Ecology also indicated that further assessment of the elevated naphthalene concentrations in the crawlspace air and/or soil vapors in the vicinity of UST #2 would be required if the client would prefer not to install the Ecology-approved sub-slab membrane depressurization system (SMDS).

Pursuant to client request, Atlas has performed a Supplemental Phase II Subsurface Investigation (Supplemental Phase II) to address the abovementioned RECs.

2.0 SUBSURFACE INVESTIGATION

For this Supplemental Phase II, Atlas oversaw test probe advancement and performed soil vapor and air sampling adjacent to and in the crawlspace of the site building. The purpose of the test probe sampling was to further assess soil in the vicinity of STS/Filco UST site assessment sample AF, where a previous detection of 3,400 milligrams per kilogram (mg/kg) "diesel extended" was identified at 7 feet below ground surface (bgs), exceeding the site-specific MTCA Method B soil cleanup level of 3,330 mg/kg. Based on the information in the STS/Filco report, it was not clear whether this soil remained on the site or had been removed during remedial excavation activities.

The purpose of the soil vapor and air sampling was to further assess the elevated naphthalene concentrations detected in the air within the crawlspace beneath the

northwest wing of the building. Figure 3 is a "UST #1 Exploration Plan" that shows the location of test probe EB-21 as well as the UST #1 remedial excavation boundary and historical explorations. Figure 4 is a "UST #2 Exploration Plan" that depicts the locations of the UST #2 remedial excavation boundary, vapor sample, crawlspace air, and ambient air sample locations, and locations of former test probes. A soil boring log for test probe EB-21 is included as Appendix A, and analytical laboratory results and sample chain-of-custody forms are included as Appendix B.

Test probe EB-21 was located on the northeast portion of the former UST #1 excavation. Soil vapor samples FLUX-1 and FLUX-2 and crawlspace air sample CS-10 were located within the crawlspace of the northwest wing of the building east-adjoining the former UST #2 excavation, and ambient air sample Amb-10 was located outside of the northwest wing of the building, approximately 15 feet south of the crawlspace air and soil vapor samples.

2.1 Test Probe Explorations

On January 29, 2019, Atlas oversaw the advancement of one direct-push exploration on the northeast portion of the former UST #1 excavation (Figure 3) to a depth of 7 feet bgs, at the approximate location of previous soil sample AF. The test probe was advanced using a truck-mounted, direct-push drill rig to drive a hollow probe tube to the desired sampling depth.

Soil sampling was accomplished using a plastic liner in approximately 4-foot increments. After each drive interval, the probe was removed from the exploration and the plastic liner, containing a sample of the subsurface materials encountered during that drive interval, was removed. The plastic liner was cut open to expose the soil sample and laboratory-prepared sample containers were filled with soil for possible analytical testing. The boring log is included in Appendix A. Groundwater was not encountered to the maximum depth explored of 7 feet bgs during exploration activities.

All soil samples collected for chemical analysis were placed in appropriate sample containers supplied by an Ecology-approved laboratory subcontracted to Atlas. Each container was labeled with the project number, date, time, and sample number. Sample containers were placed in a chilled cooler immediately after sampling, and subsequently transported to Friedman & Bruya, Inc., of Seattle, Washington (a Washington-accredited analytical laboratory), under strict chain-of-custody procedures.

2.2 Air and Soil Vapor Assessment

In order to further assess the source of the previously-detected naphthalene in the crawlspace and ambient air near former UST #2 at the site, Atlas performed air sampling concurrently with soil vapor sampling in and around the above-referenced crawlspace. As a result of the laboratory method selected for the air samples (i.e., TO-17), a 28-hour sample period was required. In order to be representative of conditions during the entire air sampling period, the soil vapor samples were collected at the beginning and the end of the same 28-hour period.

2.2.1 Air Sampling

From January 29 to January 30, 2019, air samples were collected in two locations near former UST #2. A crawlspace air sample (CS-10) was collected from within the crawlspace beneath the northwest wing of the building east-adjoining the former UST #2 location. The soil vapor samples (discussed further in Section 2.2.2 below) were also collected in this location, where previous crawlspace air samples CSA-1, CSA-1 have been collected as well. Concurrent with the crawlspace air and soil vapor samples, an ambient air sample (Amb-10) was also collected from a location 15 feet south of the aforementioned crawlspace, which was upwind during the sample collection period.

The air samples were collected using a sample train consisting of an air pump connected to a flow regulator by Teflon tubing, which was then connected to a sample container (charcoal enclosed within a brass tube) using another section of Teflon tubing. At the ambient air sample location, and then at the crawlspace sample location, the pump was turned on and the flow regulator was calibrated to 20 milliliters per minute (mL/min). In order to attain a reporting limit at or below the MTCA Method B Air Cleanup Level of 0.0735 µg/m^3, a minimum of 30 liters of air was required to pass over the charcoal media in the sample tube. Therefore, based on a flow of 20 mL/min, the pumps were operated continuously for a period of approximately 28 hours, allowing 33 to 34 liters of air to pass over the charcoal media in the tube.

After sample collection, brass caps were screwed onto each end of the sample tubes. The sealed tubes were then wrapped tightly in aluminum foil and placed into a sealed container. The container was labeled with the site name, date, time, exploration number, sample number, and sampling personnel. Sampling pump start and stop times and flow rates were also recorded. The sample containers were subsequently transported to Friedman & Bruya, Inc., of Seattle, Washington (a Washington-accredited analytical laboratory), under strict chain-of-custody procedures.

2.2.2 Soil Vapor Sampling

On January 29 and 30, 2019, soil vapor sampling was performed at the site to assess for the presence of naphthalene in subsurface vapors. Soil vapor samples were collected from beneath the northwest wing of the building crawlspace in the vicinity of former heating oil UST #2, located on the western portion of the site (Figure 4).

Soil vapor samples were collected using a flux chamber, which is a stainless steel dome with a sample port at the top. The bottom portion of the dome was worked into the surface soil by rotating in repeated, alternating fashion until it had penetrated approximately one inch into the soil. Additional surrounding soil was then used as a berm around the outside of the base of the dome. A one-liter SUMMA® canister under pressure, equipped with a pressure gauge, was connected to the flux chamber sample port and opened, which drew soil vapors from inside the dome into the sample container. Once the pressure gauge indicated a vacuum of approximately -5 inches of mercury, the SUMMA® canister was sealed and removed from the port. The port was then closed, and the flux chamber was left in-place to allow for soil vapors to accumulate via the vacuum created under the dome by the initial sampling event.

Soil vapor sample FLUX-1 was collected at the beginning of the sample period (coinciding with the time the air sample pumps were turned on as discussed above). Soil vapors were then allowed to rise into the flux chamber for a period of approximately 28 hours (the same time period as the air sampling discussed above), at which time soil vapor sample FLUX-2 was collected (coinciding with the time the air sample pumps were turned off) in the manner discussed above.

After sampling was complete, the SUMMA® canisters were labeled as discussed in Section 2.2.1 above, placed into a cardboard box and then shipped to H&P Mobile Geochemistry, Inc. (H&P), of Carlsbad, California, via UPS Next-Day Air Service, under strict chain-of-custody procedures.

2.3 Laboratory Analyses

The soil, soil vapor, and air samples collected at the site were analyzed as indicated below:

- Diesel- and oil-range TPH by Method NWTPH-Dx (soil sample).
- Naphthalene by Method TO-17 (air samples).
- Naphthalene by Method TO-15 (soil vapor samples).

The analytical laboratory reports are included in Appendix B.

3.0 SUBSURFACE INVESTIGATION RESULTS

3.1 Subsurface Conditions

Subsurface conditions at the project site were inferred from observations made during the field explorations accomplished for this study. Soils encountered beneath the subject property generally consisted of light brown, fine-grained, silty sand with gravel to a depth of approximately 6 feet bgs, beneath which the silty sand became gray. The gray silty sand extended to the maximum depth explored of 7 feet bgs. Groundwater was not encountered during exploration activities at the site.

3.2 Soil Analytical Results

Diesel-range TPH was detected at a concentration of 200 milligrams per kilogram (mg/kg) in the sample collected from a depth of 7 feet bgs in EB-21. The concentration detected was below the site-specific MTCA Method B soil cleanup level of 3,330 mg/kg. Current and historical soil analytical results are summarized in Table 1, "Current and Historical Soil Analytical Results," and the laboratory analytical report is included in Appendix B.

3.3 Soil Vapor Sampling Results

Naphthalene was not detected in the two soil vapor samples collected via flux chamber from the site during this assessment. The soil vapor results are summarized in Table 2, "Soil Vapor Analytical Results."

3.4 Air Analytical Results

Naphthalene was detected at a concentration of 0.12 micrograms per cubic meter (µg/m^3) in the crawlspace air sample and 0.17 µg/m^3 in the ambient air sample. The concentrations exceeded the MTCA Method B Indoor Air Cleanup Level of 0.0735 µg/m^3. The crawlspace and ambient air analytical results are summarized in Table 3, "Crawlspace and Ambient Air Analytical Results."

3.5 Quality Assurance/Quality Control Results

The analytical results for the current investigation were checked for completeness immediately upon receipt from the laboratory to ensure that data and QA/QC information requested were present. Data quality was assessed by considering hold times, surrogate recovery (when applicable), method blanks, matrix spike and matrix spike duplicate (MS/MSD) recovery, and detection limits. QA/QC review was completed using guidance described in USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (USEPA, 2017). Our evaluation assumes that the QA/QC is correct as reported by the laboratory, and merely provides an interpretation of the QA/QC results.

Hold Times. All analyses were completed within specified hold times.

Surrogate Recoveries. Surrogate recoveries, when applicable, were within laboratory limits.

Method Blanks. Analytes were not detected in the laboratory method blanks.

Laboratory Reporting Limits. Reporting limits were below relevant MTCA cleanup levels.

MS/MSD Results. The MS/MSD results fell within acceptable criteria.

The laboratory noted that the internal standard associated with the naphthalene analysis by TO-17 was out of control limits. Therefore, the reported concentrations were estimates. However, the laboratory control sample was within acceptance criteria. Therefore, the data are considered valid.

Based upon our interpretation of quality control information provided by the laboratories, it is our opinion that the overall dataset is useable as qualified for the purposes of this Supplemental Phase II.

4.0 SITE RESTORATION

The test probe was abandoned by filling with bentonite chips to grade and covered with soil to match the existing ground cover. No other site restoration activities were necessary or performed.

5.0 SUBSURFACE INVESTIGATION CONCLUSIONS AND RECOMMENDATIONS

A Supplemental Phase II subsurface investigation was conducted to further assess subsurface conditions at the site. Based on the Focused Phase II findings, Atlas concludes the following regarding former heating oil UST #1:

- Diesel-range TPH was detected (200 mg/kg) below the site-specific MTCA Method B soil cleanup level of 3,330 mg/kg in the soil collected from a depth of 7 feet bgs in test probe EB-21. The soil sample was collected from the approximate location and depth of former soil sample AF, which was reportedly collected during over-excavation activities associated with heating oil UST #1 (north-central portion of the subject property). Sample AF contained a reported diesel-extended concentration of 3,400 mg/kg. Based on the results of this Supplemental Phase II, it appears that the soils associated with sample AF were removed from the former UST basin during over-excavation activities since the in-situ soil at the former AF location is in compliance with MTCA Method B.

During our assessment of impacts from the historical diesel-range TPH from heating oil UST #2 (western portion of the subject property), Atlas has looked for multiple lines of evidence as to potential vapor intrusion impacts from the release, in accordance with Ecology guidance. Based on the findings of this investigation, Atlas concludes the following regarding former heating oil UST #2:

- Soil vapor in the vicinity of former heating oil UST #2 was assessed using a flux chamber. Naphthalene was not detected in the vapor samples collected at the beginning or at the end of the 28-hour sample collection period. Therefore, based on this line of evidence, a naphthalene soil vapor intrusion condition into the building crawlspace associated with previously-identified diesel-range TPH-impacted soils in the vicinity of the former heating oil UST #2 was not indicated.

- Naphthalene was detected in the crawlspace and ambient air samples at concentrations of 0.12 and 0.17 µg/m^3, respectively, which exceeded the MTCA Method B Indoor Air Cleanup Level of 0.0735 µg/m^3. The ambient air sample exhibited a higher concentration than the crawlspace air sample. The higher naphthalene concentration detected in the ambient air points to an upwind source (south to southwest of the crawlspace), providing another line of evidence that the source of the naphthalene detected in the crawlspace near former heating oil UST #2 does not appear to be the former on-site heating oil UST.

Based on the results of this investigation, it appears that the subsurface conditions at former heating oil USTs #1 and #2 are in compliance with MTCA Method B. No further investigation is warranted or recommended at the site.

6.0 ECOLOGY INQUIRY RESPONSES

Ecology issued an opinion letter, dated June 1, 2018, in which the agency indicated that a Property-Specific No Further Action (NFA) determination for the site was considered likely ("NFA Likely") pending clarification on some of the data associated with the site. Atlas has addressed some of the Ecology requests in the Sections above (e.g., the legal description for the Gibraltar Senior Living property was provided at the beginning of this report), and the remaining items are discussed below. Relevant supporting documentation has been included in Appendix C.

Soil Confirmation Sampling at UST #3

In its NFA Likely letter, Ecology provides a comparison between the UST soil confirmation samples "X," "V," and "Q," and subsequent soil confirmation samples collected by Terracon from test probes EB-6, EB-7 and EB-11, respectively. Ecology raised the fact that the depths of the samples collected in the test probes were deeper than those of the UST soil confirmation samples.

Atlas has reviewed the test probe logs for EB-6, EB-7 and EB-11. In each test probe, the soils were field screened to determine the relative magnitude of the petroleum impacts. Soils corresponding to the highest PID readings were submitted for laboratory analysis of diesel-range TPH. UST soil confirmation sample "X" was reportedly collected from an estimated depth of 7 feet bgs, based on rough measurements of the open excavation. Although an elevated PID reading (141 vppm) was detected at a depth of 7 feet bgs in test probe EB-6, the highest PID reading intercepted in this location was 212 vppm from a depth of 9.5 to 10 feet bgs, which appeared to be the worst-case sample at that location. Consequently, the deeper sample was selected for analysis. UST soil confirmation sample "V" was reportedly collected from an estimated depth of 6 feet bgs, again, based on rough measurements of the open excavation. However, when drilling test probe EB-7, the PID reading at 6 feet bgs was 0.0 vppm. The highest PID reading encountered in this boring, 155 vppm, was at a depth of 8.5 to 9 feet bgs, which appeared to be the worst-case sample at that location and, consequently, was selected for analysis. Finally, UST soil confirmation sample "Q" was reportedly collected at an estimated depth of 6 feet bgs. However, the PID readings at a depth of 6 feet in test probe EB-11 were only 0.1 vppm. Therefore, soil samples from 7.5 to 8 feet bgs (28.7 vppm) and 9.5 to 10 feet bgs (0.6 vppm) were considered worst-case and submitted for laboratory analysis.

The deeper samples with the higher PID readings were selected for laboratory analysis based on WAC 173-340-350(7)(c)(iii)(B) as well as Section 5.2 of Ecology's Guidance for Site Checks and Site Assessments for Underground Storage Tanks (Ecology, 2003), which states that "The goal of a site check and site assessment is to collect sufficient data from a site... by adequately identifying the presence of contamination where it is most likely to be present." The use of field instruments is encouraged in order to complete this goal. The guidance goes on to state (in Section 5.2.3) that "Soil samples from around a tank... must be collected where field instruments indicate contamination exists, or where contamination is most likely to occur." Furthermore, Section 6.0 of Ecology's Guidance for Remediation of Petroleum Contaminated Sites (Ecology, 2011) cautions against "drilling to pre-selected depths and locations with no consideration of conditions encountered during site investigations." Soil

samples were selected for laboratory analysis at UST #3 based on the conditions encountered during the site investigations. In order to best characterize the site and to obtain the best data to evaluate conditions in the immediate vicinity of UST soil confirmation samples "X," "V," and "Q," the soils with the highest PID readings and odors were selected for analysis, in accordance with the guidance and regulations published by Ecology.

Ecology also raised the possibility that test probe EB-7 may have been advanced through excavation fill. According to the STS/Filco report, UST soil confirmation sample "V" was reportedly collected from beneath the abovementioned school bus drive-lane. Access restrictions to the area south of UST #3 were discussed above. Therefore, in order to collect a sample as close to "V" as possible, test probe EB-7 was located immediately (approximately 2 feet) to the north of the fiber optic utility lines located on the southern portion of the UST #3 remedial excavation. Due to the presence of the fiber optic utility lines and the drive-lane, access to the exact location of "V" is not feasible.

UST #3 Delineation Activities

Throughout the NFA Likely letter, Ecology explores whether additional delineation activities may be prudent south of former UST #3, which is located on the southeast portion of the Gibraltar Senior Living property. For the purposes of southern delineation, Terracon advanced test probe EB-16 south of UST #3, on the south-adjoining property, on October 8, 2015. Test probe EB-16 was placed as close to UST #3 as possible, due to the presence of a fiber optic utility line and an active drive-lane for school buses between UST #3 and EB-16, which is illustrated in Figure 5. These areas are not accessible for drilling purposes. Therefore, additional delineation activities are not feasible between UST #3 and test probe EB-16, which defines the southern extent of the impacts.

Based on the available data, the northern extent appears to be approximately delineated by test probes EB-6 and EB-11, with supplemental confirmational sampling north of the site building at boring EB-17, the closest samples possible in that vicinity (due to access issues).

In addition, test probe EB-8 and UST soil confirmation sample "W" define the impacts to the west and UST soil confirmation sample "P" defined the impacts to the east. Test probe EB-17 (advanced north of the southeast wing of the building) defines the limit to the soil impacts to the north. Based on the presence of a building immediately north of the former excavation area, a ramp north-adjoining the building, and landscaping north of the ramp, the closest feasible location to the north of UST #3 was EB-17. Based on the analytical results from these explorations and associated samples, the impacts associated with former heating oil UST #3 have been defined in accordance with WAC 173-340-350(7)(c)(iii).

UST Site Assessment Sample "S" at UST #2

STS/Filco reported a diesel-extended TPH concentration of 12,000 mg/kg in remedial excavation soil confirmation sample "S," which was collected on September 15, 2011. Several subsequent explorations have focused on this area, each with results indicating diesel-range TPH was either not detected or was below the site-specific MTCA Method B soil cleanup level of 3,330 mg/kg. Soil samples collected and analyzed proximal to sample "S" have included:

Sample ID	Sample Location Description	Sample Depth (feet bgs)	Diesel-range TPH result (mg/kg)
T	One foot E of "S"	Unknown	2,900
EB-1 7.5-8'	East of the building, approx. 20 feet E of "S"	7.5 to 8	ND
EB-10	Approx. 1 foot SW of "S"	9.5 to 10	ND
EB-15, S-1, 0.5-1'	Approx. 3 feet SE of "S"	0.5 to 1	ND
EB-18 @ 6.5'	Approx. 2 feet N of "S"	6.5 to 7.5	250

Based on a detailed review of the STS/Filco report, the depth of samples "S" and "T" were not reported. The distances referenced in the report were reportedly 1 and 2 feet, respectively, into the east sidewall. Soil samples have been collected within 3 lateral feet of the reported "S" location, with the exception of EB-1, which could not be located closer than 20 feet to the east due to the presence of a building east-adjoining the former UST #2 location.

A review of the boring logs associated with EB-1, EB-10, EB-15 and EB-18 revealed photoionization detector (PID) results up to 20 volumetric parts per million (vppm) in the borings. The highest PID reading was observed in EB-18 at a depth of 7 feet bgs. The soil in this location was submitted for laboratory analysis, and diesel-range TPH was detected at 250 mg/kg in the sample. In each of the test probes, soil samples were collected and submitted for laboratory analysis at a depth corresponding to the highest PID reading, or just above refusal if elevated PID readings were not encountered (e.g., EB-1). Although the discussion in the STS/Filco report implies that the soils at sample location "S" were left in-place, the reported result of 12,000 mg/kg could not be replicated in the abovementioned locations, most of which were within 3 lateral feet of the reported "S" location. Although the depth of the soil sample was not indicated in the STS/Filco report, soil samples have been collected from the immediate vicinity of sample "S" at varying depths and analyzed. Field screening and observations in those borings did not indicate petroleum impacts were present, with the exception of the sample from EB-18, in which petroleum odors were encountered. As discussed above, the soils in this location exhibited a diesel-range TPH concentration of 250 mg/kg. Furthermore, recent soil vapor samples FLUX-1 and FLUX-2 (collected on January 29 and 30, 2019, respectively) did not detect naphthalene in the soil vapor. Therefore, the reported result in "S" appears to be either an anomalous result, a de minimis condition, or the soils were removed through the act of collecting samples "S" and "T." Based on the results of the characterization effort in this location, no further investigation is warranted.

Sub-Slab Vapor and Crawlspace and Ambient Air Sampling Events – Weather Conditions

As requested, the weather conditions during each sampling event (including temperature, humidity, and barometric pressure) are presented in the table below:

Sample ID	Temperature	Humidity	Barometric Pressure	Buses Idling? (Y/N)
October 8, 2015				
SSV-1	59ºF	93%	30.19"	Y
SSV-2	62ºF	83%		
SSV-3	62ºF	83%		
June 23, 2016				
CS-1	57ºF (start) 65ºF (end)	90% (start) 85% (end)	30.03" (start) 30.07" (end)	Y
CS-2				
Ambient				
July 21, 2017				
CSA-1	61ºF (start) 77ºF (end)	80% (start) 41% (end)	30.13" (start) 30.08" (end)	N
Ambient				
August 18, 2017				
CSA-2	57ºF (start)	85% (start)	30.16" (start)	Y
Ambient-2				
January 29 and 30, 2019				
FLUX-1	41ºF	64%	30.19"	Y
FLUX-2	48ºF	53%	30.05"	
CS-10	41ºF (start) 48ºF (end)	64% (start) 53% (end)	30.19" (start) 30.05" (end)	
Amb-10				

Indoor Air Sampling

Ecology mentioned indoor air sampling on a couple of occasions within the NFA Likely letter; however, Ecology has not requested indoor air sampling at the site. Ecology suggests that, per USEPA guidance, the attenuation factor between the crawlspace air and the indoor air in the building above must be assumed to be 1.0 (i.e., no adjustment) unless indoor air sampling indicates otherwise. Indoor air sampling has not been performed at the site to-date, since many items located within the building (e.g., moth balls, urinal cakes, etc.) emit naphthalene vapors and would interfere with sample collection, making it unlikely to be representative of the naphthalene contribution from the crawlspace air. Therefore, Atlas is utilizing an attenuation factor of 1.0 for the investigations at the site (i.e., crawlspace air sample results have been compared to the MTCA Method B indoor air cleanup level for naphthalene for assessment purposes).

Naphthalene in Air – Sensitive Receptors

Ecology has requested the following information as part of the naphthalene in air assessment:

- Facility sensitive receptors: the facility is an assisted living facility. The on-site residents and the faculty are the facility sensitive receptors. No other sensitive receptors are known to be present.
- Building construction details: The structure that adjoins the former UST #2 area to the east is a 1960-vintage, single-story, 2,170-square-foot, wood-framed building with a

crawlspace. An approximately 45-square-foot closet attached to the west side of the building housed the former oil burning furnace and is the only slab-on-grade area of the building. This closet is immediately north of the former UST #2 location.
- Room Use Near UST #2: Hallway and community gathering room.
- Preferential exposure pathways for vapor, if any: None known.
- Current and anticipated land use: Assisted living facility.

Diesel-Range TPH Result at UST #1 Location

In the NFA Likely letter, Ecology discusses the diesel-range TPH detection in Terracon soil boring EB-20, which was advanced near the northeast limit of the remedial excavation. Ecology noted that the excavation was reportedly 8 feet deep at UST soil confirmation sample "L," which was located in the west-central portion of the excavation. Based on this, a question was raised as to whether the diesel-range TPH detection at a depth of 6.5 feet bgs in EB-20, is indicative of the excavation backfill or native soils.

The excavation would not have been a uniform depth throughout its lateral extent and, by nature and for safety reasons, excavation sidewalls are generally sloped. Therefore, although the excavation was 8 feet in depth at the "L" location, it appears the excavation was shallower in the EB-20 location for various reasons including sloping and its close proximity to the building. This was confirmed during our review of the boring log for EB-20, where the transition from excavation backfill to native material was observed at 4 feet bgs. Therefore, the samples collected at 6.5 and 8.5 feet bgs were collected from native material and not from the pit run backfill.

7.0 LIMITATIONS AND EXCEPTIONS

This subsurface investigation is intended to reduce, but not eliminate, uncertainty regarding the potential for adversely-affected media in connection with the site. In addition, performance of this subsurface investigation does not eliminate uncertainty regarding site hazards not covered by the scope of work or the potential for future identification of adversely-affected media at the site.

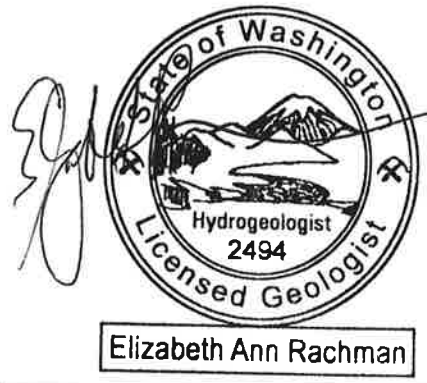
The findings, conclusions, and/or recommendations of this subsurface investigation are based strictly on information available and conditions observed at the time of this assessment. Subsequent changes to site conditions, such as site redevelopment or changes to ground cover, or changes in applicable regulatory requirements have the potential to materially affect the conclusions and/or recommendations of this report. If any such changes are apparent, the client should contact Atlas about reevaluating the findings of this investigation to incorporate the new information. The conclusions and/or recommendations are not to be construed as legal interpretation or advice. No warranties, express or implied, are intended or made herein.

8.0 CLOSURE

This report was prepared for the exclusive use of the Client, and its agents for specific application to the subject site. Atlas personnel performed this assessment in accordance with generally accepted standards of care that existed in the State of Washington at the time of this study. Our findings and conclusions have been prepared in accordance with generally accepted professional practice in the area at this time. We make no other warranty, either express or implied.

We appreciate this opportunity to provide these services. Please do not hesitate to call if you have any questions.

Sincerely,
ATLAS GEOSCIENCES NW



Elizabeth Rachman, L.G., L.Hg.
Principal Hydrogeologist

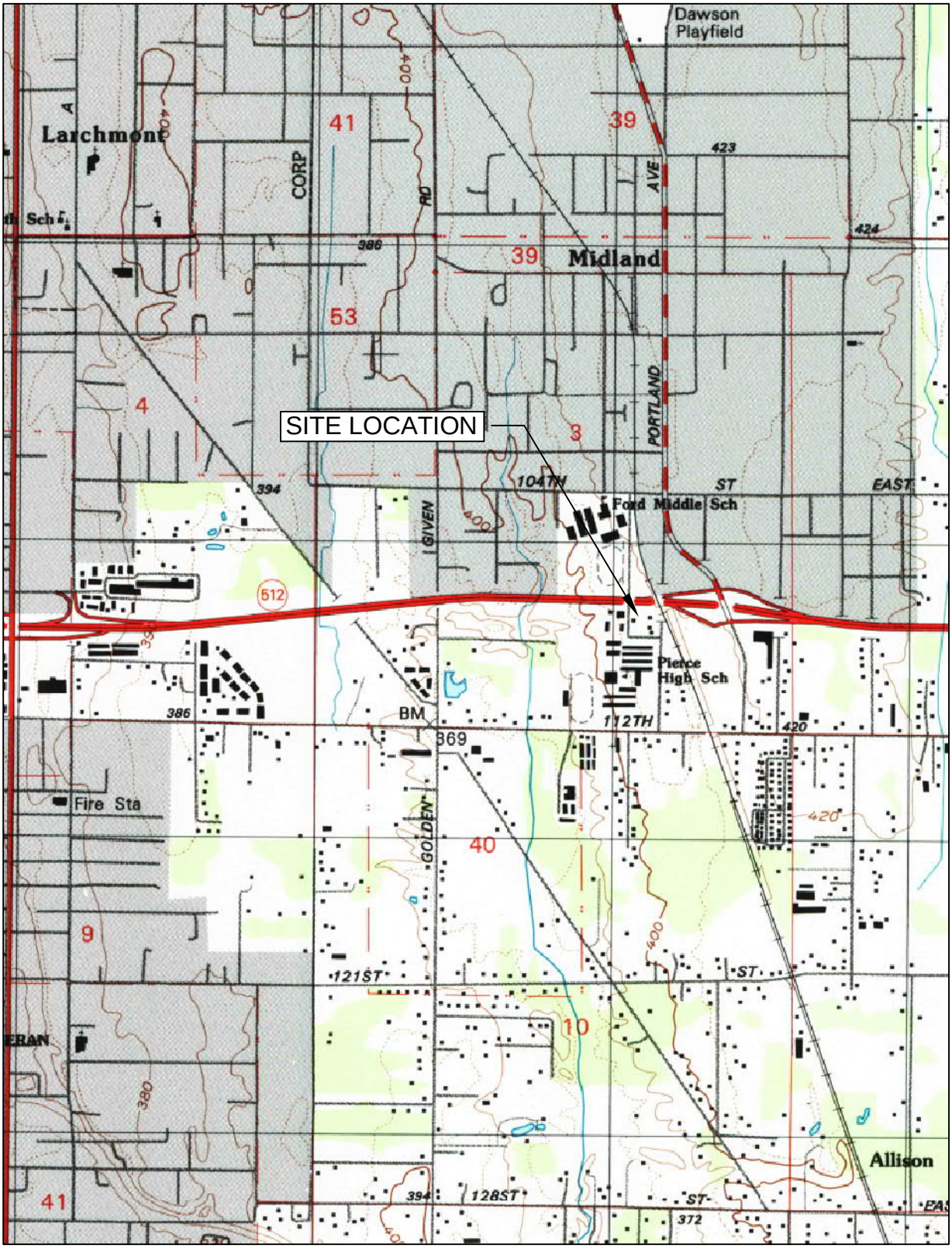
Lannie Smith, C.H.M.M.
Principal Environmental Scientist

Attachments:

Figure 1:	Site Vicinity Map
Figure 2:	Site Plan
Figure 3:	UST #1 Exploration Plan
Figure 4:	UST #2 Exploration Plan
Figure 5:	UST #3 Exploration Plan
Table 1:	Current and Historical Soil Analytical Results
Table 2:	Soil Vapor Analytical Results
Table 3:	Crawlspace and Ambient Air Analytical Results
Appendix A:	EB-21 Test Probe Log
Appendix B:	Laboratory Analytical Reports and Sample Chain-of-Custody Forms
Appendix C:	Additional Relevant Boring Logs

ATLAS GEOSCIENCES NW

FIGURES



BASEMAP TAKEN FROM TACOMA SOUTH, WASHINGTON 7.5-MINUTE QUADRANGLE, 1997

ATLAS GEOSCIENCES NW P.O. BOX 1009 SUMNER, WA 98390	DRAWN BY: ER PROJ. NO: 2019-002 DATE: FEBRUARY 2019 APPROX SCALE: 1 : 24,000 PRJ MGR: ER	SITE VICINITY MAP	FIGURE 1
		GIBRALTAR SENIOR LIVING 10816 - 18TH AVENUE EAST TACOMA, WASHINGTON	

N

SCHOOL BUS PARKING

FRANKLIN PIERCE
SCHOOL DISTRICT

LEGEND:

- PROPERTY/ PARCEL BOUNDARY
- BUILDING
- FORMER HEATING OIL UST

UST #2

NORTHWEST WING

Fence

UST #1

MAIN BUILDING

SOUTHEAST WING

UST #3

18th AVENUE EAST

SCHOOL BUS DRIVE-LANE

0 15 30 60
FEET

FRANKLIN PIERCE
HIGH SCHOOL

ATLAS GEOSCIENCES NW

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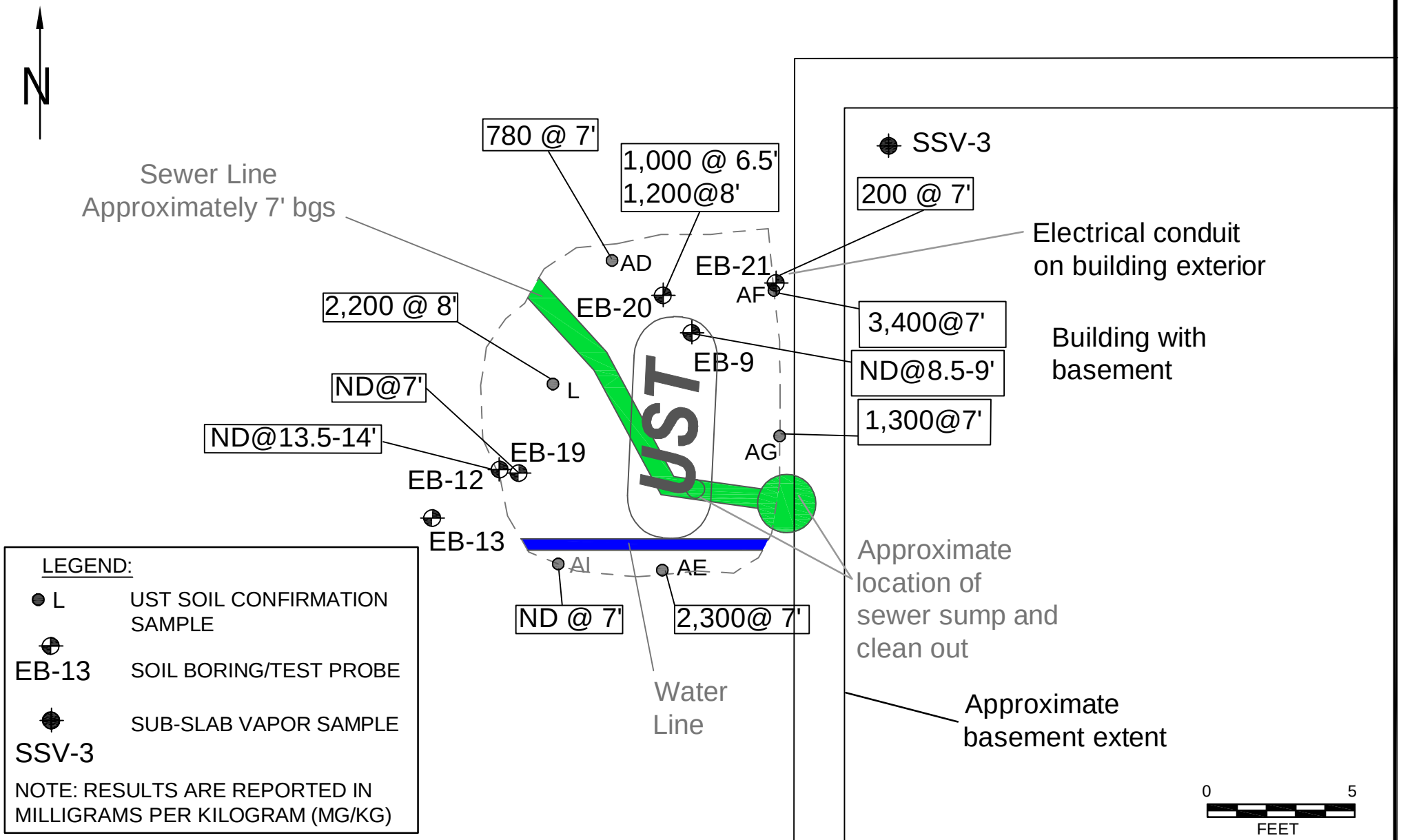
PROJ. NO:	2019-002
DATE:	MARCH 2019
APPROX SCALE:	SEE ABOVE
PRJ MGR:	ER

SITE PLAN

FIGURE 2

GIBRALTAR SENIOR LIVING (VCP No. SW1472)

10816 - 18th AVENUE EAST
TACOMA, WASHINGTON



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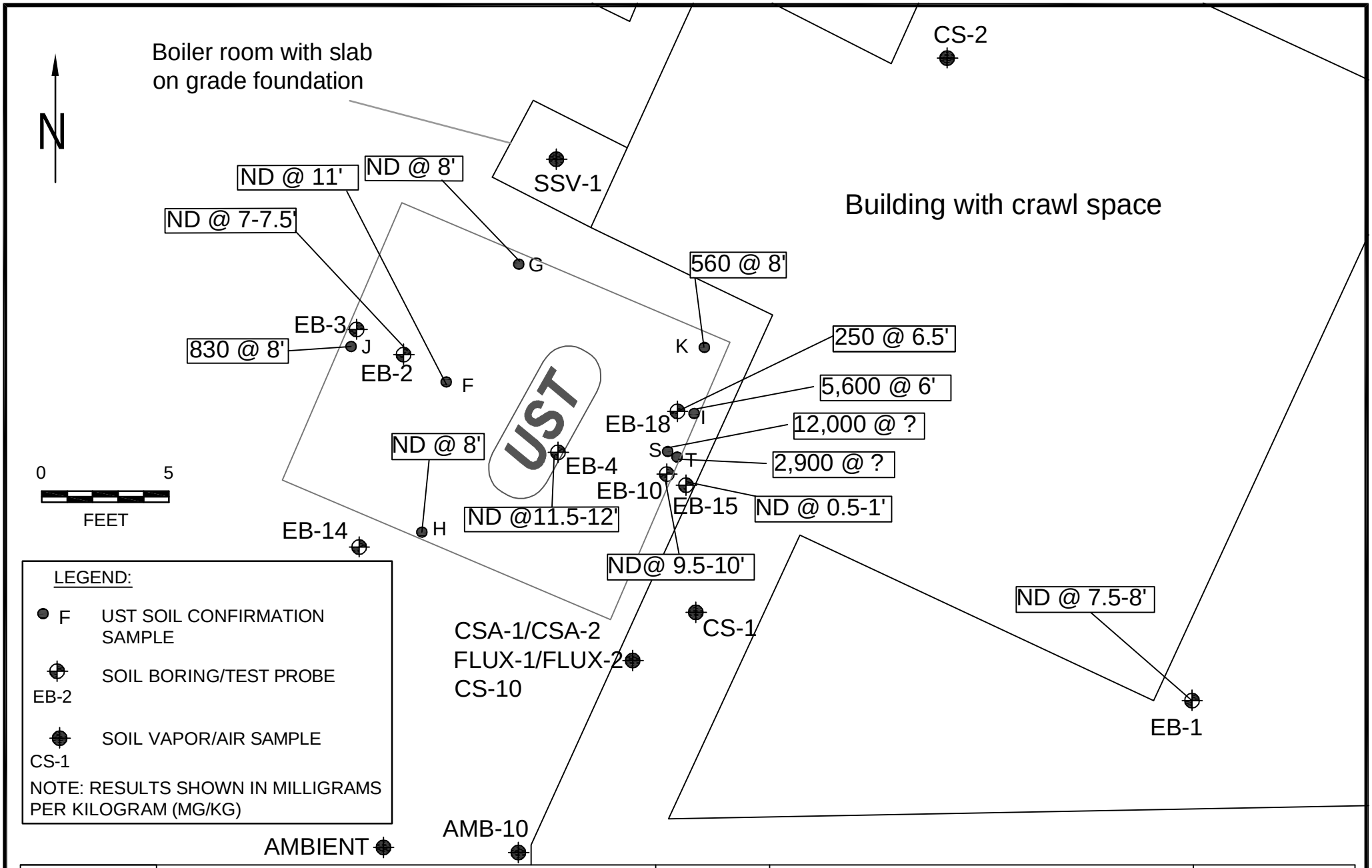
UST #1 EXPLORATION PLAN

FIGURE 3

GIBRALTAR SENIOR LIVING (VCP No. SW1472)

10816 - 18th AVENUE EAST
TACOMA, WASHINGTON



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SUMNER, WA 98390

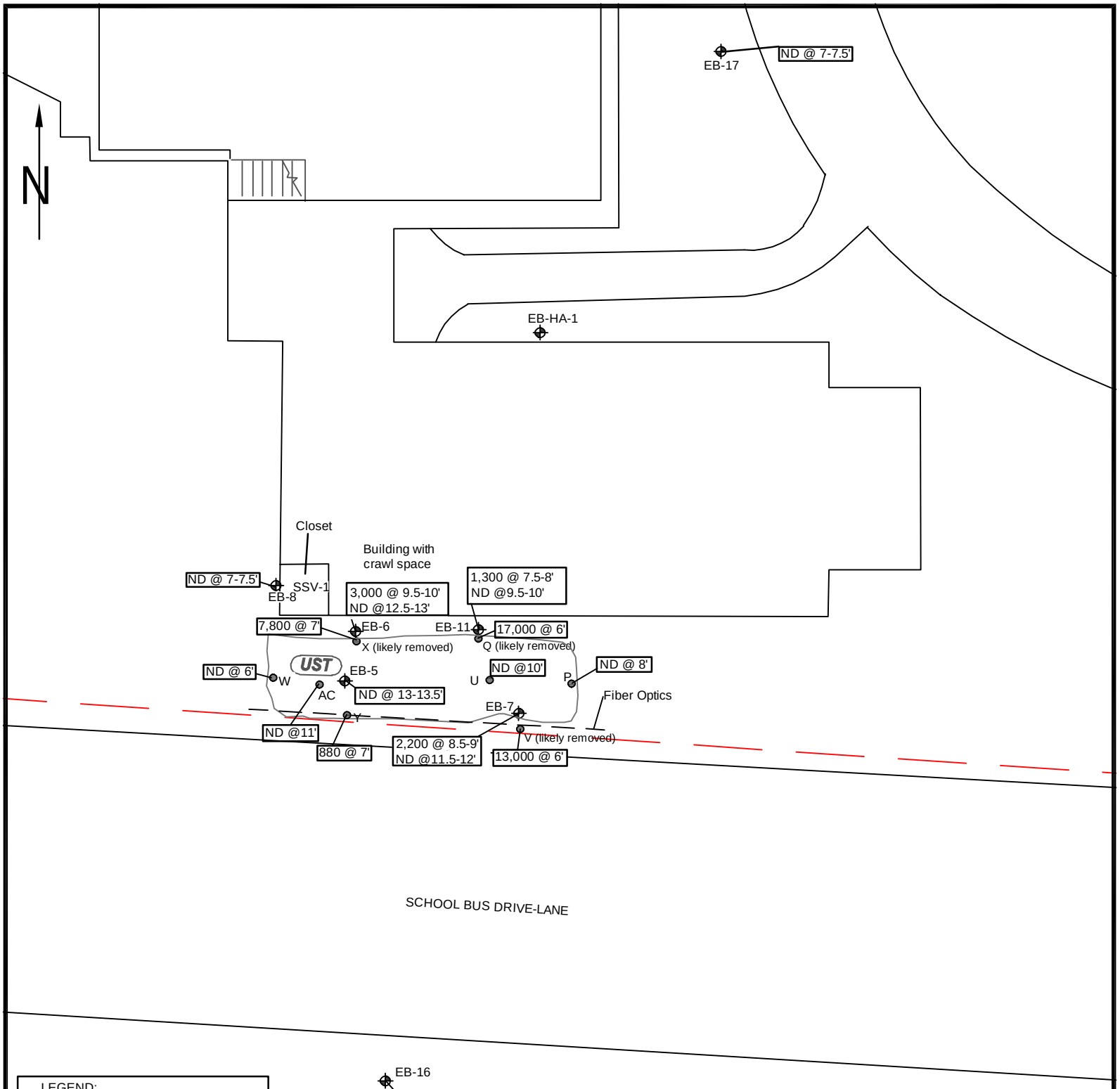
DRAWN BY:	ER
PROJ. NO:	2019-002
DATE:	MARCH 2019
APPROX SCALE:	SEE ABOVE
PRJ MGR:	ER

UST #2 EXPLORATION PLAN

FIGURE 4

GIBRALTAR SENIOR LIVING (VCP No. SW1742)

10816 - 18th AVENUE EAST
TACOMA, WASHINGTON



ATLAS GEOSCIENCES NW P.O. BOX 1009 SUMNER, WA 98390	DRAWN BY: ER PROJ. NO: 2019-002 DATE: MARCH 2019 APPROX SCALE: SEE ABOVE PRJ MGR: ER	UST #3 EXPLORATION PLAN	FIGURE 5
		GIBRALTAR SENIOR LIVING (VCP No. SW1472) 10816 - 18th AVENUE EAST TACOMA, WASHINGTON	

TABLES

Boring ID / Excavation Sample	Sample ID[2]	Sample Depth (ft)	Associated Confirmation Sample	Sample Date	Removed or In-Place	TPH[1]		VOCs
						Diesel-Range	Oil-Range	Naphthalene
UST #1								
Excavation Sample	C	12" below UST (approximatly 5-6')	NA	7/1/2011	Removed	13,000		NT
Excavation Sample	L	8'	NA	9/13/2011	In-Place	2,200		NT
Excavation Sample	AD	7'	NA	9/19/2011	In-Place	780		NT
Excavation Sample	AE	7'	NA	9/19/2011	In-Place	2,300		NT
Excavation Sample	AF	7'	NA	9/19/2011	Removed	3,400		NT
Excavation Sample	AG	7'	NA	9/19/2011	In-Place	1,300		NT
Excavation Sample	AH	7'	NA	9/19/2011	Removed	4,300		NT
Excavation Sample	AI	Under water pipe	NA	9/20/2011	In-Place	ND (<50)		NT
EB-9	EB-9	8.5-9'	C	5/14/2015	In-Place	ND (<50)	ND (<250)	NT
EB-12	EB-12	13.5-14'	AH	5/20/2015	In-Place	ND (<50)	ND (<250)	NT
EB-19	EB-19 @ 7'	7-7.5'	AH	6/28/2016	In- Place	ND (<50)	ND (<250)	ND (<0.01)
EB-20	EB-20 @ 6.5'	6.5-8'	AF	6/28/2016	In- Place	1,000	ND (<250)	0.62
	EB-20 @ 8'	8-9'	AF	6/28/2016	In- Place	1,200	ND (<250)	0.82
EB-21	EB-21-7	7'	AF	7/29/2019	In-Place	200	ND (<250)	NT
UST #2								
Excavation Sample	B	12" below UST (approximatly 5-6')	NA	7/1/2011	Removed	1,600		NT
Excavation Sample	D	12" below UST (approximatly 5-6')	NA	7/1/2011	Removed	3,900		NT
Excavation Sample	E	12" below UST (approximatly 5-6')	NA	7/1/2011	Removed	1,500		NT
Excavation Sample	F	11'	NA	9/13/2011	In-Place	ND (<50)		NT
Excavation Sample	G	8'	NA	9/13/2011	In-Place	ND (<50)		NT
Excavation Sample	H	8'	NA	9/13/2011	In-Place	ND (<50)		NT
Excavation Sample	I	6'	NA	9/13/2011	Removed	5,600		NT
Excavation Sample	J	8'	NA	9/13/2011	In-Place	830		NT
Excavation Sample	K	8'	NA	9/13/2011	In-Place	560		NT
Excavation Sample	S	1'	NA	9/15/2011	Removed	12,000		NT
Excavation Sample	T	2'	S	9/15/2011	In-Place	2,900		NT
EB-1	EB-1 7.5-8'	7.5-8'	S, T	5/14/2015	In-Place	ND (<50)	ND (<250)	NT
EB-2	EB-2 7-7.5'	7-7.5'	F	5/14/2015	In-Place	ND (<50)	ND (<250)	NT
EB-4	EB-4 11.5-12'	11.5-12'	D, E	5/14/2015	In-Place	ND (<50)	ND (<250)	NT
EB-10	EB-10	9.5-10'	S, T	5/20/2015	In-Place	ND (<50)	ND (<250)	NT
EB-15	EB-15, S-1, 0.5-1'	0.5-1'	S	10/08/2015	In-Place	ND (<25)	ND (<50)	NT
EB-18	EB-18 @ 6.5'	6.5-7.5'	I	6/28/2016	In-Place	250	ND (<50)	ND (<0.01)

Table 1: Current and Historical Soil Analytical Results

Boring ID / Excavation Sample	Sample ID[2]	Sample Depth (ft)	Associated Confirmation Sample	Sample Date	Removed or In-Place	TPH[1]		VOCs
						Diesel-Range	Oil-Range	Naphthalene
UST #3								
Excavation Sample	A	12" below UST (approximatly 5-6')	NA	7/1/2011	Removed	43,000		NT
Excavation Sample	P	8'	NA	9/14/2011	In-Place	ND (<50)		NT
Excavation Sample	Q	6'	NA	9/14/2011	Removed	17,000		NT
Excavation Sample	R	9'	NA	9/14/2011	Removed	5,400		NT
Excavation Sample	U	10'	NA	9/16/2011	In-Place	ND (<50)		NT
Excavation Sample	V	6'	NA	9/16/2011	Removed	13,000		NT
Excavation Sample	W	6'	NA	9/16/2011	In-Place	ND (<50)		NT
Excavation Sample	X	7'	NA	9/16/2011	Removed	7,800		NT
Excavation Sample	Y	7'	NA	9/16/2011	In-Place	880		NT
Excavation Sample	AC	11'	NA	9/16/2011	In-Place	ND (<50)		NT
EB-5	EB-5 13-13.5'	13-13.5'	R	5/14/2015	In-Place	ND (<50)	ND (<250)	NT
EB-6	EB-6 9.5-10'	9.5-10'	X	5/14/2015	In-Place	3,000	ND (<250)	NT
	EB-6 12.5-13'	12.5-13'	X	5/14/2015	In-Place	ND (<50)	ND (<250)	NT
EB-7	EB-7 8.5-9'	8.5-9'	V	5/14/2015	In-Place	2,200	ND (<250)	NT
	EB-7 11.5-12'	11.5-12'	V	5/14/2015	In-Place	ND (<50)	ND (<250)	NT
EB-8	EB-8 7.75'	7-7.5'	NA	5/14/2015	In-Place	ND (<50)	ND (<250)	NT
EB-11	EB-11	7.5-8'	Q	5/20/2015	In-Place	1,300	ND (<250)	NT
		9.5-10'	Q	5/20/2015	In-Place	ND (<50)	ND (<250)	NT
EB-16	EB-16, S-1, 7.5-8'	7.5-8'	NA	10/08/2015	In-Place	ND (<25)	ND (<50)	NT
	EB-16, S-2, 9.5-10'	9.5-10'	NA	10/08/2015	In-Place	ND (<25)	ND (<50)	NT
EB-17	EB-17, S-1, 7.5'	7-7.5'	NA	10/08/2015	In-Place	ND (<25)	ND (<50)	NT
Site-Specific MTCA Method B Cleanup Level						3,330	3,330	1,600*

Notes:

Results reported in milligrams per kilogram (mg/kg)

Concentrations detected above the site-specific cleanup level are shown in bold.

TPH = Total Petroleum Hydrocarbons

VOCs = Volatile organic compounds

NA = Not applicable

NT = Not tested

ND = Not detected

MTCA = Model Toxics Control Act

[1] The TPH results from 2011 were not separated into diesel- and oil-range concentrations; therefore, the total diesel extended concentration was reported.

[2] The sample depths for the samples completed by others are an approxiamte and based on the information provided in the UST report.

* Value included is the default MTCA Method B Cleanup Level, which is not site specific.

Table 2: Soil Vapor Analytical Results

Sample ID	Sample Location	Sample Date	Naphthalene
FLUX-1	Sample Period Start	7/29/2019	ND (< 2.1)
FLUX-2	Sample Period End	7/30/2019	ND (< 2.1)
MTCA Method B Sub-Slab Screening Level*			2.45

Note:
Concentrations are reported in micrograms per cubic meter ($\mu g/m^3$)
Concentrations detected above the MTCA Method B Sub-Slab Screening Level, if any, are in bold
ND = Not Detected
MTCA - Model Toxics Control Act

Table 3: Crawlspace and Ambient Air Analytical Results

Sample ID	Sample Location	Sample Date	Naphthalene
CS-10	Crawlspace	7/29/2019 through 7/30/2109	0.12[1]
Amb-10	Ambient	7/29/2019 through 7/30/2109	0.17[1]
MTCA Method B Indoor Air Cleanup Level			0.0735

Note:

Concentrations are reported in micrograms per cubic meter ($\mu g/m^3$)

Concentrations detected above the MTCA Method B Sub-Slab Screening Level, if any, are in bold

ND = Not Detected

MTCA - Model Toxics Control Act

[1] The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

APPENDIX A

EB-21 TEST PROBE LOG

Environmental Boring/Monitoring Well Log

Project Name: Gibraltar Senior Living				Sheet 1 of 1
Project No.: 2019-002	Logged By: L. Smith	Start Date: 1/29/2019	Completion Date: 1/29/2019	Boring No.: EB-21
Drilling Contractor: ESN Northwest		Drilling Method: Direct Push		Sampling Method: Liners
Ground Surface Elevation:		Hole Completion: Sealed w/Bentonite		Surface Conditions: Soil

PID Reading (ppm)	Sample ID	Recovery (%)	Sample Interval	Depth in Feet	Soil Description	Boring Completion
		90		1	Light brown, fine-grained, silty sand with gravel, dry, no odor	Backfilled with Bentonite
				2		
				3		
				4		
		90		5		
				6		
	EB-21-7			7	becomes gray with moderate odor	
				8	End of boring at 7' bgs.	
				9		
				10		
				11		
				12		
				13		
				14		
				15		
				16		
				17		
				18		
				19		
				20		

Notes: bgs - below ground surface

▼ depth to water observed at time of drilling

ATLAS GEOSCIENCES NW

APPENDIX B

Laboratory Analytical Reports and Sample Chain-of-Custody Forms

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

February 4, 2019

Liz Rachman, Project Manager
Atlas Geosciences NW
PO Box 1009
Sumner, WA 98390

Dear Ms Rachman:

Included are the results from the testing of material submitted on January 31, 2019 from the Gibraltar 2019-002, F&BI 901417 project. There are 4 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
ATG0204R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on January 31, 2019 by Friedman & Bruya, Inc. from the Atlas Geosciences NW Gibraltar 2019-002, F&BI 901417 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Atlas Geosciences NW
901417 -01	EB-21-7

All quality control requirements were acceptable.

Date of Report: 02/04/19
Date Received: 01/31/19
Project: Gibraltar 2019-002, F&BI 901417
Date Extracted: 01/31/19
Date Analyzed: 01/31/19

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 48-168)
EB-21-7 901417-01	200	<250	99
Method Blank 09-247 MB	<50	<250	93

Date of Report: 02/04/19
Date Received: 01/31/19
Project: Gibraltar 2019-002, F&BI 901417

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

Laboratory Code: 901419-01 (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	96	100	73-135	4

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	100	74-139

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.

901417

SAMPLE CHAIN OF CUSTODY

ME 01/31/19

B01

Page # 1 of 1

Report To LIZ RACHMAN

Company ATLAS

Address

City, State, ZIP SUMNER

Phone 253-237-7366 Email lrachman@atlasgeonw.com

SAMPLERS (signature)

PROJECT NAME: GIBRALTAR

PO #: 2019-002

REMARKS

INVOICE TO

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

SAMPLE DISPOSAL
- [x] 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											
EB-21-7	01	1/29/19	0955	S	1		X										
																	Samples received at 4 °C

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Annette Smith	Atlas Geosciences NW, LLC	1/31/19	8:55 AM
Received by:	Kyle Surry	FedEx SDC	1/31/19	8:55AM
Relinquished by:				
Received by:	TOM LADD	FBI	01-31-19	11:10

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

Mobile Geochemistry Inc.

18 March 2019

Ms. Liz Rachman
Atlas Geosciences Inc - WA
PO BOX 1009
Sumner, WA 98390

H&P Project: MC020519-15 Rev
Client Project: 2019-002/ Tacoma, WA

Dear Ms. Liz Rachman:

Enclosed is the analytical report for the above referenced project. The data herein applies to samples as received by H&P Mobile Geochemistry, Inc. on 05-Feb-19 which were analyzed in accordance with the attached Chain of Custody record(s).

The results for all sample analyses and required QA/QC analyses are presented in the following sections and summarized in the documents:

- Sample Summary
- Case Narrative (if applicable)
- Sample Results
- Quality Control Summary
- Notes and Definitions / Appendix
- Chain of Custody
- Sampling Logs (if applicable)

Unless otherwise noted, I certify that all analyses were performed and reviewed in compliance with our Quality Systems Manual and Standard Operating Procedures. This report shall not be reproduced, except in full, without the written approval of H&P Mobile Geochemistry, Inc.

We at H&P Mobile Geochemistry, Inc. sincerely appreciate the opportunity to provide analytical services to you on this project. If you have any questions or concerns regarding this analytical report, please contact me at your convenience at 760-804-9678.

Sincerely,

Janis La Roux
Laboratory Director

H&P Mobile Geochemistry, Inc. is certified under the California ELAP and the National Environmental Laboratory Accreditation Conference (NELAC). H&P is approved as an Environmental Testing Laboratory and Mobile Laboratory in accordance with the DoD-ELAP Program and ISO/IEC 17025:2005 programs, accreditation number 69070 for EPA Method TO-15, H&P Method TO-15, EPA Method 8260B and H&P 8260SV.

2470 Impala Drive, Carlsbad, CA 92010 & Field Office - Signal Hill, CA
P 1.800.834.9888 / 760.804.9678 F 760.804.9159 W handpmg.com

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Atlas Geosciences Inc - WA	Project: MC020519-15 Rev	
PO BOX 1009	Project Number: 2019-002/ Tacoma, WA	Reported:
Sumner, WA 98390	Project Manager: Ms. Liz Rachman	18-Mar-19 10:20

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FLUX-1	E902013-01	Vapor	29-Jan-19	05-Feb-19
FLUX-2	E902013-02	Vapor	30-Jan-19	05-Feb-19

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Atlas Geosciences Inc - WA	Project: MC020519-15 Rev	
PO BOX 1009	Project Number: 2019-002/ Tacoma, WA	Reported:
Sumner, WA 98390	Project Manager: Ms. Liz Rachman	18-Mar-19 10:20

Volatile Organic Compounds by EPA TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
FLUX-1 (E902013-01) Vapor Sampled: 29-Jan-19 Received: 05-Feb-19									
Naphthalene	ND	2.1	ug/m3	1	EB90617	05-Feb-19	06-Feb-19	EPA TO-15	
Surrogate: 1,2-Dichloroethane-d4		*106 %*	*76-134*		"	"	"	"	
Surrogate: Toluene-d8		*106 %*	*78-125*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*97.7 %*	*77-127*		"	"	"	"	
FLUX-2 (E902013-02) Vapor Sampled: 30-Jan-19 Received: 05-Feb-19									
Naphthalene	ND	2.1	ug/m3	1	EB90617	05-Feb-19	06-Feb-19	EPA TO-15	
Surrogate: 1,2-Dichloroethane-d4		*107 %*	*76-134*		"	"	"	"	
Surrogate: Toluene-d8		*108 %*	*78-125*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*95.0 %*	*77-127*		"	"	"	"	

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Atlas Geosciences Inc - WA	Project: MC020519-15 Rev	
PO BOX 1009	Project Number: 2019-002/ Tacoma, WA	Reported:
Sumner, WA 98390	Project Manager: Ms. Liz Rachman	18-Mar-19 10:20

Volatile Organic Compounds by EPA TO-15 - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EB90617 - TO-15										
Blank (EB90617-BLK1)				Prepared & Analyzed: 06-Feb-19						
Naphthalene	ND	2.1	ug/m3							
Surrogate: 1,2-Dichloroethane-d4	*45.7*		*"*	*42.9*		*107*	*76-134*			
Surrogate: Toluene-d8	*43.7*		*"*	*41.4*		*106*	*78-125*			
Surrogate: 4-Bromofluorobenzene	*70.2*		*"*	*72.9*		*96.3*	*77-127*			

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Atlas Geosciences Inc - WA	Project: MC020519-15 Rev	
PO BOX 1009	Project Number: 2019-002/ Tacoma, WA	Reported:
Sumner, WA 98390	Project Manager: Ms. Liz Rachman	18-Mar-19 10:20

Notes and Definitions

LCC	Leak Check Compound
ND	Analyte NOT DETECTED at or above the reporting limit
MDL	Method Detection Limit
%REC	Percent Recovery
RPD	Relative Percent Difference

All soil results are reported in wet weight.

Appendix

H&P Mobile Geochemistry, Inc. is approved as an Environmental Testing Laboratory and Mobile Laboratory in accordance with the DoD-ELAP Program and ISO/IEC 17025:2005 programs through PJLA, accreditation number 69070 for EPA Method TO-15, H&P Method TO-15, EPA Method 8260B and H&P 8260SV.

H&P is approved by the State of California as an Environmental Laboratory and Mobile Laboratory in conformance with the Environmental Laboratory Accreditation Program (ELAP) for the category of Volatile and Semi-Volatile Organic Chemistry of Hazardous Waste, certification numbers 2740, 2741, 2743 & 2745.

H&P is approved by the State of Louisiana Department of Environmental Quality under the National Environmental Laboratory Accreditation Conference (NELAC) certification number 04138.

The complete list of stationary and mobile laboratory certifications along with the fields of testing (FOTs) and analyte lists are available at www.handpmg.com/about/certifications.

H&P Mobile Geochemistry, Inc.

2470 Impala Drive, Carlsbad, CA 92010
& Field Office - Signal Hill, CA
W handpmg.com E info@handpmg.com

VAPOR / AIR Chain of Custody

DATE: 1/30/19
Page 1 of 1

Lab Client and Project Information

Lab Client/Consultant: Atlas Geosciences NW	Project Name / #: 2019-002
Lab Client Project Manager: Liz Rachman	Project Location: Tacoma, WA
Lab Client Address: PO Box 1009	Report E-Mail(s): lrachman@atlasgeonw.com
Lab Client City, State, Zip: Sumner WA 98390	
Phone Number: 206.715.2136	

Reporting Requirements

- [x] Standard Report ☐ Level III ☐ Level IV
- ☐ Excel EDD ☐ Other EDD:
- ☐ CA Geotracker Global ID:

Turnaround Time

- [x] **Standard** (7 days for preliminary report, 10 days for final report)
- ☐ **Rush** (specify):

Sampler Information

Sampler(s): Elizabeth Rachman
Signature:
Date: 1/30/19

Sample Receipt (Lab Use Only)

Date Rec'd: 2/5/19	Control #: 190088.01
H&P Project # MC020519-15	
Lab Work Order # E902013	
Sample Intact: [x] Yes ☐ No ☐ See Notes Below	
Receipt Gauge ID: 30005	Temp: RT
Outside Lab:	
Receipt Notes/Tracking #: 1293TT6190517166638	
Lab PM Initials: VA for SN	

Additional Instructions to Laboratory:

** Preferred VOC units (please choose one):*
☐ µg/L [x] µg/m³ ☐ ppbv ☐ ppmv

SAMPLE NAME	FIELD POINT NAME (if applicable)	DATE mm/dd/yy	TIME 24hr clock	SAMPLE TYPE Indoor Air (IA), Ambient Air (AA), Subslab (SS), Soil Vapor (SV)	CONTAINER SIZE & TYPE 400mL/1L/6L Summa, Tedlar, Tube, etc.	CONTAINER ID (###)	Lab use only: Receipt Vac	VOCs Standard Full List ☐ 8260SV ☐ TO-15	VOCs Short List / Project List ☐ 8260SV ☐ TO-15	Oxygenates ☐ 8260SV ☐ TO-15	Naphthalene ☐ 8260SV [x] TO-15	TPHv as Gas ☐ 8260SVm ☐ TO-15m	Aromatic/Aliphatic Fractions ☐ 8260SVm ☐ TO-15m	Leak Check Compound ☐ DFA ☐ IPA ☐ He	Methane by EPA 8015m	Fixed Gases by ASTM D1945 ☐ CO2 ☐ O2 ☐ N2				
FLUX-1		01/29/19	1024	SV	Summa	592	1.23				X									
~~ES-10° FP~~																				
~~Ambient-10° FP~~																				
FLUX-2		1/30/19	1426	SV	Summa	714	.42				X									

Approved/Relinquished by:	Company: Atlas Geo NW	Date: 1/31/19	Time: 1018	Received by:	Company: H&P	Date: 2/5/19	Time: 2:30pm
Approved/Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:
Approved/Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:

**Approval constitutes as authorization to proceed with analysis and acceptance of conditions on back*

H&P Mobile Geochemistry Inc.

2470 Impala Drive, Carlsbad, CA 92010
Los Angeles Field Office in Signal Hill, CA
Ph: 800-834-9888 www.handpmg.com

EPA Method TO-15 (1-Liter Summa Canister)

Analyte	*CAS #*	*1-Liter RL/LOQ Vapor (µg/m³)*	*1-Liter RL/LOQ Vapor (ppbv)*
Naphthalene	91-20-3	2.1	0.4

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

February 8, 2019

Liz Rachman, Project Manager
Atlas Geosciences NW
PO Box 1009
Sumner, WA 98390

Dear Ms Rachman:

Included are the results from the testing of material submitted on January 31, 2019 from the 2019-002, F&BI 901416 project. There are 6 pages included in this report.

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

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
ATG0208R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on January 31, 2019 by Friedman & Bruya, Inc. from the Atlas Geosciences NW 2019-002, F&BI 901416 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Atlas Geosciences NW
901416 -01	CS-10
901416 -02	Amb-10

An TO-17 internal standard failed the acceptance criteria for the samples. The data were flagged accordingly.

All other quality control requirements were acceptable.

Analysis For Volatile Compounds By Method TO-17

Client Sample ID:	CS-10	Client:	Atlas Geosciences NW
Date Received:	01/31/19	Project:	2019-002, F&BI 901416
Date Collected:	01/29/19	Lab ID:	901416-01 1/0.027
Date Analyzed:	02/05/19	Data File:	020507.D
Matrix:	Air	Instrument:	GCMS10
Units:	ug/m3	Operator:	bat

Compounds:	Concentration ug/m3
Naphthalene	0.12 J

Analysis For Volatile Compounds By Method TO-17

Client Sample ID:	Amb-10	Client:	Atlas Geosciences NW
Date Received:	01/31/19	Project:	2019-002, F&BI 901416
Date Collected:	01/29/19	Lab ID:	901416-02 1/0.025
Date Analyzed:	02/05/19	Data File:	020508.D
Matrix:	Air	Instrument:	GCMS10
Units:	ug/m3	Operator:	bat

Compounds:	Concentration ug/m3
Naphthalene	0.17 J

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-17

Client Sample ID:	Method Blank	Client:	Atlas Geosciences NW
Date Received:	Not Applicable	Project:	2019-002, F&BI 901416
Date Collected:	Not Applicable	Lab ID:	09-0207 mb
Date Analyzed:	02/05/19	Data File:	020506.D
Matrix:	Air	Instrument:	GCMS10
Units:	ug/m3	Operator:	bat

Compounds:	Concentration ug/m3
Naphthalene	<1

Date of Report: 02/08/19
Date Received: 01/31/19
Project: 2019-002, F&BI 901416

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES FOR VOLATILES BY METHOD TO-17

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Naphthalene	ng/tube	50	77	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.

901416

SAMPLE CHAIN OF CUSTODY

ME 01/31/19

CI2

Report To Atlas, Liz

Company

Address

City, State, ZIP

Phone Email lrachman@atlasgeonw.com

SAMPLERS (*signature*)

PROJECT NAME: 2019-002

PO #

REPORTING LEVEL

☒ Indoor Air ☐ Deep Soil Gas
☐ Sub Slab/Soil Gas ☐ SVE/Grab

INVOICE TO

Page # _____ of _____

TURNAROUND TIME
☒ Standard
☐ RUSH
Rush charges authorized by:

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

ANALYSIS REQUESTED

Sample Name	Lab ID	Canister ID	Flow Contr. ID	Date Sampled	Field Initial Press. (Hg)	Field Initial Time	Field Final Press. (Hg)	Field Final Time	TO-15 Full Scan	TO-15 BTEXN	TO-15 cVOCs	TO-17 naphthalene only	Notes
CS-10	01			1/29/19 - 1/30/19		1045		1415				✓	flow rate initial - 0.020 L/min flow rate final - 0.025 L/min
Amb-10	02			↓		1105		1432				✓	" " initial - 0.020 L/min final - 0.029 L/min

Samples received at 4 °C

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Annette Smith	Atlas GeoSciences NW	~~1/30/19~~ 1/31/19	8:55AM
Received by:	Kyle Surovy	FedEx SDC	1/31/19	8:55AM
Relinquished by:				
Received by:	TOM LADD	FBI	01-31-19	11:10

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

APPENDIX C

Additional Relevant Boring Logs

BORING LOG NO. EB-1

PROJECT: Gibraltar Senior Living

CLIENT: 155 Tremont Ave. LLC
Bellingham, Washington

SITE: 10816 18th Avenue East
Tacoma, Washington

LOCATION See Figure 2

GRAPHIC LOG	DEPTH	MATERIAL DESCRIPTION	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	OVA/PID (ppm)	SAMPLE NUMBER
		SILTY SAND (SM), with organic debris, dark brown, moist				0.0	
	3.5	**SILTY SAND (SP-SM)**, with gravel, light brown with orange mottling, moist				0.0	
		grades to gray	5			0.0	EB-1 4.5-5'
						0.0	
						0.0	
						0.0	
	8.0					0.0	EB-1 7.5-8'
		Boring Refusal at 8 Feet					

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Advancement Method:
Direct Push

Abandonment Method:
Borings backfilled with bentonite chips upon completion

Notes:

WATER LEVEL OBSERVATIONS

Terracon
21905 64th Ave. W, Suite 100
Mountlake Terrace, Washington

Boring Started: 5/14/2015 | Boring Completed: 5/14/2015

Drill Rig: GeoProbe | Driller: ESN

Project No.: B2157004 | Exhibit: EB-1

BORING LOG NO. EB-6

PROJECT: Gibraltar Senior Living

CLIENT: 155 Tremont Ave. LLC
Bellingham, Washington

SITE: 10816 18th Avenue East
Tacoma, Washington

LOCATION See Figure 2

DEPTH	MATERIAL DESCRIPTION	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	OVA/PID (ppm)	SAMPLE NUMBER
	SILTY SAND (SM), brown, moist				0.1	
					0.1	
4.0	grades to brown with orange mottling				0.1	
	SILT (ML), gray with orange mottling, moist				0.4	
5.0		5				
	SANDY SILT (ML), gray, moist, petroleum odor & petroleum sheen				79	EB-6 5.5-6'
7.0					141	
	SILTY SAND (SM), with gravel, gray, moist, petroleum odor & petroleum sheen				132	
					212	EB-6 9.5-10'
		10			4.7	
	grades to petroleum odor, no petroleum sheen				5.9	
	grades to brown				2.7	
					2.7	EB-6 12.5-13'
	Boring Terminated at 13 Feet					
15.0						

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Advancement Method:
Direct Push

Abandonment Method:
Borings backfilled with bentonite chips upon completion

Notes:

WATER LEVEL OBSERVATIONS

Terracon
21905 64th Ave. W, Suite 100
Mountlake Terrace, Washington

Boring Started: 5/14/2015 | Boring Completed: 5/14/2015

Drill Rig: GeoProbe | Driller: ESN

Project No.: B2157004 | Exhibit: EB-6

BORING LOG NO. EB-7

PROJECT: Gibraltar Senior Living

CLIENT: 155 Tremont Ave. LLC
Bellingham, Washington

SITE: 10816 18th Avenue East
Tacoma, Washington

LOCATION See Figure 2

Surface Elev.: 100 (Ft.)

DEPTH	MATERIAL DESCRIPTION	ELEVATION (Ft.)	OVA/PID (ppm)	SAMPLE ID
	SAND (SP), gray, moist		0	
			0	
2.5		97.5		
	SANDY SILT (ML), gray with orange mottling, moist		0	
			0	
			0	
6.0		94		
	SILTY SAND (SM), grayish-brown, moist		0	EB-7 6-6.5'
7.0		93		
	SILTY SAND (SM), with gravel, grayish-brown, moist, petroleum odor & petroleum sheen		5.9	
			155	EB-7 8.5-9'
			44	
			62	
			0.2	EB-7 11.5-12'
12.5		87.5	0.3	
13.0	**SILTY SAND (SM)**, grayish-brown, moist, petroleum odor & petroleum sheen	87	72.8	EB-7 12.5-13'
	SANDY SILT (ML), grayish-brown, moist		5.1	
15.0		85	1.1	EB-7 14.5-15'
	Boring Terminated at 15 Feet			

DEPTH (ft): 5, 10, 15

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Advancement Method:
Direct Push

Abandonment Method:
Borings backfilled with bentonite chips upon completion

Notes:

WATER LEVEL OBSERVATIONS

Terracon
21905 64th Ave W Ste 100
Mountlake Terrace, WA

Boring Started: 5/14/2015 | Boring Completed: 5/14/2015

Drill Rig: GeoProbe | Driller: ESN

Project No.: B2157004 | Exhibit: EB-7

BORING LOG NO. EB-10

PROJECT: Gibraltar Senior Living

CLIENT: 155 Tremont Ave. LLC
Bellingham, Washington

SITE: 10816 18th Avenue East
Tacoma, Washington

LOCATION See Figure 2

DEPTH	MATERIAL DESCRIPTION	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	OVA/PID (ppm)	SAMPLE NUMBER
4.5	**SILTY SAND (SM)**, dark brown, moist				0	
5.0	**SILTY SAND (SM)**, with gravel, grayish-brown, moist				0	
		5	▽			EB-10 GW
	SILTY SAND (SM), with gravel, grayish-brown, saturated, petroleum sheen			■	0.1	EB-10 7.5-8'
	slight petroleum sheen				0.1	
	grades to moist					
10.0	slight solvent odor			■	1.5	EB-10 9.5-10'
		10				
	GRAVEL (GP), with sand, grayish-brown, moist				0.1	
12.0					0.1	
	SANDY SILT (ML), with gravel, grayish-brown, moist					
					0.1	
15.0				■	0.1	EB-10 14.5-15'
	Boring Refusal at 15 Feet	15				

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Advancement Method:
Direct Push

Abandonment Method:
Borings backfilled with bentonite chips upon completion

Notes:

WATER LEVEL OBSERVATIONS

▽ *While drilling*

Terracon
21905 64th Ave. W, Suite 100
Mountlake Terrace, Washington

Boring Started: 5/20/2015 | Boring Completed: 5/20/2015

Drill Rig: GeoProbe | Driller: ESN

Project No.: B2157004 | Exhibit: EB-10

BORING LOG NO. EB-11

PROJECT: Gibraltar Senior Living

CLIENT: 155 Tremont Ave. LLC
Bellingham, Washington

SITE: 10816 18th Avenue East
Tacoma, Washington

LOCATION See Figure 2

DEPTH	MATERIAL DESCRIPTION	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	OVA/PID (ppm)	SAMPLE NUMBER
	SANDY SILT (ML), dark brown, moist				0.1	
	trace burnt woody debris				0.1	
3.0	**SILTY CLAY (CL)**, gray with orange mottling, moist				0.1	
5.0		5			0.1	
	SANDY SILT (ML), with gravel, gray, moist				0.1	
	petroleum odor & petroleum sheen				11	
				■	28.7	EB-11 7.5-8'
	grades to brown, slight petroleum odor, no sheen				1.2	
10.0		10		■	0.6	EB-11 9.5-10'
	SANDY SILT (ML), with gravel, brown, moist				0.3	
					0.3	
					0.3	
	grades to gray				0.3	
	grades to brown			■	0.2	EB-11 14.5-15'
15.0	***Boring Refusal at 15 Feet***	15				

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Advancement Method:
Direct Push

Abandonment Method:
Borings backfilled with bentonite chips upon completion

Notes:

WATER LEVEL OBSERVATIONS

Terracon
21905 64th Ave. W, Suite 100
Mountlake Terrace, Washington

Boring Started: 5/20/2015 | Boring Completed: 5/20/2015

Drill Rig: GeoProbe | Driller: ESN

Project No.: B2157004 | Exhibit: EB-11

BORING LOG NO. EB-15

PROJECT: Gibraltar Senior Living

CLIENT: 155 Tremont Ave. LLC
Bellingham, Washington

SITE: 10816 18th Avenue East
Tacoma, Washington

LOCATION See Figure 2

DEPTH	MATERIAL DESCRIPTION	ELEVATION (Ft.)	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (%)	OVA/PID (ppm)	SAMPLE ID
0.5	**SILTY SAND WITH GRAVEL (SM)**, gray, no odor							
	SAND WITH SILT AND GRAVEL (SP-SM), gray, no odor					25	3.9	EB-15, S-1, 0.5-1
1.5	no recovery							
4.0	***Boring Terminated at 4 Feet***							

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Advancement Method:
Direct Push

Abandonment Method:
Borings backfilled with bentonite chips upon completion

Notes:

WATER LEVEL OBSERVATIONS

Terracon
21905 64th Ave. W, Suite 100
Mountlake Terrace, Washington

Boring Started: 10/8/2015 | Boring Completed: 10/8/2015
Drill Rig: GeoProbe | Driller: Holocene
Project No.: B2157004 | Exhibit: EB-15

WELL LOG NO. EB-18

PROJECT: Gibraltar Senior Living

CLIENT: 155 Tremont Ave. LLC
Bellingham, Washington

SITE: 10816 18th Avenue East
Tacoma, Washington

LOCATION See Exhibit 2

DEPTH	MATERIAL DESCRIPTION	ELEVATION (Ft.)	INSTALLATION DETAILS (Well Completion)	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	OVA/PID (ppm)	SAMPLE ID
0.5	**SILTY SAND WITH GRAVEL**, tan, moist, no odor/no sheen		Solid 3/4" PVC riser				0.5	
							0.3	
							0.6	
							0.3	
			Slotted 3/4" PVC pipe					
				5				
					▽		0.6	EB-18 @ 5.5'
	grades to gray, petroleum odor						1.6	EB-18 @ 6.5'
	faint petroleum odor						20	EB-18 @ 7.'
8.0	***Boring Refusal at 8 Feet***				▽			

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Advancement Method:
Hand auger

Abandonment Method:
Borings backfilled with bentonite chips upon completion

Notes:

WATER LEVEL OBSERVATIONS

▽ *While Drilling*

▽ *In temporary groundwater well*

Terracon
21905 64th Ave W Ste 100
Mountlake Terrace, WA

Well Started: 6/28/2016 | Well Completed: 6/28/2016

Drill Rig: | Driller: Holocene

Project No.: B2157004 | Exhibit: EB-4

BORING LOG NO. EB-20

PROJECT: Gibraltar Senior Living

CLIENT: 155 Tremont Ave. LLC
Bellingham, Washington

SITE: 10816 18th Avenue East
Tacoma, Washington

LOCATION See Exhibit 2

DEPTH	MATERIAL DESCRIPTION	ELEVATION (Ft.)	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	OVA/PID (ppm)	SAMPLE ID
0.3	**FILL - GRAVEL**, gray						
	SILTY SAND WITH GRAVEL, tan, moist, no odor/sheen					1.5	
	faint petroleum odor					3.0	
4.0						3.0	
	SILTY SAND WITH GRAVEL, tan-gray, petrolem odor		5			68.7	
	strong petroleum odor					11.9	EB-20 @ 6.5'
						69.2	
9.0						5.0	EB-20 @ 8'
						19.0	
	Boring Refusal at 9 Feet						

The stratification lines represent the approximate transition between differing soil types and/or rock types; in-situ these transitions may be gradual or may occur at different depths than shown.

Advancement Method:
Direct Push

Abandonment Method:
Borings backfilled with bentonite chips upon completion

Notes:

WATER LEVEL OBSERVATIONS

Terracon
21905 64th Ave W Ste 100
Mountlake Terrace, WA

Boring Started: 6/28/2016 | Boring Completed: 6/28/2016

Drill Rig: Power Probe 9500 | Driller: Holocene

Project No.: B2157004 | Exhibit: EB-6