

LIMITED PHASE II ENVIRONMENTAL SITE ASSESSMENT

Conducted on Stanwood Gas and Deli 26901 Old Highway 99 North Stanwood, WA 98292

Prepared for ReadyCap Lending, Llc. 200 Connell Drive, Suite 4000 Berkeley Heights, NJ 07922

Prepared by Envitechnology, Inc. 9805 NE 116th Street, Suite 300 Kirkland, WA 98034

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ENVITECHNOLOGY www.envitechnology.com support@envitechnology.com Tel 425.890.3517 Fax 425.310.6600 9805 NE 116th St Suite 300 Kirkland WA 98034

August 4, 2022

Mr. Shawn Park ReadyCap Lending, Llc. 200 Connell Drive, Suite 4000 Berkeley Heights, NJ 07922

Subject: Limited Phase II Environmental Site Assessment Stanwood Gas and Deli 26901 Old Highway 99 North, Stanwood, WA 98292

Envitechnology. Inc. (Envitechnology) has prepared this Limited Phase II Environmental Site Assessment (ESA) performed at the above property.

The purpose of this assessment is to evaluate the Recognized Environmental Conditions (RECs) to provide 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 according to the American Society of Testing and Materials (ASTM) Standard Practices for Environmental Site Assessments: Phase II ESA Process (ASTM Designation: E1903).

Please get in touch with the undersigned at your convenience if you have any questions or require further clarification of the report findings. Thank you for the opportunity to be of service to you.

Yours very truly,

Joke Seryder



Jake S. Lee, Ph.D.Seung KPrincipalSenior IEnvitechnology, Inc.EnvitecICC Certified Washington State Site Assessor (5264460-U7)ICC Certified UST Decommissioning (5264460-U2)ICC Certified UST Installation/Retrofitting (5264460-U5)



EXECUTIVE SUMMARY

The Subject Property is a fueling service station located at the northeast intersection between State Route 532 and Old Highway 99 North in Stanwood, Snohomish County, Washington.

According to the Department of Ecology (DOE)'s underground storage tank (UST) system summary, the Subject Property's UST system consists of four (4) tanks – two (2) 12,000-gallon regular-grade gasoline tanks, one (1) 10,000-gallon premium-grade gasoline tank, and one (1) 8,000-gallon diesel tank. These single-walled steel tanks are protected from corrosion by sacrificed anode cathodic protection (CP). The products are connected with single-walled flexible pipes. The UST system was reportedly built in 1987.

The recognized on-site environmental concerns assessed as part of this Phase II ESA were as follows:

<u>Current USTs</u> – Based on the age of the current USTs (35 years) and the lack of recent analytical soil and groundwater data, the potential to impact the subsurface cannot be ruled out. As such current USTs at the Subject Property represent a REC.

A total of seven (7) soil borings were advanced at the Subject Property on July 25, 2022. Four (4) soil borings (B1 through B4) were advanced in the vicinity of the current USTs. Three (3) soil borings (B5 through B7) were advanced in the vicinity of the current fueling dispensers. Four (4) borings in the vicinity of the USTs were advanced until boring refusal was encountered at depths ranging from 9 to 19 feet below the ground surface (bgs). The remaining three (3) borings were terminated at a depth of 10 feet bgs. A total of seven (7) soil samples were collected, one sample per borehole. The soil samples in the vicinity of the USTs were collected at a depth of 15 feet bgs (below the bottom of the UST bedding materials), except B2, where the soil sample was collected at a boring terminal depth of 9 feet bgs. The other soil samples in the vicinity of the fueling dispensers were collected at a depth of 10 feet bgs.

Native soils beneath fill or other surface cover materials include a layer of dark brown, medium dense to dense, sandy loam to a depth of 13 feet bgs and underlain by a layer of olive brown, dense to very dense silty loam to a boring terminal depth of 19 feet bgs. Perched groundwater was encountered at a depth of 10 feet bgs in B3.

The ground-penetrating radar (GPR) survey did not reveal the presence of any anomaly indicative of abandoned USTs at the Site. However, the survey identified buried electric lines, underground utilities, and other buried objectives at the Site.

Laboratory analysis of the soil and groundwater samples collected for gasoline range organics (GRO), diesel range organics (DRO), oil range organics (ORO), and benzene, toluene, ethylbenzene, and xylene (BTEX) are summarized below:

• GRO was detected at 790 mg/kg above the applicable Model Toxics Control Acts (MTCA) Method A cleanup level (CUL) of 30 mg/kg in the soil sample, B2-9.



- Benzene was detected at 0.044 mg/kg above the applicable MTCA Method A CUL of 0.03 mg/kg in the soil sample, B1-15.
- GRO was detected at 16,000 μg/L above the applicable MTCA Method A CUL of 800 μg/L in the perched groundwater sample, B3-W.
- Benzene was detected at 1,200 μ g/L above the applicable MTCA Method A CUL of 5 μ g/L in the perched groundwater sample, B3-W.

Based on the result of this assessment, the following are recommended.

- Additional soil and groundwater sampling are necessary to further delineate the extent and magnitude of petroleum impact.
- To achieve lawful compliance with Chapter 173-340-300 (site discovery and reporting), Envitechnology 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.



TABLE OF CONTENTS

Executive Summaryi										
List of Tables iv										
List of Figuresiv										
List of Appendicesiv										
1. Introduction										
1.1. Scope of Services	1									
1.2. Limitations and Exceptions of Assessments	1									
2. Background	3									
2.1. Site Description and Features	3									
2.2. ADJOINING PROPERTIES	3									
2.3. Physical Setting	45									
3. Field Investigations	6									
2.1 Utility Location	с С									
3.1. Utility Location	о 6									
3.3. Health and Safety	6									
3.4. Exploration Methods	7									
3.5. Subsurface Soil Sampling Methods	7									
3.6. Field Screening	8									
3.7. Chemical Analytical Methods	8									
3.8. Quality Control	8									
3.9. Investigation-Derived Waste	9									
3.10. Decontamination and Hole Closure	9									
4. Analytical Results	U									
4.1. Subsurface Conditions	0									
4.2. Geophysical Survey	0									
4.3. Soli Analytical Results	U 1									
4.4. Groundwater Analytical Results	1 2									
5. Troposed cleanup standard	2									
5.1. Recognized Environmental Conditions	2 ว									
5.2. Conceptual site Model	ע 2									
5.4. Proposed Cleanup Levels	3									
5.5. Other Concerns	4									
5.6. Conclusions1	4									
6. Recommendations1	5									
References and Source of Information1	6									
Tables1	7									
Figures										
Appendices 2	4									



LIST OF TABLES

Table 1. Type of Samples CollectedTable 2. Soil Analytical ResultsTable 3. Groundwater Analytical Results

LIST OF FIGURES

Figure 1. Site Location Map

Figure 2. Site Exploration Map

LIST OF APPENDICES

Appendix 1. Boring Logs

Appendix 2. Site Photographs

Appendix 3. Laboratory Report



1. INTRODUCTION

ReadyCap Lending, Llc. engaged Envitechnology to conduct a Limited Phase II ESA on the property, Stanwood Gas and Deli, located at 26901 Old Highway 99 North, Stanwood, WA 98292, which was subsequently referred to in this report as "the Subject Property".

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

1.1. SCOPE OF SERVICES

The scope of work for this assessment was in general accordance with the American Society for Testing and Materials (ASTM) Standard Practices for Environmental Site Assessments: Phase II ESA Process (ASTM Designation: E1903, 2011 and 2019). The methodologies represent good commercial and customary practice for conducting a Phase II ESA of a property to evaluate Recognized Environmental Conditions.

The scope of work included the following tasks:

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

1.2. LIMITATIONS AND EXCEPTIONS OF ASSESSMENTS

This assessment was prepared according to the ASTM Standard Practices for Environmental Site Assessments: Phase II ESA Process (ASTM Designation: E1903, 2011 and 2019) and contains all of the limitations inherent in these methodologies. No other warranties, expressed or implied, are made regarding the professional services provided under the terms of our contract and included in this report.

No ESA can eliminate all uncertainty. Furthermore, any sample, surface or subsurface, taken for chemical analysis may or may not represent 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 artificial 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 outweighs the usefulness of the information and 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 acceptable to the user concerning the real estate transaction.

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



2. BACKGROUND

2.1. SITE DESCRIPTION AND FEATURES

The Subject Property is a fueling service station located at the northeast intersection between State Route 532 and Old Highway 99 North in Stanwood, Snohomish County, Washington. The Site is bordered on the east by the Interstate 5 ramp, on the west by Old Highway 99 North and vegetation land behind, on the south by State Route 532 and Stanwood I-5 Park & Ride behind, and on the north by an SFR and vegetation land behind. The surrounding area is a rural setting.

The Subject Property consists of two consecutive parcels of commercial land. The northern parcel identified by the Assessor's parcel no (APN) 32042400300600, which totals approximately 4.00-acres and consists of undeveloped vacant land. The southern parcel identified by APN 32042400301000, which totals approximately 3.45-acres and consists of a gas station and a 3,500 square-foot interior space currently utilized as a convenience store, and a Burger Stop restaurant.

The store building is located along the eastern property boundary. The interior of the convenience store is configured with the entrance on the west side of the store next to the sales register. The center of the building is a retail display area with walk-in coolers.

The convenience store's west is a metal-framed canopy covering six (6) double-sided fueling dispensers. Directly west of the canopy, underneath the concrete pad, are USTs. The UST system consists of four (4) tanks – two (2) 12,000-gallon regular-grade gasoline tanks, one (1) 10,000-gallon premium-grade gasoline tank, and one (1) 8,000-gallon diesel tank. These single-walled steel tanks are protected from corrosion by sacrificed anode cathodic protection (CP). The products are connected with single-walled flexible pipes. The UST system was reportedly built in 1987.

In addition to the current structure, the subject property is improved with asphalt-paved parking areas, a drive-thru espresso stand, and associated landscaping around the Site's perimeter. Access to the Subject Property is achieved from Old Highway 99 North. The general layout of the Site and immediate vicinity is shown in Figure 1 - Site Location Map.

2.2. ADJOINING PROPERTIES

Adjoining property is any real estate property whose border is contiguous or partially contiguous with the Subject Property, or that would be if the properties were not separated by a roadway, street, public thoroughfare, river, or stream. The following identifies specific adjacent property tenants and/or use:



Direction	Site Use	Adjoining Street
East	Vegetation land	Interstate 5
West	Vegetation land	Old Highway 99 North
South	Stanwood I-5 Park & Ride	State Route 532
North	Single-family home and vegetation land behind	Interstate 5

The Site is bordered on the east by the Interstate 5 ramp, on the west by Old Highway 99 North and vegetation land behind, on the south by State Route 532 and Stanwood I-5 Park & Ride behind, and on the north by an SFR and vegetation land behind. The surrounding area is a rural setting.

2.3. PHYSICAL SETTING

The objective of reviewing the physical setting is to provide information about the impact of potential environmental contaminant migration.

<u>Topography</u>

The current USGS 7.5 Minute Topographic Map (Arlington West, WA, 2017) was reviewed to determine the topography of the Subject Property. The surface elevation at the Site is approximately 259 feet above sea level. The Subject Property and general area are identified as mixed commercial and residential. The contour lines in the Subject Property area indicate that the Site is gently down to the west towards a depression that follows the route of Old Highway 99 North.

<u>Hydrology</u>

Information on groundwater flow and soil type was obtained to determine how easily contaminants from surrounding properties can reach the Subject Property. Based on the vicinity area's topography, shallow groundwater migration's direction generally appears to the west. However, the topography is not always reliable for predicting the groundwater flow direction. Local gradient under the Subject Property may be influenced naturally by higher or lower permeability zones or artificially by nearby pumping or recharge and may deviate in any particular location for the overall regional trend. The nearest surface water in the vicinity of the Subject Property is the Stillaguamish River, located approximately 1.8 miles south of the Subject Property, which drains into Port Susan, an inlet of the Puget Sound, located approximately 7 miles to the west.

<u>Geology</u>



According to this area's geologic map, the Subject Property is underlain by the till of the Wisconsin age, consisting of a hard, blue-gray to gray concrete-like mixture of clay, silt, sand, and gravel deposited as end or recessional moraine.

According to the Department of Agriculture (USDA) Soil Conservation, the dominant soil type of this area is *"Tokul gravelly medial loam, 0 to 8 percent slopes".* Tokul soils have a slow infiltration rate and are moderately well drained. A typical soil profile is a layer of gravelly loam to a depth of 22 inches, underlain by a layer of gravelly fine sandy loam to a depth of 31 inches, and underlain by a layer of gravelly sandy loam to a depth of 59 inches.

2.4. SITE HISTORY AND LAND USE

According to the recent Phase I ESA conducted by TRILEAF on August 16, 2018, the Site's southern portion (Parcel No .32042400301000) was undeveloped until 1988, when the present 3,500 square-foot structure and fueling service station were constructed. Various restaurants have occupied the building since its construction. The Site's northern portion (Parcel No. 32042400300600) has been historically undeveloped.

The Site has been used as a fueling service station since its construction in 1988.



3. FIELD INVESTIGATIONS

3.1. UTILITY LOCATION

Before 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.

3.2. GEOPHYSICAL SURVEY

Because of limited information regarding the configuration of the UST system, a geophysical survey was conducted at the Site. Envitechnology subcontracted with Mt. View locating Services Llc. in Sumner, WA, to perform a geophysical survey. The geophysical survey uses electromagnetic (EM) equipment and ground-penetrating radar (GPR) to screen the Site for subsurface anomalies characteristics of USTs and other buried metallic objects.

A magnetometer is a measuring instrument used to measure the magnetic field's strength and direction. A 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 allow them to be identified and mapped by magnetic surveys. Buried steel objects also produce strong local magnetic fields or anomalies. Magnetometer surveys find USTs, drums, piles, and reinforced concrete foundations by detecting the magnetic anomalies they produce.

A GPR is a geophysical method that uses radar pulses to image the subsurface, the most common method to locate USTs. The USTs can be made of metal or any other material with different electrical or conductive properties than the surrounding subsurface oil and rocks. The GPR can determine the boundaries of current or former UST excavations.

Underground utilities detected were spray-painted on the surface of the subject property. All drilling locations were completed without encountering underground utilities or obstructions while collecting soil samples on the Subject Property.

3.3. HEALTH AND SAFETY

A Site-Specific Health and Safety Plan was prepared before field activities. Envitechnology performed air monitoring for total volatile organic compounds (VOCs) during all field activities and enforced 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 breathing protection equipment was unnecessary.



3.4. EXPLORATION METHODS

A total of seven (7) soil borings were advanced at the Subject Property on July 25, 2022, as follows:

- Four (4) soil borings (B1 through B4) were advanced in the vicinity of the current USTs.
- Three (3) soil borings (B5 through B7) were advanced in the vicinity of the current fueling dispensers.

Four (4) borings in the vicinity of the USTs were advanced until boring refusal was encountered at depths ranging from 9 to 19 feet bgs. The remaining three (3) borings were terminated at a depth of 10 feet bgs. The location of the borings is shown in Figure 2 – *Site Exploration Map.*

The boring method was a direct push probe (Geoprobe Systems Model 6600) performed by Standard Environmental Probe., which involves using a truck-mounted hydraulic hammer to push a series of 1.5-inch diameter steel rods to the sampling depth. Every five feet, the rods were removed, and disposable Teflon sampling tubes were recovered. New sections of Teflon sampling tubes were used for each sampling depth.

According to the United Soil Classification System, each borehole was logged as described in Exploration Log Key in Appendix 1. Borehole logs are included in Appendix 1 – *Boring Logs*.

3.5. SUBSURFACE SOIL SAMPLING METHODS

The sampling was designed to prove the collection of potentially contaminated environmental media, if they occur, at locations and depths where the highest concentrations are likely to occur.

A total of seven (7) soil samples were collected, one sample per borehole. There was no obvious indication of contamination based on such factors noted during probing and sampling as odors, soil discoloration, visual sheen, stratigraphy, and PID reading. Therefore, the soil samples in the vicinity of the USTs were collected at a depth of 15 feet bgs (below the bottom of the UST bedding materials), except B2, where the soil sample was collected at a boring terminal depth of 9 feet bgs. The other soil samples in the vicinity of the fueling dispensers were collected at a depth of 10 feet bgs.

The soil samples were collected under the Environmental Protection Agency (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 two (2) pre-weighted, methanol preserved 40-milliliter (mL) volatile organic analysis (VOA) vials with Teflon-sealed lids furnished by the project laboratory. Samples were stored on ice in a cooler at the Site and taken to the laboratory in this condition to minimize excessive dissipation of volatile fraction hydrocarbons. Each container was labeled as a boring number, sample number, geologist, etc. EPA recommended a 5035-sampling protocol for sample collection and management, including



maintenance of chain-of-custody documentation observed at each project stage. Each sample was collected into a two-ounce jar for dry weight determination.

3.6. FIELD SCREENING

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

3.7. CHEMICAL ANALYTICAL METHODS

The Contaminants of Concern (COCs) are those chemicals that present an environmental risk. The COCs for the Subject Property are GRO, DRO, ORO, and BTEX.

The soil and groundwater samples were analyzed for the presence of GRO and BTEX via Northwest Method NWTPH-Gx/BTEX and DRO and ORO via Northwest Method NWTPH-Dx.

The location, depth, and type of samples collected are summarized in Table 1 – *Type of Samples Collected*.

3.8. QUALITY CONTROL

The chemical testing was designed to detect the contaminants suspected to be present in the samples collected. The testing plan included tests that 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 (Libby Environmental, Inc.). 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 analytical laboratory provided QA/QC control, including surrogate recoveries for each sample, method blank results, duplicate analysis, and laboratory control samples. All analytical laboratory QA/QC results were within required limits. Analytical laboratory results are provided in Appendix 3 – Laboratory Report.



3.9. Investigation-Derived Waste

Investigation-derived waste for this project consisted of soil cuttings from the boring activity, decontamination water from cleaning the drilling core barrel and associated equipment, and purge water from groundwater sampling.

These wastes were placed in the US Department of Transportation-approved 16-gallon drums. The drums were appropriately labeled and stored for subsequent characterization and disposal.

3.10.DECONTAMINATION AND HOLE CLOSURE

Boreholes were filled with bentonite granules, 2 feet of concrete mix, and patched with asphalt. Disposable sampling equipment was disposed of at each sample interval. Non-disposable sampling equipment was 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 could be profiled and appropriately disposed of.



4. ANALYTICAL RESULTS

4.1. 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 19 feet bgs. The surface cover at the Site consists of asphalt/concrete. Native soils beneath fill or other surface cover materials include a layer of dark brown, medium dense to dense, sandy loam to a depth of 13 feet bgs and underlain by a layer of olive brown, dense to very dense silty loam to a boring terminal depth of 19 feet bgs. Perched groundwater was encountered at a depth of 10 feet bgs in B3.

All soil samples were screened for VOCs with a MiniRae 2000 PID. No VOCs were detected in all soil samples with the PID. The physical condition did not indicate petroleum impact (e.g., soil staining, petroleum odor, and dark gray color). No other additional samples or boring locations were added based on the lack of any field indicators of subsurface contamination.

4.2. GEOPHYSICAL SURVEY

Before conducting the subsurface investigation, a geophysical survey using EM equipment and GPR was conducted. The GPR survey did not reveal the presence of any anomaly indicative of abandoned USTs at the Site. However, the survey identified buried electric lines, underground utilities, and other buried objectives at the Site. While collecting soil samples at the Subject Property, all boring locations were completed without encountering underground utilities or obstructions.

4.3. SOIL ANALYTICAL RESULTS

The soil analytical results, along with the DOE CULs, are summarized in Table 2 – *Soil Analytical Results*. Laboratory documents are located in Appendix 3 – *Laboratory Report*.

The results are summarized below:

- GRO was detected at 790 mg/kg above the applicable MTCA Method A CUL of 30 mg/kg in B2-9.
- Benzene was detected at 0.044 mg/kg above the applicable MTCA Method A CUL of 0.03 mg/kg in B1-15.
- DRO, benzene, and ethylbenzene were also detected at concentrations below the applicable MTCA Method A CULs in B2-9.



4.4. GROUNDWATER ANALYTICAL RESULTS

The perched groundwater analytical results, along with the DOE CULs, are summarized in Table 3 – *Groundwater Analytical Results*. Laboratory documents are located in Appendix 3 – *Laboratory Report*.

The results are summarized below:

- GRO was detected at 16,000 $\mu g/L$ above the applicable MTCA Method A CUL of 800 $\mu g/L$ in B3-W.
- Benzene was detected at 1,200 $\mu g/L$ above the applicable MTCA Method A CUL of 5 $\mu g/L$ in B3-W.
- Other petroleum contaminants were not detected at concentrations above the applicable MTCA Method A CULs in B3-W.



5. PROPOSED CLEANUP STANDARD

5.1. RECOGNIZED ENVIRONMENTAL CONDITIONS

The recognized on-site environmental concerns assessed as part of this Phase II ESA were as follows:

<u>Current USTs</u> – Based on the age of the current USTs (35 years) and the lack of recent analytical soil and groundwater data, the potential to impact the subsurface cannot be ruled out. As such current USTs at the Subject Property represent a REC.

5.2. CONCEPTUAL SITE MODEL

The conceptual site model takes into consideration the potential distribution of contaminants concerning 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 collect potentially contaminated environmental media, if they occur, at locations and depths where the higher concentrations are likely to occur.

The source of COCs is the property's operations as a fueling service station. The historical use of USTs would likely have contained fuel. Based on the age of the service station, typical operation procedures at that time probably resulted in spills, drips, or leaks of petroleum compounds.

The COCs include the following:

- Total petroleum hydrocarbons (TPH)– GRO, DRO, and ORO.
- BTEX

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

- Potentially complete soil exposure pathways at the Site include direct ingestion of, or dermal contact with, hazardous substances in soil by visitors, residents, and workers; and ground leaching pathway. Petroleum hydrocarbon constituents were detected at concentrations that exceeded CULs for potential receptors via this exposure pathway.
- Potentially complete groundwater exposure pathways at the Site include direct ingestion
 of, or dermal contact with, hazardous substances dissolved in groundwater by visitors,
 residents, and workers; and consumption of hazardous substances in groundwater.
 Perched groundwater was encountered near the UST nest during soil boring
 advancement. Petroleum hydrocarbon constituents were detected at concentrations that
 exceeded CULs for potential receptors via this exposure pathway.



• Potentially complete air exposure pathways at the Site include inhalation of hazardous substances in soil vapor by visitors, residents, and workers. Volatile COCs were detected at concentrations that exceeded CULs for potential receptors via this exposure pathway.

5.3. 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 of at the property. Concerning the recognized environmental conditions assessed, petroleum products have been released or disposed of at the Subject Property.

5.4. PROPOSED CLEANUP LEVELS

MTCA requires that cleanup actions meet cleanup standards. These standards are comprised of both CULs and points of compliance. A CUL is the concentration of the 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 CULs must be met. MTCA provides three options for establishing CULs, 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 CULs for the most common hazardous substances found in soil and groundwater, including those constituents identified at this Site
- Method B: Universal Method. MTCA B CULs 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 CULs. 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 CULs 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) CULs 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 the total cancer risk caused by all substances at a site.



The MTCA CULs proposed for the Site are MTCA Method A CULs for soil and groundwater. The MTCA Method A CULs are appropriate for the Site because the Subject Property is a typical retail fueling station without a complex mix of COCs.

5.5. OTHER CONCERNS

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

5.6. CONCLUSIONS

- GRO was detected at 790 mg/kg above the applicable MTCA Method A CUL of 30 mg/kg in the soil sample, B2-9.
- Benzene was detected at 0.044 mg/kg above the applicable MTCA Method A CUL of 0.03 mg/kg in the soil sample, B1-15.
- GRO was detected at 16,000 μg/L above the applicable MTCA Method A CUL of 800 μg/L in the perched groundwater sample, B3-W.
- Benzene was detected at 1,200 μ g/L above the applicable MTCA Method A CUL of 5 μ g/L in the perched groundwater sample, B3-W.



6. Recommendations

Based on the results of this assessment, the following are recommended.

- Additional soil and groundwater sampling are necessary to further delineate the extent and magnitude of petroleum impact.
- To achieve lawful compliance with Chapter 173-340-300 (site discovery and reporting), Envitechnology 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 and Source of Information

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TABLES

- Table 1. Type of Samples Collected
- Table 2. Soil Analytical Results
- Table 3. Groundwater Analytical Results



Sample ID	Sample type	Depth (ft)	Location	Constituents of concern	Analysis method	Date collected	
B1-15	Soil	15	B1	GRO, BTEX	NWTPH-Gx/BTEX	7/25/2022	
51 15	5011			DRO, ORO	MWTPH-Dx	772372022	
P 2 0	Soil	0	רם	GRO, BTEX	NWTPH-Gx/BTEX	7/25/2022	
D2-9	3011	9	DZ	DRO, ORO	MWTPH-Dx	1/23/2022	
D2 15		15	50	GRO, BTEX	NWTPH-Gx/BTEX	7/25/2022	
D3-13	5011	15	83	DRO, ORO	MWTPH-Dx	//25/2022	
D4 45	Cail	1 Г	B4	GRO, BTEX	NWTPH-Gx/BTEX	7/25/2022	
B4-15	5011	15		DRO, ORO	MWTPH-Dx	//25/2022	
DF 10	Sail	10	DE	GRO, BTEX	NWTPH-Gx/BTEX	7/25/2022	
D2-10	5011	10	са	DRO, ORO	MWTPH-Dx	//25/2022	
BC 10	Sail	10	DC	GRO, BTEX	NWTPH-Gx/BTEX	7/25/2022	
D0-10	5011	10	80	DRO, ORO	MWTPH-Dx	//25/2022	
D7 10	Cail	10	57	GRO, BTEX	NWTPH-Gx/BTEX	7/25/2022	
B7-10	J SOII 10	10	В7	DRO, ORO	MWTPH-Dx	//25/2022	
D2 \4/	Soil	10	20	GRO, BTEX	NWTPH-Gx/BTEX	7/25/2022	
D3-VV	5011	10	83	DRO, ORO	MWTPH-Dx	//25/2022	

Table 1. Type of Samples Collected

<u>Notes</u>

BTEX – Benzene, toluene, ethyl benzene & xylene

GRO – Gasoline range organics

DRO – Diesel range organics

ORO – Heavy oil range organics



		ТРН		VOCs				
Samples	GRO	DRO	ORO	Benzene	Toluene	Ethyl benzene	Xylene	
B1-15	<10	<50	<250	0.044	<0.10	<0.05	<0.15	
B2-9	790	450	<250	0.026	<0.10	1.0	<0.15	
B3-15	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	
B4-15	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	
B5-10	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	
B6-10	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	
B7-10	<10	<50	<250	<0.02	<0.10	<0.05	<0.15	
CULs	30	2,000	2,000	0.03	7	6	9	

Table 2. Soil Analytical Results

<u>Notes</u>

All values are presented in milligrams per kilogram (mg/Kg)

TPH – Total petroleum hydrocarbons

VOCs – Volatile organic compounds

GRO – Gasoline range organics

DRO – Diesel range organics

ORO – Heavy oil range organics

CULs – Method A Soil Cleanup Levels for Unrestricted Land Uses (Table 740-1)

Numbers in **bold** indicate concentrations detected below the MTCA Method A CULs

Numbers in bond red indicate concentration detected above the MTCA Method A CULs



		ТРН		VOCs			
Samples	GRO	DRO	ORO	Benzene	Toluene	Ethyl benzene	Xylene
B3-W	16,000	<250	<400	1,200	17	300	29
CULs	800	500	500	5	1,000	700	1,000

Table 3. Groundwater Analytical Results

<u>Notes</u>

All values are presented in micrograms per liter (μ g/L)

TPH – Total petroleum hydrocarbons

VOCs – Volatile organic compounds

GRO – Gasoline range organics

DRO – Diesel range organics

ORO – Heavy oil range organics

CULs – Method A Ground Water Cleanup Levels (Table 720-1)

Numbers in **bold** indicate concentrations detected below the MTCA Method A CULs

Numbers in bond red indicate concentration detected above the MTCA Method A CULs



FIGURES

Figure 1. Site Location Map

Figure 2. Site Exploration Map







APPENDICES

Appendix 1. Boring Logs Appendix 2. Site Photographs Appendix 3. Laboratory Report



APPENDIX 1. BORING LOGS



United System Classification S	ystem	(USCS)	Chart
--------------------------------	-------	--------	-------

Ma	ajor Divisio	ons	Grapł	USCS	Туріс	al Description	
			22	GW	Well Graded Gravel		
		Clean	20		Gravel-Sand Mixtures		
		Gravels		GP	Poorly-Graded Gravels		
	Gravel		6 •		Gravel-Sand Mixtures		
<i>(</i> 0	Graver		\sim	GM	Silty-Gravels		
oils		Gravels			Gravel-Sand-Silt Mixtu	res	
s pa		With Files	OO	GC	Clayey Gravels		
aine			11		Gravel-Sand-Clay Mixt	ures	
Gra				SW	Well-graded Sands		
rse		Clean			Gravelly Sands		
Coa		Sands		SP	Pooly-Graded Sands		
Ŭ	Cond				Gravelly Sands		
	Sanu	Courdo		SM	Silty Sands		
		Sands With Fines			Sand-Silt Mixtures		
			1111	SC	Clayey Sands		
			1111		Clay Mixture		
				ML	Inorganic Silt, rock Flor	ur	
					Clayey Silts with low p	lasticity	
	Silts &	Liquid		CL	Inorgalic Clays of low to medium		
<u>s</u>	Clavs	Limit Less			Plasticity		
, Soi	,	Than 50		OL	Organic Silts and Organ	nic Silty Clavs of	
pəu	ed				Low Plasticity		
rair				MH inorganic Silts of Moderately Plasticity			
e G		Liquid			<u> </u>		
Fin	Silts &	Limit		СН	Inorganic Clays of High Plasticity		
	Clavs	Greater					
	,	Than 50		ОН	Organic Clays and Silts of medium to		
					high Plasticity		
				PT	Peat. Humus. Soil with	predominantly	
High	ly Organic	Soils			Orgaic Concents	, ,	
	Stabllized G	Ground wate	er		Estimated Percent	Moisture Content	
$\bar{\nabla}$	Groundwat	er At time c	of Drilling	g	<5 Trace	Dry - dry to toucn	
GR	Grab sam	oler		-	5-10 Few	Sligthly Moist -perceptible	
EN	Encore				15-25 Little	Moist - Damp, no water	
SS	Split Spoo	n			30-45 Some	Very Moist - water visible	
SH	Shelby Tul	be			>50 Mostly	Wet - visible free water	
DP	Direct Pus	h			-		
	ENVIT	ECHNOLOGY					
- NVI	support@	Denvitechnology.com	(00		Explo	ration Log Key	
TECHNO	LOGY 9805 NE	116th Street, Suite 300	600 , Kirkland, WA	98034			



			DRING LOG																									
Projec	t: STAN	IMOOR) GAS A	ND DEI	I (0222	0626-1)	Elevation: 259 ft, above sea level																				
Driller	: STAN	DARD	ENVIR	ONME	NTAL I	PROBE		Drilling Method: GEOPROBE (MODEL 6600)																				
Sampl	ing Me	ethod:	DIREC	T PUSH	1			Logged by : Jake Lee																				
DEPTH (ft)	WELL	WATER LEVEL	ПТНОГОБУ	uscs	SAMPLE TYPE	SAMPLE NO.	PID READING	SOIL VISUAL DESCRIPTION																				
5	NSTRUCTED			SM			0.0	Top concrete 4" Dark gray,gravelly sandy loam, medium dense, dry																				
	WELL CO			FILL				Tank fill material, pea gravel Wet @ 6-16' (possibly perched water)																				
10	ON	M		ML			0.0	Grayish brown, silty loam, dense																				
15																									DP	B1-15	0.0	Soil sampling (B1-15) @ 9:50 Grayish brown, silty loam, very dense
20								Boring refusal at 19' No groundwater encountered																				
30																												
	1	ENV	ITECHN	OLOGY				STANWOOD GAS AND DELI																				
		www.	envitechni rt@envited	ology.com chnology.com	n			26901 OLD HIGHWAY 99 NORTH																				
ENV	HNOLOGY	Tel 42	5.890.3517	Fax 425.310	.6600 Kirkland	WA 09024		STANWOOD, WA 98292																				
		- 7005	mc 110 ^m 30	eet, some so	IU, NITKIANO,	WA 70034		7/25/2022 Boring No. B1																				



	BORING LOG											
Project: STAN	WOOD) GAS A	ND DEL	I (0222	0626-1)	Elevation: 259 ft, above sea level					
Driller: STAN	DARD	ENVIR	ONME	NTAL F	PROBE		Drilling Method: GEOPROBE (MODEL 6600)					
Sampling Me	thod:	DIREC	Γ PUSH	1			Logged by : Jake Lee					
DEPTH (ft) WELL	WATER LEVEL	ПТНОГОGY	USCS	SAMPLE TYPE	SAMPLE NO.	PID READING	SOIL VISUAL DESCRIPTION					
CONSTRUCTED			SM			0.0	Top concrete 4" Dark gray,gravelly sandy loam, medium dense, dry Tank fill material, pea gravel					
	í											
10 PA			ML	DP	B2-9	0.0	Grayish brown, silty loam, dense Boring refusal at 9' Soil sampling (B2-9) @ 10:15 No groundwater encountered					
ENVITECHNOLOGY www.envitechnology.com support@envitechnology.com Tel 425.890.3317 Fax 425.310.6600 9805 NE 1164 Street, Suite 300, Kirkland, WA 98034							STANWOOD GAS AND DELI 26901 OLD HIGHWAY 99 NORTH STANWOOD, WA 98292 7/25/2022 Boring No. B2					



	BORING LOG										
Projec	t: STAN	1000	D GAS A	ND DEL	_I (0222	20626-1)	Elevation: 259 ft, above sea level			
Driller	: STAN	DARD	ENVIR	ONME	NTAL	PROBE		Drilling Method: GEOPROBE (MODEL 6600)			
Sampl	ing Me	thod:	DIREC	Γ PUSH	1			Logged by : Jake Lee			
DEPTH (ft)	WELL	WATER LEVEL	ПТНОГОБУ	USCS	SAMPLE TYPE	SAMPLE NO.		SOIL VISUAL DESCRIPTION			
	NO WELL CONSTRUCTED	∑.		SM	U W DP	B3-W	0.0	Top concrete Grayish brown,gravelly sandy loam, medium dense, dry Dark brown, gravelly sandy loam, dense, dry Tank fill material, pea gravel Wet @ 6-16' (possibly perched water) Water sampling (B3-W) @ 10:50 Perched water encountred at 10-12 Dark brown, silty loam, very dense Soil sampling (B3-15) @ 10:40 Boring refusal at 15'			
35 ENVITECHNOLOGY www.envitechnology.com support@envitechnology.com Tef 425.890.3517 fax 425.310.6600 WM 09024								STANWOOD GAS AND DELI 26901 OLD HIGHWAY 99 NORTH STANWOOD, WA 98292			
			and the second second second					7/25/2022 Boring No. B3			



	BORING LOG										
Projec	t: STAN	IW00[D GAS A	ND DEL	l (0222	20626-1)	Elevation: 259 ft, above sea level			
Driller	: STAN	DARD	ENVIR	ONME	NTAL I	PROBE		Drilling Method: GEOPROBE (MOD	DEL 6600)		
Samp	ing Me	thod:	DIREC	T PUSH	ł			Logged by : Jake Lee			
DEPTH (ft)	WELL	WATER LEVEL	ПТНОГОБҮ	USCS	SAMPLE TYPE	SAMPLE NO.	PID READING	SOIL VISUAL DES	CRIPTION		
5	L CONSTRUCTED			SP			0.0	Top concrete Poorly graded, gray sand, medium	n dense		
10	NO WELI			FILL			0.0	Dark brown, silt loam, dense Tank fill material, pea gravel			
15				ML	DP	B4-15	0.0	Dark brown, silty loam, very dense Soil sampling (B4-15) @ 11:20 Boring refusal at 15'	e		
20 25 30 35								No groundwater encountered			
		ENV www.	ITECHN envitechno rt@envitec	OLOGY ology.com	m			STANWOOD GAS 26901 OLD HIGHWA	S AND DELI AY 99 NORTH		
ENTE	HNOLOG	Tel 42 9805	5.890.3517 NE 116th Str	Fax 425.310 eet, Suite 30	.6600 00, Kirkland	WA 98034		STANWOOD, V	VA 98292		
								7/25/2022	Boring No. B4		



	BORING LOG										
Projec	t: STAN	1000) GAS A	ND DEI	I (0222	20626-1)	Elevation: 259 ft, above sea level			
Driller	: STAN	DARD	ENVIR	ONME	NTAL I	PROBE		Drilling Method: GEOPROBE (MODEL 6600)			
Sampling Method: DIRECT PUSH								Logged by : Jake Lee			
DEPTH (ft)	WELL	WATER LEVEL	LITHOLOGY	uscs	SAMPLE TYPE	SAMPLE NO.	PID READING	SOIL VISUAL DESCRIPTION			
	NO WELL CONSTRUCTED			ML	DP	B5-10	0.0	Top concrete No recovery Dark brown, silty loam, dense Soil sampling (B5-10) @ 11:40 Boring termination at 10' No groundwater encountered			
35 ENVITECHNOLOGY www.envitechnology.com support@envitechnology.com Tel 425.810.6600 9805 NE 1164 Street, Suite 300, Kirkland, WA 98034								STANWOOD GAS AND DELI 26901 OLD HIGHWAY 99 NORTH STANWOOD, WA 98292			
								//25/2022 Bornig No. B5			



	BORING LOG											
Project: STAN	WOOD) GAS A	ND DEI	LI (0222	20626-1)	Elevation: 259 ft, above sea level					
Driller: STAND	DARD	ENVIR	ONME	NTAL I	PROBE		Drilling Method: GEOPROBE (MODEL 6600)					
Sampling Met	thod:	DIREC	T PUSH	1			Logged by : Jake Lee					
DEPTH (ft) WELL	WATER LEVEL	гітногоду	USCS	SAMPLE TYPE	SAMPLE NO.	PID READING	SOIL VISUAL DESCRIPTION					
N 5 5 10 10 10 10 20	>		ML	DP	в6-10	0.0	Top concrete Dark brown, silty loam, medium dense Olive brown, silty loam, dense Soil sampling (B6-10) @ 11:50 Boring termination at 10' No groundwater encountered					
25 25 30 35	ENV www. suppo ref 42 9805	/ITECHN .envitechn ort@envite 25890.3517 NE 1164 Str	OLOGY ology.com chnology.co fax 425.31(reet, Suite 3	m 0.6600 00, Kirkland	I, WA 98034		STANWOOD GAS AND DELI 26901 OLD HIGHWAY 99 NORTH STANWOOD, WA 98292					



	BORING LOG											
Project	:: STAN	1000) GAS A	ND DEI	LI (0222	20626-1)	Elevation: 259 ft, above sea level				
Driller:	STAN	DARD	ENVIR	ONME	NTAL	PROBE		Drilling Method: GEOPROBE (MODEL 6600)				
Sampliı	ng Me	thod:	DIREC	T PUSH	<u>+</u>			Logged by : Jake Lee				
DEPTH (ft)	WELL	WATER LEVEL	ГІТНОГОЄУ	USCS	SAMPLE TYPE	SAMPLE NO.	PID READING	SOIL VISUAL DESCRIPTION				
5	CONSTRUCTED			SM			0.0	Top concrete Dark brown, sandy loam, medium dense Olive brown, silty loam, dense				
10	NO WELL				DP	B7-10	0.0	Soil sampling (B7-10) @ 12:00 Boring termination at 10' No groundwater encountered				
15 20 25 30												
35		ENI	UTECHN				<u> </u>	STANWOOD GAS AND DELI				
ENVI	+ INOLOGY	E N V www. suppo Tel 42 9805	envitechno rt@envitec 15.890.3517 NE 116 th Str	ology.com thnology.cor Fax 425.310 reet, Suite 3	m).6600 00, Kirkland	I, WA 98034		26901 OLD HIGHWAY 99 NORTH STANWOOD, WA 98292 7/25/2022 Boring No. B7				



APPENDIX 2. SITE PHOTOGRAPHS



Photo 1. View of the Subject Property looking north.



Photo 3. Inside view of the convenience store.



Photo 2. View of convenience store building looking northeast.



Photo 4. View of the drive-thru espresso stand.



Photo 5. View of the UST pad looking northwest.



Photo 6. A view of the propane tank looking northwest.



Photo 7. View of the private locating.



Photo 8. View of the GPR survey.



Photo 9. View of the soil boring – B1.



Photo 10. View of the soil boring – B2.



Photo 11. View of the soil boring – B3.



Photo 12. View of the groundwater sampling at B3.



Photo 13. View of the soil boring – B4.



Photo 14. View of the soil boring – B5.



Photo 15. View of the soil boring – B6.



Photo 16. View of the soil boring – B7



APPENDIX 3. LABORATORY REPORT



3322 South Bay Road NE • Olympia, WA 98506-2957

August 1, 2022

Jake Lee Envitechnology, Inc. 9805 NE 116th Street, Suite 300 Kirkland, WA 98034

Dear Mr. Lee:

Please find enclosed the analytical data report for the Stanwood's Deli & Gas Project located in Stanwood, Washington.

The results of the analyses are summarized in the attached tables. Applicable detection limits and QA/QC data are included. The sample(s) will be disposed of within 30 days unless we are contacted to arrange long term storage.

Libby Environmental, Inc. appreciates the opportunity to have provided analytical services for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,

z I Um

Sherry L. Chilcutt Senior Chemist Libby Environmental, Inc.

Libby Environmental, Inc.				Chain of Custody Record								www.L	ibbyEnviror	nmental.com					
3322 South Bay Road NE	Ph:	360-352-2	110					-	-	~		_							
Olympia, WA 98506	Fax:	360-352-4	154			Date	e:		-	25.	-2	2		P	age:		1	of	
Client: Envitechnold	sy Ir	10				Proj	ect N	lanag	jer:	JA	ke		ee	~					
Address: 9,005 NE 1	16th	St #	300			Proj	ect N	lame:		Stan	and	ood	5	D.	eti	8	Gas		
City: Kickland		State:	A Zip:	98039	-	Location: 26901 01499 N City, St						itate:	Sta	nword	, wA				
Phone: 425-890-3	517	Fax:				Colle	ector	:]	Tak	el	et	2		D	ate o	of Coll	ection:	7/25	In
Client Project # 02.22	062	6-1				Ema	ail:	Tal	ele	ece	nur	Pec	hno	109	1.0	om		/	
THE BASA		-	Sample	Container		5260 00 54 00	SUSTIES	2100 37 822 17 182	A A A A A A A A A A A A A A A A A A A	81) 81,07 81,07 81,08	5 8 5 5	Netals CRA	Melds AH 62	10 10	V01821			//	
Sample Number	Depth	Time	Type	Туре	Y	27 ×	\sim	$\sum \frac{1}{2}$	$\sqrt{\mathbf{v}}$	~~~~	<u> </u>	70	<u>7 %</u>	7 50/	-	-		eld Notes	
1 51-15	15	9:50	100				$\overline{\gamma}$		\mathbf{A}	_					_				
2 32-9	9	10:15			+	++	_		++					_	_				
3 13-15	15	10:40							++		-	-				-			
4 14-15	15	11:20									-					_			
5 BS-10	10	1:40								_	_								
6 B6-10	10	11:50																	
7 B7-10	10	12:00																	
8 BZ-W	10	10:50	Water			V	V		V										
9																			
10																			
11																			
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Relinquished by:	, ר	helze	Date / Time	Received by:	e fl			7 -7	3 Da	te / Time	Good	San d Cond	nple dition?	Rece i Y	N	Re	marks:		
Relinguished by:	7-25	3-12	3:15	Keceived by:			7	-25-2	Da 22	1515	Cool Sam	er Ten ple Te	np. mp.		0°	, ;			
Relinquished by:			Date / Time	Received by:	~				Da	te / Time	Tota	I Numt	per of ers			TA	AT: 24H	IR 48HF	R 5-DAY

LEGAL ACTION CLAUSE: In the event of default of payment and/or failure to	pay, Client agrees to pay the costs of col	lection including court costs and reasonable attorney	fees to be determined by a court of law.

STANWOOD'S DELI & GAS PROJECT Envitechnology, Inc. Stanwood, Washington Libby Project # L22G085 Client Project # 02220626-1

Sample Description		Method	B1-15	B1-15 Dup	B2-9	B3-15	B4-15
		Blank					
Date Sampled		N/A	7/25/2022	7/25/2022	7/25/2022	7/25/2022	7/25/2022
Date Analyzed	PQL	7/26/2022	7/26/2022	7/26/2022	7/26/2022	7/26/2022	7/26/2022
	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Benzene	0.02	nd	0.044	0.026	0.026	nd	nd
Toluene	0.10	nd	nd	nd	nd	nd	nd
Ethylbenzene	0.05	nd	nd	nd	1.0	nd	nd
Total Xylenes	0.15	nd	nd	nd	nd	nd	nd
Gasoline	10	nd	nd	nd	790	nd	nd
Surrogate Recovery							
Dibromofluoromethane		118	132	147 S	129	124	128
1,2-Dichloroethane-d4		126	116	125	116	110	113
Toluene-d8		84	87	86	111	76	78
4-Bromofluorobenzene		109	87	88	115	108	103

Analyses of Gasoline (NWTPH-Gx) & BTEX (EPA Method 8260D) in Soil

"nd" Indicates not detected at listed detection limit.

"int" Indicates that interference prevents determination.

"S" Spike compound recovery is outside acceptance limits.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 65% TO 135%

STANWOOD'S DELI & GAS PROJECT Envitechnology, Inc. Stanwood, Washington Libby Project # L22G085 Client Project # 02220626-1

Sample Description		B5-10	B6-10	B7-10	
Date Sampled		7/25/2022	7/25/2022	7/25/2022	
Date Analyzed	PQL	7/26/2022	7/26/2022	7/26/2022	
	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	
Benzene	0.02	nd	nd	nd	
Toluene	0.10	nd	nd	nd	
Ethylbenzene	0.05	nd	nd	nd	
Total Xylenes	0.15	nd	nd	nd	
Gasoline	10	nd	nd	nd	
Surrogate Recovery					
Dibromofluoromethane		138 S	110	128	
1,2-Dichloroethane-d4		120	126	125	
Toluene-d8		78	80	81	
4-Bromofluorobenzene		89	83	86	
"nd" Indicates not dete	cted at lister	d detection li	mit		

Analyses of Gasoline (NWTPH-Gx) & BTEX (EPA Method 8260D) in Soil

Indicates not detected at listed detection limit.

"int" Indicates that interference prevents determination.

"S" Spike compound recovery is outside acceptance limits.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 65% TO 135%

STANWOOD'S DELI & GAS PROJECT Envitechnology, Inc. Stanwood, Washington Libby Project # L22G085 Client Project # 02220626-1

	Matrix Spike	Sample Ide	ntification:	B1-15				
		Date	Analyzed:	7/26/2022				
	Spiked	MS	MSD	MS	MSD	RPD	Limits	Data
	Conc.	Response	Response	Recovery	Recovery		Recovery	Flag
	(mg/kg)	(mg/kg)	(mg/kg)	(%)	(%)	(%)	(%)	
Benzene	0.25	0.20	0.20	80	78	2.0	65-135	
Toluene	0.25	0.18	0.19	73	74	1.6	65-135	
Ethylbenzene	0.25	0.25	0.26	101	104	2.3	65-135	
Total Xylenes	0.75	0.69	0.73	91	97	5.7	65-135	
Surrogate Recovery (%)				MS	MSD			
Dibromofluoromethane				122	122		65-135	
1,2-Dichloroethane-d4				104	100		65-135	
Toluene-d8				74	74		65-135	
4-Bromofluorobenzene				113	108		65-135	

QA/QC for Gasoline (NWTPH-Gx) & BTEX (EPA Method 8260D) in Soil

ACCEPTABLE RPD IS 35%

ANALYSES PERFORMED BY: Sherry Chilcutt

Date Analyzed	1: 7/26/2022				
	Spiked	LCS	LCS	LCS	Data
	Conc. (mg/kg)	Response (mg/kg)	Recovery (%)	Recovery Limits (%)	Flag
Benzene	0.25	0.21	85	80-120	
Toluene	0.25	0.23	90	80-120	
Ethylbenzene	0.25	0.26	106	80-120	
Total Xylenes	0.75	0.73	97	80-120	
Surrogate Recovery					
Dibromofluoromethane			145 S	65-135	
1,2-Dichloroethane-d4			116	65-135	
Toluene-d8			85	65-135	
4-Bromofluorobenzene			132	65-135	

Laboratory Control Sample

"S" Spike compound recovery is outside acceptance limits.

STANWOOD'S DELI & GAS PROJECT Envitechnology, Inc. Stanwood, Washington Libby Project # L22G085 Client Project # 02220626-1

BlankDate SampledN/A7/25/2022
Date SampledN/A7/25/2022
-
Date Analyzed PQL 7/26/2022 7/26/2022
$(\mu g/L)$ $(\mu g/L)$ $(\mu g/L)$
Benzene 1.0 nd 1200
Toluene 2.0 nd 17
Ethylbenzene 1.0 nd 300
Total Xylenes2.0nd29
Gasoline 100 nd 16000
Surrogate Recovery
Dibromofluoromethane 71 117
1,2-Dichloroethane-d4 141 S 128
Toluene-d8 120 106
4-Bromofluorobenzene 97 89

Analyses of Gasoline (NWTPH-Gx) & BTEX (EPA Method 8260D) in Water

"nd" Indicates not detected at listed detection limit.

"int" Indicates that interference prevents determination.

"S" Spike compound recovery is outside acceptance limits.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 65% TO 135%

STANWOOD'S DELI & GAS PROJECT Envitechnology, Inc. Stanwood, Washington Libby Project # L22G085 Client Project # 02220626-1

1	Matrix Spike Sample Identification: L22G084											
		Date	Analyzed:	7/26/2022								
	Spiked	MS	MSD	MS	MSD	RPD	Limits	Data				
	Conc.	Response	Response	Recovery	Recovery		Recovery	Flag				
	(µg/L)	(µg/L)	$(\mu g/L)$	(%)	(%)	(%)	(%)					
Benzene	5.0	5.7	5.4	115	108	5.7	65-135					
Toluene	5.0	6.8	6.6	135	132	2.2	65-135					
Ethylbenzene	5.0	5.5	5.4	110	107	2.6	65-135					
Total Xylenes	15.0	16.6	16.8	111	112	1.2	65-135					
Surrogate Recovery (%)				MS	MSD							
Dibromofluoromethane				119	133		65-135					
1,2-Dichloroethane-d4				140 S	141 S		65-135					
Toluene-d8				115	116		65-135					
4-Bromofluorobenzene				97	99		65-135					

QA/QC for Gasoline (NWTPH-Gx) & BTEX (EPA Method 8260D) in Water

ACCEPTABLE RPD IS 35%

"S" Spike compound recovery is outside acceptance limits.

ANALYSES PERFORMED BY: Sherry Chilcutt

Laboratory Control Sample

Date Analyzed	: 7/26/2022				
	Spiked	LCS	LCS	LCS	Data
	Conc.	Response	Recovery	Recovery	Flag
	(µg/L)	$(\mu g/L)$	(%)	Limits (%)	
Benzene	5.0	5.2	104	80-120	
Toluene	5.0	5.5	111	80-120	
Ethylbenzene	5.0	4.9	97	80-120	
Total Xylenes	15.0	14.5	97	80-120	
Surrogate Recovery					
Dibromofluoromethane			103	65-135	
1,2-Dichloroethane-d4			113	65-135	
Toluene-d8			105	65-135	
4-Bromofluorobenzene			102	65-135	

STANWOOD'S DELI & GAS PROJECT Envitechnology, Inc. Stanwood, Washington Libby Project # L22G085 Client Project # 02220626-1 3322 South Bay Road NE Olympia, WA 98506 Phone: (360) 352-2110 FAX: (360) 352-4154 Email: libbyenv@gmail.com

Date	Surrogate	Diesel	Oil
Analyzed	Recovery (%)	(mg/kg)	(mg/kg)
7/26/2022	109	nd	nd
7/29/2022	112	nd	nd
7/26/2022	116	nd	nd
7/26/2022	int	450	nd
7/26/2022	92	nd	nd
7/26/2022	122	nd	nd
7/29/2022	119	nd	nd
7/26/2022	117	nd	nd
7/26/2022	104	nd	nd
		~ 0	250
		50	250
	Date Analyzed 7/26/2022 7/29/2022 7/26/2022 7/26/2022 7/26/2022 7/26/2022 7/26/2022 7/26/2022	DateSurrogateAnalyzedRecovery (%)7/26/20221097/29/20221127/26/20221167/26/2022int7/26/2022927/26/20221227/29/20221197/26/2022104	Date Surrogate Diesel Analyzed Recovery (%) (mg/kg) 7/26/2022 109 nd 7/29/2022 112 nd 7/26/2022 116 nd 7/26/2022 116 nd 7/26/2022 116 nd 7/26/2022 92 nd 7/26/2022 92 nd 7/26/2022 122 nd 7/26/2022 119 nd 7/26/2022 104 nd 7/26/2022 104 nd

Analyses of Diesel & Oil (NWTPH-Dx/Dx Extended) in Soil

"nd" Indicates not detected at the listed detection limits.

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (2-F Biphenyl): 65% TO 135%

ANALYSES PERFORMED BY: Jenny Anderson & Lucy Owens

STANWOOD'S DELI & GAS PROJECT Envitechnology, Inc. Stanwood, Washington Libby Project # L22G085 Client Project # 02220626-1 3322 South Bay Road NE Olympia, WA 98506 Phone: (360) 352-2110 FAX: (360) 352-4154 Email: libbyenv@gmail.com

Analyses of Diesel & Oil (NWTPH-Dx/Dx Extended) in Water

Sample Number	Date Analyzed	Surrogate Recovery (%)	Diesel (µg/L)	Oil (µg/L)				
Method Blank	7/29/2022	71	nd	nd				
B3-W	7/29/2022	92	nd	nd				
Practical Quantitation Limit			200	400				
"nd" Indicates not detected at the listed detection limits.								
"int" Indicates that interference prevents determination.								

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (2-F Biphenyl): 42% TO 150%

ANALYSES PERFORMED BY: Lucy Owens

STANWOOD'S DELI & GAS PROJECT Envitechnology, Inc. Libby Project # L22G085 Date Received 7/25/22 15:15 3322 South Bay Road NE Olympia, WA 98506 Phone: (360) 352-2110 FAX: (360) 352-4154 Email: libbyenv@gmail.com

Received By KD

Sample Receipt Checklist

Chain of Custody								
1. Is the Chain of Custody complete?		\checkmark	Yes	🗌 No				
2. How was the sample delivered?		\checkmark	Hand Delivered	Picked Up)	Shipped		
Log In								
3. Cooler or Shipping Container is present.		\checkmark	Yes	🗌 No		□ N/A		
4. Cooler or Shipping Container is in good condition.		\checkmark	Yes	🗌 No		□ N/A		
5. Cooler or Shipping Container has Custody Seals present.			Yes	✓ No		□ N/A		
6. Was an attempt made to cool the samples?		\checkmark	Yes	🗌 No		□ N/A		
7. Temperature of cooler (0°C to 8°C recommended)			1.6	°C				
8. Temperature of sample(s) (0°C to 8°C recommended)			14.4	°C				
9. Did all containers arrive in good condition (unbroken)?		\checkmark	Yes	🗌 No				
10. Is it clear what analyses were requested?		\checkmark	Yes	🗌 No				
11. Did container labels match Chain of Custody?		\checkmark	Yes	🗌 No				
12. Are matrices correctly identified on Chain of Custody?		\checkmark	Yes	🗌 No				
13. Are correct containers used for the analysis indicated?		\checkmark	Yes	🗌 No				
14. Is there sufficient sample volume for indicated analysis?		\checkmark	Yes	🗌 No				
15. Were all containers properly preserved per each analysis?		\checkmark	Yes	🗌 No				
16. Were VOA vials collected correctly (no headspace)?			Yes	✓ No		🗌 N/A		
17. Were all holding times able to be met?		\checkmark	Yes	🗌 No				
Discrepancies/ Notes								
18. Was client notified of all discrepancies?			Yes	✓ No		□ N/A		
Person Notified:					Date:			
By Whom:				-	Via:			
Regarding:	VOA Headspace							
19. Comments.	VOA 1 = 1 cm bubble			_				
	VOA 2 = 2 cm bubble							
	VOA 3 = no bubble							