ENVITECHNOLOGY
www.envitechnology.com
support@envitechnology.com
Tel 425.890.3517 Fax 425.310.6600
16541 Redmond Way #358c Redmond, WA 98052

LIMITED PHASE II ENVIRONMENTAL SITE ASSESSMENT

Boulevard Grocery

5304 61st Street NE
Marysville, WA 98270

Prepared for

LGL Investment Inc.

Prepared by

Envitechnology, Inc.
16541 Redmond Way #358C
Redmond, WA 98052

May 7, 2019

Project No. 02190114-1

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www.envitechnology.com
support@envitechnology.com
Tel 425.890.3517 Fax 425.310.6600
16541 Redmond Way #358c Redmond, WA 98052

May 7, 2019

Project number 02190114-1

Mr. Jae Park
LGL Investment Inc.

Subject: Limited Phase II Environmental Site Assessment Report
Boulevard Grocery
5304 61st Street NE, Marysville, WA 98270

Envitechnology, Inc. is pleased to submit two copies of our report describing the finding of the Subsurface Investigation performed at the above property.

The purpose of this assessment is to evaluate the Recognized Environmental Conditions (RECs) for the purpose of providing sufficient information regarding the nature and extent of contamination to assist in making informed business decisions about the property; and where applicable, providing the level of knowledge necessary to satisfy the innocent purchaser defense under CERCLA.

This assessment was prepared in general accordance with the American Society of Testing and Materials (ASTM) Standard Practices for Environmental Site Assessments: Phase II ESA Process (ASTM Designation: E1903-11, 2011).

If you have any questions or require further clarification of the report findings, please contact the undersigned at your convenience. Thank you for the opportunity to be of service to you.

Yours very truly,

Jake S. Lee, Ph.D.
President
jakelee@envitechnology.com
Envitechnology, Inc.

Seung K. Chung, P.E.
Senior Environmental Consultant
steve.chung@envitechnology.com
Envitechnology, Inc.

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1. EXECUTIVE SUMMARY

The Subject Property is a fueling service station located at 5304 61st St NE, Marysville, Snohomish County, Washington. The UST system at the Subject Property consists of two 5,000-gallon USTs containing 5,000-gallon gasoline and 5,000-gallon diesel. It was reportedly built in 1978. The tanks are single-walled steel tanks. The products are connected with single-walled fiberglass piping.

A Limited Phase II ESA was conducted on January 18, 2019. Laboratory analysis indicated the presence of DRO exceeding the MTCA cleanup level in the soil and water samples.

Additional investigation was conducted on March 14, 2019. A total of eight (8) soil boring was advanced into native soils. One (1) boring (B8) was were advanced near the current fueling dispenser area. One (1) boring (B9) was advanced near the UST area. Six (6) borings were advanced downstream from the boring B7 where the contamination was confirmed. The soil borings were extended up to 20 feet bgs during soil borings.

Seven (7) soil samples were collected. Soil samples were collected near the groundwater table or where the greatest likelihood of detecting contamination occurs based on odors, soil discoloration, and on-site analysis by PID detector. Eight (8) groundwater samples (W8 through W15) were collected from boreholes (one groundwater sample per each borehole). Groundwater was encountered at a depth ranging from 13 to 15 feet bgs during the soil borings.

The surface cover at the Site consists of asphalt. Native soils beneath fill or other surface cover materials include brown, silty SAND to a depth of 2 feet bgs, underlain by a layer of brown, poorly graded SAND to a depth of 20 feet bgs.

Laboratory analysis of the soil samples indicated the presence of GRO and DRO at concentrations above the cleanup levels. GRO was identified in the soil sample B15-15 at a concentration of 130 mg/kg, which is exceeding the MTCA Method A cleanup level of 100 mg/kg. DRO was identified in the soil sample B7-15 at a concentration of 12,000 mg/kg, which is exceeding the MTCA Method A cleanup level of 2,000 mg/kg. Other petroleum hydrocarbons and associated VOCs were below the MTCA Method A cleanup levels or below the laboratory detection limits.

Laboratory analysis of the groundwater samples indicated the presence of DRO at a concentration above the cleanup levels. DRO was identified in the water sample W7 at a concentration of 18,000 μg/L, which is exceeding the MTCA Method A cleanup level of 500 μg/L. Other petroleum hydrocarbons and associated VOCs were below the MTCA Method A cleanup levels or below the laboratory detection limits.

Based on the result of this assessment, GRO and DRO exceeding the MTCA Method A cleanup levels were identified in the soil and water samples obtained from the downstream locations of the UST nest.

Envitechnology recommends UST decommissioning and site remediation.

2. INTRODUCTION

LGL Investment Inc. engaged Envitechnology, Inc. to conduct a Limited Phase II Environmental Site Assessment (ESA) on the property, Boulevard Grocery, located at 5304 61st Street NE, Marysville, WA 98270, subsequently referred to in this report as "the Subject Property".

The purpose of the Phase II ESA is to collect and evaluate environmental data at the Site to determine potential impacts to human health and the environment resulting from on-site exposure and/or off-site migration of site contaminants.

This assessment was prepared in general accordance with the American Society of Testing and Materials (ASTM) Standard Practices for Environmental Site Assessments: Phase II ESA Process (ASTM Designation: E1903-11, 2011).

2.1. SCOPE OF SERVICES

The scope of work for this assessment was in general accordance with the American Society of Testing and Materials (ASTM) Standard Practices for Environmental Site Assessments: Phase II ESA Process (ASTM Designation: E1903-11, 2011). The methodologies are described as representing good commercial and customary practice for conducting a Phase II ESA of a property for the purpose of evaluating Recognized Environmental Conditions.

The scope of work included the following tasks:

- Review of Existing Information
- Field Exploration
- Geophysical Survey
- Sampling and Chemical Analyses
- Evaluation of Results
- Discussion of Finding and Conclusions

2.2. LIMITATIONS AND EXCEPTIONS OF ASSESSMENTS

This assessment was prepared in general accordance with the American Society of Testing and Materials (ASTM) Standard Practices for Environmental Site Assessments: Phase II ESA Process (ASTM Designation: E1903-11, 2011), and contains all of the limitations inherent in these methodologies. No other warranties, expressed or implied, are made as to the professional services provided under the terms of our contract and included in this report.

No ESA can eliminate all uncertainty. Furthermore, any sample, either surface or subsurface, taken for chemical analysis may or may not be representative of a larger population. Professional judgment and interpretation are inherent in the process and uncertainty is inevitable. Additional assessment may be able to reduce the uncertainty.

Even when Phase II ESA work is executed with an appropriate site-specific standard of care, certain conditions present especially difficult detection problems. Such conditions may include, but are not limited to, complex geological settings, the fate and transport characteristics of certain hazardous substances, the distribution of existing contamination, physical limitations imposed by the location of utilities and other man-made objects, and the limitations of assessment technologies.

Phase II ESA does not generally require an exhaustive assessment of environmental conditions on a property. There is a point at which the cost of information obtained and the time required to obtain it outweigh the usefulness of the information and, in fact, may be a material detriment to the orderly completion of transactions. If hazardous substance releases are confirmed on a parcel of property, the extent of further assessment is related to the degree of uncertainty that is acceptable to the user with respect to the real estate transaction.

Measurements and sampling data only represent the site conditions at the time of data collection. Therefore, the usability of data collected as part of this Phase II ESA may have a finite lifetime depending on the application and use being made of the data. An environmental professional should evaluate whether the generated data are appropriate.

3. BACKGROUND

3.1. SITE DESCRIPTION

The Subject Property is a fueling service station located at 5304 61st St NE, Marysville, Snohomish County, Washington. According to the UST site/Tank Data Summary obtained from Department of Ecology, the UST system at the Subject Property consists of two 5,000-gallon USTs containing 5,000-gallon gasoline and 5,000-gallon diesel. It was reportedly built in 1978. The tanks are single-walled steel tanks. The products are connected with single-walled fiberglass piping.

The legal description of the Subject Property is:

Parcel # 00539700900101

PARK ADD TO MARYSVILLE BLK 009 D-01 - ALL THAT PT LOTS 1 & 2 LY S OF CO RD TGW W 10FT OF ADJ VAC ST TGW BAYVIEW ADD TO MARYSVILLE D-00 - E 40FT OF LOTS 1 & 12 BLK 1 LY S OF SUNNYSIDE BLVD LESS SLY28FT SD TR DESC BEING PTN LOT 1 SP 454(9-78) REC UND AF NO 7906080437 SEGD TO 5397-009-001-0109 TGW SEC 27 TWP 30 RGE 05 TH PTN BLK 9 VAC PARK ADD TO MAR DAF - BEG AT INT OF S LN SUNNY- SIDE BLVD &W LN OF E 40FT LOT 1 BLK 1 BAYVIEW ADD TO MAR TH S ALG SD W LN 150 FT TH E PLT N LN LOT 12 BLK 1 SD BAYVIEW ADD 120FT TH N PLT W LN VAC CLAYTON ST IN SD VAC PARK ADD TO S LN SUNNYSIDE BLVD TH W ALG SDS LN 120FT M/L TO POB- LESS TH PTN LY WHN BAYVIEW ADD TO MAR - SD TR BEING PTN LOT 1 SP 454 (9-78) REC UND AF NO 7906080437

3.2. PHYSICAL SETTING

According to the USDA Soil Survey for the area of the Subject Property, the soil in the vicinity of the Subject Property are classified as “Ragnar fine sandy loam, 0 to 8 percent slopes”. This type of soil is well drained. Depth to restrictive feature is 20 to 40 inches to strongly contrasting textural stratification. Available water storage in profile is low at 3.4 inches. Typical soil profile is a layer of ashy find sandy loam up to 2 inches, underlain by a layer of ashy sandy loam to a depth of 24 inches, and underlain by a layer of loamy sand to a depth of 60 inches.

3.3. SITE HISTORY

According to the Snohomish County assessor, the grocery store was reportedly built in 1980. According to the store owner, previous generation of gasoline service station was present at the site before the construction of current gasoline service station. However, exact configuration and built year of previous gasoline service station is not known.

A Phase II ESA was recently conducted by Envitechnology, Inc. A total of seven (7) soil borings were advanced into native soils on January 18, 2019. Four (4) borings (B1 through B4) were advanced near the current fueling dispenser area. Three (3) borings (B5 through B7) were advanced near the UST area. The soil borings were extended up to 20 feet bgs during soil borings.

Seven (7) soil samples were collected. Soil samples (B1-8 through B4-8) near the dispensers were collected at a depth of 8 feet to investigate shallow soil underneath the dispensers and pipes. Soil samples (B5-15 through B7-15) were collected near the groundwater table at a depth of 15 feet bgs. Three (3) groundwater samples (W5 through W7) were collected from boreholes (one groundwater sample per each borehole). Groundwater was encountered at a depth of 15 feet bgs during the soil borings.

Laboratory analysis of the soil samples indicated the presence of DRO at a concentration above the cleanup levels. DRO was identified in the soil sample B7-15 at a concentration of 12,000 mg/kg, which is exceeding the MTCA Method A cleanup level of 2,000 mg/kg. GRO was also identified in the soil sample B7-15 at a concentration of 69 mg/kg, which is lower than the MTCA Method A cleanup level of 100 mg/kg. Other petroleum hydrocarbons and associated VOCs were all below the laboratory detection limits.

Laboratory analysis of the groundwater samples indicated the presence of DRO at a concentration above the cleanup levels. DRO was identified in the water sample W7 at a concentration of 18,000 μg/L, which is exceeding the MTCA Method A cleanup level of 500 μg/L. Other petroleum hydrocarbons and associated VOCs were all below the laboratory detection limits.

Based on the result of this assessment, DRO exceeding the MTCA Method A cleanup level was identified in the soil and water sample obtained from the borehole B7.

Envitechnology recommends additional subsurface investigation in order to verify the lateral and vertical extent and magnitude of contamination.

4. FIELD INVESTIGATIONS

4.1. UTILITY LOCATION

Prior to conducting the next phase of the field investigation, Envitechnology requested public utility locating service to check proposed boring locations for the presence of underground utilities.

Envitechnology subcontracted with Mr. View Locating Services, Llc, Sumner, Washington to perform an additional site-specific utility clearance on the subject property prior to drilling. Underground utilities that were detected were spray painted on the surface of the subject property. All drilling locations were completed without encountering underground utilities or obstructions during Envitechnology's collection of soil samples on the Subject Property.

4.2. GEOPHYSICAL SURVEY

The geophysical survey employed the use of both electro-magnetic (EM) equipment and ground penetrating radar (GPR) to screen the Site for subsurface anomalies characters of USTs and other buried metallic objects.

A magnetometer is a measuring instrument used to measure the strength and the direction of magnetic field. Magnetometer is widely used for measuring the earth's magnetic fields and in geophysical surveys. The magnetic properties of naturally occurring materials such as magnetic ore bodies and basic igneous rocks allows them to be identified and mapped by magnetic surveys. Strong local magnetic fields or anomalies are also produced by buried steel objects. Magnetometer surveys find underground storage tanks, drums, piles and reinforced concrete foundations by detecting the magnetic anomalies they produce.

Ground Penetrating Radar (GPR) is a geophysical method that uses radar pulses to image the subsurface which is the most common method used to locate underground storage tanks (USTs). The USTs can be made of metal or any other material that has different electrical or conductive properties than the surrounding subsurface oil and rocks. The GPR can determine the boundaries of current and/or former UST excavations.

Envitechnology subcontracted with Mr. View Locating Services, Llc, Sumner, Washington to perform a geophysical survey on 3/14/2019. The survey was conducted in all areas of concern. Continuous GPR data was collected over the survey area on a five-foot grid consisting of north-south and east-west trending survey lines.

4.3. HEALTH AND SAFETY

A Site Specific Health and Safety Plan was prepared prior to field activities. Envitechnology performed air monitoring for total VOC during all field activities and also enforced the appropriate protective equipment including hard hats, safety glasses, hearing protection, steel-toed boots, and chemical resistant gloves. Air monitoring performed throughout the day indicated that the use of breathing protection equipment was not necessary.

4.4. EXPLORATION METHODS

A total of eight (8) soil borings were advanced into native soils on March 14, 2019. One (1) boring (B8) was were advanced near the current fueling dispenser area. One (1) boring (B9) was advanced near the UST area. Six (6) borings were advanced downstream from the boring B7 where the contamination was confirmed.

The soil borings were extended to a depth of 20 feet bgs. Groundwater was encountered at a depth ranging from 13 to 15 feet bgs. The location of these borings (labeled B1 through B7) are shown in Figure 3. Site Plan.

The method of boring was a direct push probe (Geoprobe Systems Model 5410) performed by Standard Environmental Probe, which involves the use of truck-mounted hydraulic hammer to push a series of 1.5-inch diameter steel rods to the sampling depth. Every four feet, the rods were removed and disposable Teflon sampling tubes were recovered. New sections of Teflon sampling tubes were used for each sampling depth.

4.5. SUBSURFACE SOIL SAMPLING METHODS

Six (6) soil samples were collected. Soil samples were collected near the groundwater table or where the greatest likelihood of detecting contamination occurs based on odors, soil discoloration, and on-site analysis by PID detector.

The undisturbed soil samples were collected continuously using core samplers attached to drive rods. Each borehole was logged according to the United Soil Classification System as described in Figure A1 in Appendix A. Borehole logs are included in Appendix A as Figure A2 through A9.

Soil samples were collected in accordance with EPA method 5035A. (US EPA, 2002). Soil samples were recovered using a hand sampler to take about 5 grams of soil from each soil core. Samples were transferred from the samplers directly to sterilized glassware with Teflon-sealed lids furnished by the project laboratory. Samples were stored in an iced chest at the site and taken to the lab in this condition to minimize excessive dissipation of volatile fraction hydrocarbons. Each container was clearly labeled as to boring number, sample number, geologist, etc. EPA recommended 5035 sampling protocol for sample collection and management including maintenance of chain-of-custody documentation was observed at each stage of the project. Each sample was collected into a two-ounce jar for dry weight determination.

4.6. GROUNDWATER SAMPLING METHODS

Eight (8) groundwater samples (W8 through W15) were collected from boreholes (one groundwater sample per each borehole). Groundwater was encountered at a depth ranging from 13 to 15 feet bgs during the soil borings.

Direct push was used to advance temporary sampler below the groundwater level. Groundwater sample was collected with a peristaltic pump utilizing low flow techniques. A temporary 5-ft well screen was installed. The intake of the pump tubing was set approximately one foot below the water. Dedicated polyethylene tubing was used. Discharge from the pump was directed into sample container. When an untreated one-liter bottle and two HCl-treated VOC glass containers were immediately filled with water, they were sealed, and then checked for air bubbles to ensure that there was no container head space. The bottle was labeled, a chain of custody form was prepared and the sample was transferred to chilled cooler and ready for transport to analytical laboratory.

4.7. FIELD SCREENING

Soil samples obtained from the core sampler were screened with visual and olfactory indications and photoionization detector (PID). Prior to use, the PID was calibrated against a 100 parts per million (ppm) isobutylene span gas in air mixture. The instrument was then zeroed against the ambient air near the work area. The PID is useful for qualitative field screening of volatile organic compounds (VOCs) and provides a basis for comparison between soil samples collected in the field. Soil samples were placed into sealable plastic bags and allowed to sit in a warm area for volatilization to occur. After approximately 5 minutes, VOCs were field measured by placing the tip of the PID into the head space above each sample in each bag. This is not a compound-specific analysis and is affected by, among other influences, climate (e.g., temperature and humidity), soil type and conditions, instrument calibration and operation, and type of VOCs present.

4.8. CHEMICAL ANALYTICAL METHODS

The chemical testing was designed to detect the contaminants suspected to be present in the samples collected. The testing plan included tests which provide quality assurance (QA) and techniques that provide quality control (QC) over the chemical analysis. A completed chain of custody record accompanied each sample shipment to the analytical laboratory. Chain of custody records provide written documentation regarding sample collection and handling, identify the persons involved in the chain of sample possession, and a written record of requested analytical parameters.

The soil and groundwater samples were analyzed for the presence of petroleum-related contaminants – gasoline range organics (GRO), diesel range organics (DRO), oil range organics (ORO), benzene, toluene, ethyl benzene, and xylene (BTEX). The location, depth and type of samples collected are summarized in Table 1.

4.9. DECONTAMINATION AND HOLE CLOSURE

Boreholes B8 through B15 were filled with bentonite granules, 2 feet of concrete mix, and patched with asphalt. Disposable sampling equipment were disposed of at each sample interval. Non-disposable sampling equipment were decontaminated by scrubbing in a solution of Alconox and potable water, followed by rinses with potable water between test holes. Soil cuttings, decontamination water, and purge water were stored in labeled drums in a secure location until they can be profiled and appropriately disposed of.

5. ANALYTICAL RESULTS

5.1. SUBSURFACE CONDITIONS

A general characterization of the on-site soil units encountered during our exploration is presented in this section. The Boring Logs in Appendix A present details of the soil encountered at each exploration location.

The soil borings were extended up to 20 feet below ground surface (ft bgs). The surface cover at the Site consists of asphalt. Native soils beneath fill or other surface cover materials include brown, silty SAND to a depth of 2 feet bgs, underlain by a layer of brown, poorly graded SAND to a depth of 20 feet bgs.

A water saturated zone indicative of groundwater was observed within soil borings B8 through B15 at a depth ranging from 13 to 15 feet bgs during our field observation.

All soil samples were screened for volatile organic compounds (VOCs) with a MiniRae 3000 Photoionization Detector (PID). VOCs were detected in the soil samples S14-15 and S15-15. The VOCs concentration was 80.8 ppm at the soil sample S14-15 obtained at a depth of 15 feet bgs from the borehole B14. About 4 inches of gray colored soil was observed at a depth of 14’10” bgs. The VOCs concentration was 30.6 ppm at the soil sample S15-15 obtained at a depth of 15 feet bgs from the borehole B15. About 0.5 inches of gray colored soil was observed at a depth of 14’10” bgs.

5.2. GEOPHYSICAL SURVEY

The geophysical survey was conducted by Mt. View Locating Services, Llc. of Sumner, Washington on March 14, 2019. The electro-magnetic and GPR survey did not identify any anomaly at the Site.

5.3. SOIL ANALYTICAL RESULTS

The soil analytical results along with the Washington State Department of Ecology (WSDOE) cleanup levels are summarized in Table 2. Laboratory documents are located in Appendix E. Laboratory Report.

Laboratory analysis of the soil samples for GRO, DRO, ORO, and BTEX indicated the presence of GRO at a concentration above the cleanup level. GRO was identified in the soil sample B15-15 at a concentration of 130 mg/kg, which is exceeding the MTCA Method A cleanup level of 100 mg/kg. DRO was also identified in the soil sample B14-15 at a concentration of 330 mg/kg, which is lower than the MTCA Method A cleanup level of 2,000 mg/kg. ORO was also identified in the soil sample B10-13 at a concentration of 210 mg/kg, which is lower than the MTCA Method A

cleanup level of 2,000 mg/kg. Other petroleum hydrocarbons and associated VOCs were all below the laboratory detection limits.

Based on the result of this assessment, GRO exceeding the MTCA Method A cleanup level was identified in the soil sample B15-15.

5.4. GROUNDWATER ANALYTICAL RESULTS

The groundwater analytical results along with the Washington State Department of Ecology (WSDOE) cleanup levels are summarized in Table 3. Laboratory documents are located in Appendix D. Laboratory Report.

Laboratory analysis of the groundwater samples for GRO, DRO, ORO, and BTEX indicated none of petroleum contaminants were identified in the water samples at concentration exceeding the MTCA Method A cleanup levels.

DRO was identified in the water sample W14 at a concentration of 470 μg/L, which is lower than the MTCA Method A cleanup level of 500 μg/L. VOCs were also identified in the water samples at concentrations lower than the MTCA Method A cleanup levels.

Based on the result of this assessment, petroleum contaminants exceeding the MTCA Method A cleanup level was not identified in the water samples.

6. PROPOSED CLEANUP STANDARDS

6.1. RECOGNIZED ENVIRONMENTAL CONDITIONS

The recognized on-site environmental concerns assessed as part of this Phase II ESA were the current and former presence of underground fuel storage.

This assessment performed on January 18, 2019 to evaluate the recognized environmental conditions were: seven (7) soil borings were advanced, seven (7) soil samples and three (3) groundwater samples were collected and analyzed for GRO, DRO, ORO, and BTEX. Laboratory analysis of the soil and groundwater samples indicated that petroleum-contaminated soil and groundwater exceeding the MTCA Method A cleanup levels were identified at the Subject Property.

The assessment performed on March 14, 2019 to evaluate the recognized environmental conditions were: eight (8) soil borings were advanced, Six (6) soil samples and eight (8) groundwater samples were collected and analyzed for GRO, DRO, ORO, and BTEX. Laboratory analysis of the soil and groundwater samples indicated that petroleum-contaminated soil exceeding the MTCA Method A cleanup levels were identified at the Subject Property.

The GPR and electro-magnetic geophysical survey did not indicate what appeared to be a fueling UST.

6.2. CONCEPTUAL SITE MODEL

The conceptual site model takes into consideration the potential distribution of contaminants with respect to the properties, behaviors and fate and transport characteristics of the contaminant in a setting such as that being assessed. The sampling plan was designed to provide for the collection of potentially contaminated environmental media, if they occur, at locations and depths where the higher concentrations are likely to occur.

The source of COCs (Chemicals of Concern) is the operations of the property as a gasoline service station. The historical use of USTs would likely have contained petroleum fuel. Based on the age of the service station, typical operation procedures at that time likely resulted in spills, drips, and/or leaks of petroleum compounds.

Possible fate and transport mechanisms are the following: infiltration of rain water and surface runoff; percolation of rain water and surface runoff through the soil; leaching of soil impacts into groundwater; groundwater recharging to surface water; movement of shallow groundwater along underground utility corridors and septic system; and flow of soil vapors.

Possible exposure pathways and the related potential receptors associated with soil impacted by COCs include the following:

- Incidental ingestion and/or dermal contact with surface soils by construction/utility workers, on-Site employees and visitors, and ecological receptors;
- Incidental ingestion and/or dermal contact with soils above 12 feet bgs by construction/utility workers, on-Site employees and visitors, and ecological receptors;
- Ingestion of groundwater by construction/utility workers, on-Site employees and visitors, and ecological receptors;
- Dermal contact with groundwater by construction/utility workers, on-Site employees and visitors, and ecological receptors; and
- Inhalation of vapors by construction/utility workers, on-Site employees and visitors, and ecological receptors.

6.3. AFFECTED MEDIA

Based on the results of this assessment, impacted soil and groundwater above applicable or relevant and appropriate requirements ("ARARs") were identified.

The data gathered during this assessment is sufficient to determine whether products were released or disposed at the property. With respect to the recognized environmental conditions assessed, petroleum products have been released or disposed on the property.

6.4. PROPOSED CLEANUP LEVELS

MTCA (Model Toxics Control Act) requires that cleanup actions meet cleanup standards. These standards are comprised of both cleanup levels and points of compliance. A cleanup level is the concentration of hazardous substance in soil, water, air, or sediment that is determined to be protective of human health and the environment under specified exposure conditions. A point of compliance (POC) defines the point or points on a site where cleanup levels must be met. MTCA provides three options for establishing cleanup levels, as described below:

- Method A: Applicable Laws and Tables. Method A is designed for cleanups that are relatively straightforward or involve only a few hazardous substances. This method consists of tabularized cleanup levels for the most common hazardous substances found in soil and groundwater, including those constituents identified at this site
- Method B: Universal Method. MTCA B cleanup levels are established using applicable state and federal laws and the risk equations and other requirements specified for each medium. Method B is divided into two tiers – standard and modified. Standard Method B uses generic default assumptions to calculate cleanup levels. Modified Method B provides for the use of chemical-specific or site-specific information to change selected default assumptions. For both standard and modified Method B, the human health risk level for

individual carcinogens must not exceed one-in-a-million. If more than one type of hazardous substance is present, the total risk level at the site may not exceed 1 in 100,000. Levels for non-carcinogens cannot exceed a hazard quotient of 1. In addition to accounting for human health impacts, the Method B cleanup levels must account for potential terrestrial or aquatic ecological impacts, if present at the site.

- Method C: Conditional Method. Method C is similar to Method B in that it is divided into two tiers – standard and modified. The main differences are: (1) cleanup levels are based on less stringent exposure assumptions and (2) the lifetime cancer risk is set at 1 in 100,000 for both individual substances and for the total cancer risk caused by all substances at a site.

The MTCA cleanup levels proposed for the Site are MTCA Method A cleanup levels for soil and groundwater. MTCA Method A cleanup levels are appropriate for the Site because it was a typical retail fueling station without a complex mix of COCs. (See Appendix C. Method A Cleanup Levels).

6.5. OTHER CONCERNS

There were no other concerns identified during this Phase II ESA.

6.6. CONCLUSIONS

Laboratory analysis of the soil samples indicated the presence of GRO and DRO at concentrations above the cleanup levels. GRO was identified in the soil sample B15-15 at a concentration of 130 mg/kg, which is exceeding the MTCA Method A cleanup level of 100 mg/kg. DRO was identified in the soil sample B7-15 at a concentration of 12,000 mg/kg, which is exceeding the MTCA Method A cleanup level of 2,000 mg/kg. Other petroleum hydrocarbons and associated VOCs were below the MTCA Method A cleanup levels or below the laboratory detection limits.

Laboratory analysis of the groundwater samples indicated the presence of DRO at a concentration above the cleanup levels. DRO was identified in the water sample W7 at a concentration of 18,000 μg/L, which is exceeding the MTCA Method A cleanup level of 500 μg/L. Other petroleum hydrocarbons and associated VOCs were below the MTCA Method A cleanup levels or below the laboratory detection limits.

Based on the result of this assessment, GRO and DRO exceeding the MTCA Method A cleanup levels were identified in the soil and water samples obtained from the downstream locations of UST nest.

7. RECOMMENDATIONS

Based on the results of this assessment the following is recommended:

1. Envitechnology recommends UST decommissioning and site remediation.

2. To achieve lawful compliance with Chapter 173-340-300 (site discovery and reporting), Envitech recommends that copies of this report along with any future reports regarding the environmental conditions thus far encountered be forwarded to the Washington State Department of Ecology.

REFERENCES

ASTM International. (2004). ASTM D5730-04 Standard Guide for Site Characterization for Environmental Purposes With Emphasis on Soil, Rock, the Vadose Zone and Ground Water. ASTM International.

ASTM International. (2001). ASTM Standards Related to the Subsurface Investigation Process, Second Edition. ASTM International.

ASTM International. (2011). Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process.

Department of Ecology. State of Washington (2001). Model Toxics Control Act Cleanup Levels & Risk Calculations (CLARC) Version 3.1. Washington State Department of Ecology, Toxics Cleanup Program.

Envitechnology, Inc. (2019). Limited Phase II Environmental Site Assessment. Boulevard Grocery. 5304 61st Street NE, Marysville, WA 98270.

Washington State Department of Ecology. (2001). Chapter 173-340 WAC, Model Toxics Control Act Cleanup Regulation. Washington State Department of Ecology, Toxics Cleanup Program.

TABLES

Table 1. Location, Depth and Type of Samples Collected

Sample ID	Sample type	Depth (ft)	Location	Compounds	Analysis method	Date collected
B1-8	Soil	8	B1	GRO, BTEX, DRO, ORO	NWTPH-Gx/BTEX, NWTPH-Dx	1/18/2019 10:00
B2-8	Soil	8	B2	GRO, BTEX, DRO, ORO	NWTPH-Gx/BTEX, NWTPH-Dx	1/18/2019 10:20
B3-8	Soil	8	B3	GRO, BTEX, DRO, ORO	NWTPH-Gx/BTEX, NWTPH-Dx	1/18/2019 10:40
B4-8	Soil	8	B4	GRO, BTEX, DRO, ORO	NWTPH-Gx/BTEX, NWTPH-Dx	1/18/2019 10:55
B5-15	Soil	15	B5	GRO, BTEX, DRO, ORO	NWTPH-Gx/BTEX, NWTPH-Dx	1/18/2019 11:15
B6-15	Soil	15	B6	GRO, BTEX, DRO, ORO	NWTPH-Gx/BTEX, NWTPH-Dx	1/18/2019 12:00
B7-15	Soil	15	B7	GRO, BTEX, DRO, ORO	NWTPH-Gx/BTEX, NWTPH-Dx	1/18/2019 12:50
B10-13	Soil	13	B7	GRO, BTEX, DRO, ORO	NWTPH-Gx/BTEX, NWTPH-Dx	3/14/2019 10:00
B11-14	Soil	14	B7	GRO, BTEX, DRO, ORO	NWTPH-Gx/BTEX, NWTPH-Dx	3/14/2019 10:15
B12-13	Soil	13	B7	GRO, BTEX, DRO, ORO	NWTPH-Gx/BTEX, NWTPH-Dx	3/14/2019 11:00
B13-13	Soil	13	B7	GRO, BTEX, DRO, ORO	NWTPH-Gx/BTEX, NWTPH-Dx	3/14/2019 12:20
B14-15	Soil	15	B7	GRO, BTEX, DRO, ORO	NWTPH-Gx/BTEX, NWTPH-Dx	3/14/2019 12:50
B15-15	Soil	15	B7	GRO, BTEX, DRO, ORO	NWTPH-Gx/BTEX, NWTPH-Dx	3/14/2019 13:50
W5	Water	15	B5	GRO, BTEX, DRO, ORO	NWTPH-Gx/BTEX, NWTPH-Dx	1/18/2019 11:15
W6	Water	15	B6	GRO, BTEX, DRO, ORO	NWTPH-Gx/BTEX, NWTPH-Dx	1/18/2019 12:10
W7	Water	15	B7	GRO, BTEX, DRO, ORO	NWTPH-Gx/BTEX, NWTPH-Dx	1/18/2019 13:00
W8	Water	15	B8	GRO, BTEX, DRO, ORO	NWTPH-Gx/BTEX, NWTPH-Dx	3/14/2019 07:50
W9	Water	15	B9	GRO, BTEX, DRO, ORO	NWTPH-Gx/BTEX, NWTPH-Dx	3/14/2019 08:50
W10	Water	13	B10	GRO, BTEX, DRO, ORO	NWTPH-Gx/BTEX, NWTPH-Dx	3/14/2019 09:40
W11	Water	14	B11	GRO, BTEX, DRO, ORO	NWTPH-Gx/BTEX, NWTPH-Dx	3/14/2019 10:20
W12	Water	13	B12	GRO, BTEX, DRO, ORO	NWTPH-Gx/BTEX, NWTPH-Dx	3/14/2019 11:00
W13	Water	13	B13	GRO, BTEX, DRO, ORO	NWTPH-Gx/BTEX, NWTPH-Dx	3/14/2019 12:30
W14	Water	14	B14	GRO, BTEX, DRO, ORO	NWTPH-Gx/BTEX, NWTPH-Dx	3/14/2019 13:00
W15	Water	14	B15	GRO, BTEX, DRO, ORO	NWTPH-Gx/BTEX, NWTPH-Dx	3/14/2019 13:50

Notes

GRO – gasoline range organics

DRO – diesel range organics

ORO – oil range organics

BTEX – benzene, toluene, ethyl benzene, and xylene

Table 2. Summary of Soil Analytical Results (mg/kg)

	BTEX				Total petroleum hydrocarbons		
	Benzene	Toluene	Ethyl Benzene	Xylene	GRO	DRO	ORO
B1-8	<0.02	<0.05	<0.05	<0.1	<10	<50	<100
B2-8	<0.02	<0.05	<0.05	<0.1	<10	<50	78
B3-8	<0.02	<0.05	<0.05	<0.1	<10	<50	<100
B4-8	<0.02	<0.05	<0.05	<0.1	<10	<50	<100
B5-15	<0.02	<0.05	<0.05	<0.1	<10	<50	<100
B6-15	<0.02	<0.05	<0.05	<0.1	<10	<50	<100
B7-15	<0.02	<0.05	<0.05	<0.1	69	**12,000**	<100
B10-13	<0.02	<0.05	<0.05	<0.1	<10	<50	210
B11-14	<0.02	<0.05	<0.05	<0.1	<10	<50	<100
B12-13	<0.02	<0.05	<0.05	<0.1	<10	<50	<100
B13-13	<0.02	<0.05	<0.05	<0.1	<10	<50	<100
B14-15	<0.02	<0.05	<0.05	<0.1	<10	330	<100
B15-15	<0.02	<0.05	<0.05	<0.1	**130**	<50	<100
Std	0.03	7	6	9	30/ 100	2,000	2,000

Notes

Std: Method A soil cleanup levels for unrestricted land uses (Table 740-1)

GRO – gasoline range organics

DRO – diesel range organics

ORO – oil range organics

BTEX – benzene, toluene, ethyl benzene, and xylene

Numbers in bold red indicate concentrations above the cleanup levels

Table 3. Summary of Groundwater Analytical Results (µg/L)

	BTEX				Total petroleum hydrocarbons		
	Benzene	Toluene	Ethyl Benzene	Xylene	GRO	DRO	ORO
W5	<1.0	<1.0	<1.0	<2.0	<250	<200	<400
W6	<1.0	<1.0	<1.0	<2.0	<250	<200	<400
W7	<1.0	<1.0	<1.0	<2.0	820	**18,000**	<400
W8	<1.0	<1.0	6.5	<2.0	<250	<200	<400
W9	<1.0	<1.0	1.9	<2.0	<250	<200	<400
W10	<1.0	<1.0	<1.0	3.9	<250	<200	<400
W11	<1.0	<1.0	<1.0	<2.0	<250	<200	<400
W12	<1.0	<1.0	<1.0	<2.0	<250	<200	<400
W13	<1.0	<1.0	<1.0	1.7	<250	<200	<400
W14	<1.0	<1.0	2.5	13.4	<250	470	<400
W15	<1.0	<1.0	<1.0	<2.0	<250	<200	<400
Std	5	1,000	700	1,000	800/ 1,000	500	500

Notes

Std: Method A ground water cleanup levels (Table 720-1)
GRO – gasoline range organics
DRO – diesel range organics
ORO – oil range organics
BTEX – benzene, toluene, ethyl benzene, and xylene
Numbers in bold red indicate concentrations above the cleanup levels.

FIGURES

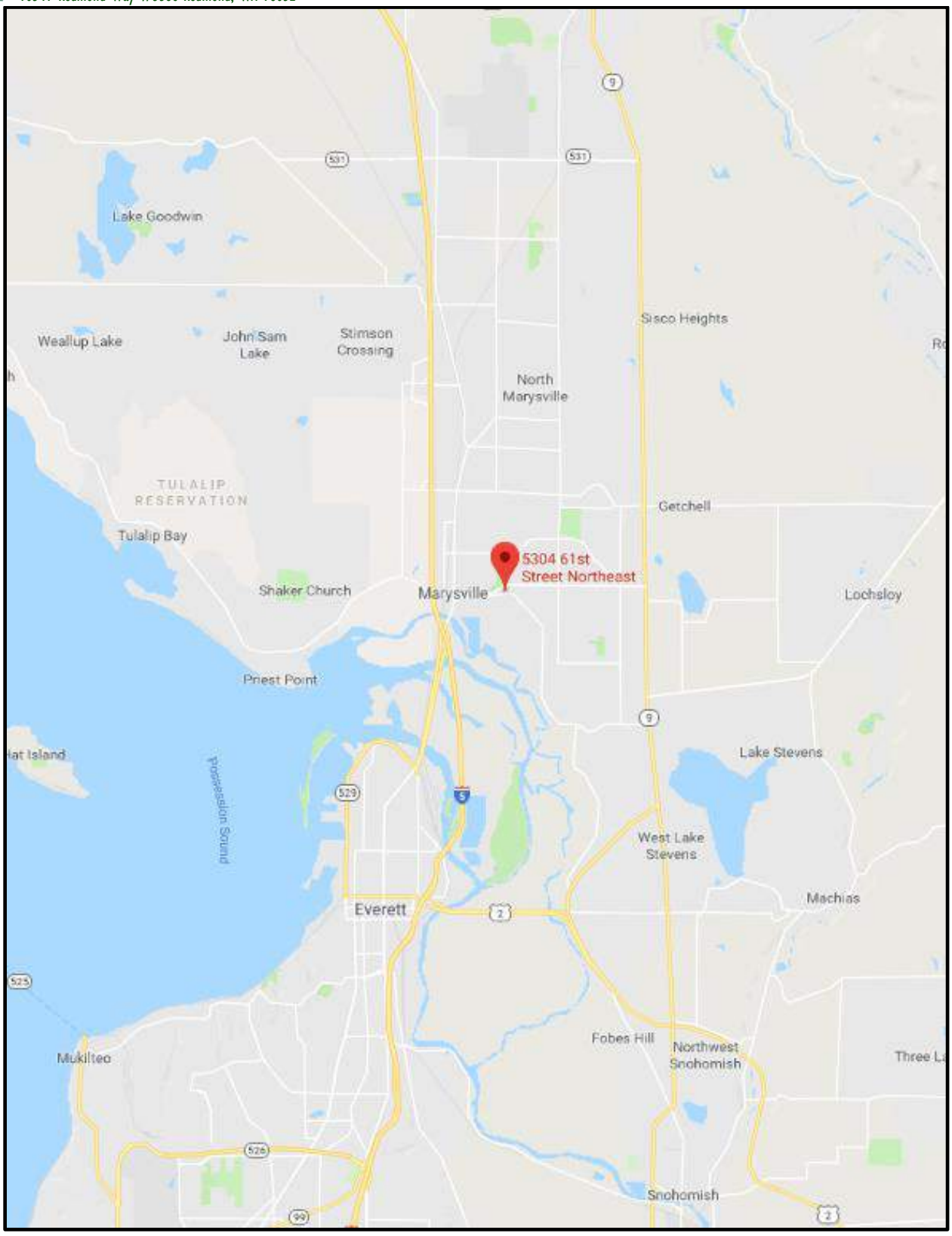

Figure 1. Site Location Map

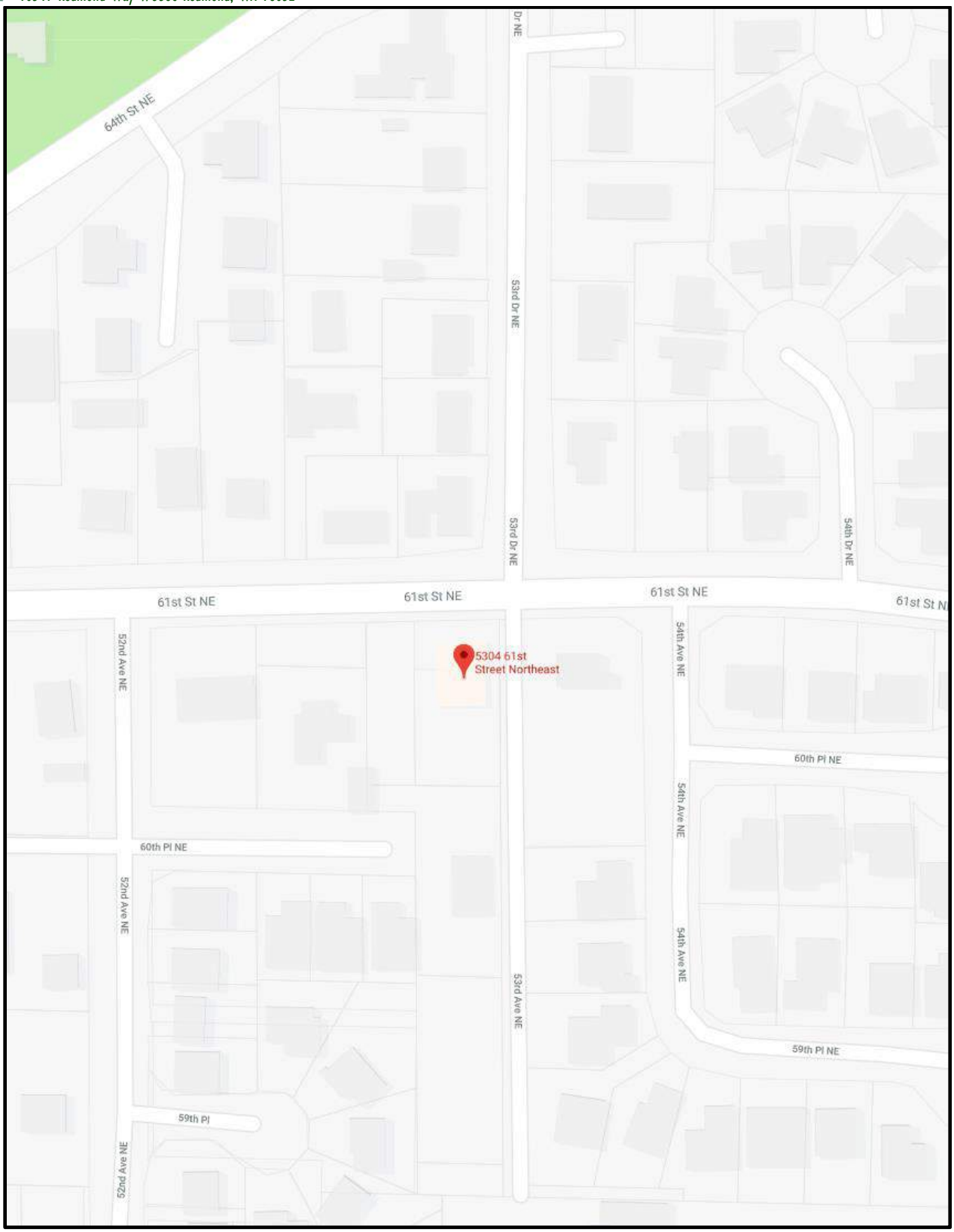

Figure 2. Site Vicinity Map

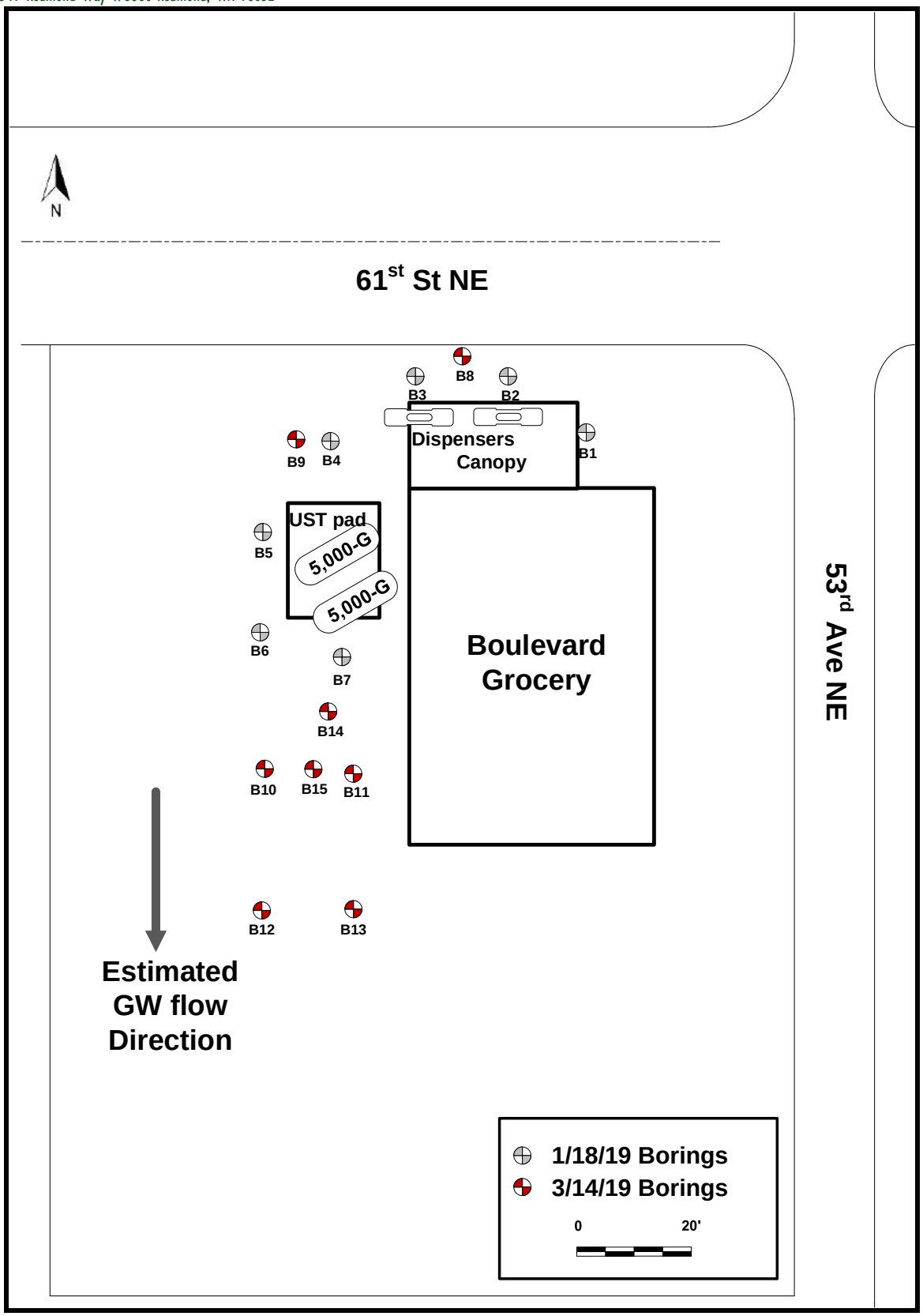

Figure 2. Site Plan

APPENDICES

APPENDIX A. BORING LOGS

Unified Soil Classification System Chart

Major Divisions			Graph	USCS	Typical Description
Coarse Grained Soils More Than 50% Retained On No. 200 Sieve	**Gravel** More Than 50% of Coarse Fraction Retained On No. 4 Sieve	Clean Gravels		GW	Well-graded Gravels, Gravel-Sand Mixtures
				GP	Poorly-Graded Gravels, Gravel-Sand Mixtures
		Gravels With Fines		GM	Silty Gravels, Gravel-Sand-Silt Mixtures
				GC	Clayey Gravels, Gravel-Sand-Clay Mixtures
	Sand More Than 50% of Coarse Fraction Passing No. 4 Sieve	Clean Sands		SW	Well-graded Sands, Gravelly Sands
				SP	Poorly-Graded Sands, Gravelly Sands
		Sands With Fines		SM	Silty Sands, Sand-Silt Mixtures
				SC	Clayey Sands, Clay Mixtures
Fine Grained Soils More Than 50% Passing The No. 200 Sieve	**Silts & Clays**	Liquid Limit Less Than 50		ML	Inorganic Silts, rock Flour, Clayey Silts With Low Plasticity
				CL	Inorganic Clays of Low To Medium Plasticity
				OL	Organic Silts and Organic Silty Clays of Low Plasticity
	Silts & Clays	Liquid Limit Greater Than 50		MH	Inorganic Silts of Moderate Plasticity
				CH	Inorganic Clays of High Plasticity
				OH	Organic Clays And Silts of Medium to High Plasticity
Highly Organic Soils				PT	Peat, Humus, Soils with Predominantly Organic Content

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support@envitechnology.com
Tel 425.890.3517 Fax 425.310.6600
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The Unified Soil Classification System (USCS)

3/14/2019 | **Figure A1**

Log of Borehole – B8

Project : Boulevard Grocery — Approximate Elevation: 32.8 ft. above sea level

Location: 5304 61st St NE, Marysville, WA 98270 — Drilling Method: Geoprobe (model 5410)

Driller: Standard Environmental Probe — Logged by: Jake Lee

Depth (ft)	Well	Water Table	Symbol	USCS	Soil Sample	Water sample	PID Reading	Soil Description
	NO WELL CONSTRUCTED							Top asphalt cover
				SM				Brown Silty SAND
							0.0	
5								Brown, poorly grade SAND
				SP			0.0	
10							0.0	
15		▼				W8		Groundwater encountered at 15 feet bgs
							0.0	Groundwater sample W8 @ 7:50
20							0.0	
								Boring termination at 20 feet bgs
25								

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Boulevard Grocery

3/14/2019 — **Figure A2**

Log of Borehole – B9

Project : Boulevard Grocery	Approximate Elevation: 32.8 ft. above sea level
Location: 5304 61st St NE, Marysville, WA 98270	Drilling Method: Geoprobe (model 5410)
Driller: Standard Environmental Probe	Logged by: Jake Lee

Depth (ft)	Well	Water Table	Symbol	USCS	Soil Sample	Water sample	PID Reading	Soil Description
	NO WELL CONSTRUCTED							Top asphalt cover
				SM				Brown Silty SAND
							0.0	
5								Brown, poorly grade SAND
				SP			0.0	
10								
							0.0	
15		▼				W9		Groundwater encountered at 15 feet bgs
							0.0	Groundwater sample W8 @8:50
20							0.0	
								Boring termination at 20 feet bgs
25								

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Boulevard Grocery

3/14/2019 | **Figure A3**

Log of Borehole – B10

Project : Boulevard Grocery | Approximate Elevation: 32.8 ft. above sea level

Location: 5304 61st St NE, Marysville, WA 98270 | Drilling Method: Geoprobe (model 5410)

Driller: Standard Environmental Probe | Logged by: Jake Lee

Depth (ft)	Well	Water Table	Symbol	USCS	Soil Sample	Water sample	PID Reading	Soil Description
	NO WELL CONSTRUCTED							Top asphalt cover
				SM				Brown Silty SAND
							0.0	
5								Brown, poorly grade SAND
				SP			0.0	
10								
							0.0	
		▼			S10-13	W10		Groundwater encountered at 13 feet bgs
15								Groundwater sample W10@ 9:40, Soil sample S10-13@10:00
							0.0	
20							0.0	
								Boring termination at 20 feet bgs
25								

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Boulevard Grocery

3/14/2019 | **Figure A4**

Log of Borehole – B11

Project : Boulevard Grocery	Approximate Elevation: 32.8 ft. above sea level
Location: 5304 61st St NE, Marysville, WA 98270	Drilling Method: Geoprobe (model 5410)
Driller: Standard Environmental Probe	Logged by: Jake Lee

Depth (ft)	Well	Water Table	Symbol	USCS	Soil Sample	Water sample	PID Reading	Soil Description
	NO WELL CONSTRUCTED							Top asphalt cover
				SM				Brown Silty SAND
							0.0	
5								Brown, poorly grade SAND
				SP			0.0	
10								
							0.0	
		▼			S11-14	W11		Groundwater encountered at 14 feet bgs
15		—						Groundwater sample W11@ 10:20, Soil sample S11-14@10:15
							0.0	
20							0.0	
								Boring termination at 20 feet bgs
25								

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Boulevard Grocery

3/14/2019 | **Figure A5**

Log of Borehole – B12

Project : Boulevard Grocery	Approximate Elevation: 32.8 ft. above sea level
Location: 5304 61st St NE, Marysville, WA 98270	Drilling Method: Geoprobe (model 5410)
Driller: Standard Environmental Probe	Logged by: Jake Lee

Depth (ft)	Well	Water Table	Symbol	USCS	Soil Sample	Water sample	PID Reading	Soil Description
	NO WELL CONSTRUCTED							Top asphalt cover
				SM				Brown Silty SAND
							0.0	
5								Brown, poorly grade SAND
				SP			0.0	
10								
							0.0	
		▼			S12-13	W12		Groundwater encountered at 13 feet bgs
								Groundwater sample W12@ 11:10, Soil sample S12-13@11:00
15								
							0.0	
20							0.0	
								Boring termination at 20 feet bgs
25								

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Boulevard Grocery

3/14/2019 | **Figure A6**

Log of Borehole – B13

Project : Boulevard Grocery	Approximate Elevation: 32.8 ft. above sea level
Location: 5304 61st St NE, Marysville, WA 98270	Drilling Method: Geoprobe (model 5410)
Driller: Standard Environmental Probe	Logged by: Jake Lee

Depth (ft)	Well	Water Table	Symbol	USCS	Soil Sample	Water sample	PID Reading	Soil Description
	NO WELL CONSTRUCTED							Top asphalt cover
				SM				Brown Silty SAND
							0.0	
5								Brown, poorly grade SAND
				SP			0.0	
10								
							0.0	
		▼			S13-13	W13		Groundwater encountered at 13 feet bgs
15								Groundwater sample W13@ 12:30, Soil sample S13-13@12:20
							0.0	
20							0.0	
								Boring termination at 20 feet bgs
25								

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Boulevard Grocery

3/14/2019 | **Figure A7**

Log of Borehole – B14

Project : Boulevard Grocery	Approximate Elevation: 32.8 ft. above sea level
Location: 5304 61st St NE, Marysville, WA 98270	Drilling Method: Geoprobe (model 5410)
Driller: Standard Environmental Probe	Logged by: Jake Lee

Depth (ft)	Well	Water Table	Symbol	USCS	Soil Sample	Water sample	PID Reading	Soil Description
	NO WELL CONSTRUCTED							Top asphalt cover
				SM				Brown Silty SAND
							0.0	
5								Brown, poorly grade SAND
				SP			0.0	
10								
							0.0	
		▼				W14		Groundwater encountered at 14 feet bgs, Groundwater sample W14 @13:00
15		—			S14-15		**80.8**	Soil sample S14-15@13:00
								4 inches of gray color at 14'10"
20							0.0	
								Boring termination at 20 feet bgs
25								

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Boulevard Grocery

3/14/2019 | **Figure A8**

Log of Borehole – B15

Project : Boulevard Grocery	Approximate Elevation: 32.8 ft. above sea level
Location: 5304 61st St NE, Marysville, WA 98270	Drilling Method: Geoprobe (model 5410)
Driller: Standard Environmental Probe	Logged by: Jake Lee

Depth (ft)	Well	Water Table	Symbol	USCS	Soil Sample	Water sample	PID Reading	Soil Description
	NO WELL CONSTRUCTED							Top asphalt cover
				SM				Brown Silty SAND
							0.0	
5								Brown, poorly grade SAND
				SP				
							0.0	
10								
							0.0	
		▼				W15		Groundwater encountered at 14 feet bgs, Groundwater sample W15@ 13:50
15		—			S15-15		**30.6**	Soil sample S15-15@13:50
								0.5 inches of gray color at 14'10"
20							0.0	
								Boring termination at 20 feet bgs
25								

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Boulevard Grocery

3/14/2019 | **Figure A9**

APPENDIX B. SITE PHOTOGRAPHS

B

Photo 1. A view of the Subject Property looking southeast.

Photo 2. A view of the canopy and pump island looking east.

Photo 3. A view of the convenience store looking east.

Photo 4. A view of the UST pad looking south.

Photo 5. A view of the utility marks.

Photo 6. A view of the Ground Penetrating Radar (GPR) Survey.

Photo 7. A view of the soil boring – B8.

Photo 8. A view of the water sampling at B8 – W8.

Photo 9. A view of the soil boring – B9.

Photo 10. A view of the water sampling at B9 – W9.

Photo 11. A view of the soil boring – B10.

Photo 12. A view of the water sampling at B10 – W10.

Photo 13. A view of the soil boring – B11.

Photo 14. A view of the water sampling at B11 – W11.

Photo 15. A view of the soil boring – B12.

Photo 16. A view of the water sampling at B12 – W12.

Photo 17. A view of the soil boring – B13.

Photo 18. A view of the water sampling at B13 – W13.

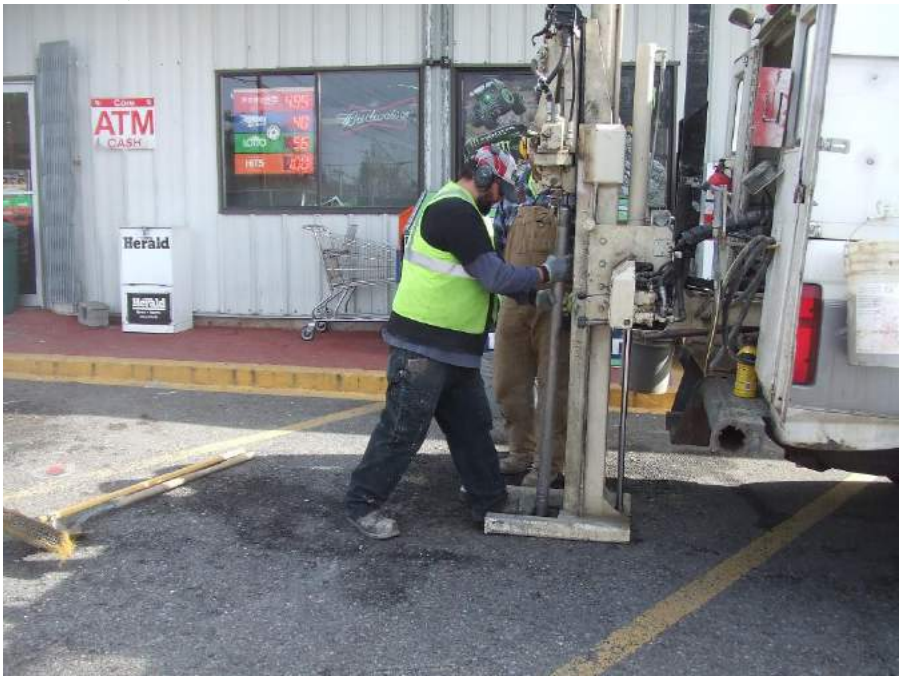

Photo 19. A view of the soil boring – B14.

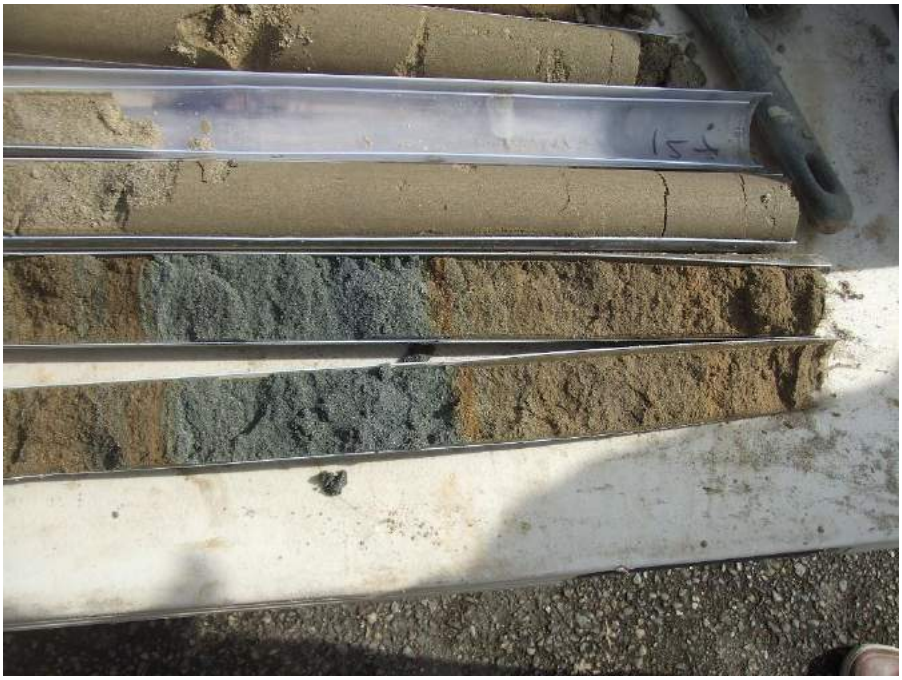

Photo 20. A view of the gray colored soil at 14'11" of the soil boring B14.

Photo 21. A view of the water sampling at B14 – W14.

Photo 22. A view of the soil boring – B15.

Photo 23. A view of the gray colored soil at 14'11" of the soil boring B15

Photo 24. A view of the water sampling at B15 – W15.

APPENDIX C. METHOD A CLEANUP LEVELS

C

WAC 173-340-900 Tables.

Table 720-1
Method A Cleanup Levels for Ground Water.[a]

Hazardous Substance	CAS Number	Cleanup Level
Arsenic	7440-38-2	5 ug/liter[b]
Benzene	71-43-2	5 ug/liter[c]
Benzo(a)pyrene	50-32-8	0.1 ug/liter[d]
Cadmium	7440-43-9	5 ug/liter[e]
Chromium (Total)	7440-47-3	50 ug/liter[f]
DDT	50-29-3	0.3 ug/liter[g]
1,2 Dichloroethane (EDC)	107-06-2	5 ug/liter[h]
Ethylbenzene	100-41-4	700 ug/liter[i]
Ethylene dibromide (EDB)	106-93-4	0.01 ug/liter[j]
Gross Alpha Particle Activity		15 pCi/liter[k]
Gross Beta Particle Activity		4 mrem/yr[l]
Lead	7439-92-1	15 ug/liter[m]
Lindane	58-89-9	0.2 ug/liter[n]
Methylene chloride	75-09-2	5 ug/liter[o]
Mercury	7439-97-6	2 ug/liter[p]
MTBE	1634-04-4	20 ug/liter[q]
Naphthalenes	91-20-3	160 ug/liter[r]
PAHs (carcinogenic)		See benzo(a)pyrene[d]
PCB mixtures		0.1 ug/liter[s]
Radium 226 and 228		5 pCi/liter[t]
Radium 226		3 pCi/liter[u]
Tetrachloroethylene	127-18-4	5 ug/liter[v]
Toluene	108-88-3	1,000 ug/liter[w]
Total Petroleum Hydrocarbons[x]		
[Note: Must also test for and meet cleanup levels for other petroleum components--see footnotes!]		
Gasoline Range Organics		
Benzene present in ground water		800 ug/liter
No detectable benzene in ground water		1,000 ug/liter
Diesel Range Organics		500 ug/liter
Heavy Oils		500 ug/liter
Mineral Oil		500 ug/liter
1,1,1 Trichloroethane	71-55-6	200 ug/liter[y]
Trichloroethylene	79-01-6	5 ug/liter[z]
Vinyl chloride	75-01-4	0.2 ug/liter[aa]
Xylenes	1330-20-7	1,000 ug/liter[bb]

Footnotes:

a **Caution on misusing this table.** This table has been developed for specific purposes. It is intended to provide conservative cleanup levels for drinking water beneficial uses at sites undergoing routine cleanup actions or those sites with relatively few hazardous substances. This table may not be appropriate for defining cleanup levels at other sites. For these reasons, the values in this table should not automatically be used to define cleanup levels that must be met for financial, real estate, insurance coverage or placement, or similar transactions or purposes. Exceedances of the values in this table do not necessarily mean the ground water must be restored to those levels at all sites. The level of restoration depends on the remedy selected under WAC 173-340-350 through 173-340-390.

b **Arsenic.** Cleanup level based on background concentrations for state of Washington.

c **Benzene.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61).

d **Benzo(a)pyrene.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61), adjusted to a 1 x 10^{-5} risk. If other carcinogenic PAHs are suspected of being present at the site, test for them and use this value as the total concentration that all carcinogenic PAHs must meet using the toxicity equivalency methodology in WAC 173-340-708(8).

e **Cadmium.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.62).

f **Chromium (Total).** Cleanup level based on concentration derived using Equation 720-1 for hexavalent chromium. This is a total value for chromium III and chromium VI. If just chromium III is present at the site, a cleanup level of 100 ug/l may be used (based on WAC 246-290-310 and 40 C.F.R. 141.62).

g **DDT (dichlorodiphenyltrichloroethane).** Cleanup levels based on concentration derived using Equation 720-2.

h **1,2 Dichloroethane (ethylene dichloride or EDC)**. Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61).

i **Ethylbenzene.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61).

j **Ethylene dibromide (1,2 dibromoethane or EDB).** Cleanup level based on concentration derived using Equation 720-2, adjusted for the practical quantitation limit.

k **Gross Alpha Particle Activity, excluding uranium.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.15).

l **Gross Beta Particle Activity, including gamma activity.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.15).

m **Lead.** Cleanup level based on applicable state and federal law (40 C.F.R. 141.80).

n **Lindane.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61).

o **Methylene chloride (dichloromethane).** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61).

p **Mercury.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.62).

q **Methyl tertiary-butyl ether (MTBE).** Cleanup level based on federal drinking water advisory level (EPA-822-F-97-009, December 1997).

r **Naphthalenes.** Cleanup level based on concentration derived using Equation 720-1. This is a total value for naphthalene, 1-methyl naphthalene and 2-methyl naphthalene.

s **PCB mixtures.** Cleanup level based on concentration derived using Equation 720-2, adjusted for the practical quantitation limit. This cleanup level is a total value for all PCBs.

t **Radium 226 and 228.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.15).

u **Radium 226.** Cleanup level based on applicable state law (WAC 246-290-310).

v **Tetrachloroethylene.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61).

w **Toluene.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61).

x **Total Petroleum Hydrocarbons (TPH).** TPH cleanup values have been provided for the most common petroleum products encountered at contaminated sites. Where there is a mixture of products or the product composition is unknown, samples must be tested using both the NWTPH-Gx and NWTPH-Dx methods and the lowest applicable TPH cleanup level must be met.

- **Gasoline range organics** means organic compounds measured using method NWTPH-Gx. Examples are aviation and automotive gasoline. The cleanup level is based on protection of ground water for noncarcinogenic effects during drinking water use. Two cleanup levels are provided. The higher value is based on the assumption that no benzene is present in the ground water sample. If any detectable amount of benzene is present in the ground water sample, then the lower TPH cleanup level must be used. No interpolation between these cleanup levels is allowed. The ground water cleanup level for any carcinogenic components of the petroleum [such as benzene, EDB and EDC] and any noncarcinogenic components [such as ethylbenzene, toluene, xylenes and MTBE], if present at the site, must also be met. See Table 830-1 for the minimum testing requirements for gasoline releases.
- **Diesel range organics** means organic compounds measured using NWTPH-Dx. Examples are diesel, kerosene, and #1 and #2 heating oil. The cleanup level is based on protection from noncarcinogenic effects during drinking water use. The ground water cleanup level for any carcinogenic components of the petroleum [such as benzene and PAHs] and any noncarcinogenic components [such as ethylbenzene, toluene, xylenes and naphthalenes], if present at the site, must also be met. See Table 830-1 for the minimum testing requirements for diesel releases.
- **Heavy oils** means organic compounds measured using NWTPH-Dx. Examples are #6 fuel oil, bunker C oil, hydraulic oil and waste oil. The cleanup level is based on protection from noncarcinogenic effects during drinking water use, assuming a product composition similar to diesel fuel. The ground water cleanup level for any carcinogenic components of the petroleum [such as benzene, PAHs and PCBs] and any noncarcinogenic components [such as ethylbenzene, toluene, xylenes and naphthalenes], if present at the site, must also be met. See Table 830-1 for the minimum testing requirements for heavy oil releases.
- **Mineral oil** means non-PCB mineral oil, typically used as an insulator and coolant in electrical devices such as transformers and capacitors measured using NWTPH-Dx. The cleanup level is based on protection from noncarcinogenic effects during drinking water use. Sites using this cleanup level must analyze ground water samples for PCBs and meet the PCB cleanup level in this table unless it can be demonstrated that: (1) The release originated from an electrical device manufactured after July 1, 1979; or (2) oil containing PCBs was never used in the equipment suspected as the source of the release; or (3) it can be documented that the oil released was recently tested and did not contain PCBs. Method B (or Method C, if applicable) must be used for releases of oils containing greater than 50 ppm PCBs. See Table 830-1 for the minimum testing requirements for mineral oil releases.

y **1,1,1 Trichloroethane.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61).

z **Trichloroethylene.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61).

aa **Vinyl chloride.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61), adjusted to a 1×10^{-5} risk.

bb **Xylenes.** Cleanup level based on xylene not exceeding the maximum allowed cleanup level in this table for total petroleum hydrocarbons and on prevention of adverse aesthetic characteristics. This is a total value for all xylenes.

Table 740-1
Method A Soil Cleanup Levels for Unrestricted Land Uses.[a]

Hazardous Substance	CAS Number	Cleanup Level
Arsenic	7440-38-2	20 mg/kg[b]
Benzene	71-43-2	0.03 mg/kg[c]
Benzo(a)pyrene	50-32-8	0.1 mg/kg[d]
Cadmium	7440-43-9	2 mg/kg[e]
Chromium		
Chromium VI	18540-29-9	19 mg/kg[f1]
Chromium III	16065-83-1	2,000 mg/kg[f2]
DDT	50-29-3	3 mg/kg[g]
Ethylbenzene	100-41-4	6 mg/kg[h]
Ethylene dibromide (EDB)	106-93-4	0.005 mg/kg[i]
Lead	7439-92-1	250 mg/kg[j]
Lindane	58-89-9	0.01 mg/kg[k]
Methylene chloride	75-09-2	0.02 mg/kg[l]
Mercury (inorganic)	7439-97-6	2 mg/kg[m]
MTBE	1634-04-4	0.1 mg/kg[n]
Naphthalenes	91-20-3	5 mg/kg[o]
PAHs (carcinogenic)		See benzo(a)pyrene[d]
PCB Mixtures		1 mg/kg[p]
Tetrachloroethylene	127-18-4	0.05 mg/kg[q]
Toluene	108-88-3	7 mg/kg[r]
Total Petroleum Hydrocarbons[s]		
[Note: Must also test for and meet cleanup levels for other petroleum components--see footnotes!]		
Gasoline Range Organics		
Gasoline mixtures without benzene and the total of ethyl benzene, toluene and xylene are less than 1% of the gasoline mixture		100 mg/kg
All other gasoline mixtures		30 mg/kg
Diesel Range Organics		2,000 mg/kg
Heavy Oils		2,000 mg/kg
Mineral Oil		4,000 mg/kg
1,1,1 Trichloroethane	71-55-6	2 mg/kg[t]
Trichloroethylene	79-01-6	0.03 mg/kg[u]
Xylenes	1330-20-7	9 mg/kg[v]

Footnotes:

a **Caution on misusing this table.** This table has been developed for specific purposes. It is intended to provide conservative cleanup levels for sites undergoing routine cleanup actions or for sites with relatively few hazardous substances, and the site qualifies under WAC 173-340-7491 for an exclusion from conducting a simplified or site-specific terrestrial ecological evaluation, or it can be demonstrated using a terrestrial ecological evaluation under WAC 173-340-7492 or 173-340-7493 that the values in this table are ecologically protective for the site. This table may not be appropriate for defining cleanup levels at other sites. For these reasons, the values in this table should not automatically be used to define cleanup levels that must be met for financial, real estate, insurance coverage or placement, or similar transactions or purposes. Exceedances of the values in this table do not necessarily mean the soil must be restored to these levels at a site. The level of restoration depends on the remedy selected under WAC 173-340-350 through 173-340-390.

b **Arsenic.** Cleanup level based on direct contact using Equation 740-2 and protection of ground water for drinking water use using the procedures in WAC 173-340-747(4), adjusted for natural background for soil.

c **Benzene.** Cleanup level based on protection of ground water for drinking water use, using the procedures in WAC 173-340-747(4) and (6).

d **Benzo(a)pyrene.** Cleanup level based on direct contact using Equation 740-2. If other carcinogenic PAHs are suspected of being present at the site, test for them and use this value as the total concentration that all carginogenic PAHs must meet using the toxicity equivalency methodology in WAC 173-340-708(8).

e **Cadmium.** Cleanup level based on protection of ground water for drinking water use, using the procedures described in WAC 173-340-747(4), adjusted for the practical quantitation limit for soil.

f1 **Chromium VI.** Cleanup level based on protection of ground water for drinking water use, using the procedures described in WAC 173-340-747(4).

f2 **Chromium III.** Cleanup level based on protection of ground water for drinking water use, using the procedures described in WAC 173-340-747(4). Chromium VI must also be tested for and the cleanup level met when present at a site.

g **DDT (dichlorodiphenyltrichloroethane).** Cleanup level based on direct contact using Equation 740-2.

h **Ethylbenzene.** Cleanup level based on protection of ground water for drinking water use, using the procedures described in WAC 173-340-747(4).

i **Ethylene dibromide (1,2 dibromoethane or EDB).** Cleanup level based on protection of ground water for drinking water use, using the procedures described in WAC 173-340-747(4) and adjusted for the practical quantitation limit for soil.

j **Lead.** Cleanup level based on preventing unacceptable blood lead levels.

k **Lindane.** Cleanup level based on protection of ground water for drinking water use, using the procedures described in WAC 173-340-747(4), adjusted for the practical quantitation limit.

l **Methylene chloride (dichloromethane).** Cleanup level based on protection of ground water for drinking water use, using the procedures described in WAC 173-340-747(4).

m **Mercury.** Cleanup level based on protection of ground water for drinking water use, using the procedures described in WAC 173-340-747(4).

n **Methyl tertiary-butyl ether (MTBE).** Cleanup level based on protection of ground water for drinking water use, using the procedures described in WAC 173-340-747(4).

o **Naphthalenes.** Cleanup level based on protection of ground water for drinking water use, using the procedures described in WAC 173-340-747(4). This is a total value for naphthalene, 1-methyl naphthalene and 2-methyl naphthalene.

p **PCB Mixtures.** Cleanup level based on applicable federal law (40 C.F.R. 761.61). This is a total value for all PCBs.

q **Tetrachloroethylene.** Cleanup level based on protection of ground water for drinking water use, using the procedures described in WAC 173-340-747(4).

r **Toluene.** Cleanup level based on protection of ground water for drinking water use, using the procedures described in WAC 173-340-747(4).

s **Total Petroleum Hydrocarbons (TPH).**
TPH cleanup values have been provided for the most common petroleum products encountered at contaminated sites. Where there is a mixture of products or the product composition is unknown, samples must be tested using both the NWTPH-Gx and NWTPH-Dx methods and the lowest applicable TPH cleanup level must be met.

- **Gasoline range organics** means organic compounds measured using method NWTPH-Gx. Examples are aviation and automotive gasoline. The cleanup level is based on protection of ground water for noncarcinogenic effects during drinking water use using the procedures described in WAC 173-340-747(6). Two cleanup levels are provided. The lower value of 30 mg/kg can be used at any site. When using this lower value, the soil must also be tested for and meet the benzene soil cleanup level. The higher value of 100 mg/kg can only be used if the soil is tested and found to contain no benzene and the total of ethyl benzene, toluene and xylene are less than 1% of the gasoline mixture. No interpolation between these cleanup levels is allowed. In both cases, the soil cleanup level for any other carcinogenic components of the petroleum [such as EDB and EDC], if present at the site, must also be met. Also, in both cases, soil cleanup levels for any noncarcinogenic components [such as toluene, ethylbenzene, xylenes, naphthalene, and MTBE], also must be met if these substances are found to exceed ground water cleanup levels at the site. See Table 830-1 for the minimum testing requirements for gasoline releases.
- **Diesel range organics** means organic compounds measured using method NWTPH-Dx. Examples are diesel, kerosene, and #1 and #2 heating oil. The cleanup level is based on preventing the accumulation of free product on the ground water, as described in WAC 173-340-747(10). The soil cleanup level for any carcinogenic components of the petroleum [such as benzene and PAHs], if present at the site, must also be met. Soil cleanup levels for any noncarcinogenic components [such as toluene, ethylbenzene, xylenes and naphthalenes], also must be met if these substances are found to exceed the ground water cleanup levels at the site. See Table 830-1 for the minimum testing requirements for diesel releases.
- **Heavy oils means** organic compounds measured using NWTPH-Dx. Examples are #6 fuel oil, bunker C oil, hydraulic oil and waste oil. The cleanup level is based on preventing the accumulation of free product on the ground water, as described in WAC 173-340-747(10) and assuming a product composition similar to diesel fuel. The soil cleanup level for any carcinogenic components of the petroleum [such as benzene, PAHs and PCBs], if present at the site, must also be met. Soil cleanup levels for any noncarcinogenic components [such as toluene, ethylbenzene, xylenes and naphthalenes], also must be met if found to exceed the ground water cleanup levels at the site. See Table 830-1 for the minimum testing requirements for heavy oil releases.
- **Mineral oil** means non-PCB mineral oil, typically used as an insulator and coolant in electrical devices such as transformers and capacitors, measured using NWTPH-Dx. The cleanup level is based on preventing the accumulation of free product on the ground water, as described in WAC 173-340-747(10). Sites using this cleanup level must also analyze soil samples and meet the soil cleanup level for PCBs, unless it can be demonstrated that: (1) The release originated from an electrical device that was manufactured after July 1, 1979; or (2) oil containing PCBs was never used in the equipment suspected as the source of the release; or (3) it can be documented that the oil released was recently tested and did not contain PCBs. Method B must be used for releases of oils containing greater than 50 ppm PCBs. See Table 830-1 for the minimum testing requirements for mineral oil releases.

t **1,1,1 Trichloroethane.** Cleanup level based on protection of ground water for drinking water use, using the procedures described in WAC 173-340-747(4).

u **Trichloroethylene.** Cleanup level based on protection of ground water for drinking water use, using the procedures described in WAC 173-340-747(4).

v **Xylenes.** Cleanup level based on protection of ground water for drinking water use, using the procedures described in WAC 173-340-747(4). This is a total value for all xylenes.

APPENDIX D. LABORATORY REPORT

D

ACCU LABORATORY

12524 130th Lane NE
Kirkland, WA 98034

Tel: (425) 214-5858
(425) 214-5868
Email: lisa@accu-lab.com
Website: www.accu-lab.com

March 20, 2019

Mr. Jake Lee
Envitechnology, Inc.
16541 Redmond Way #358C
Redmond, WA 98052

Dear Mr. Lee:

Please find enclosed the analytical reports for:

Project Name:	***Boulevard Grocery***
Project#:	***02190114-1***
Date Received:	***March 15, 2019***
Accu Lab WO#:	***19-AL0315-1***

The results of analyses are presented in the attached tables. Applicable reporting limits, QA/QC data and data qualifiers are included. An invoice for the work is also enclosed.

Accu Laboratory appreciates the opportunity to provide analytical service for this project. If you should have any question pertaining to the report, or if we can be of further assistance, please feel free to contact me.

Sincerely,

Lisa Y Zhang
Laboratory Manager

ACCU LABORATORY

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Kirkland WA 98034

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(425) 214-5868
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website: www.accu-lab.com

Analytical Report

Client	**Envitechnology, Inc**	**Acculab WO#**	**19-AL0315-1**
	16541 Redmond Way #358C		
	Redmond WA 98052	Date Sampled	3/14/2019
Project Manager	**Jake Lee**	Date Received	3/15/2019
Project Name	**Boulevard Grocery**	Date Reported	3/20/2019
Project #	**02190114-1**		

NWTPH-Gx/8260 BTEX in Water

Accu Lab Batch# AL031619-1

Client sample ID					**W8**	**W9**	**W10**	**W11**
Lab ID	**MRL**	**Unit**	**MTH BLK**	**LCS**	19-AL0315-1-1	19-AL0315-1-2	19-AL0315-1-3	19-AL0315-1-4
Matrix			Water	Water	Water	Water	Water	Water
Date Analyzed			3/16/2019	3/16/2019	3/16/2019	3/16/2019	3/16/2019	3/16/2019
NWTPH-Gx								
Mineral Spirits/Other Solvents	0.25	mg/L	nd		nd	nd	nd	nd
Gasoline Range Organics (GRO)	0.25	mg/L	nd	117%	nd	nd	nd	nd
EPA 8260 BTEX								
Benzene	1.0	ug/L	nd	110%	nd	nd	nd	nd
Toluene	1.0	ug/L	nd	112%	nd	nd	nd	nd
Ethylbenzene	1.0	ug/L	nd	115%	6.5	1.9	nd	nd
m,p-Xylenes	2.0	ug/L	nd	113%	nd	nd	2.9	nd
o-Xylene	1.0	ug/L	nd	116%	nd	nd	1.0	nd
Surrogate Recoveries								
Dibromofluoromethane			99%	94%	99%	96%	100%	95%
Bromofluorobenzene			100%	103%	101%	100%	99%	101%

Acceptable Recovery Limits:

Surrogates/LCS	*70-130%*
MS/MSD	*65-135%*
Acceptable RPD limit:	*30%*

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Analytical Report

Client	**Envitechnology, Inc**	**Acculab WO#**	**19-AL0315-1**
	16541 Redmond Way #358C		
	Redmond WA 98052	Date Sampled	3/14/2019
Project Manager	**Jake Lee**	Date Received	3/15/2019
Project Name	**Boulevard Grocery**	Date Reported	3/20/2019
Project #	**02190114-1**		

NWTPH-Gx/8260 BTEX in Water

Accu Lab Batch# AL031619-1

Client sample ID			**W12**	**W13**	**W14**	**W15**
Lab ID	**MRL**	**Unit**	19-AL0315-1-5	19-AL0315-1-6	19-AL0315-1-7	19-AL0315-1-8
Matrix			Water	Water	Water	Water
Date Analyzed			3/16/2019	3/16/2019	3/16/2019	3/16/2019
NWTPH-Gx						
Mineral Spirits/Other Solvents	0.25	mg/L	nd	nd	nd	nd
Gasoline Range Organics (GRO)	0.25	mg/L	nd	nd	nd	nd
EPA 8260 BTEX						
Benzene	1.0	ug/L	nd	nd	nd	nd
Toluene	1.0	ug/L	nd	nd	nd	nd
Ethylbenzene	1.0	ug/L	nd	nd	2.5	nd
m,p-Xylenes	2.0	ug/L	nd	1.7	10	nd
o-Xylene	1.0	ug/L	nd	nd	3.4	nd
Surrogate Recoveries						
Dibromofluoromethane			99%	99%	98%	97%
Bromofluorobenzene			105%	97%	99%	98%

Acceptable Recovery Limits:

Surrogates/LCS	*70-130%*
MS/MSD	*65-135%*
Acceptable RPD limit:	*30%*

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Analytical Report

Client	**Envitechnology, Inc**	**Acculab WO#**	**19-AL0315-1**
	16541 Redmond Way #358C		
	Redmond WA 98052	Date Sampled	3/14/2019
Project Manager	**Jake Lee**	Date Received	3/15/2019
Project Name	**Boulevard Grocery**	Date Reported	3/20/2019
Project #	**02190114-1**		

NWTPH-Dx in Water

Accu Lab Batch# AL031519-5

Client sample ID					**W8**	**W9**	**W10**	**W11**
Lab ID	**MRL**	**Unit**	**MTH BLK**	**LCS**	19-AL0315-1-1	19-AL0315-1-2	19-AL0315-1-3	19-AL0315-1-4
Matrix			Water	Water	Water	Water	Water	Water
Date Extracted			3/15/2019	3/15/2019	3/15/2019	3/15/2019	3/15/2019	3/15/2019
Date Analyzed			3/19/2019	3/19/2019	3/19/2019	3/19/2019	3/19/2019	3/19/2019
Diesel Range Organics (DRO)	0.20	mg/L	nd	102%	nd	nd	nd	nd
Heavy Oil Range	0.40	mg/L	nd		nd	nd	nd	nd
Surrogate Recoveries								
2-Fluorobiphenyl			105%	120%	89%	99%	91%	92%
p-Terphenyl-d4			107%	115%	90%	101%	96%	100%

Acceptable Recovery Limits:

Surrogates/LCS	*70-135%*
MS/MSD	*65-140%*
Acceptable RPD limit:	*30%*

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Analytical Report

Client	**Envitechnology, Inc**	**Acculab WO#**	**19-AL0315-1**
	16541 Redmond Way #358C		
	Redmond WA 98052	Date Sampled	3/14/2019
Project Manager	**Jake Lee**	Date Received	3/15/2019
Project Name	**Boulevard Grocery**	Date Reported	3/20/2019
Project #	**02190114-1**		

NWTPH-Dx in Water

Accu Lab Batch# AL031519-5

Client sample ID			**W12**	**W13**	**W14**	**W15**
Lab ID	**MRL**	**Unit**	19-AL0315-1-5	19-AL0315-1-6	19-AL0315-1-7	19-AL0315-1-8
Matrix			Water	Water	Water	Water
Date Extracted			3/15/2019	3/15/2019	3/15/2019	3/15/2019
Date Analyzed			3/19/2019	3/19/2019	3/19/2019	3/19/2019
Diesel Range Organics (DRO)	0.20	mg/L	nd	nd	0.47	nd
Heavy Oil Range	0.40	mg/L	nd	nd	nd	nd
Surrogate Recoveries						
2-Fluorobiphenyl			109%	92%	92%	104%
p-Terphenyl-d4			114%	104%	83%	113%

Acceptable Recovery Limits:

Surrogates/LCS	*70-135%*
MS/MSD	*65-140%*
Acceptable RPD limit:	*30%*

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Analytical Report

Client	**Envitechnology, Inc**	**Acculab WO#**	**19-AL0315-1**
	16541 Redmond Way #358C		
	Redmond WA 98052	Date Sampled	3/14/2019
Project Manager	**Jake Lee**	Date Received	3/15/2019
Project Name	**Boulevard Grocery**	Date Reported	3/20/2019
Project #	**02190114-1**		

NWTPH-Gx/BTEX in Soil

Accu Lab Batch# AL031619-1

Client sample ID					**B10-13**	**B11-14**	**B12-13**	**B13-13**
Lab ID	**MRL**	**Unit**	**MTH BLK**	**LCS**	19-AL0315-1-9	19-AL0315-1-10	19-AL0315-1-11	19-AL0315-1-12
Matrix			Soil	Soil	Soil	Soil	Soil	Soil
Date Extracted			3/16/2019	3/16/2019	3/14/2019	3/14/2019	3/14/2019	3/14/2019
Date Analyzed			3/16/2019	3/16/2019	3/16/2019	3/16/2019	3/16/2019	3/16/2019
Moisture (%)					16%	17%	17%	16%
NWTPH-Gx								
Mineral Spirits/Other Solvents	10	mg/Kg	nd		nd	nd	nd	nd
Gasoline Range Organics (GRO)	10	mg/Kg	nd	117%	nd	nd	nd	nd
EPA 8260 BTEX								
Benzene	20	ug/Kg	nd	110%	nd	nd	nd	nd
Toluene	50	ug/Kg	nd	112%	nd	nd	nd	nd
Ethylbenzene	50	ug/Kg	nd	115%	nd	nd	nd	nd
m,p-Xylenes	100	ug/Kg	nd	113%	nd	nd	nd	nd
o-Xylene	20	ug/Kg	nd	116%	nd	nd	nd	nd
Surrogate Recoveries								
Dibromofluoromethane			94%	94%	83%	85%	84%	84%
Bromofluorobenzene			99%	103%	100%	95%	98%	96%

Acceptable Recovery Limits:

Surrogates/LCS	*70-130%*
MS/MSD	*65-135%*
Acceptable RPD limit:	*30%*

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Kirkland WA 98034

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Analytical Report

Client	**Envitechnology, Inc**	**Acculab WO#**	**19-AL0315-1**
	16541 Redmond Way #358C		
	Redmond WA 98052	Date Sampled	3/14/2019
Project Manager	**Jake Lee**	Date Received	3/15/2019
Project Name	**Boulevard Grocery**	Date Reported	3/20/2019
Project #	**02190114-1**		

NWTPH-Gx/BTEX in Soil

Accu Lab Batch# AL031619-1

Client sample ID			**B14-15**	**B15-15**	**MS B10-13**	**MSD B10-13**	**RPD B10-13**
Lab ID	**MRL**	**Unit**	19-AL0315-1-13	19-AL0315-1-14	19-AL0315-1-9	19-AL0315-1-9	19-AL0315-1-9
Matrix			Soil	Soil	Soil	Soil	Soil
Date Extracted			3/14/2019	3/14/2019	3/14/2019	3/14/2019	3/14/2019
Date Analyzed			3/16/2019	3/16/2019	3/16/2019	3/16/2019	3/16/2019
Moisture (%)			19%	16%	16%	16%	16%
NWTPH-Gx							
Mineral Spirits/Other Solvents	10	mg/Kg	nd	nd			
Gasoline Range Organics (GRO)	10	mg/Kg	nd	130	97%	98%	1%
EPA 8260 BTEX							
Benzene	20	ug/Kg	nd	nd	87%	80%	9%
Toluene	50	ug/Kg	nd	nd	87%	77%	12%
Ethylbenzene	50	ug/Kg	nd	nd	88%	80%	10%
m,p-Xylenes	100	ug/Kg	nd	nd	86%	77%	11%
o-Xylene	20	ug/Kg	nd	nd	92%	79%	15%
Surrogate Recoveries							
Dibromofluoromethane			84%	87%	94%	98%	
Bromofluorobenzene			100%	96%	99%	100%	

Acceptable Recovery Limits:

Surrogates/LCS	*70-130%*
MS/MSD	*65-135%*
Acceptable RPD limit:	*30%*

ACCU LABORATORY

12524 130th Lane NE
Kirkland WA 98034

Tel: (425) 214-5858
(425) 214-5868
Email: lisa@accu-lab.com
website: www.accu-lab.com

Analytical Report

Client	**Envitechnology, Inc**	**Acculab WO#**	**19-AL0315-1**
	16541 Redmond Way #358C		
	Redmond WA 98052	Date Sampled	3/14/2019
Project Manager	**Jake Lee**	Date Received	3/15/2019
Project Name	**Boulevard Grocery**	Date Reported	3/20/2019
Project #	**02190114-1**		

NWTPH-Dx in Soil

Accu Lab Batch# AL031919-2

Client sample ID					**B10-13**	**B11-14**	**B12-13**	**B13-13**
Lab ID	**MRL**	**Unit**	**MTH BLK**	**LCS**	19-AL0315-1-9	19-AL0315-1-10	19-AL0315-1-11	19-AL0315-1-12
Matrix			Soil	Soil	Soil	Soil	Soil	Soil
Date Extracted			3/19/2019	3/19/2019	3/19/2019	3/19/2019	3/19/2019	3/19/2019
Date Analyzed			3/20/2019	3/20/2019	3/20/2019	3/20/2019	3/20/2019	3/20/2019
Moisture (%)					16%	17%	17%	16%
Diesel Range Organics (DRO)	50	mg/Kg	nd	85%	nd	nd	nd	nd
Heavy Oil Range	100	mg/Kg	nd		210	nd	nd	nd
Surrogate Recoveries								
2-Fluorobiphenyl			101%	119%	102%	99%	98%	102%
p-Terphenyl-d4			103%	114%	108%	106%	104%	104%

Acceptable Recovery Limits:

Surrogates/LCS	*70-130%*
MS/MSD	*65-135%*
Acceptable RPD limit:	*30%*

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Kirkland WA 98034

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Analytical Report

Client	**Envitechnology, Inc**	**Acculab WO#**	**19-AL0315-1**
	16541 Redmond Way #358C		
	Redmond WA 98052	Date Sampled	3/14/2019
Project Manager	Jake Lee	Date Received	3/15/2019
Project Name	**Boulevard Grocery**	Date Reported	3/20/2019
Project #	**02190114-1**		

NWTPH-Dx in Soil

Accu Lab Batch# AL031919-2

					MS	MSD	RPD
Client sample ID			**B14-15**	**B15-15**	**B11-14**	**B11-14**	**B11-14**
Lab ID	**MRL**	**Unit**	19-AL0315-1-13	19-AL0315-1-14	19-AL0315-1-10	19-AL0315-1-10	19-AL0315-1-10
Matrix			Soil	Soil	Soil	Soil	Soil
Date Extracted			3/19/2019	3/19/2019	3/19/2019	3/19/2019	3/19/2019
Date Analyzed			3/20/2019	3/20/2019	3/20/2019	3/20/2019	3/20/2019
Moisture (%)			19%	16%	17%	17%	17%
Diesel Range Organics (DRO)	50	mg/Kg	330	nd	119%	122%	2%
Heavy Oil Range	100	mg/Kg	nd	nd			
Surrogate Recoveries							
2-Fluorobiphenyl			130%	98%	121%	120%	
p-Terphenyl-d4			107%	104%	116%	115%	

Acceptable Recovery Limits:

Surrogates/LCS	*70-130%*
MS/MSD	*65-135%*
Acceptable RPD limit:	*30%*

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12524 130th Lane NE
Kirkland WA 98034

Tel: (425) 214-5858
(425) 214-5868
Email: lisa@accu-lab.com
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Analytical Report

Client	**Envitechnology, Inc**	**Acculab WO#**	**19-AL0315-1**
	16541 Redmond Way #358C		
	Redmond WA 98052	Date Sampled	3/14/2019
Project Manager	**Jake Lee**	Date Received	3/15/2019
Project Name	**Boulevard Grocery**	Date Reported	3/20/2019
Project #	**02190114-1**		

Data Qualifiers and Comments:

Results reported on dry-weight basis for soil samples.

MRL- Method Reporting Limit
nd- Indicates the analyte is not detected at the listing reporting limit.
C- Coelution with other compounds.
M- % Recovery of surrogate, MS/MSD is out of the acceptable limit due to matrix effect.
B- Indicates the analyte is detected in the method blank associated with the sample.
J- The analyte is detected at below the reporting limit.
E- The result reported exceeds the calibration range, and is an estimate.
D- Sample required dilution due to matrix. Method Reporting Limits were elevated due to dilutions.
H- Sample was received or analyzed past holding time
Q- Sample was received with head space, improper preserved or above recommended temperature.

19-AL0315-1

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ACCU LABORATORY

Accu Lab WO#_____

Sample Chain of Custody/Analysis Request

~~125424~~ 130th Lane NE,
Kirkland, WA 98034
Tel: (425) 214-5858 , (425) 214-5868
www. accu-lab.com

Company: Envitechnology Inc.
Address: 16541 Redmond Way #3580
Redmond. WA 98052
Telephone: 425-890-3517
Email: jakelee@envitechnology.com

Project Manager: Jake Lee
Project number: 02190114-1
Project Name: Boulevard Grocery
5304 61st St NE. Marysville
Sampled by: Jake Lee

Report to: _____ (If not the same as client info)
Invoice to: _____ (If not the same as client info)

Accu Lab #	Sample ID	Date	time	Matrix	Container Type	NWTPH-HCID	NWTPH-DX	NWTPH-GX/BTEX	NWTPH-GX	EPA 8260 Halogenated Volatiles	EPA 8260C VOA in water (EDB not included)	EDB (0.01ppb) by EPA 8011/8260 SIM	Vinyl chloride/TCE/PCE by 8260C SIM	EPA 8260 VOA in Soil	8260 Oxygenates	Ethanol by Modified EPA 8260	EPA 8270D Full Scan	EPA 8270D SIM PAH	PCP by 8270 GC/ECD	EPA 8081B Chlorinated Pesticides	EPA 8082A PCB	6020A Metals (circle one) MTCA5 RCRA8	Metals by EPA 200.8 Dissolved Total	EPA1664 Oil & Grease	pH / TSS / TDS / Conductivity/Turbidity	TCLP RCRA8 SVOA VOA	Note	Composite	Grab
	W8	3/14/19	7:50	Water			X	X																					
	W9		8:50																										
	W10		9:40																										
	W11		10:20																										
	W12		11:00																										
	W13		12:30																										
	W14		13:00																										
	W15	↓	13:50	↓			↓	↓																					

Sample Receipt Information Note:

Turnaround Time: Working Calendar Day

3 Day Standard	X
48 hour	
24 hour	
Same Day	

Relinquished By: Jake Lee Date/Time 3/15/19 14:57
Received By: _____ Date/time 3/15/19 14:57

White page to Laboratory

Yellow page to Client

12524 2/2

ACCU LABORATORY

Accu Lab WO# 19-AL0315-9

Sample Chain of Custody/Analysis Request

~~125424~~ 130th Lane NE,
Kirkland, WA 98034
Tel: (425) 214-5858 , (425) 214-5868
www. accu-lab.com

Company: Envitechnology, inc.
Address: 16541 Redmond Way #358C
Redmond, WA 98052
Telephone: 425-890-3517
Email: jakelee@envitechnology.com

Project Manager: Jake Lee
Project number: 021901141
Project Name: Boulevard Grocery
5304 61st St NE Marysville
Sampled by: Jake Lee

Report to: (If not the same as client info)
Invoice to: (If not the same as client info)

Accu Lab #	Sample ID	Date	time	Matrix	Container Type	NWTPH-HCID	NWTPH-DX	NWTPH-GX/BTEX	NWTPH-GX	EPA 8260 Halogenated Volatiles	EPA 8260C VOA in water (EDB not included)	EDB (0.01ppb) by EPA 8011/8260 SIM	Vinyl chloride/TCE/PCE by 8260C SIM	EPA 8260 VOA in Soil	8260 Oxygenates	Ethanol by Modified EPA 8260	EPA 8270D Full Scan	EPA 8270D SIM PAH	PCP by 8270 GC/ECD	EPA 8081B Chlorinated Pesticides	EPA 8082A PCB	6020A Metals (circle one) MTCA5 RCRA8	Metals by EPA 200.8 Dissolved Total	EPA1664 Oil & Grease	pH / TSS / TDS / Conductivity/Turbidity	TCLP RCRA8 SVOA VOA	Note	Composite	Grab
	B10-13	3/14/19	10:00	Soil			X	X																					
	B11-14		10:15																										
	B12-13		11:00																										
	B13-13		12:20																										
	B14-15		12:50																										
	B15-15		13:50																										

Sample Receipt Information Note:

Turnaround Time: Working Calendar Day

3 Day Standard	X
48 hour	
24 hour	
Same Day	

Relinquished By: Jake Lee Date/Time 3/15/19 14:57
Received By: Date/time 3/15/19 14:57

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