



Summary of Surficial Investigation

**ICBC Claim #CA57177.2 Khalis Transport,
Whidbey Island, Washington – GHD
Contractors Limited**

GHD Contractors Limited

7 August 2024

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1. Introduction

GHD Contractors Limited (GHD) was retained by the Insurance Corporation of British Columbia (ICBC) on behalf of Khalis Transport Inc. to conduct environmental consulting services related to a diesel release that occurred at 26184 State Route 20, in Coupeville, Washington (Property). The release was assigned ICBC Claim #CA57177.2. Based on information provided by ICBC and Khalis Transport Inc., GHD understands that on the morning of June 19, 2022, a truck carrying paper products was travelling northbound on State Route 20 when it failed to navigate a curve and collided with a building on the east side of the road. The collision resulted in damage to the building. In addition, a release of diesel fuel from the main tank of the vehicle migrated southwest along the asphalt of the roadway toward a vegetated area located south of the parking area on the Property (Incident). The volume of diesel released is unknown. The release was reported to the Washington State Department of Ecology (Ecology) and assigned Environmental Report Tracking System (ERTS) Report #715671. The Property location is presented on Figure 1.

GHD conducted an initial assessment of the Site on June 28, 2022, when visual and olfactory evidence of diesel impacts were observed in the vegetated area located southwest of the parking area on the Property. A surficial soil investigation was conducted on May 23, 2024, to further investigate soil impacts related to the Release to determine the characteristics and extent of impacts at the Site, if present.

The objective of this report is to provide a summary of the surficial investigation activities conducted on the Property on May 23, 2024, and present the laboratory analytical results from confirmatory soil sampling.

1.1 Scope and Limitations

This report has been prepared by GHD for GHD Contractors Limited and may only be used and relied on by GHD Contractors Limited for the purpose agreed between GHD and GHD Contractors Limited as set out in this report.

GHD otherwise disclaims responsibility to any person other than GHD Contractors Limited arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.

The opinions, conclusions and any recommendations in this report are based on assumptions made by GHD described in this report. GHD disclaims liability arising from any of the assumptions being incorrect.

2. Background

2.1 Site Setting

The Property is located at 26184 State Route 20, in Coupeville, Washington, adjacent to Route 20. The Property consists of primarily asphalt covered ground, with a single storey commercial building located in the east portion of the property. The portion of the Property to the north and south of the building and at the southwest extent of the Property are vegetated with grass. The topography is generally flat with a gentle slope to the south. The closest surface water body is Penn Cove, which is located approximately 100 feet southeast of the Property boundary.

2.2 Initial Assessment

On June 28, 2022, GHD met with a representative from Ecology on the Property and conducted an initial assessment. GHD's observations from the assessment are provided below:

- The truck involved in the crash which resulted in the Incident had been removed from the Property.
- A temporary fence had been erected around the damaged portion of the building and related debris. Given that this area was inaccessible, no observations were collected from within the fenced-off area.
- An absorbent boom was present just outside the temporary fence, adjacent to the grass on the southeast edge of the asphalt. Several used absorbent pads with fuel absorbed were also present on the ground surface.
- The guard rail adjacent to the Property on the southeast edge of State Route 20 was damaged.
- Suspected diesel staining was visible on asphalt in the southern portion of the parking area of the Property and on the southern portion of adjacent Penn Cove Road, depicted on Figure 2. The release of diesel appears to follow the gradual downward slope of the asphalt towards these areas.

A photographic log of the initial observations is presented in Appendix A.

During the initial assessment, GHD conducted preliminary soil screening using a photo ionization detector (PID) for undifferentiated volatile organic carbons (VOCs). VOC headspace readings observed in the ditch south of the parking area ranged from 0.0 to 56.2 parts per million (ppm) VOCs. Negligible VOC readings were observed in the grass area adjacent to the staining on the south side of Penn Cove Road, with a maximum reading of 0.6 ppm VOCs.

Observations from GHD's assessment on June 28, 2022, have been previously provided via an email summary on July 8, 2022.

3. Surficial Soil Investigation

On May 23, 2024, GHD conducted surficial soil screening and sampling at the property.

Soil Investigation activities were conducted in general accordance with the Soil Investigation and Remediation Plan dated April 5, 2024, previously agreed upon by ICBC and the Landowner.

A photographic log from soil investigation activities conducted on May 23, 2024, is presented in Appendix B.

3.1 Soil Screening

On May 23, 2024, GHD personnel conducted soil screening at the Property for the purpose of assessing and delineating the extents of impacted soil, if present. Common signs of impact such as stressed vegetation and staining or sheen on the ground surface were not observed during the investigation. GHD additionally performed further evaluation of Property inaccessible during the initial investigation. GHD's inspection was based on visual and olfactory evidence of adversely affected soil as well as soil VOC headspace measurements. GHD screened the proposed investigation area for VOCs using a PID equipped with a 10.6 electron volt lamp by testing the headspace of sealable plastic bags containing a small quantity of soil. Surficial soil was screened approximately in a 6 foot (ft) by 6 ft grid within areas of accessible topsoil for undifferentiated total VOCs. Holes were advanced to 0.2 ft using hand tools. Tools were decontaminated with Alconox precision cleaner and water between each use.

GHD personnel were able to safely conduct soil screening and sampling in the area directly adjacent to the damaged building on Site.

The following observations were made:

- VOC headspace readings observed in the ditch south of the parking area ranged from 0.0 to 4.2 ppm VOCs.

- VOC headspace readings in previously inaccessible areas to the north and south of the building ranged from 0.0 to 8.8 ppm VOCs.
- Soil sample composition ranged from loose brown organic rich soil to silty gravel with sand.
- Hydrocarbon odour and staining were not observed throughout the investigation.

Soil screening locations with associated PID values are presented in Figure 2.

3.2 Soil Sampling

Following preliminary assessment of potentially impacted areas via soil screening, GHD personnel collected soil samples from surficial soil. Soil sample locations were selected primarily based on screening locations with the highest soil headspace screening results, and to provide an even distribution of samples throughout the proposed investigation area.

GHD personnel collected a total of six investigative soil samples at Property for the purposes of determining the need for further remedial work. Soil samples were collected into laboratory-supplied containers and submitted under chain-of-custody protocol to ALS Environmental (ALS), an accredited laboratory located in Everett, WA for analysis of the following potential contaminants of concern (PCOCs):

- Benzene, toluene, ethylbenzene, and xylenes, collectively known as BTEX, analyzed by Environmental Protection Agency (EPA) Method 8260
- Total petroleum hydrocarbons gasoline range organics (TPH GRO) analyzed by northwest method TPH Gx (NWTPH-Gx)
- Total petroleum hydrocarbons diesel range organics (TPH DRO) analyzed by northwest method TPH Dx (NWTPH-Dx)
- Total petroleum hydrocarbons oil range organics (TPH ORO) analyzed by northwest method TPH Dx (NWTPH-Dx)

A summary of soil analytical results is presented on Table 1.

3.2.1 Regulatory Guidelines

Soil analytical data was assessed with respect to the following soil quality standards and guidelines:

- Washington Administrative Code (WAC):
 - Model Toxics Control Act (MTCA) Cleanup Levels and Risk Calculation (CLARC) Table 740-1 Method A Soil Cleanup Levels for Unrestricted Land Uses

The results from the soil investigation were used to determine if additional work is required to remediate the area of the release to meet applicable standards and guidelines.

4. Quality Assurance/Quality Control

A Quality Assurance/Quality Control (QA/QC) program was implemented to ensure quality data were generated. This program involved both field and laboratory QA/QC measures. The QA/QC program was initiated to ensure that if any form of sample contamination occurred, or if any lack of precision in the analytical methods employed was evident, the potential source and degree of the contamination or analytical imprecision could be identified and properly addressed.

The following measures were implemented for QA/QC:

- Between collection of each sample, field personnel put on a new pair of disposable nitrile gloves.
- Between collection of each sample, field personnel decontaminated the sampling equipment, if used.

- Calibration of monitoring equipment was completed daily, as required.
- Pre-cleaned laboratory-supplied sampling containers with the appropriate preservative were used.
- Samples were submitted under COC protocol of the accredited laboratory for chemical analysis. The COC forms document the condition and handling of the samples throughout the collection, transportation, and final analyses of the samples.
- From the time of collection to the time of submission to the laboratory, samples were stored in a cooler and packed on ice to maintain sample integrity.

Following the receipt of the analytical data from the laboratory, a GHD chemist performed a data quality assessment and validation. The evaluation of the analytical data is based on the QA/QC information provided by the laboratory including laboratory blank data, laboratory duplicate data, and laboratory surrogate spike and check recovery data, as well as sample holding times, field duplicate analysis, and reagent blank analysis.

5. Results

The following section presents the soil analytical results from samples collected on May 23, 2024.

5.1 Surficial Soil Sample Results

A summary of soil analytical results is presented on Table 1.

Samples were collected from both the area adjacent to the southern property boundary as well as areas to the north and south of the damaged building which were previously inaccessible.

Based on a review of the soil analytical results from the six soil samples collected, concentrations of analysed parameters, specifically hydrocarbon-related PCOCs, were below the applicable cleanup levels outlined in section 3.2.1.

Copies of the soil laboratory analytical report is presented in Appendix C.

6. Conclusions

Based on the data and information presented in this report, the following conclusions are made:

- No visual or olfactory evidence of diesel impacts were observed on the Property during the surficial soil investigation on May 23, 2024.
- Concentrations of diesel related PCOCs were below the MTCA Method A cleanup levels in each of the soil samples collected on May 23, 2024.

Given the results of observations made during the investigation and surficial soil screening and sampling conducted, no further remedial action is recommended related to the Incident.

7. References

- [1] Department of Ecology, State of Washington. 2001 & 2004. Supporting Material for Cleanup Levels and Risk Calculation – Toxic Cleanup Program, Soil Cleanup Levels for Unrestricted Land Use – Table 740-1.

Tables

Table 1

Soil Analytical Results
ICBC Claim #CA57177.2
Khalis Transport Inc
26184 State Route 20, Coupeville, Washington

Sample Location:			S-01	S-02	S-03	S-04	S-05	S-06
			Building North	Building North	Building North	Southwestern Property Line	Southwestern Property Line	Building South
Sample ID:			SO-12587420-052324-MH-01	SO-12587420-052324-MH-02	SO-12587420-052324-MH-03	SO-12587420-052324-MH-04	SO-12587420-052324-MH-05	SO-12587420-052324-MH-06
Sample Date:			5/23/2024	5/23/2024	5/23/2024	5/23/2024	5/23/2024	5/23/2024
Sample Depth:			0.16 ft BGS	0.16 ft BGS	0.16 ft BGS	0.16 ft BGS	0.16 ft BGS	0.16 ft BGS
Parameters	Units	WAC Table 740-1 Method A						
PHC								
Motor oil	µg/g	--	150	72	3500	440	840	240
Total Petroleum Hydrocarbons - Diesel Range Organics	µg/g	2000	ND (50)	ND (25)	580	67	73	ND (50)
Total Petroleum Hydrocarbons - Gasoline Range Organics	µg/g	30	ND (3.0)	ND (3.0)	ND (3.0)	ND (3.0)	ND (3.0) J	ND (3.0)
VOC								
Benzene	µg/g	0.03	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
Ethylbenzene	µg/g	6	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)
Toluene	µg/g	7	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)	ND (0.010)
Xylenes (total)	µg/g	9	ND (0.020)	ND (0.020)	ND (0.020)	ND (0.020)	ND (0.020)	ND (0.020)

- Notes:**
- WAC

- Washington Administrative Code Model Toxics Control Act (MTCA) Cleanup Levels and Risk Calculation (CLARC) Table 740-1 Method A Soil Cleanup Levels for Unrestricted Land Uses
- ND (50)

- Not detected at the associated reporting limit.
- m BGS

- Metres below ground surface
- µg/g

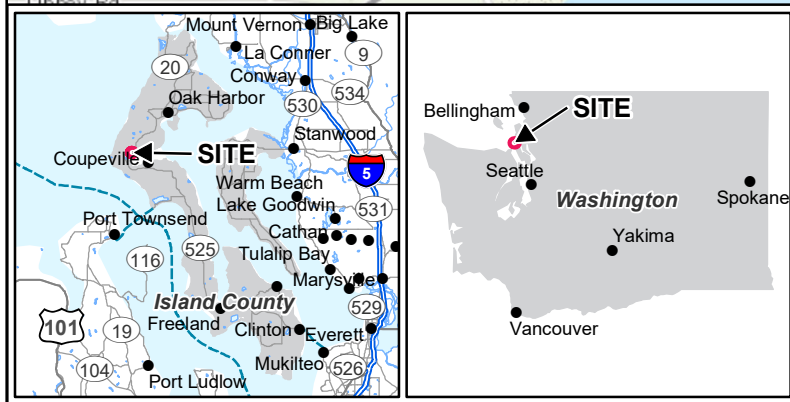
- Microgram per gram
- - No applicable standard or guideline
- PHC

- Petroleum hydrocarbons
- VOC

- Volatile organic compounds
- J

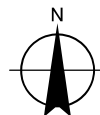
- Estimated concentration

Figures



Paper Size ANSI A
0 480 960 1,440 1,920
Feet

Map Projection: Mercator
Horizontal Datum: WGS 1984
Grid: World Mercator



KHALIS TRANSPORT INC
ICBC CLAIM #CA57177.2
26184 STATE ROUTE 20,
COUPEVILLE, WASHINGTON

Project No. **12587420**
Revision No. -
Date **Aug 07, 2024**

PROPERTY LOCATION MAP

FIGURE 1

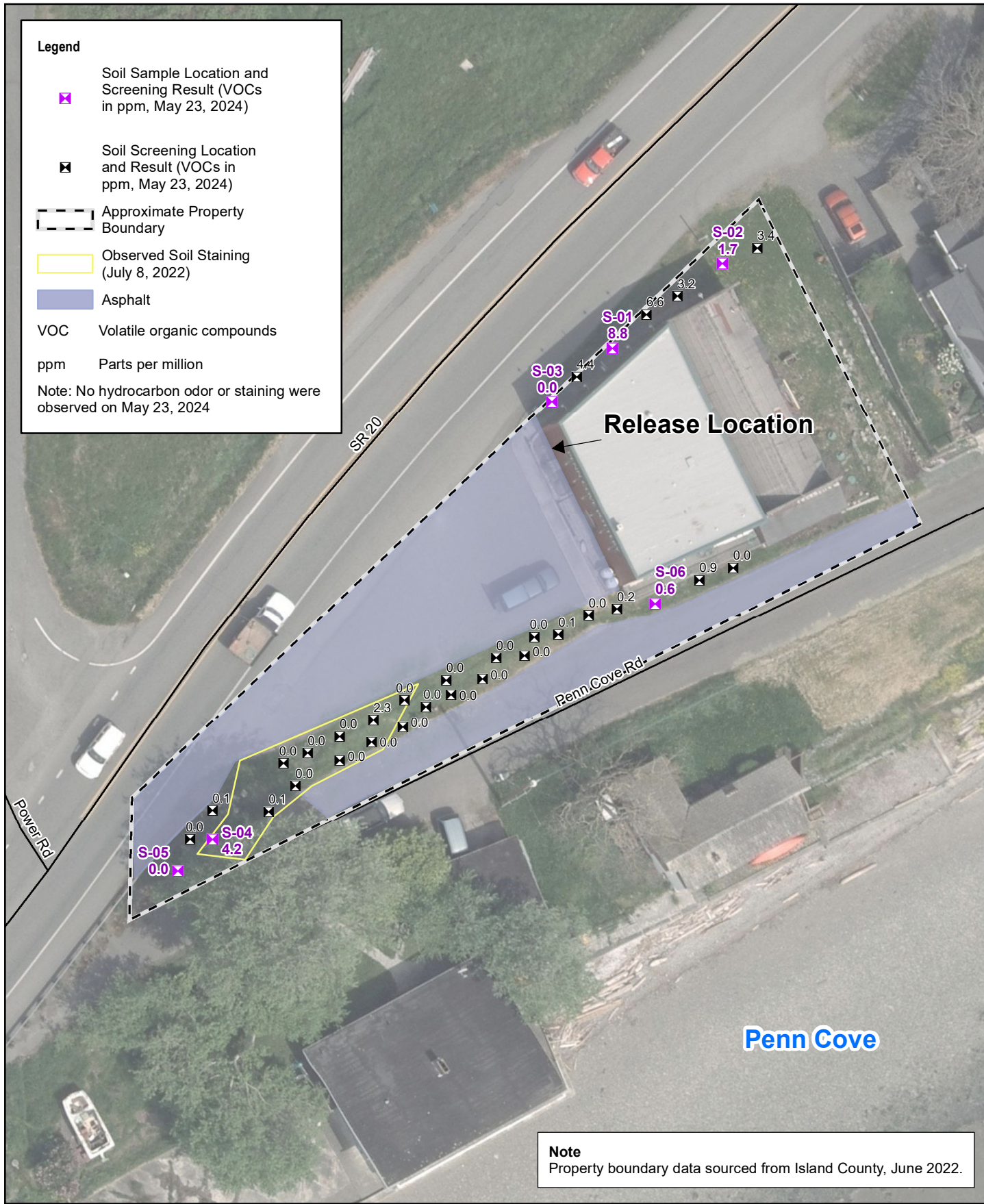


FIGURE 2

Appendices

Appendix A

Photographic Log June 28, 2022

Site Photographs



Photo 1 *View of damaged building and temporary fencing | Facing south | June 28, 2022*



Photo 2 *View of the damaged guard rail and suspected hydrocarbon impacted area on the south east edge of State Route 20. | Facing east | June 28, 2022*



Photo 3 ***View of suspected hydrocarbon staining on asphalt on the south side of Penn Cove Road | Facing south | June 28, 2022***



Photo 4 ***View of suspected contaminated soil along the shoulder of State Route 20 | Facing west | June 28, 2022***



Photo 5 **View of soil screening locations along the shoulder of State Route 20 | Facing west | June 28, 2022**

Appendix B

Photographic Log May 23, 2024



Photo 1 | View of southwestern Property Boundary, facing south | May 23, 2024



Photo 2 | View of damaged building on Site, facing north | May 23, 2024

Site Photographs



Photo 3 | View of previously inaccessible area south of damaged building, facing west | May 23, 2024



Photo 4 | View of soil screening and sampling activities, facing northeast | May 23, 2024

Site Photographs

Appendix C

Laboratory Report



May 31, 2024

Ms. Kristian Shortridge
GHD Services
9725 - 3rd Ave NE, Suite 204
Seattle, WA 98115

Dear Ms. Shortridge,

On May 23rd, 7 samples were received by our laboratory and assigned our laboratory project number EV24050195. The project was identified as your 12587420. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rob Greer
Laboratory Director



CERTIFICATE OF ANALYSIS

CLIENT:	GHD Services	DATE:	5/31/2024
	9725 - 3rd Ave NE, Suite 204	ALS JOB#:	EV24050195
	Seattle, WA 98115	ALS SAMPLE#:	EV24050195-01
CLIENT CONTACT:	Kristian Shortridge	DATE RECEIVED:	05/23/2024
CLIENT PROJECT:	12587420	COLLECTION DATE:	5/23/2024 11:45:00 AM
CLIENT SAMPLE ID	SO-12587420-052324-MH-01	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	05/28/2024	MNC
TPH-Diesel Range	NWTPH-DX	U	50	2	MG/KG	05/30/2024	DHM
TPH-Oil Range	NWTPH-DX	150	100	2	MG/KG	05/30/2024	DHM
Benzene	EPA-8260	U	0.0050	1	MG/KG	05/28/2024	DLC
Toluene	EPA-8260	U	0.010	1	MG/KG	05/28/2024	DLC
Ethylbenzene	EPA-8260	U	0.010	1	MG/KG	05/28/2024	DLC
Xylenes	EPA-8260	U	0.020	1	MG/KG	05/28/2024	DLC
Solids, Total	SM2540G	88.1	0	1	%	05/31/2024	CLC

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	79.8	05/28/2024	MNC
C25 2X Dilution	NWTPH-DX	102	05/30/2024	DHM
Toluene-d8	EPA-8260	105	05/28/2024	DLC

U - Analyte analyzed for but not detected at level above reporting limit.
Chromatogram indicates that it is likely that sample contains an unidentified diesel range product and lube oil.

CERTIFICATE OF ANALYSIS

CLIENT:	GHD Services	DATE:	5/31/2024
	9725 - 3rd Ave NE, Suite 204	ALS JOB#:	EV24050195
	Seattle, WA 98115	ALS SAMPLE#:	EV24050195-02
CLIENT CONTACT:	Kristian Shortridge	DATE RECEIVED:	05/23/2024
CLIENT PROJECT:	12587420	COLLECTION DATE:	5/23/2024 12:00:00 PM
CLIENT SAMPLE ID	SO-12587420-052324-MH-02	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	05/29/2024	MNC
TPH-Diesel Range	NWTPH-DX	U	25	1	MG/KG	05/31/2024	DHM
TPH-Oil Range	NWTPH-DX	72	50	1	MG/KG	05/31/2024	DHM
Benzene	EPA-8260	U	0.0050	1	MG/KG	05/28/2024	DLC
Toluene	EPA-8260	U	0.010	1	MG/KG	05/28/2024	DLC
Ethylbenzene	EPA-8260	U	0.010	1	MG/KG	05/28/2024	DLC
Xylenes	EPA-8260	U	0.020	1	MG/KG	05/28/2024	DLC
Solids, Total	SM2540G	91.6	0	1	%	05/31/2024	CLC

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	80.2	05/29/2024	MNC
C25	NWTPH-DX	118	05/31/2024	DHM
Toluene-d8	EPA-8260	104	05/28/2024	DLC

U - Analyte analyzed for but not detected at level above reporting limit.
Chromatogram indicates that it is likely that sample contains lube oil.



CERTIFICATE OF ANALYSIS

CLIENT: GHD Services
9725 - 3rd Ave NE, Suite 204
Seattle, WA 98115
DATE: 5/31/2024
ALS JOB#: EV24050195
ALS SAMPLE#: EV24050195-03
CLIENT CONTACT: Kristian Shortridge
DATE RECEIVED: 05/23/2024
CLIENT PROJECT: 12587420
COLLECTION DATE: 5/23/2024 12:30:00 PM
CLIENT SAMPLE ID: SO-12587420-052324-MH-03
WDOE ACCREDITATION: C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	05/29/2024	MNC
TPH-Diesel Range	NWTPH-DX	580	120	5	MG/KG	05/29/2024	DHM
TPH-Oil Range	NWTPH-DX	3500	250	5	MG/KG	05/29/2024	DHM
Benzene	EPA-8260	U	0.0050	1	MG/KG	05/28/2024	DLC
Toluene	EPA-8260	U	0.010	1	MG/KG	05/28/2024	DLC
Ethylbenzene	EPA-8260	U	0.010	1	MG/KG	05/28/2024	DLC
Xylenes	EPA-8260	U	0.020	1	MG/KG	05/28/2024	DLC
Solids, Total	SM2540G	89.9	0	1	%	05/31/2024	CLC

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	81.6	05/29/2024	MNC
C25 5X Dilution	NWTPH-DX	110	05/29/2024	DHM
Toluene-d8	EPA-8260	102	05/28/2024	DLC

U - Analyte analyzed for but not detected at level above reporting limit.
Chromatogram indicates that it is likely that sample contains an unidentified diesel range product and lube oil.
Diesel range product results biased high due to oil range product overlap.



CERTIFICATE OF ANALYSIS

CLIENT:	GHD Services	DATE:	5/31/2024
	9725 - 3rd Ave NE, Suite 204	ALS JOB#:	EV24050195
	Seattle, WA 98115	ALS SAMPLE#:	EV24050195-04
CLIENT CONTACT:	Kristian Shortridge	DATE RECEIVED:	05/23/2024
CLIENT PROJECT:	12587420	COLLECTION DATE:	5/23/2024 12:15:00 PM
CLIENT SAMPLE ID	SO-12587420-052324-MH-04	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	05/29/2024	MNC
TPH-Diesel Range	NWTPH-DX	67	50	2	MG/KG	05/30/2024	DHM
TPH-Oil Range	NWTPH-DX	440	100	2	MG/KG	05/30/2024	DHM
Benzene	EPA-8260	U	0.0050	1	MG/KG	05/28/2024	DLC
Toluene	EPA-8260	U	0.010	1	MG/KG	05/28/2024	DLC
Ethylbenzene	EPA-8260	U	0.010	1	MG/KG	05/28/2024	DLC
Xylenes	EPA-8260	U	0.020	1	MG/KG	05/28/2024	DLC
Solids, Total	SM2540G	79.0	0	1	%	05/31/2024	CLC

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	70.6	05/29/2024	MNC
C25 2X Dilution	NWTPH-DX	111	05/30/2024	DHM
Toluene-d8	EPA-8260	109	05/28/2024	DLC

U - Analyte analyzed for but not detected at level above reporting limit.
Chromatogram indicates that it is likely that sample contains an unidentified diesel range product and lube oil.
Diesel range product results biased high due to oil range product overlap.

CERTIFICATE OF ANALYSIS

CLIENT:	GHD Services	DATE:	5/31/2024
	9725 - 3rd Ave NE, Suite 204	ALS JOB#:	EV24050195
	Seattle, WA 98115	ALS SAMPLE#:	EV24050195-05
CLIENT CONTACT:	Kristian Shortridge	DATE RECEIVED:	05/23/2024
CLIENT PROJECT:	12587420	COLLECTION DATE:	5/23/2024 12:45:00 PM
CLIENT SAMPLE ID	SO-12587420-052324-MH-05	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	05/29/2024	MNC
TPH-Diesel Range	NWTPH-DX	73	50	2	MG/KG	05/30/2024	DHM
TPH-Oil Range	NWTPH-DX	840	100	2	MG/KG	05/30/2024	DHM
Benzene	EPA-8260	U	0.0050	1	MG/KG	05/28/2024	DLC
Toluene	EPA-8260	U	0.010	1	MG/KG	05/28/2024	DLC
Ethylbenzene	EPA-8260	U	0.010	1	MG/KG	05/28/2024	DLC
Xylenes	EPA-8260	U	0.020	1	MG/KG	05/28/2024	DLC
Solids, Total	SM2540G	59.2	0	1	%	05/31/2024	CLC

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	49.6 SUR12	05/29/2024	MNC
C25 2X Dilution	NWTPH-DX	75.4	05/30/2024	DHM
Toluene-d8	EPA-8260	105	05/28/2024	DLC

U - Analyte analyzed for but not detected at level above reporting limit.

SUR12 -Surrogate recoveries were outside of the control limits due to matrix interference.

Chromatogram indicates that it is likely that sample contains an unidentified diesel range product and lube oil.

Diesel range product results biased high due to oil range product overlap.

CERTIFICATE OF ANALYSIS

CLIENT:	GHD Services	DATE:	5/31/2024
	9725 - 3rd Ave NE, Suite 204	ALS JOB#:	EV24050195
	Seattle, WA 98115	ALS SAMPLE#:	EV24050195-06
CLIENT CONTACT:	Kristian Shortridge	DATE RECEIVED:	05/23/2024
CLIENT PROJECT:	12587420	COLLECTION DATE:	5/23/2024 12:55:00 PM
CLIENT SAMPLE ID	SO-12587420-052324-MH-06	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	05/29/2024	MNC
TPH-Diesel Range	NWTPH-DX	U	50	2	MG/KG	05/30/2024	DHM
TPH-Oil Range	NWTPH-DX	240	100	2	MG/KG	05/30/2024	DHM
Benzene	EPA-8260	U	0.0050	1	MG/KG	05/28/2024	DLC
Toluene	EPA-8260	U	0.010	1	MG/KG	05/28/2024	DLC
Ethylbenzene	EPA-8260	U	0.010	1	MG/KG	05/28/2024	DLC
Xylenes	EPA-8260	U	0.020	1	MG/KG	05/28/2024	DLC
Solids, Total	SM2540G	85.1	0	1	%	05/31/2024	CLC

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	69.6	05/29/2024	MNC
C25 2X Dilution	NWTPH-DX	103	05/30/2024	DHM
Toluene-d8	EPA-8260	103	05/28/2024	DLC

U - Analyte analyzed for but not detected at level above reporting limit.
Chromatogram indicates that it is likely that sample contains lube oil.

CERTIFICATE OF ANALYSIS

CLIENT:	GHD Services 9725 - 3rd Ave NE, Suite 204 Seattle, WA 98115	DATE:	5/31/2024
		ALS SDG#:	EV24050195
CLIENT CONTACT:	Kristian Shortridge	WDOE ACCREDITATION:	C601
CLIENT PROJECT:	12587420		

LABORATORY BLANK RESULTS

MBG-052824S - Batch 212677 - Soil by NWTPH-GX

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	MG/KG	3.0	05/28/2024	MNC

U - Analyte analyzed for but not detected at level above reporting limit.

MB-052824S - Batch 212636 - Soil by NWTPH-DX

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range	NWTPH-DX	U	MG/KG	25	05/29/2024	DHM
TPH-Oil Range	NWTPH-DX	U	MG/KG	50	05/29/2024	DHM

U - Analyte analyzed for but not detected at level above reporting limit.

MB-052824S - Batch 212686 - Soil by EPA-8260

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Benzene	EPA-8260	U	MG/KG	0.0050	05/28/2024	DLC
Toluene	EPA-8260	U	MG/KG	0.010	05/28/2024	DLC
Ethylbenzene	EPA-8260	U	MG/KG	0.010	05/28/2024	DLC
Xylenes	EPA-8260	U	MG/KG	0.020	05/28/2024	DLC

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT: GHD Services
 9725 - 3rd Ave NE, Suite 204
 Seattle, WA 98115
CLIENT CONTACT: Kristian Shortridge
CLIENT PROJECT: 12587420

DATE: 5/31/2024
ALS SDG#: EV24050195
WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS
ALS Test Batch ID: 212677 - Soil by NWTPH-GX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
TPH-Volatile Range - BS	NWTPH-GX	98.5			66.5	122.7	05/28/2024	MNC
TPH-Volatile Range - BSD	NWTPH-GX	96.3	2		66.5	122.7	05/28/2024	MNC

ALS Test Batch ID: 212636 - Soil by NWTPH-DX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
TPH-Diesel Range - BS	NWTPH-DX	109			75.5	122.1	05/29/2024	DHM
TPH-Diesel Range - BSD	NWTPH-DX	120	10		75.5	122.1	05/29/2024	DHM

ALS Test Batch ID: 212686 - Soil by EPA-8260

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
Benzene - BS	EPA-8260	90.6			75	138	05/28/2024	DLC
Benzene - BSD	EPA-8260	89.2	2		75	138	05/28/2024	DLC
Toluene - BS	EPA-8260	96.7			71.6	122.1	05/28/2024	DLC
Toluene - BSD	EPA-8260	93.5	3		71.6	122.1	05/28/2024	DLC
Ethylbenzene - BS	EPA-8260	94.4			50	150	05/28/2024	DLC
Ethylbenzene - BSD	EPA-8260	92.1	3		50	150	05/28/2024	DLC
Xylenes - BS	EPA-8260	95.5			50	150	05/28/2024	DLC
Xylenes - BSD	EPA-8260	92.9	3		50	150	05/28/2024	DLC

APPROVED BY



Rob Greer
 Laboratory Director



ALS Environmental
8620 Holly Drive, Suite 100
Everett, WA 98208
Phone (425) 356-2600
Fax (425) 356-2626
http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

ALS Lab# (Laboratory Use Only)

EV24050195

Date 5/23/24 Page 1 Of 1

PROJECT ID: 12587420					ANALYSIS REQUESTED															OTHER (Specify)													
REPORT TO COMPANY: GHD					NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA 8021	BTEX by EPA 8260	MTBE by EPA 8021	MTBE by EPA 8260	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA 8270 SIM	PCB by EPA 8082	Pesticides by EPA 8081	Metals-MTCA-5	RCRA-8	Pri Pol	TAL	Metals Other (Specify)	TCPL-Metals	VOA	Semi-Vol	Pest	Herbs	Hold sample	NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?	
PROJECT MANAGER: Kristian Shortridge																																	
ADDRESS: 9725 3rd Ave NE Ste 204																																	
Seattle wa 98115																																	
PHONE: 236-330-9120 P.O. #: 340-018551																																	
E-MAIL: kristian.shortridge@ghd.com																																	
INVOICE TO COMPANY:																																	
ATTENTION:																																	
ADDRESS:																																	
Airesse, MacPhee@ghd.com																																	
SAMPLE I.D.	DATE	TIME	TYPE	LAB#																													
1.50-12587420-052324-MH-01	5/23	1145	SO	1		X	X	X																							4		
2.50-12587420-052324-MH-02	5/23	1200	SO	2		X	X	X																							4		
3.50-12587420-052324-MH-03	5/23	1230	SO	3		X	X	X																							4		
4.50-12587420-052324-MH-04	5/23	1215	SO	4		X	X	X																							4		
5.50-12587420-052324-MH-05	5/23	1245	SO	5		X	X	X																							4		
6.50-12587420-052324-MH-06	5/23	1255	SO	6		X	X	X																							4		
7.50-12587420-052324-MH-07	5/23	1210	SO	7		X	X	X																							4		
8.																																	
9.																																	
10.																																	

SPECIAL INSTRUCTIONS Sample 07 on hold pending results

SIGNATURES (Name, Company, Date, Time):

- Relinquished By: Mitchell Hatfield/GHD/5/23/24/ 1513
Received By: CHASE 5/23/24 1515
- Relinquished By: _____
Received By: _____

TURNAROUND REQUESTED in Business Days*									
Organic, Metals & Inorganic Analysis									
10	5	3	2	1	SAME DAY	OTHER:			
Fuels & Hydrocarbon Analysis						Specify: _____			
5	3	1	SAME DAY	_____					

*Turnaround request less than standard may incur Rush Charges

ALS ENVIRONMENTAL

Sample Receiving Checklist

Client: GHD ALS Job#: EV24050195

Project: 12587420

Login Date: 5/23/24 Login Time: 1515 Login By: ce

Type of Shipping Container: Cooler ☒ Box ☐ Other ☐

Shipped via: FedEx Ground ☐ UPS ☐ Courier ☐ Hand Delivered ☒ ALS Courier ☐
FedEx Express ☐

	Yes	No	N/A
Were custody seals on outside of shipping container?			<input checked="" type="checkbox"/>
If yes, how many? _____ Where? _____			
Custody seal date: _____ Seal name: _____			
Was Chain of Custody properly filled out (ink, signed, dated, etc.)?	<input checked="" type="checkbox"/>		
Did all bottles have labels?	<input checked="" type="checkbox"/>		
Did all bottle labels and tags agree with Chain of Custody?	<input checked="" type="checkbox"/>		
Were samples received within hold time?	<input checked="" type="checkbox"/>		
Did all bottles arrive in good condition (unbroken, etc.)?	<input checked="" type="checkbox"/>		
Was sufficient amount of sample sent for the tests indicated?	<input checked="" type="checkbox"/>		
Was correct preservation added to samples?	<input checked="" type="checkbox"/>		
Subcontract test containers added to Subcontract Bin?			<input checked="" type="checkbox"/>
Wetchem test containers marked with required Tests?			<input checked="" type="checkbox"/>
Short hold time test containers delivered to analysts?			<input checked="" type="checkbox"/>
Were VOA vials checked for absence of air bubbles?			<input checked="" type="checkbox"/>
Bubbles present in sample #: _____			

5035A kits received? 7 # Low Kits: 7 # High Kits: 0

5035A kits returned? 0 # Low Kits: 0 # High Kits: 0

sodium bisulfates

Temperature of cooler upon receipt: 4.3 On ice? ☒

Explain any discrepancies:

Was client contacted? _____ Who was called? _____ By whom? _____ Date: _____

Outcome of call:



GHD FIRST