



September 03, 2020  
Project No. 20-0591

**Freeland and Associates**  
220 West Champion Street #200  
Bellingham, WA 98225

Attn: Tony Freeland, P.E.

**Re: Analytical Sampling Results  
Queen Mountain Plat  
4175 Iron Gate Road  
Bellingham, WA 98226  
Parcel Number 380308336210**

Dear Mr. Freeland,

As requested, GeoTest Services, Inc. [GeoTest] is pleased to submit analytical results related to preliminary screening for the identification of potential contamination of existing site fill soil historically stockpiled within the proposed project location.

#### **PURPOSE AND SCOPE OF SERVICES**

The purpose of our services was to perform preliminary environmental sampling of historic fill soils present within the subject site. Our work entailed 5-point composite sampling of fill soils in order to assess the material for the presence of petroleum products, heavy metals, and/or other compound contamination that may be present.

In accordance with Washington State Department of Ecology (DOE) and the United States Environmental Protection Agency (EPA), the fill area, if treated as a stockpile, requires approximately 40 to 50 individual tests based on digital volume estimates which approximate the amount of material present to be between 15,000 and 20,000 cubic yards (cy). As such, composite sampling is intended for preliminary assessment and screening only.

Specifically, the scope of our services included the following:

- GeoTest collected five 5-point composite soil samples from the historic fill material per the DOE's Guidelines for Sampling as outlined in the Guidance for Remediation of Petroleum Contaminated Sites Toxics Cleanup Program.

- Periodic field screening via photo ionization detector during sample collection operations.
- The obtained composite samples were analyzed for the following list of compounds using a qualified independent laboratory:
  - TPH - Gasoline Range Organics with BTEX, MTBE Combination (NWTPH-G<sub>x</sub>, EPA 8021)
  - Resource Conservation and Recovery Act (RCRA) Heavy Metals (RCRA-8 Metals, EPA Method 6020) + Chromium III + Hexavalent Chrome (EPA 7196)
  - TPH - Diesel and Oil Range Organics (NWTPH-D<sub>x</sub>)
  - Volatile Organic Compounds (VOCs -Includes HVOCs, EPA 8260)
  - Semi-Volatile Organic Compounds (SVOCs, EPA 8270)
  - Polychlorinated Biphenyl Compounds (PCBs, EPA Method 8082)
  - Pesticides
- All soil samples were submitted for analytical testing to ALS Analytical Laboratories, Inc. (ALS) located in Everett, WA. Standard laboratory turnaround time was 10 working days. Please reference the attached analytical sheets for more detail regarding the individual analyses conducted for each sample.
- Compile a summary letter that outlines the site conditions, work performed, sampling results, analytical results, and our conclusions.

## **FIELD SAMPLING METHODOLOGY**

On July 23<sup>rd</sup>, 2020, GeoTest was on-site to perform 5-point composite soil sampling. Five composite samples were obtained for analysis using pre-cleaned stainless-steel spoons and nitrile gloves.

For the 5-point composite sample collection, the stockpile was divided into five sections. Each section was then divided into five roughly equal sized subsections. Approximately eight ounces of material was selected from each subsection to create a sub-sample. Each portion of the sub-sample was placed into a homogenization container and mixed thoroughly prior to placing into sample jars. The soil was collected from various locations throughout the stockpile using an excavator to expose new sidewall and bottom soils just prior to sampling. This was done to ensure that “fresh” samples were obtained for chemical testing and to reduce the potential loss of volatile contaminants. Samples were obtained using a combination of sidewall sampling and sampling directly from the middle of the excavator bucket. A new pre-cleaned sampling spoon was used to sample at each location, and gloves were changed between each collection point to prevent cross-contamination. Sample depths ranged from one to two feet into the stockpile to upwards of eight feet, the maximum equipment reach of the excavator.

The soil sample containers for Oil and Diesel Total Petroleum Hydrocarbons (TPH-Oil, TPH-Diesel), RCRA 8 metals, SVOC, PAH, PCB, Pesticides, Hexavalent Chromium, and Chromium III consisted of two standard 8-oz wide mouth glass jars with Teflon-lined lids. The soil sample containers for TPH gasoline, BTEX, MTBE, VOC, and HVOC analyses were 40 ml glass vials using a disposable syringe via Method 5035: Closed-System Purge-and-Trap and Extraction for Volatile Organics in Soil and Waste Samples. The sample containers were appropriately prepared with preservatives (as applicable) by the analytical laboratory. Each sample was labeled, immediately placed in a cooler, and chilled to approximately 4 degrees Celsius. The samples were delivered to ALS within 24 hours of field collection. GeoTest followed the DOE recommendation that sample collection, handling, chain of custody records, and protocols be maintained during the process. Standard laboratory analysis required 10 full business days to complete.

Our field screening consisted of a visually inspecting the soils for stains indicative of petroleum-related contaminants, olfactory “sniff” tests for the presence of potential petroleum contamination, and the use of a photoionization detector (PID) to detect the possible presence of VOCs. PID readings at the time of sampling were consistently 0.0 parts per million (PPM).



**Photo 1:** An excavator was used during sampling to ensure that “fresh” samples were obtained for chemical testing to reduce the potential loss of volatile contaminants.

## **ANALYTICAL RESULTS**

### **Petroleum Related Contaminants:**

TPH-Diesel and TPH-Oil Range organics are present in all samples. The reported levels are below MTCA Method A Clean Up Levels for Industrial Properties. A chromatogram indicates that all samples likely contain an unidentified diesel range product and lube oil. According to Table 12.1 of DOE's Guidance for Remediation of Petroleum Contaminated Sites, the reported levels of petroleum related contaminants present in all samples cause the material to meet the criteria for Soil Category 3.

### **Semi-Volatile Organic Compounds (Includes Polycyclic Aromatic Hydrocarbons):**

SVOCs and PAHs are reported to be present in all five of the composite samples. The reported amounts of analytes present in each sample are below MTCA Method A Clean Up Levels for Industrial Properties.

### **Metals:**

Various RCRA 8 metals were identified in all soil samples; however, metals are naturally occurring and common in all soils. All identified metal concentrations would appear to be consistent with natural background levels expected for the region based on the reference tables provided by DOE and the US Geological Survey.

The following table provides a summary of sampling results:

<b>TABLE 1:            SUMMARY OF LABORATORY ANALYSES            QUEEN MOUNTAIN PLAT            ENVIRONMENTAL SOIL STOCKPILE SAMPLING</b>				
All soil sample results and limits are in milligrams per kilogram (MG/KG) or parts per million (ppm). Please refer to the individual analytical laboratory result sheets for a complete list of analyses and results.				
Sample #	Method	Analyte	Results	Action Level
COMP-1	NWTPH-D <sub>x</sub>	TPH-Diesel Range	48	100
	NWTPH-D <sub>x</sub>	TPH-Oil Range	290	100
	EPA-8270 SIM	Phenanthrene	44	N/A
	EPA-8270 SIM	Fluoranthene	0.210	3,200
	EPA-8270 SIM	Pyrene	0.180	2,400
	EPA-8270 SIM	Benzo(A)Anthracene	0.091	1.37
	EPA-8270 SIM	Chrysene	0.100	137
	EPA-8270 SIM	Benzo(B)Fluoranthene	0.200	1.37
	EPA-8270 SIM	Benzo(K)Fluoranthene	0.067	13.7
	EPA-8270 SIM	Benzo(A)Pyrene	0.120	0.137
	EPA-8270 SIM	Ideno(1,2,3-Cd)Pyrene	0.100	1.37
	EPA-8270	Dibenz(A,H)Anthracene	0.035	0.137
	EPA-8270	Benzo(G,H,I)Perylene	0.180	N/A
	EPA-8270	Pyrene	0.100	2,400
	EPA-8270	Bis(2-Ethylhexyl)Phthalate	0.210	71.42
	EPA-8270	Benzo(B)Fluoranthene	0.160	1.37
	EPA-6020	Mercury*	0.076	20
	EPA-6020	Chromium III*	70	2,000
	EPA-6020	Arsenic*	4.6	20
	EPA-6020	Barium*	84	1,600
EPA-6020	Cadmium*	0.21	2.0	
EPA-6020	Lead*	24	250	
COMP-2	NWTPH-D <sub>x</sub>	TPH-Diesel Range	150	100
	NWTPH-D <sub>x</sub>	TPH-Oil Range	450	100
	EPA-8270 SIM	Fluorene	0.026	3,200
	EPA-8270 SIM	Phenanthrene	0.065	N/A
	EPA-8270 SIM	Fluoranthene	0.240	3,200
	EPA-8270 SIM	Pyrene	0.035	2,400
	EPA-8270 SIM	Chrysene	0.033	137
	EPA-8270 SIM	Benzo(B)Fluoranthene	0.030	1.37
	EPA-8270 SIM	Ideno(1,2,3-Cd)Pyrene	0.022	0.137
	EPA-8270 SIM	Benzo(G,H,I)Perylene	0.030	N/A
	EPA-6020	Mercury*	0.038	20
	EPA-6020	Chromium III*	43	2,000
	EPA-6020	Arsenic*	4.5	20
	EPA-6020	Barium*	120	1,600
	EPA-6020	Cadmium*	0.19	2.0
	EPA-6020	Lead*	9.9	250

<b>TABLE 1 (cont.):</b> <b>SUMMARY OF LABORATORY ANALYSES</b> <b>QUEEN MOUNTAIN PLAT</b> <b>ENVIRONMENTAL SOIL STOCKPILE SAMPLING</b>				
All soil sample results and limits are in milligrams per kilogram (MG/KG) or parts per million (ppm). Please refer to the individual analytical laboratory result sheets for a complete list of analyses and results.				
Sample #	Method	Analyte	Results	Action Level
COMP-3	NWTPH-D <sub>x</sub>	TPH-Diesel Range	83	100
	NWTPH-D <sub>x</sub>	TPH-Oil Range	390	100
	EPA-8270 SIM	Fluorene	0.032	3,200
	EPA-8270 SIM	Phenanthrene	0.070	N/A
	EPA-8270 SIM	Fluoranthene	0.170	3,200
	EPA-8270 SIM	Pyrene	0.050	2,400
	EPA-8270 SIM	Benzo(A)Anthracene	0.027	1.37
	EPA-8270 SIM	Chrysene	0.052	137
	EPA-8270 SIM	Benzo(B)Fluoranthene	0.060	1.37
	EPA-8270 SIM	Benzo(A)Pyrene	0.030	0.137
	EPA-8270 SIM	Ideno(1,2,3-Cd)Pyrene	0.025	0.137
	EPA-8270 SIM	Benzo(G,H,I)Perylene	0.037	N/A
	EPA-6020	Mercury*	0.075	20
	EPA-6020	Chromium III*	44	2,000
	EPA-6020	Arsenic*	5.4	20
	EPA-6020	Barium*	160	1,600
	EPA-6020	Cadmium*	0.33	2.0
	EPA-6020	Lead*	22	250
	EPA-6020	Silver	0.14	400
	COMP-4	NWTPH-G <sub>x</sub>	TPH-Volatile Range	6.3
NWTPH-D <sub>x</sub>		TPH-Diesel Range	62	100
NWTPH-D <sub>x</sub>		TPH-Oil Range	370	100
EPA-8270 SIM		Phenanthrene	0.034	N/A
EPA-8270 SIM		Fluoranthene	0.120	3,200
EPA-8270 SIM		Pyrene	0.069	2,400
EPA-8270 SIM		Benzo(A)Anthracene	0.040	1.37
EPA-8270 SIM		Chrysene	0.053	137
EPA-8270 SIM		Benzo(B)Fluoranthene	0.074	1.37
EPA-8270 SIM		Benzo(K)Fluoranthene	0.025	13.7
EPA-8270 SIM		Benzo(A)Pyrene	0.043	0.137
EPA-8270 SIM		Ideno(1,2,3-Cd)Pyrene	0.035	1.37
EPA-8270		Benzo(G,H,I)Perylene	0.053	N/A
EPA-8270		Benzyl Alcohol	0.470	8,000
EPA-8270		2-Methylphenol	0.300	4,000
EPA-8082		Bis(2-Ethylhexyl)Phthalate	0.280	1,600
EPA-6020		Mercury*	0.057	20
EPA-6020		Chromium III*	45	2,000
EPA-6020		Arsenic*	7.6	20
EPA-6020		Barium*	220	1,600
EPA-6020	Cadmium*	0.29	2.0	
EPA-6020	Lead*	26	250	

<b>TABLE 1 (cont.):            SUMMARY OF LABORATORY ANALYSES            QUEEN MOUNTAIN PLAT            ENVIRONMENTAL SOIL STOCKPILE SAMPLING</b>				
All soil sample results and limits are in milligrams per kilogram (MG/KG) or parts per million (ppm). Please refer to the individual analytical laboratory result sheets for a complete list of analyses and results.				
Sample #	Method	Analyte	Results	Action Level
COMP-5	NWTPH-Dx	TPH-Diesel Range	82	100
	NWTPH-Dx	TPH-Oil Range	400	100
	EPA-8270 SIM	Naphthalene	0.120	5
	EPA-8270 SIM	Acenaphthene	29	4,800
	EPA-8270 SIM	Fluorene	0.040	4,800
	EPA-8270 SIM	Phenanthrene	0.088	N/A
	EPA-8270 SIM	Fluoranthene	0.220	3,200
	EPA-8270 SIM	Pyrene	0.082	2,400
	EPA-8270 SIM	Benzo(A)Anthracene	0.031	1.37
	EPA-8270 SIM	Chrysene	0.051	137
	EPA-8270 SIM	Benzo(B)Fluoranthene	0.062	1.37
	EPA-8270 SIM	Benzo(A)Pyrene	0.025	0.137
	EPA-8270 SIM	Ideno(1,2,3-Cd)Pyrene	0.026	1.37
	EPA-8270	Benzo[G,H,I]Perylene	0.036	N/A
	EPA-6020	Mercury*	0.075	20
	EPA-6020	Chromium III*	37	2,000
	EPA-6020	Arsenic*	16	20
EPA-6020	Barium*	130	1,600	
EPA-6020	Cadmium*	0.40	2.0	
EPA-6020	Lead*	27	250	

**Key:**

**Highlighted** - Indicates analyte present in levels requiring a DOE Soil Category Designation, but below the referenced cleanup action level.

N/A – No Action Level given for either MTCA Method A or CLARC Method B where applicable.

\* RCRA 8 + Chromium III analytical results are near the natural background levels expected for the geographic region per the Natural Background Soil Metals Concentrations in Washington State report published by the Washington State Department of Ecology in 1994 and the Background Concentrations of Metals in Soils from Selected Regions in the State of Washington published by the US Geological Survey in 1985.

## CONCLUSIONS

As requested, GeoTest conducted preliminary five-point composite soil sampling of historic uncontrolled fill material located within the proposed project site. Based on the analytical laboratory results reported, the excavated materials meet the criteria for Soil Category 3 as outlined by Table 12.1 of DOE's *Guidance for Remediation of Petroleum Contaminated Sites*. In order to adequately characterize the stockpile, GeoTest recommends a comprehensive environmental soils investigation be performed based on the sampling frequency as recommended by the DOE.

## Material Reuse

The above referenced document classifies the soils sampled to be Soil Category 3 based on the reported level of Diesel and Oil Range Organics and carcinogenic Polycyclic Aromatic Hydrocarbons. Category 3 soils are comprised of soil with moderate levels of residual petroleum



contamination that may have adverse impacts on the environment unless re-used in carefully controlled situations. These soils are suitable as paving base material and for road construction, based on contamination levels, however the volume of organic material present in the stockpile excludes it from reuse in structural areas from a geotechnical engineering perspective.

*Category 3 Acceptable Uses:*

- Any use allowed for Category 4 soils.
- Use as pavement base material under public and private paved streets and roads.
- Use as pavement base material under commercial and industrial parking lots.

*Category 3 Limitations:*

- Should be placed above the highest anticipated high-water table. If seasonal groundwater elevation information is not available, place at least 10 feet above the current water table.
- Should be a maximum of 2 feet thick to minimize potential for leaching or vapor impacts.
- Should not be placed within 100 feet of any private drinking water well or within the 10-year wellhead protection area of a public water supply well.
- Should not be placed in or directly adjacent to wetlands or surface water.
- Should not be placed under a surface water infiltration facility or septic drain fields.
- When exposed, runoff from area in use should be contained or treated to prevent entrance to storm drains, surface water, or wetlands.
- Any other limitations defined in state or local regulations.

Alternately, Category 3 soil can be hauled off site and thermally treated at an accepted facility. Prior to any soils being hauled to their facility, we recommend that the attached soil sampling results be provided to the selected waste disposal company for their review and approval.

## **LIMITATIONS**

Our conclusions are based on the described data and site visit. Our study area included the areas of the site described in this report only. We assume the encountered conditions are representative of the subject stockpiles sampled on this date.

However, the client should be aware that conditions may vary between sampling locations. We have prepared this report exclusively for the use of Freeland and Associates and their representatives.

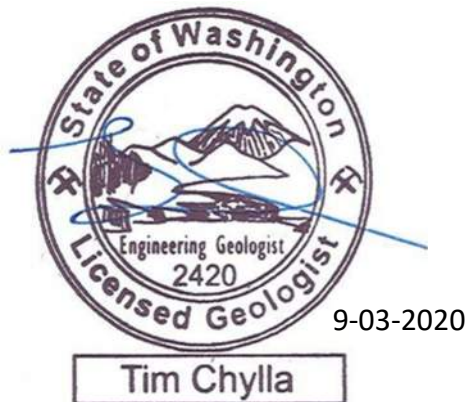


Use of this report by others is at their own risk. The information contained herein is not applicable to other sites.

The analyses, conclusions, and recommendations provided in this report are based on sampling performed by GeoTest Services, Inc., State/Federal regulatory guidelines, and GeoTest's experience and judgment. Our work has been performed in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions in this area. No warranty, expressed or implied, is made.

As a condition of our services, it is understood that, to the fullest extent permitted by law, our clients agree to defend, indemnify, and hold harmless GeoTest Services, Inc. its owners, employees, subcontractors, and agents, from any (past, present, or future) pollution-related claims or damages at the site, including potential claims from third parties that may name GeoTest Services, Inc. as a claimant.

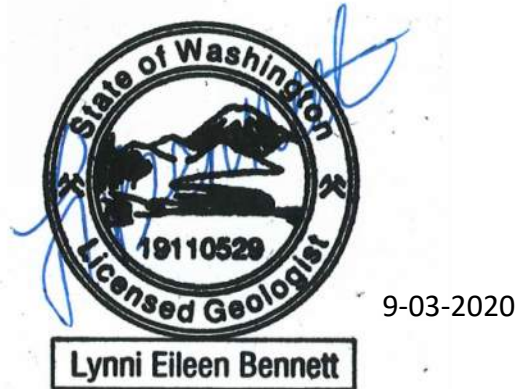
Respectfully Submitted,  
**GeoTest Services, Inc.**



9-03-2020

**Tim Chylla**

Tim Chylla, L.E.G.  
Environmental Professional



9-03-2020

**Lynni Eileen Bennett**

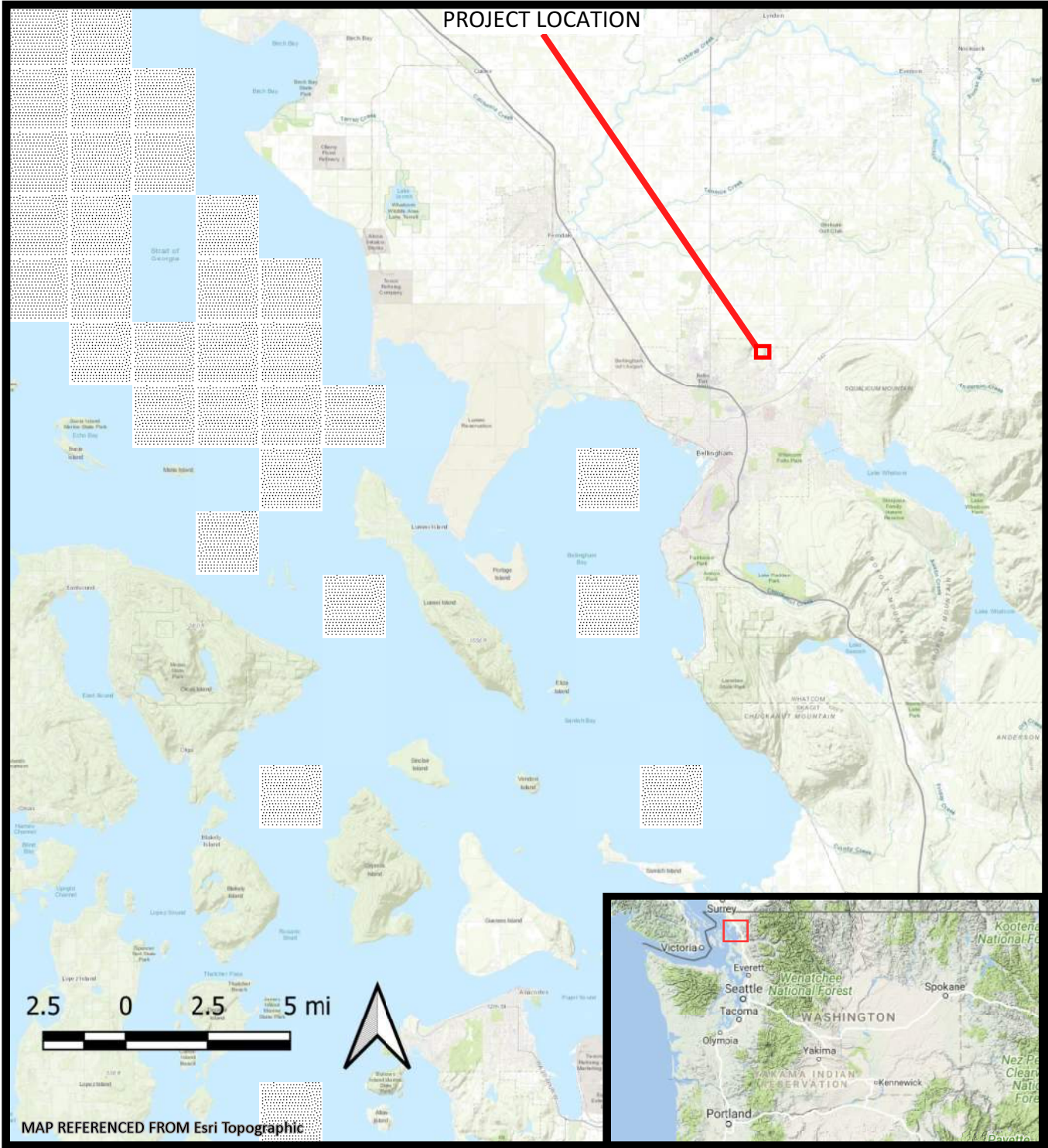
Lynni Bennett, L.G.  
Environmental Professional


Attachments:

- Figure 1: Site Location and Vicinity
- Figure 2: Approximate Stockpile Location
- ALS Analytical Results (50 pages)
- DOE Tables 12.1 and 12.2

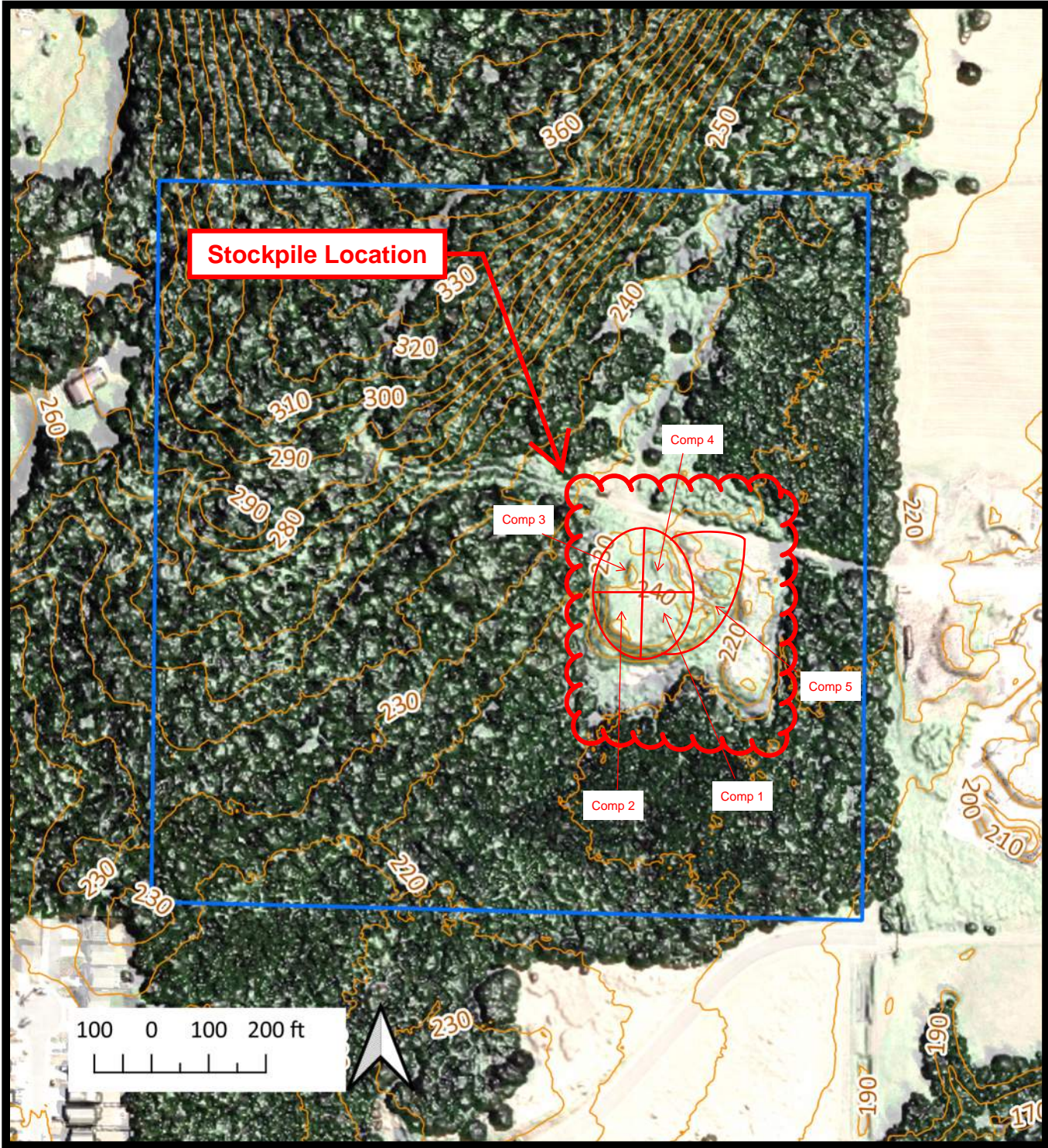
## REFERENCES

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- Ames, K. C. (1995). *Background Concentrations of Metals in Soils from Selected Regions in the State of Washington*. Tacoma: Us. Department of the Interior.
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Retrieved August 19, 2020.



	Date: 7.28.2020	By: NGD	Scale: As Shown	Project <b>20-0591</b>
	<b>VICINITY MAP</b> <b>QUEEN MOUNTAIN PLAT</b> <b>4175 IRON GATE ROAD</b> <b>BELLINGHAM, WA 98226</b>			Figure <b>1</b>





Date: 7.28.2020

By: NGD

Scale: As Shown

Project  
20-0591

**POTHOLING AND SAMPLING PLAN**

QUEEN MOUNTAIN PLAT

4175 IRON GATE ROAD

BELLINGHAM, WA 98226

Figure

2



August 6, 2020

Ms. Lynni Bennett  
Geotest Services, Inc.  
741 Marine Dr.  
Bellingham, WA 98225

Dear Ms. Bennett,

On July 24th, 5 samples were received by our laboratory and assigned our laboratory project number EV20070106. The project was identified as your 20-0591 Queen MT.. 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

Rick Bagan  
Laboratory Director





**CERTIFICATE OF ANALYSIS**

CLIENT: Geotest Services, Inc.  
 741 Marine Dr.  
 Bellingham, WA 98225

CLIENT CONTACT: Lynni Bennett  
 CLIENT PROJECT: 20-0591 Queen MT.  
 CLIENT SAMPLE ID: Comp-1

DATE: 8/6/2020  
 ALS JOB#: EV20070106  
 ALS SAMPLE#: EV20070106-01  
 DATE RECEIVED: 07/24/2020  
 COLLECTION DATE: 7/23/2020 1:30:00 PM  
 WDOE ACCREDITATION: C601

**SAMPLE DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	07/28/2020	KLS
Benzene	EPA-8021	U	0.030	1	MG/KG	07/28/2020	KLS
Toluene	EPA-8021	U	0.050	1	MG/KG	07/28/2020	KLS
Ethylbenzene	EPA-8021	U	0.050	1	MG/KG	07/28/2020	KLS
Xylenes	EPA-8021	U	0.20	1	MG/KG	07/28/2020	KLS
TPH-Diesel Range	NWTPH-DX	48	25	1	MG/KG	07/30/2020	EBS
TPH-Oil Range	NWTPH-DX	290	50	1	MG/KG	07/30/2020	EBS
Dichlorodifluoromethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Chloromethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Vinyl Chloride	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Bromomethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Chloroethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Carbon Tetrachloride	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Trichlorofluoromethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Carbon Disulfide	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Acetone	EPA-8260	U	50	1	UG/KG	07/30/2020	DLC
1,1-Dichloroethene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Methylene Chloride	EPA-8260	U	20	1	UG/KG	07/30/2020	DLC
Acrylonitrile	EPA-8260	U	50	1	UG/KG	07/30/2020	DLC
Methyl T-Butyl Ether	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,1-Dichloroethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
2-Butanone	EPA-8260	U	50	1	UG/KG	07/30/2020	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
2,2-Dichloropropane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Bromochloromethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Chloroform	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,1,1-Trichloroethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,1-Dichloropropene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,2-Dichloroethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Benzene	EPA-8260	U	5.0	1	UG/KG	07/30/2020	DLC
Trichloroethene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,2-Dichloropropane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Dibromomethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Bromodichloromethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Trans-1,3-Dichloropropene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
4-Methyl-2-Pentanone	EPA-8260	U	50	1	UG/KG	07/30/2020	DLC
Toluene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC



**CERTIFICATE OF ANALYSIS**

<b>CLIENT:</b>	Geotest Services, Inc. 741 Marine Dr. Bellingham, WA 98225	<b>DATE:</b>	8/6/2020
<b>CLIENT CONTACT:</b>	Lynni Bennett	<b>ALS JOB#:</b>	EV20070106
<b>CLIENT PROJECT:</b>	20-0591 Queen MT.	<b>ALS SAMPLE#:</b>	EV20070106-01
<b>CLIENT SAMPLE ID</b>	Comp-1	<b>DATE RECEIVED:</b>	07/24/2020
		<b>COLLECTION DATE:</b>	7/23/2020 1:30:00 PM
		<b>WDOE ACCREDITATION:</b>	C601

**SAMPLE DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
Cis-1,3-Dichloropropene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,1,2-Trichloroethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
2-Hexanone	EPA-8260	U	50	1	UG/KG	07/30/2020	DLC
1,3-Dichloropropane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Tetrachloroethylene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Dibromochloromethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,2-Dibromoethane	EPA-8260	U	5.0	1	UG/KG	07/30/2020	DLC
Chlorobenzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Ethylbenzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
m,p-Xylene	EPA-8260	U	20	1	UG/KG	07/30/2020	DLC
Styrene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
o-Xylene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Bromoform	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Isopropylbenzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,2,3-Trichloropropane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Bromobenzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
N-Propyl Benzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
2-Chlorotoluene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
4-Chlorotoluene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
T-Butyl Benzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
S-Butyl Benzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
P-Isopropyltoluene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,3-Dichlorobenzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,4-Dichlorobenzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
N-Butylbenzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,2-Dichlorobenzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	50	1	UG/KG	07/30/2020	DLC
1,2,4-Trichlorobenzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Hexachlorobutadiene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Naphthalene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Naphthalene	EPA-8270 SIM	U	20	1	UG/KG	07/25/2020	JMK
2-Methylnaphthalene	EPA-8270 SIM	U	20	1	UG/KG	07/25/2020	JMK
1-Methylnaphthalene	EPA-8270 SIM	U	20	1	UG/KG	07/25/2020	JMK
Acenaphthylene	EPA-8270 SIM	U	20	1	UG/KG	07/25/2020	JMK





**CERTIFICATE OF ANALYSIS**

<b>CLIENT:</b>	Geotest Services, Inc. 741 Marine Dr. Bellingham, WA 98225	<b>DATE:</b>	8/6/2020
<b>CLIENT CONTACT:</b>	Lynni Bennett	<b>ALS JOB#:</b>	EV20070106
<b>CLIENT PROJECT:</b>	20-0591 Queen MT.	<b>ALS SAMPLE#:</b>	EV20070106-01
<b>CLIENT SAMPLE ID</b>	Comp-1	<b>DATE RECEIVED:</b>	07/24/2020
		<b>COLLECTION DATE:</b>	7/23/2020 1:30:00 PM
		<b>WDOE ACCREDITATION:</b>	C601

**SAMPLE DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
Acenaphthene	EPA-8270 SIM	U	20	1	UG/KG	07/25/2020	JMK
Fluorene	EPA-8270 SIM	U	20	1	UG/KG	07/25/2020	JMK
Phenanthrene	EPA-8270 SIM	44	20	1	UG/KG	07/25/2020	JMK
Anthracene	EPA-8270 SIM	U	20	1	UG/KG	07/25/2020	JMK
Fluoranthene	EPA-8270 SIM	210	20	1	UG/KG	07/25/2020	JMK
Pyrene	EPA-8270 SIM	180	20	1	UG/KG	07/25/2020	JMK
Benzo[A]Anthracene	EPA-8270 SIM	91	20	1	UG/KG	07/25/2020	JMK
Chrysene	EPA-8270 SIM	100	20	1	UG/KG	07/25/2020	JMK
Benzo[B]Fluoranthene	EPA-8270 SIM	200	20	1	UG/KG	07/25/2020	JMK
Benzo[K]Fluoranthene	EPA-8270 SIM	67	20	1	UG/KG	07/25/2020	JMK
Benzo[A]Pyrene	EPA-8270 SIM	120	20	1	UG/KG	07/25/2020	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	100	20	1	UG/KG	07/25/2020	JMK
Dibenz[A,H]Anthracene	EPA-8270 SIM	35	20	1	UG/KG	07/25/2020	JMK
Benzo[G,H,I]Perylene	EPA-8270 SIM	160	20	1	UG/KG	07/25/2020	JMK
Pyridine	EPA-8270	U	200	1	UG/KG	08/05/2020	JMK
N-Nitrosodimethylamine	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Phenol	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Aniline	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Bis(2-Chloroethyl)Ether	EPA-8270	U	250	1	UG/KG	08/05/2020	JMK
2-Chlorophenol	EPA-8270	U	250	1	UG/KG	08/05/2020	JMK
1,3-Dichlorobenzene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
1,4-Dichlorobenzene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Benzyl Alcohol	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
1,2-Dichlorobenzene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
2-Methylphenol	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	250	1	UG/KG	08/05/2020	JMK
3&4-Methylphenol	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
N-Nitroso-Di-N-Propylamine	EPA-8270	U	250	1	UG/KG	08/05/2020	JMK
Hexachloroethane	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Nitrobenzene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Isophorone	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
2-Nitrophenol	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
2,4-Dimethylphenol	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Benzoic Acid	EPA-8270	U	1000	1	UG/KG	08/05/2020	JMK
Bis(2-Chloroethoxy)Methane	EPA-8270	U	250	1	UG/KG	08/05/2020	JMK
2,4-Dichlorophenol	EPA-8270	U	500	1	UG/KG	08/05/2020	JMK
1,2,4-Trichlorobenzene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Naphthalene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
4-Chloroaniline	EPA-8270	U	1000	1	UG/KG	08/05/2020	JMK



**CERTIFICATE OF ANALYSIS**

<b>CLIENT:</b>	Geotest Services, Inc. 741 Marine Dr. Bellingham, WA 98225	<b>DATE:</b>	8/6/2020
<b>CLIENT CONTACT:</b>	Lynni Bennett	<b>ALS JOB#:</b>	EV20070106
<b>CLIENT PROJECT:</b>	20-0591 Queen MT.	<b>ALS SAMPLE#:</b>	EV20070106-01
<b>CLIENT SAMPLE ID</b>	Comp-1	<b>DATE RECEIVED:</b>	07/24/2020
		<b>COLLECTION DATE:</b>	7/23/2020 1:30:00 PM
		<b>WDOE ACCREDITATION:</b>	C601

**SAMPLE DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
2,6-Dichlorophenol	EPA-8270	U	250	1	UG/KG	08/05/2020	JMK
Hexachlorobutadiene	EPA-8270	U	500	1	UG/KG	08/05/2020	JMK
4-Chloro-3-Methylphenol	EPA-8270	U	500	1	UG/KG	08/05/2020	JMK
2-Methylnaphthalene	EPA-8270	U	250	1	UG/KG	08/05/2020	JMK
1-Methylnaphthalene	EPA-8270	U	250	1	UG/KG	08/05/2020	JMK
Hexachlorocyclopentadiene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
2,4,6-Trichlorophenol	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
2,4,5-Trichlorophenol	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
2-Chloronaphthalene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
2-Nitroaniline	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Acenaphthylene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Dimethylphthalate	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
2,6-Dinitrotoluene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Acenaphthene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
3-Nitroaniline	EPA-8270	U	1000	1	UG/KG	08/05/2020	JMK
2,4-Dinitrophenol	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
4-Nitrophenol	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Dibenzofuran	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
2,4-Dinitrotoluene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
2,3,4,6-Tetrachlorophenol	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Diethylphthalate	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Fluorene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
4-Chlorophenyl-Phenylether	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
4-Nitroaniline	EPA-8270	U	250	1	UG/KG	08/05/2020	JMK
4,6-Dinitro-2-Methylphenol	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
N-Nitrosodiphenylamine	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Azobenzene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
4-Bromophenyl-Phenylether	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Hexachlorobenzene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Pentachlorophenol	EPA-8270	U	500	1	UG/KG	08/05/2020	JMK
Phenanthrene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Anthracene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Carbazole	EPA-8270	U	250	1	UG/KG	08/05/2020	JMK
Di-N-Butylphthalate	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Fluoranthene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Pyrene	EPA-8270	<b>100</b>	100	1	UG/KG	08/05/2020	JMK
Butylbenzylphthalate	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
3,3-Dichlorobenzidine	EPA-8270	U	250	1	UG/KG	08/05/2020	JMK
Benzo[A]Anthracene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK



**CERTIFICATE OF ANALYSIS**

<b>CLIENT:</b>	Geotest Services, Inc. 741 Marine Dr. Bellingham, WA 98225	<b>DATE:</b>	8/6/2020
<b>CLIENT CONTACT:</b>	Lynni Bennett	<b>ALS JOB#:</b>	EV20070106
<b>CLIENT PROJECT:</b>	20-0591 Queen MT.	<b>ALS SAMPLE#:</b>	EV20070106-01
<b>CLIENT SAMPLE ID</b>	Comp-1	<b>DATE RECEIVED:</b>	07/24/2020
		<b>COLLECTION DATE:</b>	7/23/2020 1:30:00 PM
		<b>WDOE ACCREDITATION:</b>	C601

**SAMPLE DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
Chrysene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Bis(2-Ethylhexyl)Phthalate	EPA-8270	210	100	1	UG/KG	08/05/2020	JMK
Di-N-Octylphthalate	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Benzo[B]Fluoranthene	EPA-8270	160	100	1	UG/KG	08/05/2020	JMK
Benzo[K]Fluoranthene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Benzo[A]Pyrene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Dibenz[A,H]Anthracene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Benzo[G,H,I]Perylene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
PCB-1016	EPA-8082	U	0.10	1	MG/KG	07/31/2020	JMK
PCB-1221	EPA-8082	U	0.10	1	MG/KG	07/31/2020	JMK
PCB-1232	EPA-8082	U	0.10	1	MG/KG	07/31/2020	JMK
PCB-1242	EPA-8082	U	0.10	1	MG/KG	07/31/2020	JMK
PCB-1248	EPA-8082	U	0.10	1	MG/KG	07/31/2020	JMK
PCB-1254	EPA-8082	U	0.10	1	MG/KG	07/31/2020	JMK
PCB-1260	EPA-8082	U	0.10	1	MG/KG	07/31/2020	JMK
Chlordane	EPA-8082	U	0.50	1	MG/KG	07/31/2020	JMK
PCB-1268	EPA-8082	U	0.10	1	MG/KG	07/31/2020	JMK
Total PCBs	EPA-8082	U	0.10	1	MG/KG	07/31/2020	JMK
A-BHC	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
G-BHC	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
B-BHC	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
Heptachlor	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
D-BHC	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
Aldrin	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
Heptachlor Epoxide	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
Chlordane	EPA-8081	U	0.020	1	MG/KG	08/03/2020	JMK
Endosulfan I	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
4,4'-DDE	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
Dieldrin	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
Endrin	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
4,4'-DDD	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
Endosulfan II	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
4,4'-DDT	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
Endrin Aldehyde	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
Endosulfan Sulfate	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
Methoxychlor	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
Toxaphene	EPA-8081	U	0.50	1	MG/KG	08/03/2020	JMK
Chromium (VI)	EPA-7196	U	5.0	1	MG/KG	08/06/2020	JNF



**CERTIFICATE OF ANALYSIS**

CLIENT:	Geotest Services, Inc. 741 Marine Dr. Bellingham, WA 98225	DATE:	8/6/2020
CLIENT CONTACT:	Lynni Bennett	ALS JOB#:	EV20070106
CLIENT PROJECT:	20-0591 Queen MT.	ALS SAMPLE#:	EV20070106-01
CLIENT SAMPLE ID	Comp-1	DATE RECEIVED:	07/24/2020
		COLLECTION DATE:	7/23/2020 1:30:00 PM
		WDOE ACCREDITATION:	C601

**SAMPLE DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
Mercury	EPA-7471	0.076	0.020	1	MG/KG	07/24/2020	RAL
Chromium (III)	Calc-Cr3	70	0.50	1	MG/KG	07/24/2020	RAL
Arsenic	EPA-6020	4.6	0.20	1	MG/KG	07/24/2020	RAL
Barium	EPA-6020	84	0.10	1	MG/KG	07/24/2020	RAL
Cadmium	EPA-6020	0.21	0.10	1	MG/KG	07/24/2020	RAL
Chromium	EPA-6020	70	0.10	1	MG/KG	07/24/2020	RAL
Lead	EPA-6020	24	0.10	1	MG/KG	07/24/2020	RAL
Selenium	EPA-6020	U	1.0	1	MG/KG	07/24/2020	RAL
Silver	EPA-6020	U	0.10	1	MG/KG	07/24/2020	RAL

SURROGATE	METHOD	%REC	ANALYSIS	ANALYSIS
			DATE	BY
TFT	NWTPH-GX	91.7	07/28/2020	KLS
TFT	EPA-8021	90.1	07/28/2020	KLS
C25	NWTPH-DX	105	07/30/2020	EBS
1,2-Dichloroethane-d4	EPA-8260	109	07/30/2020	DLC
Toluene-d8	EPA-8260	101	07/30/2020	DLC
4-Bromofluorobenzene	EPA-8260	119	07/30/2020	DLC
Terphenyl-d14	EPA-8270 SIM	108	07/25/2020	JMK
2-Fluorophenol	EPA-8270	104	08/05/2020	JMK
Phenol-d5	EPA-8270	99.8	08/05/2020	JMK
Nitrobenzene-d5	EPA-8270	69.5	08/05/2020	JMK
2-Fluorobiphenyl	EPA-8270	84.2	08/05/2020	JMK
2,4,6-Tribromophenol	EPA-8270	96.7	08/05/2020	JMK
Terphenyl-d14	EPA-8270	85.4	08/05/2020	JMK
TCMX	EPA-8082	80.6	07/31/2020	JMK
DCB	EPA-8082	81.1	07/31/2020	JMK
TCMX	EPA-8081	67.9	08/03/2020	JMK
DCB	EPA-8081	65.9	08/03/2020	JMK

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**

<b>CLIENT:</b>	Geotest Services, Inc. 741 Marine Dr. Bellingham, WA 98225	<b>DATE:</b>	8/6/2020
<b>CLIENT CONTACT:</b>	Lynni Bennett	<b>ALS JOB#:</b>	EV20070106
<b>CLIENT PROJECT:</b>	20-0591 Queen MT.	<b>ALS SAMPLE#:</b>	EV20070106-02
<b>CLIENT SAMPLE ID</b>	Comp-2	<b>DATE RECEIVED:</b>	07/24/2020
		<b>COLLECTION DATE:</b>	7/23/2020 2:00:00 PM
		<b>WDOE ACCREDITATION:</b>	C601

**SAMPLE DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
TPH-Volatile Range	NWTPH-GX	U	5.0	1	MG/KG	07/28/2020	KLS
Benzene	EPA-8021	U	0.030	1	MG/KG	07/28/2020	KLS
Toluene	EPA-8021	U	0.050	1	MG/KG	07/28/2020	KLS
Ethylbenzene	EPA-8021	U	0.050	1	MG/KG	07/28/2020	KLS
Xylenes	EPA-8021	U	0.20	1	MG/KG	07/28/2020	KLS
TPH-Diesel Range	NWTPH-DX	150	50	2	MG/KG	07/30/2020	EBS
TPH-Oil Range	NWTPH-DX	450	100	2	MG/KG	07/30/2020	EBS
Dichlorodifluoromethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Chloromethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Vinyl Chloride	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Bromomethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Chloroethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Carbon Tetrachloride	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Trichlorofluoromethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Carbon Disulfide	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Acetone	EPA-8260	U	50	1	UG/KG	07/30/2020	DLC
1,1-Dichloroethene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Methylene Chloride	EPA-8260	U	20	1	UG/KG	07/30/2020	DLC
Acrylonitrile	EPA-8260	U	50	1	UG/KG	07/30/2020	DLC
Methyl T-Butyl Ether	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,1-Dichloroethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
2-Butanone	EPA-8260	U	50	1	UG/KG	07/30/2020	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
2,2-Dichloropropane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Bromochloromethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Chloroform	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,1,1-Trichloroethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,1-Dichloropropene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,2-Dichloroethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Benzene	EPA-8260	U	5.0	1	UG/KG	07/30/2020	DLC
Trichloroethene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,2-Dichloropropane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Dibromomethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Bromodichloromethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Trans-1,3-Dichloropropene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
4-Methyl-2-Pentanone	EPA-8260	U	50	1	UG/KG	07/30/2020	DLC
Toluene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC



**CERTIFICATE OF ANALYSIS**

<b>CLIENT:</b>	Geotest Services, Inc. 741 Marine Dr. Bellingham, WA 98225	<b>DATE:</b>	8/6/2020
<b>CLIENT CONTACT:</b>	Lynni Bennett	<b>ALS JOB#:</b>	EV20070106
<b>CLIENT PROJECT:</b>	20-0591 Queen MT.	<b>ALS SAMPLE#:</b>	EV20070106-02
<b>CLIENT SAMPLE ID</b>	Comp-2	<b>DATE RECEIVED:</b>	07/24/2020
		<b>COLLECTION DATE:</b>	7/23/2020 2:00:00 PM
		<b>WDOE ACCREDITATION:</b>	C601

**SAMPLE DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
1,1,2-Trichloroethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
2-Hexanone	EPA-8260	U	50	1	UG/KG	07/30/2020	DLC
1,3-Dichloropropane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Tetrachloroethylene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Dibromochloromethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,2-Dibromoethane	EPA-8260	U	5.0	1	UG/KG	07/30/2020	DLC
Chlorobenzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Ethylbenzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
m,p-Xylene	EPA-8260	U	20	1	UG/KG	07/30/2020	DLC
Styrene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
o-Xylene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Bromoform	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Isopropylbenzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,2,3-Trichloropropane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Bromobenzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
N-Propyl Benzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
2-Chlorotoluene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
4-Chlorotoluene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
T-Butyl Benzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
S-Butyl Benzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
P-Isopropyltoluene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,3-Dichlorobenzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,4-Dichlorobenzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
N-Butylbenzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,2-Dichlorobenzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	50	1	UG/KG	07/30/2020	DLC
1,2,4-Trichlorobenzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Hexachlorobutadiene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Naphthalene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Naphthalene	EPA-8270 SIM	U	20	1	UG/KG	07/25/2020	JMK
2-Methylnaphthalene	EPA-8270 SIM	U	20	1	UG/KG	07/25/2020	JMK
1-Methylnaphthalene	EPA-8270 SIM	U	20	1	UG/KG	07/25/2020	JMK
Acenaphthylene	EPA-8270 SIM	U	20	1	UG/KG	07/25/2020	JMK
Acenaphthene	EPA-8270 SIM	U	20	1	UG/KG	07/25/2020	JMK





**CERTIFICATE OF ANALYSIS**

<b>CLIENT:</b>	Geotest Services, Inc. 741 Marine Dr. Bellingham, WA 98225	<b>DATE:</b>	8/6/2020
<b>CLIENT CONTACT:</b>	Lynni Bennett	<b>ALS JOB#:</b>	EV20070106
<b>CLIENT PROJECT:</b>	20-0591 Queen MT.	<b>ALS SAMPLE#:</b>	EV20070106-02
<b>CLIENT SAMPLE ID</b>	Comp-2	<b>DATE RECEIVED:</b>	07/24/2020
		<b>COLLECTION DATE:</b>	7/23/2020 2:00:00 PM
		<b>WDOE ACCREDITATION:</b>	C601

**SAMPLE DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
Fluorene	EPA-8270 SIM	26	20	1	UG/KG	07/25/2020	JMK
Phenanthrene	EPA-8270 SIM	65	20	1	UG/KG	07/25/2020	JMK
Anthracene	EPA-8270 SIM	U	20	1	UG/KG	07/25/2020	JMK
Fluoranthene	EPA-8270 SIM	240	20	1	UG/KG	07/25/2020	JMK
Pyrene	EPA-8270 SIM	35	20	1	UG/KG	07/25/2020	JMK
Benzo[A]Anthracene	EPA-8270 SIM	U	20	1	UG/KG	07/25/2020	JMK
Chrysene	EPA-8270 SIM	33	20	1	UG/KG	07/25/2020	JMK
Benzo[B]Fluoranthene	EPA-8270 SIM	30	20	1	UG/KG	07/25/2020	JMK
Benzo[K]Fluoranthene	EPA-8270 SIM	U	20	1	UG/KG	07/25/2020	JMK
Benzo[A]Pyrene	EPA-8270 SIM	U	20	1	UG/KG	07/25/2020	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	22	20	1	UG/KG	07/25/2020	JMK
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	20	1	UG/KG	07/25/2020	JMK
Benzo[G,H,I]Perylene	EPA-8270 SIM	30	20	1	UG/KG	07/25/2020	JMK
Pyridine	EPA-8270	U	200	1	UG/KG	08/05/2020	JMK
N-Nitrosodimethylamine	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Phenol	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Aniline	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Bis(2-Chloroethyl)Ether	EPA-8270	U	250	1	UG/KG	08/05/2020	JMK
2-Chlorophenol	EPA-8270	U	250	1	UG/KG	08/05/2020	JMK
1,3-Dichlorobenzene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
1,4-Dichlorobenzene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Benzyl Alcohol	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
1,2-Dichlorobenzene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
2-Methylphenol	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	250	1	UG/KG	08/05/2020	JMK
3&4-Methylphenol	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
N-Nitroso-Di-N-Propylamine	EPA-8270	U	250	1	UG/KG	08/05/2020	JMK
Hexachloroethane	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Nitrobenzene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Isophorone	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
2-Nitrophenol	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
2,4-Dimethylphenol	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Benzoic Acid	EPA-8270	U	1000	1	UG/KG	08/05/2020	JMK
Bis(2-Chloroethoxy)Methane	EPA-8270	U	250	1	UG/KG	08/05/2020	JMK
2,4-Dichlorophenol	EPA-8270	U	500	1	UG/KG	08/05/2020	JMK
1,2,4-Trichlorobenzene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Naphthalene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
4-Chloroaniline	EPA-8270	U	1000	1	UG/KG	08/05/2020	JMK
2,6-Dichlorophenol	EPA-8270	U	260	1	UG/KG	08/05/2020	JMK





**CERTIFICATE OF ANALYSIS**

<b>CLIENT:</b>	Geotest Services, Inc. 741 Marine Dr. Bellingham, WA 98225	<b>DATE:</b>	8/6/2020
<b>CLIENT CONTACT:</b>	Lynni Bennett	<b>ALS JOB#:</b>	EV20070106
<b>CLIENT PROJECT:</b>	20-0591 Queen MT.	<b>ALS SAMPLE#:</b>	EV20070106-02
<b>CLIENT SAMPLE ID</b>	Comp-2	<b>DATE RECEIVED:</b>	07/24/2020
		<b>COLLECTION DATE:</b>	7/23/2020 2:00:00 PM
		<b>WDOE ACCREDITATION:</b>	C601

**SAMPLE DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
Hexachlorobutadiene	EPA-8270	U	500	1	UG/KG	08/05/2020	JMK
4-Chloro-3-Methylphenol	EPA-8270	U	500	1	UG/KG	08/05/2020	JMK
2-Methylnaphthalene	EPA-8270	U	250	1	UG/KG	08/05/2020	JMK
1-Methylnaphthalene	EPA-8270	U	250	1	UG/KG	08/05/2020	JMK
Hexachlorocyclopentadiene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
2,4,6-Trichlorophenol	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
2,4,5-Trichlorophenol	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
2-Chloronaphthalene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
2-Nitroaniline	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Acenaphthylene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Dimethylphthalate	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
2,6-Dinitrotoluene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Acenaphthene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
3-Nitroaniline	EPA-8270	U	1000	1	UG/KG	08/05/2020	JMK
2,4-Dinitrophenol	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
4-Nitrophenol	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Dibenzofuran	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
2,4-Dinitrotoluene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
2,3,4,6-Tetrachlorophenol	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Diethylphthalate	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Fluorene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
4-Chlorophenyl-Phenylether	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
4-Nitroaniline	EPA-8270	U	250	1	UG/KG	08/05/2020	JMK
4,6-Dinitro-2-Methylphenol	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
N-Nitrosodiphenylamine	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Azobenzene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
4-Bromophenyl-Phenylether	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Hexachlorobenzene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Pentachlorophenol	EPA-8270	U	500	1	UG/KG	08/05/2020	JMK
Phenanthrene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Anthracene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Carbazole	EPA-8270	U	250	1	UG/KG	08/05/2020	JMK
Di-N-Butylphthalate	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Fluoranthene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Pyrene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Butylbenzylphthalate	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
3,3-Dichlorobenzidine	EPA-8270	U	250	1	UG/KG	08/05/2020	JMK
Benzo[A]Anthracene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Chrysene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK



**CERTIFICATE OF ANALYSIS**

CLIENT:	Geotest Services, Inc. 741 Marine Dr. Bellingham, WA 98225	DATE:	8/6/2020
CLIENT CONTACT:	Lynni Bennett	ALS JOB#:	EV20070106
CLIENT PROJECT:	20-0591 Queen MT.	ALS SAMPLE#:	EV20070106-02
CLIENT SAMPLE ID	Comp-2	DATE RECEIVED:	07/24/2020
		COLLECTION DATE:	7/23/2020 2:00:00 PM
		WDOE ACCREDITATION:	C601

**SAMPLE DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Di-N-Octylphthalate	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Benzo[B]Fluoranthene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Benzo[K]Fluoranthene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Benzo[A]Pyrene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Dibenz[A,H]Anthracene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Benzo[G,H,I]Perylene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
PCB-1016	EPA-8082	U	0.10	1	MG/KG	07/31/2020	JMK
PCB-1221	EPA-8082	U	0.10	1	MG/KG	07/31/2020	JMK
PCB-1232	EPA-8082	U	0.10	1	MG/KG	07/31/2020	JMK
PCB-1242	EPA-8082	U	0.10	1	MG/KG	07/31/2020	JMK
PCB-1248	EPA-8082	U	0.10	1	MG/KG	07/31/2020	JMK
PCB-1254	EPA-8082	U	0.10	1	MG/KG	07/31/2020	JMK
PCB-1260	EPA-8082	U	0.10	1	MG/KG	07/31/2020	JMK
Chlordane	EPA-8082	U	0.50	1	MG/KG	07/31/2020	JMK
PCB-1268	EPA-8082	U	0.10	1	MG/KG	07/31/2020	JMK
Total PCBs	EPA-8082	U	0.10	1	MG/KG	07/31/2020	JMK
A-BHC	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
G-BHC	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
B-BHC	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
Heptachlor	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
D-BHC	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
Aldrin	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
Heptachlor Epoxide	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
Chlordane	EPA-8081	U	0.020	1	MG/KG	08/03/2020	JMK
Endosulfan I	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
4,4'-DDE	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
Dieldrin	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
Endrin	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
4,4'-DDD	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
Endosulfan II	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
4,4'-DDT	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
Endrin Aldehyde	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
Endosulfan Sulfate	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
Methoxychlor	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
Toxaphene	EPA-8081	U	0.50	1	MG/KG	08/03/2020	JMK
Chromium (VI)	EPA-7196	U	5.0	1	MG/KG	08/06/2020	JNF
Mercury	EPA-7471	<b>0.038</b>	0.020	1	MG/KG	07/24/2020	RAL



**CERTIFICATE OF ANALYSIS**

<b>CLIENT:</b>	Geotest Services, Inc. 741 Marine Dr. Bellingham, WA 98225	<b>DATE:</b>	8/6/2020
<b>CLIENT CONTACT:</b>	Lynni Bennett	<b>ALS JOB#:</b>	EV20070106
<b>CLIENT PROJECT:</b>	20-0591 Queen MT.	<b>ALS SAMPLE#:</b>	EV20070106-02
<b>CLIENT SAMPLE ID</b>	Comp-2	<b>DATE RECEIVED:</b>	07/24/2020
		<b>COLLECTION DATE:</b>	7/23/2020 2:00:00 PM
		<b>WDOE ACCREDITATION:</b>	C601

**SAMPLE DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
Chromium (III)	Calc-Cr3	43	0.50	1	MG/KG	07/24/2020	RAL
Arsenic	EPA-6020	4.5	0.20	1	MG/KG	07/24/2020	RAL
Barium	EPA-6020	120	0.10	1	MG/KG	07/24/2020	RAL
Cadmium	EPA-6020	0.19	0.10	1	MG/KG	07/24/2020	RAL
Chromium	EPA-6020	43	0.10	1	MG/KG	07/24/2020	RAL
Lead	EPA-6020	9.9	0.10	1	MG/KG	07/24/2020	RAL
Selenium	EPA-6020	U	1.0	1	MG/KG	07/24/2020	RAL
Silver	EPA-6020	U	0.10	1	MG/KG	07/24/2020	RAL

SURROGATE	METHOD	%REC	ANALYSIS	ANALYSIS
			DATE	BY
TFT	NWTPH-GX	88.8	07/28/2020	KLS
TFT	EPA-8021	79.3	07/28/2020	KLS
C25 2X Dilution	NWTPH-DX	125	07/30/2020	EBS
1,2-Dichloroethane-d4	EPA-8260	107	07/30/2020	DLC
Toluene-d8	EPA-8260	100	07/30/2020	DLC
4-Bromofluorobenzene	EPA-8260	115	07/30/2020	DLC
Terphenyl-d14	EPA-8270 SIM	93.9	07/25/2020	JMK
2-Fluorophenol	EPA-8270	103	08/05/2020	JMK
Phenol-d5	EPA-8270	97.8	08/05/2020	JMK
Nitrobenzene-d5	EPA-8270	68.0	08/05/2020	JMK
2-Fluorobiphenyl	EPA-8270	82.9	08/05/2020	JMK
2,4,6-Tribromophenol	EPA-8270	99.9	08/05/2020	JMK
Terphenyl-d14	EPA-8270	84.7	08/05/2020	JMK
TCMX	EPA-8082	81.2	07/31/2020	JMK
DCB	EPA-8082	80.4	07/31/2020	JMK
TCMX	EPA-8081	69.2	08/03/2020	JMK
DCB	EPA-8081	72.3	08/03/2020	JMK

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



**CERTIFICATE OF ANALYSIS**

<b>CLIENT:</b>	Geotest Services, Inc. 741 Marine Dr. Bellingham, WA 98225	<b>DATE:</b>	8/6/2020
<b>CLIENT CONTACT:</b>	Lynni Bennett	<b>ALS JOB#:</b>	EV20070106
<b>CLIENT PROJECT:</b>	20-0591 Queen MT.	<b>ALS SAMPLE#:</b>	EV20070106-03
<b>CLIENT SAMPLE ID</b>	Comp-3	<b>DATE RECEIVED:</b>	07/24/2020
		<b>COLLECTION DATE:</b>	7/23/2020 2:30:00 PM
		<b>WDOE ACCREDITATION:</b>	C601

**SAMPLE DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	07/28/2020	KLS
Benzene	EPA-8021	U	0.030	1	MG/KG	07/28/2020	KLS
Toluene	EPA-8021	U	0.050	1	MG/KG	07/28/2020	KLS
Ethylbenzene	EPA-8021	U	0.050	1	MG/KG	07/28/2020	KLS
Xylenes	EPA-8021	U	0.20	1	MG/KG	07/28/2020	KLS
TPH-Diesel Range	NWTPH-DX	83	50	2	MG/KG	07/30/2020	EBS
TPH-Oil Range	NWTPH-DX	390	100	2	MG/KG	07/30/2020	EBS
Dichlorodifluoromethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Chloromethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Vinyl Chloride	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Bromomethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Chloroethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Carbon Tetrachloride	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Trichlorofluoromethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Carbon Disulfide	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Acetone	EPA-8260	U	50	1	UG/KG	07/30/2020	DLC
1,1-Dichloroethene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Methylene Chloride	EPA-8260	U	20	1	UG/KG	07/30/2020	DLC
Acrylonitrile	EPA-8260	U	50	1	UG/KG	07/30/2020	DLC
Methyl T-Butyl Ether	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,1-Dichloroethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
2-Butanone	EPA-8260	U	50	1	UG/KG	07/30/2020	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
2,2-Dichloropropane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Bromochloromethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Chloroform	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,1,1-Trichloroethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,1-Dichloropropene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,2-Dichloroethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Benzene	EPA-8260	U	5.0	1	UG/KG	07/30/2020	DLC
Trichloroethene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,2-Dichloropropane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Dibromomethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Bromodichloromethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Trans-1,3-Dichloropropene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
4-Methyl-2-Pentanone	EPA-8260	U	50	1	UG/KG	07/30/2020	DLC
Toluene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC



**CERTIFICATE OF ANALYSIS**

<b>CLIENT:</b>	Geotest Services, Inc. 741 Marine Dr. Bellingham, WA 98225	<b>DATE:</b>	8/6/2020
<b>CLIENT CONTACT:</b>	Lynni Bennett	<b>ALS JOB#:</b>	EV20070106
<b>CLIENT PROJECT:</b>	20-0591 Queen MT.	<b>ALS SAMPLE#:</b>	EV20070106-03
<b>CLIENT SAMPLE ID</b>	Comp-3	<b>DATE RECEIVED:</b>	07/24/2020
		<b>COLLECTION DATE:</b>	7/23/2020 2:30:00 PM
		<b>WDOE ACCREDITATION:</b>	C601

**SAMPLE DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING	DILUTION	UNITS	ANALYSIS	ANALYSIS
			LIMITS	FACTOR		DATE	BY
1,1,2-Trichloroethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
2-Hexanone	EPA-8260	U	50	1	UG/KG	07/30/2020	DLC
1,3-Dichloropropane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Tetrachloroethylene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Dibromochloromethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,2-Dibromoethane	EPA-8260	U	5.0	1	UG/KG	07/30/2020	DLC
Chlorobenzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Ethylbenzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
m,p-Xylene	EPA-8260	U	20	1	UG/KG	07/30/2020	DLC
Styrene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
o-Xylene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Bromoform	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Isopropylbenzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,2,3-Trichloropropane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Bromobenzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
N-Propyl Benzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
2-Chlorotoluene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
4-Chlorotoluene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
T-Butyl Benzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
S-Butyl Benzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
P-Isopropyltoluene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,3-Dichlorobenzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,4-Dichlorobenzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
N-Butylbenzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,2-Dichlorobenzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	50	1	UG/KG	07/30/2020	DLC
1,2,4-Trichlorobenzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Hexachlorobutadiene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Naphthalene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Naphthalene	EPA-8270 SIM	U	20	1	UG/KG	07/25/2020	JMK
2-Methylnaphthalene	EPA-8270 SIM	U	20	1	UG/KG	07/25/2020	JMK
1-Methylnaphthalene	EPA-8270 SIM	U	20	1	UG/KG	07/25/2020	JMK
Acenaphthylene	EPA-8270 SIM	U	20	1	UG/KG	07/25/2020	JMK
Acenaphthene	EPA-8270 SIM	32	20	1	UG/KG	07/25/2020	JMK



**CERTIFICATE OF ANALYSIS**

<b>CLIENT:</b>	Geotest Services, Inc. 741 Marine Dr. Bellingham, WA 98225	<b>DATE:</b>	8/6/2020
<b>CLIENT CONTACT:</b>	Lynni Bennett	<b>ALS JOB#:</b>	EV20070106
<b>CLIENT PROJECT:</b>	20-0591 Queen MT.	<b>ALS SAMPLE#:</b>	EV20070106-03
<b>CLIENT SAMPLE ID</b>	Comp-3	<b>DATE RECEIVED:</b>	07/24/2020
		<b>COLLECTION DATE:</b>	7/23/2020 2:30:00 PM
		<b>WDOE ACCREDITATION:</b>	C601

**SAMPLE DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
Fluorene	EPA-8270 SIM	32	20	1	UG/KG	07/25/2020	JMK
Phenanthrene	EPA-8270 SIM	70	20	1	UG/KG	07/25/2020	JMK
Anthracene	EPA-8270 SIM	U	20	1	UG/KG	07/25/2020	JMK
Fluoranthene	EPA-8270 SIM	170	20	1	UG/KG	07/25/2020	JMK
Pyrene	EPA-8270 SIM	50	20	1	UG/KG	07/25/2020	JMK
Benzo[A]Anthracene	EPA-8270 SIM	27	20	1	UG/KG	07/25/2020	JMK
Chrysene	EPA-8270 SIM	52	20	1	UG/KG	07/25/2020	JMK
Benzo[B]Fluoranthene	EPA-8270 SIM	60	20	1	UG/KG	07/25/2020	JMK
Benzo[K]Fluoranthene	EPA-8270 SIM	U	20	1	UG/KG	07/25/2020	JMK
Benzo[A]Pyrene	EPA-8270 SIM	30	20	1	UG/KG	07/25/2020	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	25	20	1	UG/KG	07/25/2020	JMK
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	20	1	UG/KG	07/25/2020	JMK
Benzo[G,H,I]Perylene	EPA-8270 SIM	37	20	1	UG/KG	07/25/2020	JMK
Pyridine	EPA-8270	U	200	1	UG/KG	08/05/2020	JMK
N-Nitrosodimethylamine	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Phenol	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Aniline	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Bis(2-Chloroethyl)Ether	EPA-8270	U	250	1	UG/KG	08/05/2020	JMK
2-Chlorophenol	EPA-8270	U	250	1	UG/KG	08/05/2020	JMK
1,3-Dichlorobenzene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
1,4-Dichlorobenzene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Benzyl Alcohol	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
1,2-Dichlorobenzene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
2-Methylphenol	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	250	1	UG/KG	08/05/2020	JMK
3&4-Methylphenol	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
N-Nitroso-Di-N-Propylamine	EPA-8270	U	250	1	UG/KG	08/05/2020	JMK
Hexachloroethane	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Nitrobenzene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Isophorone	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
2-Nitrophenol	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
2,4-Dimethylphenol	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Benzoic Acid	EPA-8270	U	1000	1	UG/KG	08/05/2020	JMK
Bis(2-Chloroethoxy)Methane	EPA-8270	U	250	1	UG/KG	08/05/2020	JMK
2,4-Dichlorophenol	EPA-8270	U	500	1	UG/KG	08/05/2020	JMK
1,2,4-Trichlorobenzene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Naphthalene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
4-Chloroaniline	EPA-8270	U	1000	1	UG/KG	08/05/2020	JMK
2,6-Dichlorophenol	EPA-8270	U	270	1	UG/KG	08/05/2020	JMK





**CERTIFICATE OF ANALYSIS**

<b>CLIENT:</b>	Geotest Services, Inc. 741 Marine Dr. Bellingham, WA 98225	<b>DATE:</b>	8/6/2020
<b>CLIENT CONTACT:</b>	Lynni Bennett	<b>ALS JOB#:</b>	EV20070106
<b>CLIENT PROJECT:</b>	20-0591 Queen MT.	<b>ALS SAMPLE#:</b>	EV20070106-03
<b>CLIENT SAMPLE ID</b>	Comp-3	<b>DATE RECEIVED:</b>	07/24/2020
		<b>COLLECTION DATE:</b>	7/23/2020 2:30:00 PM
		<b>WDOE ACCREDITATION:</b>	C601

**SAMPLE DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
Hexachlorobutadiene	EPA-8270	U	500	1	UG/KG	08/05/2020	JMK
4-Chloro-3-Methylphenol	EPA-8270	U	500	1	UG/KG	08/05/2020	JMK
2-Methylnaphthalene	EPA-8270	U	250	1	UG/KG	08/05/2020	JMK
1-Methylnaphthalene	EPA-8270	U	260	1	UG/KG	08/05/2020	JMK
Hexachlorocyclopentadiene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
2,4,6-Trichlorophenol	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
2,4,5-Trichlorophenol	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
2-Chloronaphthalene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
2-Nitroaniline	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Acenaphthylene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Dimethylphthalate	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
2,6-Dinitrotoluene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Acenaphthene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
3-Nitroaniline	EPA-8270	U	1000	1	UG/KG	08/05/2020	JMK
2,4-Dinitrophenol	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
4-Nitrophenol	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Dibenzofuran	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
2,4-Dinitrotoluene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
2,3,4,6-Tetrachlorophenol	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Diethylphthalate	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Fluorene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
4-Chlorophenyl-Phenylether	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
4-Nitroaniline	EPA-8270	U	250	1	UG/KG	08/05/2020	JMK
4,6-Dinitro-2-Methylphenol	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
N-Nitrosodiphenylamine	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Azobenzene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
4-Bromophenyl-Phenylether	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Hexachlorobenzene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Pentachlorophenol	EPA-8270	U	500	1	UG/KG	08/05/2020	JMK
Phenanthrene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Anthracene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Carbazole	EPA-8270	U	250	1	UG/KG	08/05/2020	JMK
Di-N-Butylphthalate	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Fluoranthene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Pyrene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Butylbenzylphthalate	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
3,3-Dichlorobenzidine	EPA-8270	U	250	1	UG/KG	08/05/2020	JMK
Benzo[A]Anthracene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Chrysene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK





**CERTIFICATE OF ANALYSIS**

<b>CLIENT:</b>	Geotest Services, Inc. 741 Marine Dr. Bellingham, WA 98225	<b>DATE:</b>	8/6/2020
<b>CLIENT CONTACT:</b>	Lynni Bennett	<b>ALS JOB#:</b>	EV20070106
<b>CLIENT PROJECT:</b>	20-0591 Queen MT.	<b>ALS SAMPLE#:</b>	EV20070106-03
<b>CLIENT SAMPLE ID</b>	Comp-3	<b>DATE RECEIVED:</b>	07/24/2020
		<b>COLLECTION DATE:</b>	7/23/2020 2:30:00 PM
		<b>WDOE ACCREDITATION:</b>	C601

**SAMPLE DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Di-N-Octylphthalate	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Benzo[B]Fluoranthene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Benzo[K]Fluoranthene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Benzo[A]Pyrene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Dibenz[A,H]Anthracene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Benzo[G,H,I]Perylene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
PCB-1016	EPA-8082	U	0.10	1	MG/KG	07/31/2020	JMK
PCB-1221	EPA-8082	U	0.10	1	MG/KG	07/31/2020	JMK
PCB-1232	EPA-8082	U	0.10	1	MG/KG	07/31/2020	JMK
PCB-1242	EPA-8082	U	0.10	1	MG/KG	07/31/2020	JMK
PCB-1248	EPA-8082	U	0.10	1	MG/KG	07/31/2020	JMK
PCB-1254	EPA-8082	U	0.10	1	MG/KG	07/31/2020	JMK
PCB-1260	EPA-8082	U	0.10	1	MG/KG	07/31/2020	JMK
Chlordane	EPA-8082	U	0.50	1	MG/KG	07/31/2020	JMK
PCB-1268	EPA-8082	U	0.10	1	MG/KG	07/31/2020	JMK
Total PCBs	EPA-8082	U	0.10	1	MG/KG	07/31/2020	JMK
A-BHC	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
G-BHC	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
B-BHC	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
Heptachlor	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
D-BHC	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
Aldrin	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
Heptachlor Epoxide	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
Chlordane	EPA-8081	U	0.020	1	MG/KG	08/03/2020	JMK
Endosulfan I	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
4,4'-DDE	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
Dieldrin	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
Endrin	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
4,4'-DDD	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
Endosulfan II	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
4,4'-DDT	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
Endrin Aldehyde	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
Endosulfan Sulfate	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
Methoxychlor	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
Toxaphene	EPA-8081	U	0.50	1	MG/KG	08/03/2020	JMK
Chromium (VI)	EPA-7196	U	5.0	1	MG/KG	08/06/2020	JNF
Mercury	EPA-7471	<b>0.075</b>	0.020	1	MG/KG	07/24/2020	RAL



**CERTIFICATE OF ANALYSIS**

CLIENT:	Geotest Services, Inc. 741 Marine Dr. Bellingham, WA 98225	DATE:	8/6/2020
CLIENT CONTACT:	Lynni Bennett	ALS JOB#:	EV20070106
CLIENT PROJECT:	20-0591 Queen MT.	ALS SAMPLE#:	EV20070106-03
CLIENT SAMPLE ID	Comp-3	DATE RECEIVED:	07/24/2020
		COLLECTION DATE:	7/23/2020 2:30:00 PM
		WDOE ACCREDITATION:	C601

**SAMPLE DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chromium (III)	Calc-Cr3	44	0.50	1	MG/KG	07/24/2020	RAL
Arsenic	EPA-6020	5.4	0.20	1	MG/KG	07/24/2020	RAL
Barium	EPA-6020	160	0.10	1	MG/KG	07/24/2020	RAL
Cadmium	EPA-6020	0.33	0.10	1	MG/KG	07/24/2020	RAL
Chromium	EPA-6020	44	0.10	1	MG/KG	07/24/2020	RAL
Lead	EPA-6020	22	0.10	1	MG/KG	07/24/2020	RAL
Selenium	EPA-6020	U	1.0	1	MG/KG	07/24/2020	RAL
Silver	EPA-6020	0.14	0.10	1	MG/KG	07/24/2020	RAL

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	71.4	07/28/2020	KLS
TFT	EPA-8021	84.1	07/28/2020	KLS
C25 2X Dilution	NWTPH-DX	130	07/30/2020	EBS
1,2-Dichloroethane-d4	EPA-8260	108	07/30/2020	DLC
Toluene-d8	EPA-8260	102	07/30/2020	DLC
4-Bromofluorobenzene	EPA-8260	125 SQ2	07/30/2020	DLC
Terphenyl-d14	EPA-8270 SIM	94.5	07/25/2020	JMK
2-Fluorophenol	EPA-8270	101	08/05/2020	JMK
Phenol-d5	EPA-8270	97.4	08/05/2020	JMK
Nitrobenzene-d5	EPA-8270	66.5	08/05/2020	JMK
2-Fluorobiphenyl	EPA-8270	82.9	08/05/2020	JMK
2,4,6-Tribromophenol	EPA-8270	101	08/05/2020	JMK
Terphenyl-d14	EPA-8270	89.3	08/05/2020	JMK
TCMX	EPA-8082	77.9	07/31/2020	JMK
DCB	EPA-8082	76.2	07/31/2020	JMK
TCMX	EPA-8081	67.4	08/03/2020	JMK
DCB	EPA-8081	73.7	08/03/2020	JMK

U - Analyte analyzed for but not detected at level above reporting limit.  
 SQ2 - Spike outside of control limits due to matrix effect.  
 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**

<b>CLIENT:</b>	Geotest Services, Inc. 741 Marine Dr. Bellingham, WA 98225	<b>DATE:</b>	8/6/2020
<b>CLIENT CONTACT:</b>	Lynni Bennett	<b>ALS JOB#:</b>	EV20070106
<b>CLIENT PROJECT:</b>	20-0591 Queen MT.	<b>ALS SAMPLE#:</b>	EV20070106-04
<b>CLIENT SAMPLE ID</b>	Comp-4	<b>DATE RECEIVED:</b>	07/24/2020
		<b>COLLECTION DATE:</b>	7/23/2020 3:00:00 PM
		<b>WDOE ACCREDITATION:</b>	C601

**SAMPLE DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
TPH-Volatile Range	NWTPH-GX	6.3	3.0	1	MG/KG	07/28/2020	KLS
Benzene	EPA-8021	U	0.030	1	MG/KG	07/28/2020	KLS
Toluene	EPA-8021	U	0.050	1	MG/KG	07/28/2020	KLS
Ethylbenzene	EPA-8021	U	0.050	1	MG/KG	07/28/2020	KLS
Xylenes	EPA-8021	U	0.20	1	MG/KG	07/28/2020	KLS
TPH-Diesel Range	NWTPH-DX	62	50	2	MG/KG	07/30/2020	EBS
TPH-Oil Range	NWTPH-DX	370	100	2	MG/KG	07/30/2020	EBS
Dichlorodifluoromethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Chloromethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Vinyl Chloride	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Bromomethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Chloroethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Carbon Tetrachloride	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Trichlorofluoromethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Carbon Disulfide	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Acetone	EPA-8260	U	50	1	UG/KG	07/30/2020	DLC
1,1-Dichloroethene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Methylene Chloride	EPA-8260	U	20	1	UG/KG	07/30/2020	DLC
Acrylonitrile	EPA-8260	U	50	1	UG/KG	07/30/2020	DLC
Methyl T-Butyl Ether	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,1-Dichloroethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
2-Butanone	EPA-8260	U	50	1	UG/KG	07/30/2020	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
2,2-Dichloropropane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Bromochloromethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Chloroform	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,1,1-Trichloroethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,1-Dichloropropene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,2-Dichloroethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Benzene	EPA-8260	U	5.0	1	UG/KG	07/30/2020	DLC
Trichloroethene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,2-Dichloropropane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Dibromomethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Bromodichloromethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Trans-1,3-Dichloropropene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
4-Methyl-2-Pentanone	EPA-8260	U	50	1	UG/KG	07/30/2020	DLC
Toluene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC



**CERTIFICATE OF ANALYSIS**

<b>CLIENT:</b>	Geotest Services, Inc. 741 Marine Dr. Bellingham, WA 98225	<b>DATE:</b>	8/6/2020
<b>CLIENT CONTACT:</b>	Lynni Bennett	<b>ALS JOB#:</b>	EV20070106
<b>CLIENT PROJECT:</b>	20-0591 Queen MT.	<b>ALS SAMPLE#:</b>	EV20070106-04
<b>CLIENT SAMPLE ID</b>	Comp-4	<b>DATE RECEIVED:</b>	07/24/2020
		<b>COLLECTION DATE:</b>	7/23/2020 3:00:00 PM
		<b>WDOE ACCREDITATION:</b>	C601

**SAMPLE DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING	DILUTION	UNITS	ANALYSIS	ANALYSIS
			LIMITS	FACTOR		DATE	BY
1,1,2-Trichloroethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
2-Hexanone	EPA-8260	U	50	1	UG/KG	07/30/2020	DLC
1,3-Dichloropropane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Tetrachloroethylene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Dibromochloromethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,2-Dibromoethane	EPA-8260	U	5.0	1	UG/KG	07/30/2020	DLC
Chlorobenzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Ethylbenzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
m,p-Xylene	EPA-8260	U	20	1	UG/KG	07/30/2020	DLC
Styrene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
o-Xylene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Bromoform	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Isopropylbenzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,2,3-Trichloropropane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Bromobenzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
N-Propyl Benzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
2-Chlorotoluene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
4-Chlorotoluene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
T-Butyl Benzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
S-Butyl Benzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
P-Isopropyltoluene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,3-Dichlorobenzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,4-Dichlorobenzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
N-Butylbenzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,2-Dichlorobenzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	50	1	UG/KG	07/30/2020	DLC
1,2,4-Trichlorobenzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Hexachlorobutadiene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Naphthalene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Naphthalene	EPA-8270 SIM	U	20	1	UG/KG	07/25/2020	JMK
2-Methylnaphthalene	EPA-8270 SIM	U	20	1	UG/KG	07/25/2020	JMK
1-Methylnaphthalene	EPA-8270 SIM	U	20	1	UG/KG	07/25/2020	JMK
Acenaphthylene	EPA-8270 SIM	U	20	1	UG/KG	07/25/2020	JMK
Acenaphthene	EPA-8270 SIM	U	20	1	UG/KG	07/25/2020	JMK



**CERTIFICATE OF ANALYSIS**

<b>CLIENT:</b>	Geotest Services, Inc. 741 Marine Dr. Bellingham, WA 98225	<b>DATE:</b>	8/6/2020
<b>CLIENT CONTACT:</b>	Lynni Bennett	<b>ALS JOB#:</b>	EV20070106
<b>CLIENT PROJECT:</b>	20-0591 Queen MT.	<b>ALS SAMPLE#:</b>	EV20070106-04
<b>CLIENT SAMPLE ID</b>	Comp-4	<b>DATE RECEIVED:</b>	07/24/2020
		<b>COLLECTION DATE:</b>	7/23/2020 3:00:00 PM
		<b>WDOE ACCREDITATION:</b>	C601

**SAMPLE DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
Fluorene	EPA-8270 SIM	U	20	1	UG/KG	07/25/2020	JMK
Phenanthrene	EPA-8270 SIM	34	20	1	UG/KG	07/25/2020	JMK
Anthracene	EPA-8270 SIM	U	20	1	UG/KG	07/25/2020	JMK
Fluoranthene	EPA-8270 SIM	120	20	1	UG/KG	07/25/2020	JMK
Pyrene	EPA-8270 SIM	69	20	1	UG/KG	07/25/2020	JMK
Benzo[A]Anthracene	EPA-8270 SIM	40	20	1	UG/KG	07/25/2020	JMK
Chrysene	EPA-8270 SIM	53	20	1	UG/KG	07/25/2020	JMK
Benzo[B]Fluoranthene	EPA-8270 SIM	74	20	1	UG/KG	07/25/2020	JMK
Benzo[K]Fluoranthene	EPA-8270 SIM	25	20	1	UG/KG	07/25/2020	JMK
Benzo[A]Pyrene	EPA-8270 SIM	43	20	1	UG/KG	07/25/2020	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	35	20	1	UG/KG	07/25/2020	JMK
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	20	1	UG/KG	07/25/2020	JMK
Benzo[G,H,I]Perylene	EPA-8270 SIM	53	20	1	UG/KG	07/25/2020	JMK
Pyridine	EPA-8270	U	200	1	UG/KG	08/05/2020	JMK
N-Nitrosodimethylamine	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Phenol	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Aniline	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Bis(2-Chloroethyl)Ether	EPA-8270	U	250	1	UG/KG	08/05/2020	JMK
2-Chlorophenol	EPA-8270	U	250	1	UG/KG	08/05/2020	JMK
1,3-Dichlorobenzene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
1,4-Dichlorobenzene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Benzyl Alcohol	EPA-8270	470	100	1	UG/KG	08/05/2020	JMK
1,2-Dichlorobenzene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
2-Methylphenol	EPA-8270	300	100	1	UG/KG	08/05/2020	JMK
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	250	1	UG/KG	08/05/2020	JMK
3&4-Methylphenol	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
N-Nitroso-Di-N-Propylamine	EPA-8270	U	250	1	UG/KG	08/05/2020	JMK
Hexachloroethane	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Nitrobenzene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Isophorone	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
2-Nitrophenol	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
2,4-Dimethylphenol	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Benzoic Acid	EPA-8270	U	1000	1	UG/KG	08/05/2020	JMK
Bis(2-Chloroethoxy)Methane	EPA-8270	U	250	1	UG/KG	08/05/2020	JMK
2,4-Dichlorophenol	EPA-8270	U	500	1	UG/KG	08/05/2020	JMK
1,2,4-Trichlorobenzene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Naphthalene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
4-Chloroaniline	EPA-8270	U	1000	1	UG/KG	08/05/2020	JMK
2,6-Dichlorophenol	EPA-8270	U	250	1	UG/KG	08/05/2020	JMK



**CERTIFICATE OF ANALYSIS**

<b>CLIENT:</b>	Geotest Services, Inc. 741 Marine Dr. Bellingham, WA 98225	<b>DATE:</b>	8/6/2020
<b>CLIENT CONTACT:</b>	Lynni Bennett	<b>ALS JOB#:</b>	EV20070106
<b>CLIENT PROJECT:</b>	20-0591 Queen MT.	<b>ALS SAMPLE#:</b>	EV20070106-04
<b>CLIENT SAMPLE ID</b>	Comp-4	<b>DATE RECEIVED:</b>	07/24/2020
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**SAMPLE DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
Hexachlorobutadiene	EPA-8270	U	500	1	UG/KG	08/05/2020	JMK
4-Chloro-3-Methylphenol	EPA-8270	U	500	1	UG/KG	08/05/2020	JMK
2-Methylnaphthalene	EPA-8270	U	250	1	UG/KG	08/05/2020	JMK
1-Methylnaphthalene	EPA-8270	U	250	1	UG/KG	08/05/2020	JMK
Hexachlorocyclopentadiene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
2,4,6-Trichlorophenol	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
2,4,5-Trichlorophenol	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
2-Chloronaphthalene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
2-Nitroaniline	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Acenaphthylene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Dimethylphthalate	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
2,6-Dinitrotoluene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Acenaphthene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
3-Nitroaniline	EPA-8270	U	1000	1	UG/KG	08/05/2020	JMK
2,4-Dinitrophenol	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
4-Nitrophenol	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Dibenzofuran	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
2,4-Dinitrotoluene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
2,3,4,6-Tetrachlorophenol	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Diethylphthalate	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Fluorene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
4-Chlorophenyl-Phenylether	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
4-Nitroaniline	EPA-8270	U	250	1	UG/KG	08/05/2020	JMK
4,6-Dinitro-2-Methylphenol	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
N-Nitrosodiphenylamine	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Azobenzene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
4-Bromophenyl-Phenylether	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Hexachlorobenzene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Pentachlorophenol	EPA-8270	U	500	1	UG/KG	08/05/2020	JMK
Phenanthrene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Anthracene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Carbazole	EPA-8270	U	250	1	UG/KG	08/05/2020	JMK
Di-N-Butylphthalate	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Fluoranthene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Pyrene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Butylbenzylphthalate	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
3,3-Dichlorobenzidine	EPA-8270	U	250	1	UG/KG	08/05/2020	JMK
Benzo[A]Anthracene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Chrysene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK





**CERTIFICATE OF ANALYSIS**

<b>CLIENT:</b>	Geotest Services, Inc. 741 Marine Dr. Bellingham, WA 98225	<b>DATE:</b>	8/6/2020
<b>CLIENT CONTACT:</b>	Lynni Bennett	<b>ALS JOB#:</b>	EV20070106
<b>CLIENT PROJECT:</b>	20-0591 Queen MT.	<b>ALS SAMPLE#:</b>	EV20070106-04
<b>CLIENT SAMPLE ID</b>	Comp-4	<b>DATE RECEIVED:</b>	07/24/2020
		<b>COLLECTION DATE:</b>	7/23/2020 3:00:00 PM
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**SAMPLE DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
Bis(2-Ethylhexyl)Phthalate	EPA-8270	280	100	1	UG/KG	08/05/2020	JMK
Di-N-Octylphthalate	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Benzo[B]Fluoranthene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Benzo[K]Fluoranthene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Benzo[A]Pyrene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Dibenz[A,H]Anthracene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
Benzo[G,H,I]Perylene	EPA-8270	U	100	1	UG/KG	08/05/2020	JMK
PCB-1016	EPA-8082	U	0.10	1	MG/KG	07/31/2020	JMK
PCB-1221	EPA-8082	U	0.10	1	MG/KG	07/31/2020	JMK
PCB-1232	EPA-8082	U	0.10	1	MG/KG	07/31/2020	JMK
PCB-1242	EPA-8082	U	0.10	1	MG/KG	07/31/2020	JMK
PCB-1248	EPA-8082	U	0.10	1	MG/KG	07/31/2020	JMK
PCB-1254	EPA-8082	U	0.10	1	MG/KG	07/31/2020	JMK
PCB-1260	EPA-8082	U	0.10	1	MG/KG	07/31/2020	JMK
Chlordane	EPA-8082	U	0.50	1	MG/KG	07/31/2020	JMK
PCB-1268	EPA-8082	U	0.10	1	MG/KG	07/31/2020	JMK
Total PCBs	EPA-8082	U	0.10	1	MG/KG	07/31/2020	JMK
A-BHC	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
G-BHC	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
B-BHC	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
Heptachlor	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
D-BHC	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
Aldrin	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
Heptachlor Epoxide	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
Chlordane	EPA-8081	U	0.020	1	MG/KG	08/03/2020	JMK
Endosulfan I	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
4,4'-DDE	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
Dieldrin	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
Endrin	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
4,4'-DDD	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
Endosulfan II	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
4,4'-DDT	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
Endrin Aldehyde	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
Endosulfan Sulfate	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
Methoxychlor	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
Toxaphene	EPA-8081	U	0.50	1	MG/KG	08/03/2020	JMK
Chromium (VI)	EPA-7196	U	5.0	1	MG/KG	08/06/2020	JNF
Mercury	EPA-7471	0.057	0.020	1	MG/KG	07/24/2020	RAL





**CERTIFICATE OF ANALYSIS**

CLIENT:	Geotest Services, Inc. 741 Marine Dr. Bellingham, WA 98225	DATE:	8/6/2020
CLIENT CONTACT:	Lynni Bennett	ALS JOB#:	EV20070106
CLIENT PROJECT:	20-0591 Queen MT.	ALS SAMPLE#:	EV20070106-04
CLIENT SAMPLE ID	Comp-4	DATE RECEIVED:	07/24/2020
		COLLECTION DATE:	7/23/2020 3:00:00 PM
		WDOE ACCREDITATION:	C601

**SAMPLE DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chromium (III)	Calc-Cr3	45	0.50	1	MG/KG	07/24/2020	RAL
Arsenic	EPA-6020	7.6	0.20	1	MG/KG	07/24/2020	RAL
Barium	EPA-6020	220	0.10	1	MG/KG	07/24/2020	RAL
Cadmium	EPA-6020	0.29	0.10	1	MG/KG	07/24/2020	RAL
Chromium	EPA-6020	45	0.10	1	MG/KG	07/24/2020	RAL
Lead	EPA-6020	26	0.10	1	MG/KG	07/24/2020	RAL
Selenium	EPA-6020	U	1.0	1	MG/KG	07/24/2020	RAL
Silver	EPA-6020	0.25	0.10	1	MG/KG	07/24/2020	RAL

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	93.7	07/28/2020	KLS
TFT	EPA-8021	85.8	07/28/2020	KLS
C25 2X Dilution	NWTPH-DX	114	07/30/2020	EBS
1,2-Dichloroethane-d4	EPA-8260	108	07/30/2020	DLC
Toluene-d8	EPA-8260	103	07/30/2020	DLC
4-Bromofluorobenzene	EPA-8260	126 SQ2	07/30/2020	DLC
Terphenyl-d14	EPA-8270 SIM	87.3	07/25/2020	JMK
2-Fluorophenol	EPA-8270	106	08/05/2020	JMK
Phenol-d5	EPA-8270	101	08/05/2020	JMK
Nitrobenzene-d5	EPA-8270	69.5	08/05/2020	JMK
2-Fluorobiphenyl	EPA-8270	87.2	08/05/2020	JMK
2,4,6-Tribromophenol	EPA-8270	107	08/05/2020	JMK
Terphenyl-d14	EPA-8270	91.9	08/05/2020	JMK
TCMX	EPA-8082	84.8	07/31/2020	JMK
DCB	EPA-8082	81.8	07/31/2020	JMK
TCMX	EPA-8081	73.0	08/03/2020	JMK
DCB	EPA-8081	72.5	08/03/2020	JMK

U - Analyte analyzed for but not detected at level above reporting limit.  
 SQ2 - Spike outside of control limits due to matrix effect.  
 Chromatogram indicates that it is likely that sample contains an unidentified gasoline range product, an unidentified diesel range product and lube oil.  
 Diesel range product results biased high due to oil range product overlap.



**CERTIFICATE OF ANALYSIS**

<b>CLIENT:</b>	Geotest Services, Inc. 741 Marine Dr. Bellingham, WA 98225	<b>DATE:</b>	8/6/2020
<b>CLIENT CONTACT:</b>	Lynni Bennett	<b>ALS JOB#:</b>	EV20070106
<b>CLIENT PROJECT:</b>	20-0591 Queen MT.	<b>ALS SAMPLE#:</b>	EV20070106-05
<b>CLIENT SAMPLE ID</b>	Comp-5	<b>DATE RECEIVED:</b>	07/24/2020
		<b>COLLECTION DATE:</b>	7/23/2020 3:30:00 PM
		<b>WDOE ACCREDITATION:</b>	C601

**SAMPLE DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	07/28/2020	KLS
Benzene	EPA-8021	U	0.030	1	MG/KG	07/28/2020	KLS
Toluene	EPA-8021	U	0.050	1	MG/KG	07/28/2020	KLS
Ethylbenzene	EPA-8021	U	0.050	1	MG/KG	07/28/2020	KLS
Xylenes	EPA-8021	U	0.20	1	MG/KG	07/28/2020	KLS
TPH-Diesel Range	NWTPH-DX	82	25	1	MG/KG	07/30/2020	EBS
TPH-Oil Range	NWTPH-DX	400	50	1	MG/KG	07/30/2020	EBS
Dichlorodifluoromethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Chloromethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Vinyl Chloride	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Bromomethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Chloroethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Carbon Tetrachloride	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Trichlorofluoromethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Carbon Disulfide	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Acetone	EPA-8260	U	50	1	UG/KG	07/30/2020	DLC
1,1-Dichloroethene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Methylene Chloride	EPA-8260	U	20	1	UG/KG	07/30/2020	DLC
Acrylonitrile	EPA-8260	U	50	1	UG/KG	07/30/2020	DLC
Methyl T-Butyl Ether	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,1-Dichloroethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
2-Butanone	EPA-8260	U	50	1	UG/KG	07/30/2020	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
2,2-Dichloropropane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Bromochloromethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Chloroform	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,1,1-Trichloroethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,1-Dichloropropene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,2-Dichloroethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Benzene	EPA-8260	U	5.0	1	UG/KG	07/30/2020	DLC
Trichloroethene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,2-Dichloropropane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Dibromomethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Bromodichloromethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Trans-1,3-Dichloropropene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
4-Methyl-2-Pentanone	EPA-8260	U	50	1	UG/KG	07/30/2020	DLC
Toluene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC



**CERTIFICATE OF ANALYSIS**

<b>CLIENT:</b>	Geotest Services, Inc. 741 Marine Dr. Bellingham, WA 98225	<b>DATE:</b>	8/6/2020
<b>CLIENT CONTACT:</b>	Lynni Bennett	<b>ALS JOB#:</b>	EV20070106
<b>CLIENT PROJECT:</b>	20-0591 Queen MT.	<b>ALS SAMPLE#:</b>	EV20070106-05
<b>CLIENT SAMPLE ID</b>	Comp-5	<b>DATE RECEIVED:</b>	07/24/2020
		<b>COLLECTION DATE:</b>	7/23/2020 3:30:00 PM
		<b>WDOE ACCREDITATION:</b>	C601

**SAMPLE DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING	DILUTION	UNITS	ANALYSIS	ANALYSIS
			LIMITS	FACTOR		DATE	BY
1,1,2-Trichloroethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
2-Hexanone	EPA-8260	U	50	1	UG/KG	07/30/2020	DLC
1,3-Dichloropropane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Tetrachloroethylene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Dibromochloromethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,2-Dibromoethane	EPA-8260	U	5.0	1	UG/KG	07/30/2020	DLC
Chlorobenzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Ethylbenzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
m,p-Xylene	EPA-8260	U	20	1	UG/KG	07/30/2020	DLC
Styrene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
o-Xylene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Bromoform	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Isopropylbenzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,2,3-Trichloropropane	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Bromobenzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
N-Propyl Benzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
2-Chlorotoluene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
4-Chlorotoluene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
T-Butyl Benzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
S-Butyl Benzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
P-Isopropyltoluene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,3-Dichlorobenzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,4-Dichlorobenzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
N-Butylbenzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,2-Dichlorobenzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	50	1	UG/KG	07/30/2020	DLC
1,2,4-Trichlorobenzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Hexachlorobutadiene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Naphthalene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	10	1	UG/KG	07/30/2020	DLC
Naphthalene	EPA-8270 SIM	120	20	1	UG/KG	07/25/2020	JMK
2-Methylnaphthalene	EPA-8270 SIM	U	20	1	UG/KG	07/25/2020	JMK
1-Methylnaphthalene	EPA-8270 SIM	U	20	1	UG/KG	07/25/2020	JMK
Acenaphthylene	EPA-8270 SIM	U	20	1	UG/KG	07/25/2020	JMK
Acenaphthene	EPA-8270 SIM	29	20	1	UG/KG	07/25/2020	JMK



**CERTIFICATE OF ANALYSIS**

<b>CLIENT:</b>	Geotest Services, Inc. 741 Marine Dr. Bellingham, WA 98225	<b>DATE:</b>	8/6/2020
<b>CLIENT CONTACT:</b>	Lynni Bennett	<b>ALS JOB#:</b>	EV20070106
<b>CLIENT PROJECT:</b>	20-0591 Queen MT.	<b>ALS SAMPLE#:</b>	EV20070106-05
<b>CLIENT SAMPLE ID</b>	Comp-5	<b>DATE RECEIVED:</b>	07/24/2020
		<b>COLLECTION DATE:</b>	7/23/2020 3:30:00 PM
		<b>WDOE ACCREDITATION:</b>	C601

**SAMPLE DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
Fluorene	EPA-8270 SIM	40	20	1	UG/KG	07/25/2020	JMK
Phenanthrene	EPA-8270 SIM	88	20	1	UG/KG	07/25/2020	JMK
Anthracene	EPA-8270 SIM	22	20	1	UG/KG	07/25/2020	JMK
Fluoranthene	EPA-8270 SIM	220	20	1	UG/KG	07/25/2020	JMK
Pyrene	EPA-8270 SIM	82	20	1	UG/KG	07/25/2020	JMK
Benzo[A]Anthracene	EPA-8270 SIM	31	20	1	UG/KG	07/25/2020	JMK
Chrysene	EPA-8270 SIM	51	20	1	UG/KG	07/25/2020	JMK
Benzo[B]Fluoranthene	EPA-8270 SIM	64	20	1	UG/KG	07/25/2020	JMK
Benzo[K]Fluoranthene	EPA-8270 SIM	U	20	1	UG/KG	07/25/2020	JMK
Benzo[A]Pyrene	EPA-8270 SIM	25	20	1	UG/KG	07/25/2020	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	26	20	1	UG/KG	07/25/2020	JMK
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	20	1	UG/KG	07/25/2020	JMK
Benzo[G,H,I]Perylene	EPA-8270 SIM	36	20	1	UG/KG	07/25/2020	JMK
Pyridine	EPA-8270	U	200	1	UG/KG	08/06/2020	JMK
N-Nitrosodimethylamine	EPA-8270	U	100	1	UG/KG	08/06/2020	JMK
Phenol	EPA-8270	U	100	1	UG/KG	08/06/2020	JMK
Aniline	EPA-8270	U	100	1	UG/KG	08/06/2020	JMK
Bis(2-Chloroethyl)Ether	EPA-8270	U	250	1	UG/KG	08/06/2020	JMK
2-Chlorophenol	EPA-8270	U	250	1	UG/KG	08/06/2020	JMK
1,3-Dichlorobenzene	EPA-8270	U	100	1	UG/KG	08/06/2020	JMK
1,4-Dichlorobenzene	EPA-8270	U	100	1	UG/KG	08/06/2020	JMK
Benzyl Alcohol	EPA-8270	U	100	1	UG/KG	08/06/2020	JMK
1,2-Dichlorobenzene	EPA-8270	U	100	1	UG/KG	08/06/2020	JMK
2-Methylphenol	EPA-8270	U	100	1	UG/KG	08/06/2020	JMK
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	250	1	UG/KG	08/06/2020	JMK
3&4-Methylphenol	EPA-8270	U	100	1	UG/KG	08/06/2020	JMK
N-Nitroso-Di-N-Propylamine	EPA-8270	U	250	1	UG/KG	08/06/2020	JMK
Hexachloroethane	EPA-8270	U	100	1	UG/KG	08/06/2020	JMK
Nitrobenzene	EPA-8270	U	100	1	UG/KG	08/06/2020	JMK
Isophorone	EPA-8270	U	120	1	UG/KG	08/06/2020	JMK
2-Nitrophenol	EPA-8270	U	100	1	UG/KG	08/06/2020	JMK
2,4-Dimethylphenol	EPA-8270	U	110	1	UG/KG	08/06/2020	JMK
Benzoic Acid	EPA-8270	U	1200	1	UG/KG	08/06/2020	JMK
Bis(2-Chloroethoxy)Methane	EPA-8270	U	250	1	UG/KG	08/06/2020	JMK
2,4-Dichlorophenol	EPA-8270	U	500	1	UG/KG	08/06/2020	JMK
1,2,4-Trichlorobenzene	EPA-8270	U	120	1	UG/KG	08/06/2020	JMK
Naphthalene	EPA-8270	U	100	1	UG/KG	08/06/2020	JMK
4-Chloroaniline	EPA-8270	U	1000	1	UG/KG	08/06/2020	JMK
2,6-Dichlorophenol	EPA-8270	U	310	1	UG/KG	08/06/2020	JMK



**CERTIFICATE OF ANALYSIS**

<b>CLIENT:</b>	Geotest Services, Inc. 741 Marine Dr. Bellingham, WA 98225	<b>DATE:</b>	8/6/2020
<b>CLIENT CONTACT:</b>	Lynni Bennett	<b>ALS JOB#:</b>	EV20070106
<b>CLIENT PROJECT:</b>	20-0591 Queen MT.	<b>ALS SAMPLE#:</b>	EV20070106-05
<b>CLIENT SAMPLE ID</b>	Comp-5	<b>DATE RECEIVED:</b>	07/24/2020
		<b>COLLECTION DATE:</b>	7/23/2020 3:30:00 PM
		<b>WDOE ACCREDITATION:</b>	C601

**SAMPLE DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
Hexachlorobutadiene	EPA-8270	U	500	1	UG/KG	08/06/2020	JMK
4-Chloro-3-Methylphenol	EPA-8270	U	540	1	UG/KG	08/06/2020	JMK
2-Methylnaphthalene	EPA-8270	U	260	1	UG/KG	08/06/2020	JMK
1-Methylnaphthalene	EPA-8270	U	300	1	UG/KG	08/06/2020	JMK
Hexachlorocyclopentadiene	EPA-8270	U	100	1	UG/KG	08/06/2020	JMK
2,4,6-Trichlorophenol	EPA-8270	U	100	1	UG/KG	08/06/2020	JMK
2,4,5-Trichlorophenol	EPA-8270	U	100	1	UG/KG	08/06/2020	JMK
2-Chloronaphthalene	EPA-8270	U	100	1	UG/KG	08/06/2020	JMK
2-Nitroaniline	EPA-8270	U	100	1	UG/KG	08/06/2020	JMK
Acenaphthylene	EPA-8270	U	100	1	UG/KG	08/06/2020	JMK
Dimethylphthalate	EPA-8270	U	100	1	UG/KG	08/06/2020	JMK
2,6-Dinitrotoluene	EPA-8270	U	100	1	UG/KG	08/06/2020	JMK
Acenaphthene	EPA-8270	U	100	1	UG/KG	08/06/2020	JMK
3-Nitroaniline	EPA-8270	U	1000	1	UG/KG	08/06/2020	JMK
2,4-Dinitrophenol	EPA-8270	U	100	1	UG/KG	08/06/2020	JMK
4-Nitrophenol	EPA-8270	U	100	1	UG/KG	08/06/2020	JMK
Dibenzofuran	EPA-8270	U	100	1	UG/KG	08/06/2020	JMK
2,4-Dinitrotoluene	EPA-8270	U	100	1	UG/KG	08/06/2020	JMK
2,3,4,6-Tetrachlorophenol	EPA-8270	U	100	1	UG/KG	08/06/2020	JMK
Diethylphthalate	EPA-8270	U	100	1	UG/KG	08/06/2020	JMK
Fluorene	EPA-8270	U	100	1	UG/KG	08/06/2020	JMK
4-Chlorophenyl-Phenylether	EPA-8270	U	100	1	UG/KG	08/06/2020	JMK
4-Nitroaniline	EPA-8270	U	250	1	UG/KG	08/06/2020	JMK
4,6-Dinitro-2-Methylphenol	EPA-8270	U	100	1	UG/KG	08/06/2020	JMK
N-Nitrosodiphenylamine	EPA-8270	U	100	1	UG/KG	08/06/2020	JMK
Azobenzene	EPA-8270	U	100	1	UG/KG	08/06/2020	JMK
4-Bromophenyl-Phenylether	EPA-8270	U	100	1	UG/KG	08/06/2020	JMK
Hexachlorobenzene	EPA-8270	U	100	1	UG/KG	08/06/2020	JMK
Pentachlorophenol	EPA-8270	U	500	1	UG/KG	08/06/2020	JMK
Phenanthrene	EPA-8270	U	100	1	UG/KG	08/06/2020	JMK
Anthracene	EPA-8270	U	100	1	UG/KG	08/06/2020	JMK
Carbazole	EPA-8270	U	250	1	UG/KG	08/06/2020	JMK
Di-N-Butylphthalate	EPA-8270	U	100	1	UG/KG	08/06/2020	JMK
Fluoranthene	EPA-8270	U	100	1	UG/KG	08/06/2020	JMK
Pyrene	EPA-8270	U	100	1	UG/KG	08/06/2020	JMK
Butylbenzylphthalate	EPA-8270	U	100	1	UG/KG	08/06/2020	JMK
3,3-Dichlorobenzidine	EPA-8270	U	290	1	UG/KG	08/06/2020	JMK
Benzo[A]Anthracene	EPA-8270	U	100	1	UG/KG	08/06/2020	JMK
Chrysene	EPA-8270	U	100	1	UG/KG	08/06/2020	JMK





**CERTIFICATE OF ANALYSIS**

<b>CLIENT:</b>	Geotest Services, Inc. 741 Marine Dr. Bellingham, WA 98225	<b>DATE:</b>	8/6/2020
<b>CLIENT CONTACT:</b>	Lynni Bennett	<b>ALS JOB#:</b>	EV20070106
<b>CLIENT PROJECT:</b>	20-0591 Queen MT.	<b>ALS SAMPLE#:</b>	EV20070106-05
<b>CLIENT SAMPLE ID</b>	Comp-5	<b>DATE RECEIVED:</b>	07/24/2020
		<b>COLLECTION DATE:</b>	7/23/2020 3:30:00 PM
		<b>WDOE ACCREDITATION:</b>	C601

**SAMPLE DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING	DILUTION	UNITS	ANALYSIS	ANALYSIS
			LIMITS	FACTOR		DATE	BY
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	100	1	UG/KG	08/06/2020	JMK
Di-N-Octylphthalate	EPA-8270	U	100	1	UG/KG	08/06/2020	JMK
Benzo[B]Fluoranthene	EPA-8270	U	100	1	UG/KG	08/06/2020	JMK
Benzo[K]Fluoranthene	EPA-8270	U	100	1	UG/KG	08/06/2020	JMK
Benzo[A]Pyrene	EPA-8270	U	100	1	UG/KG	08/06/2020	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	100	1	UG/KG	08/06/2020	JMK
Dibenz[A,H]Anthracene	EPA-8270	U	100	1	UG/KG	08/06/2020	JMK
Benzo[G,H,I]Perylene	EPA-8270	U	100	1	UG/KG	08/06/2020	JMK
PCB-1016	EPA-8082	U	0.10	1	MG/KG	07/31/2020	JMK
PCB-1221	EPA-8082	U	0.10	1	MG/KG	07/31/2020	JMK
PCB-1232	EPA-8082	U	0.10	1	MG/KG	07/31/2020	JMK
PCB-1242	EPA-8082	U	0.10	1	MG/KG	07/31/2020	JMK
PCB-1248	EPA-8082	U	0.10	1	MG/KG	07/31/2020	JMK
PCB-1254	EPA-8082	U	0.10	1	MG/KG	07/31/2020	JMK
PCB-1260	EPA-8082	U	0.10	1	MG/KG	07/31/2020	JMK
Chlordane	EPA-8082	U	0.50	1	MG/KG	07/31/2020	JMK
PCB-1268	EPA-8082	U	0.10	1	MG/KG	07/31/2020	JMK
Total PCBs	EPA-8082	U	0.10	1	MG/KG	07/31/2020	JMK
A-BHC	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
G-BHC	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
B-BHC	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
Heptachlor	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
D-BHC	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
Aldrin	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
Heptachlor Epoxide	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
Chlordane	EPA-8081	U	0.020	1	MG/KG	08/03/2020	JMK
Endosulfan I	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
4,4'-DDE	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
Dieldrin	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
Endrin	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
4,4'-DDD	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
Endosulfan II	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
4,4'-DDT	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
Endrin Aldehyde	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
Endosulfan Sulfate	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
Methoxychlor	EPA-8081	U	0.010	1	MG/KG	08/03/2020	JMK
Toxaphene	EPA-8081	U	0.50	1	MG/KG	08/03/2020	JMK
Chromium (VI)	EPA-7196	U	5.0	1	MG/KG	08/06/2020	JNF
Mercury	EPA-7471	<b>0.075</b>	0.020	1	MG/KG	07/24/2020	RAL



**CERTIFICATE OF ANALYSIS**

<b>CLIENT:</b>	Geotest Services, Inc. 741 Marine Dr. Bellingham, WA 98225	<b>DATE:</b>	8/6/2020
<b>CLIENT CONTACT:</b>	Lynni Bennett	<b>ALS JOB#:</b>	EV20070106
<b>CLIENT PROJECT:</b>	20-0591 Queen MT.	<b>ALS SAMPLE#:</b>	EV20070106-05
<b>CLIENT SAMPLE ID</b>	Comp-5	<b>DATE RECEIVED:</b>	07/24/2020
		<b>COLLECTION DATE:</b>	7/23/2020 3:30:00 PM
		<b>WDOE ACCREDITATION:</b>	C601

**SAMPLE DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
						DATE	BY
Chromium (III)	Calc-Cr3	37	0.50	1	MG/KG	07/24/2020	RAL
Arsenic	EPA-6020	16	0.20	1	MG/KG	07/24/2020	RAL
Barium	EPA-6020	130	0.10	1	MG/KG	07/24/2020	RAL
Cadmium	EPA-6020	0.40	0.10	1	MG/KG	07/24/2020	RAL
Chromium	EPA-6020	37	0.10	1	MG/KG	07/24/2020	RAL
Lead	EPA-6020	27	0.10	1	MG/KG	07/24/2020	RAL
Selenium	EPA-6020	U	1.0	1	MG/KG	07/24/2020	RAL
Silver	EPA-6020	U	0.10	1	MG/KG	07/24/2020	RAL

SURROGATE	METHOD	%REC	ANALYSIS	ANALYSIS
			DATE	BY
TFT	NWTPH-GX	66.6	07/28/2020	KLS
TFT	EPA-8021	71.6	07/28/2020	KLS
C25	NWTPH-DX	108	07/30/2020	EBS
1,2-Dichloroethane-d4	EPA-8260	109	07/30/2020	DLC
Toluene-d8	EPA-8260	104	07/30/2020	DLC
4-Bromofluorobenzene	EPA-8260	122	07/30/2020	DLC
Terphenyl-d14	EPA-8270 SIM	92.5	07/25/2020	JMK
2-Fluorophenol	EPA-8270	96.4	08/06/2020	JMK
Phenol-d5	EPA-8270	86.8	08/06/2020	JMK
Nitrobenzene-d5	EPA-8270	68.0	08/06/2020	JMK
2-Fluorobiphenyl	EPA-8270	80.0	08/06/2020	JMK
2,4,6-Tribromophenol	EPA-8270	90.9	08/06/2020	JMK
Terphenyl-d14	EPA-8270	83.2	08/06/2020	JMK
TCMX	EPA-8082	78.3	07/31/2020	JMK
DCB	EPA-8082	84.6	07/31/2020	JMK
TCMX	EPA-8081	65.5	08/03/2020	JMK
DCB	EPA-8081	71.4	08/03/2020	JMK

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:	Geotest Services, Inc. 741 Marine Dr. Bellingham, WA 98225	DATE:	8/6/2020
CLIENT CONTACT:	Lynni Bennett	ALS SDG#:	EV20070106
CLIENT PROJECT:	20-0591 Queen MT.	WDOE ACCREDITATION:	C601

**LABORATORY BLANK RESULTS**

**MBG-072720S - Batch 155826 - Soil by NWTPH-GX**

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	MG/KG	3.0	07/27/2020	KLS

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

**MB-072720S - Batch 155826 - Soil by EPA-8021**

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Methyl T-Butyl Ether	EPA-8021	U	MG/KG	0.10	07/27/2020	KLS
Benzene	EPA-8021	U	MG/KG	0.030	07/27/2020	KLS
Toluene	EPA-8021	U	MG/KG	0.050	07/27/2020	KLS
Ethylbenzene	EPA-8021	U	MG/KG	0.050	07/27/2020	KLS
Xylenes	EPA-8021	U	MG/KG	0.20	07/27/2020	KLS

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

**MB-072920S2 - Batch 156090 - Soil by NWTPH-DX**

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range	NWTPH-DX	U	MG/KG	25	07/29/2020	EBS
TPH-Oil Range	NWTPH-DX	U	MG/KG	50	07/29/2020	EBS

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

**MB-072920S - Batch 156075 - Soil by EPA-8260**

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	UG/KG	10	07/29/2020	DLC
Chloromethane	EPA-8260	U	UG/KG	10	07/29/2020	DLC
Vinyl Chloride	EPA-8260	U	UG/KG	10	07/29/2020	DLC
Bromomethane	EPA-8260	U	UG/KG	10	07/29/2020	DLC
Chloroethane	EPA-8260	U	UG/KG	10	07/29/2020	DLC
Carbon Tetrachloride	EPA-8260	U	UG/KG	10	07/29/2020	DLC
Trichlorofluoromethane	EPA-8260	U	UG/KG	10	07/29/2020	DLC
Carbon Disulfide	EPA-8260	U	UG/KG	10	07/29/2020	DLC
Acetone	EPA-8260	U	UG/KG	50	07/29/2020	DLC
1,1-Dichloroethene	EPA-8260	U	UG/KG	10	07/29/2020	DLC
Methylene Chloride	EPA-8260	U	UG/KG	20	07/29/2020	DLC
Acrylonitrile	EPA-8260	U	UG/KG	50	07/29/2020	DLC
Methyl T-Butyl Ether	EPA-8260	U	UG/KG	10	07/29/2020	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	UG/KG	10	07/29/2020	DLC
1,1-Dichloroethane	EPA-8260	U	UG/KG	10	07/29/2020	DLC



**CERTIFICATE OF ANALYSIS**

CLIENT: Geotest Services, Inc.  
 741 Marine Dr.  
 Bellingham, WA 98225

CLIENT CONTACT: Lynni Bennett  
 CLIENT PROJECT: 20-0591 Queen MT.

DATE: 8/6/2020  
 ALS SDG#: EV20070106  
 WDOE ACCREDITATION: C601

**LABORATORY BLANK RESULTS**

**MB-072920S - Batch 156075 - Soil by EPA-8260**

2-Butanone	EPA-8260	U	UG/KG	50	07/29/2020	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	UG/KG	10	07/29/2020	DLC
2,2-Dichloropropane	EPA-8260	U	UG/KG	10	07/29/2020	DLC
Bromochloromethane	EPA-8260	U	UG/KG	10	07/29/2020	DLC
Chloroform	EPA-8260	U	UG/KG	10	07/29/2020	DLC
1,1,1-Trichloroethane	EPA-8260	U	UG/KG	10	07/29/2020	DLC
1,1-Dichloropropene	EPA-8260	U	UG/KG	10	07/29/2020	DLC
1,2-Dichloroethane	EPA-8260	U	UG/KG	10	07/29/2020	DLC
Benzene	EPA-8260	U	UG/KG	5.0	07/29/2020	DLC
Trichloroethene	EPA-8260	U	UG/KG	10	07/29/2020	DLC
1,2-Dichloropropane	EPA-8260	U	UG/KG	10	07/29/2020	DLC
Dibromomethane	EPA-8260	U	UG/KG	10	07/29/2020	DLC
Bromodichloromethane	EPA-8260	U	UG/KG	10	07/29/2020	DLC
Trans-1,3-Dichloropropene	EPA-8260	U	UG/KG	10	07/29/2020	DLC
4-Methyl-2-Pentanone	EPA-8260	U	UG/KG	50	07/29/2020	DLC
Toluene	EPA-8260	U	UG/KG	10	07/29/2020	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	UG/KG	10	07/29/2020	DLC
1,1,2-Trichloroethane	EPA-8260	U	UG/KG	10	07/29/2020	DLC
2-Hexanone	EPA-8260	U	UG/KG	50	07/29/2020	DLC
1,3-Dichloropropane	EPA-8260	U	UG/KG	10	07/29/2020	DLC
Tetrachloroethylene	EPA-8260	U	UG/KG	10	07/29/2020	DLC
Dibromochloromethane	EPA-8260	U	UG/KG	10	07/29/2020	DLC
1,2-Dibromoethane	EPA-8260	U	UG/KG	5.0	07/29/2020	DLC
Chlorobenzene	EPA-8260	U	UG/KG	10	07/29/2020	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	U	UG/KG	10	07/29/2020	DLC
Ethylbenzene	EPA-8260	U	UG/KG	10	07/29/2020	DLC
m,p-Xylene	EPA-8260	U	UG/KG	20	07/29/2020	DLC
Styrene	EPA-8260	U	UG/KG	10	07/29/2020	DLC
o-Xylene	EPA-8260	U	UG/KG	10	07/29/2020	DLC
Bromoform	EPA-8260	U	UG/KG	10	07/29/2020	DLC
Isopropylbenzene	EPA-8260	U	UG/KG	10	07/29/2020	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	U	UG/KG	10	07/29/2020	DLC
1,2,3-Trichloropropane	EPA-8260	U	UG/KG	10	07/29/2020	DLC
Bromobenzene	EPA-8260	U	UG/KG	10	07/29/2020	DLC
N-Propyl Benzene	EPA-8260	U	UG/KG	10	07/29/2020	DLC
2-Chlorotoluene	EPA-8260	U	UG/KG	10	07/29/2020	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	UG/KG	10	07/29/2020	DLC
4-Chlorotoluene	EPA-8260	U	UG/KG	10	07/29/2020	DLC
T-Butyl Benzene	EPA-8260	U	UG/KG	10	07/29/2020	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	UG/KG	10	07/29/2020	DLC
S-Butyl Benzene	EPA-8260	U	UG/KG	10	07/29/2020	DLC



**CERTIFICATE OF ANALYSIS**

CLIENT: Geotest Services, Inc.  
 741 Marine Dr.  
 Bellingham, WA 98225

CLIENT CONTACT: Lynni Bennett  
 CLIENT PROJECT: 20-0591 Queen MT.

DATE: 8/6/2020  
 ALS SDG#: EV20070106  
 WDOE ACCREDITATION: C601

**LABORATORY BLANK RESULTS**

**MB-072920S - Batch 156075 - Soil by EPA-8260**

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
P-Isopropyltoluene	EPA-8260	U	UG/KG	10	07/29/2020	DLC
1,3-Dichlorobenzene	EPA-8260	U	UG/KG	10	07/29/2020	DLC
1,4-Dichlorobenzene	EPA-8260	U	UG/KG	10	07/29/2020	DLC
N-Butylbenzene	EPA-8260	U	UG/KG	10	07/29/2020	DLC
1,2-Dichlorobenzene	EPA-8260	U	UG/KG	10	07/29/2020	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	UG/KG	50	07/29/2020	DLC
1,2,4-Trichlorobenzene	EPA-8260	U	UG/KG	10	07/29/2020	DLC
Hexachlorobutadiene	EPA-8260	U	UG/KG	10	07/29/2020	DLC
Naphthalene	EPA-8260	U	UG/KG	10	07/29/2020	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	UG/KG	10	07/29/2020	DLC

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

**MB-072420S - Batch 155814 - Soil by EPA-8270 SIM**

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Naphthalene	EPA-8270 SIM	U	UG/KG	20	07/24/2020	JMK
2-Methylnaphthalene	EPA-8270 SIM	U	UG/KG	20	07/24/2020	JMK
1-Methylnaphthalene	EPA-8270 SIM	U	UG/KG	20	07/24/2020	JMK
Acenaphthylene	EPA-8270 SIM	U	UG/KG	20	07/24/2020	JMK
Acenaphthene	EPA-8270 SIM	U	UG/KG	20	07/24/2020	JMK
Fluorene	EPA-8270 SIM	U	UG/KG	20	07/24/2020	JMK
Phenanthrene	EPA-8270 SIM	U	UG/KG	20	07/24/2020	JMK
Anthracene	EPA-8270 SIM	U	UG/KG	20	07/24/2020	JMK
Fluoranthene	EPA-8270 SIM	U	UG/KG	20	07/24/2020	JMK
Pyrene	EPA-8270 SIM	U	UG/KG	20	07/24/2020	JMK
Benzo[A]Anthracene	EPA-8270 SIM	U	UG/KG	20	07/24/2020	JMK
Chrysene	EPA-8270 SIM	U	UG/KG	20	07/24/2020	JMK
Benzo[B]Fluoranthene	EPA-8270 SIM	U	UG/KG	20	07/24/2020	JMK
Benzo[K]Fluoranthene	EPA-8270 SIM	U	UG/KG	20	07/24/2020	JMK
Benzo[A]Pyrene	EPA-8270 SIM	U	UG/KG	20	07/24/2020	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	U	UG/KG	20	07/24/2020	JMK
Dibenz[A,H]Anthracene	EPA-8270 SIM	U	UG/KG	20	07/24/2020	JMK
Benzo[G,H,I]Perylene	EPA-8270 SIM	U	UG/KG	20	07/24/2020	JMK

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

**MB-073020S - Batch 155952 - Soil by EPA-8270**

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Pyridine	EPA-8270	U	UG/KG	200	08/05/2020	JMK
N-Nitrosodimethylamine	EPA-8270	U	UG/KG	100	08/05/2020	JMK





**CERTIFICATE OF ANALYSIS**

CLIENT: Geotest Services, Inc.  
 741 Marine Dr.  
 Bellingham, WA 98225

CLIENT CONTACT: Lynni Bennett  
 CLIENT PROJECT: 20-0591 Queen MT.

DATE: 8/6/2020  
 ALS SDG#: EV20070106  
 WDOE ACCREDITATION: C601

**LABORATORY BLANK RESULTS**

**MB-073020S - Batch 155952 - Soil by EPA-8270**

Phenol	EPA-8270	U	UG/KG	100	08/05/2020	JMK
Aniline	EPA-8270	U	UG/KG	100	08/05/2020	JMK
Bis(2-Chloroethyl)Ether	EPA-8270	U	UG/KG	250	08/05/2020	JMK
2-Chlorophenol	EPA-8270	U	UG/KG	250	08/05/2020	JMK
1,3-Dichlorobenzene	EPA-8270	U	UG/KG	100	08/05/2020	JMK
1,4-Dichlorobenzene	EPA-8270	U	UG/KG	100	08/05/2020	JMK
Benzyl Alcohol	EPA-8270	U	UG/KG	100	08/05/2020	JMK
1,2-Dichlorobenzene	EPA-8270	U	UG/KG	100	08/05/2020	JMK
2-Methylphenol	EPA-8270	U	UG/KG	100	08/05/2020	JMK
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	UG/KG	250	08/05/2020	JMK
3&4-Methylphenol	EPA-8270	U	UG/KG	100	08/05/2020	JMK
N-Nitroso-Di-N-Propylamine	EPA-8270	U	UG/KG	250	08/05/2020	JMK
Hexachloroethane	EPA-8270	U	UG/KG	100	08/05/2020	JMK
Nitrobenzene	EPA-8270	U	UG/KG	100	08/05/2020	JMK
Isophorone	EPA-8270	U	UG/KG	100	08/05/2020	JMK
2-Nitrophenol	EPA-8270	U	UG/KG	100	08/05/2020	JMK
2,4-Dimethylphenol	EPA-8270	U	UG/KG	100	08/05/2020	JMK
Benzoic Acid	EPA-8270	U	UG/KG	1000	08/05/2020	JMK
Bis(2-Chloroethoxy)Methane	EPA-8270	U	UG/KG	250	08/05/2020	JMK
2,4-Dichlorophenol	EPA-8270	U	UG/KG	500	08/05/2020	JMK
1,2,4-Trichlorobenzene	EPA-8270	U	UG/KG	100	08/05/2020	JMK
Naphthalene	EPA-8270	U	UG/KG	100	08/05/2020	JMK
4-Chloroaniline	EPA-8270	U	UG/KG	1000	08/05/2020	JMK
2,6-Dichlorophenol	EPA-8270	U	UG/KG	250	08/05/2020	JMK
Hexachlorobutadiene	EPA-8270	U	UG/KG	500	08/05/2020	JMK
4-Chloro-3-Methylphenol	EPA-8270	U	UG/KG	500	08/05/2020	JMK
2-Methylnaphthalene	EPA-8270	U	UG/KG	250	08/05/2020	JMK
1-Methylnaphthalene	EPA-8270	U	UG/KG	250	08/05/2020	JMK
Hexachlorocyclopentadiene	EPA-8270	U	UG/KG	100	08/05/2020	JMK
2,4,6-Trichlorophenol	EPA-8270	U	UG/KG	100	08/05/2020	JMK
2,4,5-Trichlorophenol	EPA-8270	U	UG/KG	100	08/05/2020	JMK
2-Chloronaphthalene	EPA-8270	U	UG/KG	100	08/05/2020	JMK
2-Nitroaniline	EPA-8270	U	UG/KG	100	08/05/2020	JMK
Acenaphthylene	EPA-8270	U	UG/KG	100	08/05/2020	JMK
Dimethylphthalate	EPA-8270	U	UG/KG	100	08/05/2020	JMK
2,6-Dinitrotoluene	EPA-8270	U	UG/KG	100	08/05/2020	JMK
Acenaphthene	EPA-8270	U	UG/KG	100	08/05/2020	JMK
3-Nitroaniline	EPA-8270	U	UG/KG	1000	08/05/2020	JMK
2,4-Dinitrophenol	EPA-8270	U	UG/KG	100	08/05/2020	JMK
4-Nitrophenol	EPA-8270	U	UG/KG	100	08/05/2020	JMK
Dibenzofuran	EPA-8270	U	UG/KG	100	08/05/2020	JMK



**CERTIFICATE OF ANALYSIS**

CLIENT: Geotest Services, Inc.  
 741 Marine Dr.  
 Bellingham, WA 98225

CLIENT CONTACT: Lynni Bennett  
 CLIENT PROJECT: 20-0591 Queen MT.

DATE: 8/6/2020  
 ALS SDG#: EV20070106  
 WDOE ACCREDITATION: C601

**LABORATORY BLANK RESULTS**

**MB-073020S - Batch 155952 - Soil by EPA-8270**

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
2,4-Dinitrotoluene	EPA-8270	U	UG/KG	100	08/05/2020	JMK
2,3,4,6-Tetrachlorophenol	EPA-8270	U	UG/KG	100	08/05/2020	JMK
Diethylphthalate	EPA-8270	U	UG/KG	100	08/05/2020	JMK
Fluorene	EPA-8270	U	UG/KG	100	08/05/2020	JMK
4-Chlorophenyl-Phenylether	EPA-8270	U	UG/KG	100	08/05/2020	JMK
4-Nitroaniline	EPA-8270	U	UG/KG	250	08/05/2020	JMK
4,6-Dinitro-2-Methylphenol	EPA-8270	U	UG/KG	100	08/05/2020	JMK
N-Nitrosodiphenylamine	EPA-8270	U	UG/KG	100	08/05/2020	JMK
Azobenzene	EPA-8270	U	UG/KG	100	08/05/2020	JMK
4-Bromophenyl-Phenylether	EPA-8270	U	UG/KG	100	08/05/2020	JMK
Hexachlorobenzene	EPA-8270	U	UG/KG	100	08/05/2020	JMK
Pentachlorophenol	EPA-8270	U	UG/KG	500	08/05/2020	JMK
Phenanthrene	EPA-8270	U	UG/KG	100	08/05/2020	JMK
Anthracene	EPA-8270	U	UG/KG	100	08/05/2020	JMK
Carbazole	EPA-8270	U	UG/KG	250	08/05/2020	JMK
Di-N-Butylphthalate	EPA-8270	U	UG/KG	100	08/05/2020	JMK
Fluoranthene	EPA-8270	U	UG/KG	100	08/05/2020	JMK
Pyrene	EPA-8270	U	UG/KG	100	08/05/2020	JMK
Butylbenzylphthalate	EPA-8270	U	UG/KG	100	08/05/2020	JMK
3,3-Dichlorobenzidine	EPA-8270	U	UG/KG	250	08/05/2020	JMK
Benzo[A]Anthracene	EPA-8270	U	UG/KG	100	08/05/2020	JMK
Chrysene	EPA-8270	U	UG/KG	100	08/05/2020	JMK
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	UG/KG	100	08/05/2020	JMK
Di-N-Octylphthalate	EPA-8270	U	UG/KG	100	08/05/2020	JMK
Benzo[B]Fluoranthene	EPA-8270	U	UG/KG	100	08/05/2020	JMK
Benzo[K]Fluoranthene	EPA-8270	U	UG/KG	100	08/05/2020	JMK
Benzo[A]Pyrene	EPA-8270	U	UG/KG	100	08/05/2020	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	UG/KG	100	08/05/2020	JMK
Dibenz[A,H]Anthracene	EPA-8270	U	UG/KG	100	08/05/2020	JMK
Benzo[G,H,I]Perylene	EPA-8270	U	UG/KG	100	08/05/2020	JMK

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

**MB-073020S - Batch 155947 - Soil by EPA-8082**

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
PCB-1016	EPA-8082	U	MG/KG	0.10	07/31/2020	JMK
PCB-1221	EPA-8082	U	MG/KG	0.10	07/31/2020	JMK
PCB-1232	EPA-8082	U	MG/KG	0.10	07/31/2020	JMK
PCB-1242	EPA-8082	U	MG/KG	0.10	07/31/2020	JMK
PCB-1248	EPA-8082	U	MG/KG	0.10	07/31/2020	JMK
PCB-1254	EPA-8082	U	MG/KG	0.10	07/31/2020	JMK



**CERTIFICATE OF ANALYSIS**

CLIENT: Geotest Services, Inc.  
 741 Marine Dr.  
 Bellingham, WA 98225

CLIENT CONTACT: Lynni Bennett  
 CLIENT PROJECT: 20-0591 Queen MT.

DATE: 8/6/2020  
 ALS SDG#: EV20070106  
 WDOE ACCREDITATION: C601

**LABORATORY BLANK RESULTS**

**MB-073020S - Batch 155947 - Soil by EPA-8082**

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
PCB-1260	EPA-8082	U	MG/KG	0.10	07/31/2020	JMK
Chlordane	EPA-8082	U	MG/KG	0.50	07/31/2020	JMK
PCB-1268	EPA-8082	U	MG/KG	0.10	07/31/2020	JMK
Total PCBs	EPA-8082	U	MG/KG	0.10	07/31/2020	JMK

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

**MB-073020S - Batch 155948 - Soil by EPA-8081**

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
A-BHC	EPA-8081	U	MG/KG	0.010	08/03/2020	JMK
G-BHC	EPA-8081	U	MG/KG	0.010	08/03/2020	JMK
B-BHC	EPA-8081	U	MG/KG	0.010	08/03/2020	JMK
Heptachlor	EPA-8081	U	MG/KG	0.010	08/03/2020	JMK
D-BHC	EPA-8081	U	MG/KG	0.010	08/03/2020	JMK
Aldrin	EPA-8081	U	MG/KG	0.010	08/03/2020	JMK
Heptachlor Epoxide	EPA-8081	U	MG/KG	0.010	08/03/2020	JMK
Chlordane	EPA-8081	U	MG/KG	0.020	08/03/2020	JMK
Endosulfan I	EPA-8081	U	MG/KG	0.010	08/03/2020	JMK
4,4'-DDE	EPA-8081	U	MG/KG	0.010	08/03/2020	JMK
Dieldrin	EPA-8081	U	MG/KG	0.010	08/03/2020	JMK
Endrin	EPA-8081	U	MG/KG	0.010	08/03/2020	JMK
4,4'-DDD	EPA-8081	U	MG/KG	0.010	08/03/2020	JMK
Endosulfan II	EPA-8081	U	MG/KG	0.010	08/03/2020	JMK
4,4'-DDT	EPA-8081	U	MG/KG	0.010	08/03/2020	JMK
Endrin Aldehyde	EPA-8081	U	MG/KG	0.010	08/03/2020	JMK
Endosulfan Sulfate	EPA-8081	U	MG/KG	0.010	08/03/2020	JMK
Methoxychlor	EPA-8081	U	MG/KG	0.010	08/03/2020	JMK
Toxaphene	EPA-8081	U	MG/KG	0.50	08/03/2020	JMK

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

**MBLK-R366329 - Batch R366329 - Soil by EPA-7196**

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Chromium (VI)	EPA-7196	U	MG/KG	5.0	08/06/2020	JNF

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

**MBLK-R365711 - Batch R365711 - Soil by EPA-7471**

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	U	MG/KG	0.020	07/24/2020	RAL



CERTIFICATE OF ANALYSIS

CLIENT: Geotest Services, Inc.
741 Marine Dr.
Bellingham, WA 98225

DATE: 8/6/2020
ALS SDG#: EV20070106
WDOE ACCREDITATION: C601

CLIENT CONTACT: Lynni Bennett
CLIENT PROJECT: 20-0591 Queen MT.

LABORATORY BLANK RESULTS

MBLK-R365711 - Batch R365711 - Soil by EPA-7471

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

MB-072420S - Batch 155788 - Soil by EPA-6020

Table with 7 columns: ANALYTE, METHOD, RESULTS, UNITS, REPORTING LIMITS, ANALYSIS DATE, ANALYSIS BY. Rows include Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, and Silver, all with 'U' results.

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



**CERTIFICATE OF ANALYSIS**

CLIENT: Geotest Services, Inc.  
 741 Marine Dr.  
 Bellingham, WA 98225

CLIENT CONTACT: Lynni Bennett  
 CLIENT PROJECT: 20-0591 Queen MT.

DATE: 8/6/2020  
 ALS SDG#: EV20070106  
 WDOE ACCREDITATION: C601

**LABORATORY CONTROL SAMPLE RESULTS**

**ALS Test Batch ID: 155826 - Soil by NWTPH-GX**

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
TPH-Volatile Range - BS	NWTPH-GX	88.2			66.5	122.7	07/27/2020	KLS
TPH-Volatile Range - BSD	NWTPH-GX	91.1	3		66.5	122.7	07/28/2020	KLS

**ALS Test Batch ID: 155826 - Soil by EPA-8021**

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
Methyl T-Butyl Ether - BS	EPA-8021	99.5			66	116	07/27/2020	KLS
Methyl T-Butyl Ether - BSD	EPA-8021	105	5		66	116	07/27/2020	KLS
Benzene - BS	EPA-8021	96.2			67.7	124	07/27/2020	KLS
Benzene - BSD	EPA-8021	103	6		67.7	124	07/27/2020	KLS
Toluene - BS	EPA-8021	101			71	123	07/27/2020	KLS
Toluene - BSD	EPA-8021	107	6		71	123	07/27/2020	KLS
Ethylbenzene - BS	EPA-8021	106			69.8	117	07/27/2020	KLS
Ethylbenzene - BSD	EPA-8021	112	6		69.8	117	07/27/2020	KLS
Xylenes - BS	EPA-8021	103			70	119	07/27/2020	KLS
Xylenes - BSD	EPA-8021	110	6		70	119	07/27/2020	KLS

**ALS Test Batch ID: 156090 - Soil by NWTPH-DX**

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
TPH-Diesel Range - BS	NWTPH-DX	106			75.5	122.1	07/29/2020	EBS
TPH-Diesel Range - BSD	NWTPH-DX	105	1		75.5	122.1	07/29/2020	EBS

**ALS Test Batch ID: 156075 - Soil by EPA-8260**

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
Dichlorodifluoromethane - BS	EPA-8260	87.0			50	150	07/29/2020	DLC
Dichlorodifluoromethane - BSD	EPA-8260	71.0	20		50	150	07/29/2020	DLC
Chloromethane - BS	EPA-8260	105			50	150	07/29/2020	DLC
Chloromethane - BSD	EPA-8260	85.5	20		50	150	07/29/2020	DLC
Vinyl Chloride - BS	EPA-8260	92.1			50	150	07/29/2020	DLC
Vinyl Chloride - BSD	EPA-8260	74.8	21		50	150	07/29/2020	DLC
Bromomethane - BS	EPA-8260	97.6			50	150	07/29/2020	DLC
Bromomethane - BSD	EPA-8260	82.0	17		50	150	07/29/2020	DLC
Chloroethane - BS	EPA-8260	92.9			50	150	07/29/2020	DLC
Chloroethane - BSD	EPA-8260	73.9	23		50	150	07/29/2020	DLC
Carbon Tetrachloride - BS	EPA-8260	97.7			50	150	07/29/2020	DLC
Carbon Tetrachloride - BSD	EPA-8260	82.0	17		50	150	07/29/2020	DLC
Trichlorofluoromethane - BS	EPA-8260	102			50	150	07/29/2020	DLC





**CERTIFICATE OF ANALYSIS**

CLIENT: Geotest Services, Inc.  
 741 Marine Dr.  
 Bellingham, WA 98225

CLIENT CONTACT: Lynni Bennett  
 CLIENT PROJECT: 20-0591 Queen MT.

DATE: 8/6/2020  
 ALS SDG#: EV20070106  
 WDOE ACCREDITATION: C601

**LABORATORY CONTROL SAMPLE RESULTS**

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
Trichlorofluoromethane - BSD	EPA-8260	85.8	18		50	150	07/29/2020	DLC
Carbon Disulfide - BS	EPA-8260	88.2			50	150	07/29/2020	DLC
Carbon Disulfide - BSD	EPA-8260	73.4	18		50	150	07/29/2020	DLC
Acetone - BS	EPA-8260	80.1			50	150	07/29/2020	DLC
Acetone - BSD	EPA-8260	70.5	13		50	150	07/29/2020	DLC
1,1-Dichloroethene - BS	EPA-8260	88.4			70	130	07/29/2020	DLC
1,1-Dichloroethene - BSD	EPA-8260	75.3	16		70	130	07/29/2020	DLC
Methylene Chloride - BS	EPA-8260	98.4			50	150	07/29/2020	DLC
Methylene Chloride - BSD	EPA-8260	76.4	25	SR1	50	150	07/29/2020	DLC
Acrylonitrile - BS	EPA-8260	96.0			50	150	07/29/2020	DLC
Acrylonitrile - BSD	EPA-8260	80.4	18		50	150	07/29/2020	DLC
Methyl T-Butyl Ether - BS	EPA-8260	95.6			50	150	07/29/2020	DLC
Methyl T-Butyl Ether - BSD	EPA-8260	82.7	14		50	150	07/29/2020	DLC
Trans-1,2-Dichloroethene - BS	EPA-8260	92.8			50	150	07/29/2020	DLC
Trans-1,2-Dichloroethene - BSD	EPA-8260	74.7	21		50	150	07/29/2020	DLC
1,1-Dichloroethane - BS	EPA-8260	99.5			50	150	07/29/2020	DLC
1,1-Dichloroethane - BSD	EPA-8260	84.6	16		50	150	07/29/2020	DLC
2-Butanone - BS	EPA-8260	90.6			50	150	07/29/2020	DLC
2-Butanone - BSD	EPA-8260	79.4	13		50	150	07/29/2020	DLC
Cis-1,2-Dichloroethene - BS	EPA-8260	95.5			50	150	07/29/2020	DLC
Cis-1,2-Dichloroethene - BSD	EPA-8260	77.5	21		50	150	07/29/2020	DLC
2,2-Dichloropropane - BS	EPA-8260	92.0			50	150	07/29/2020	DLC
2,2-Dichloropropane - BSD	EPA-8260	77.5	17		50	150	07/29/2020	DLC
Bromochloromethane - BS	EPA-8260	92.8			50	150	07/29/2020	DLC
Bromochloromethane - BSD	EPA-8260	79.5	15		50	150	07/29/2020	DLC
Chloroform - BS	EPA-8260	106			50	150	07/29/2020	DLC
Chloroform - BSD	EPA-8260	86.0	21		50	150	07/29/2020	DLC
1,1,1-Trichloroethane - BS	EPA-8260	89.7			50	150	07/29/2020	DLC
1,1,1-Trichloroethane - BSD	EPA-8260	75.6	17		50	150	07/29/2020	DLC
1,1-Dichloropropene - BS	EPA-8260	92.5			50	150	07/29/2020	DLC
1,1-Dichloropropene - BSD	EPA-8260	78.2	17		50	150	07/29/2020	DLC
1,2-Dichloroethane - BS	EPA-8260	101			50	150	07/29/2020	DLC
1,2-Dichloroethane - BSD	EPA-8260	86.3	16		50	150	07/29/2020	DLC
Benzene - BS	EPA-8260	94.1			75	138	07/29/2020	DLC
Benzene - BSD	EPA-8260	79.5	17		75	138	07/29/2020	DLC
Trichloroethene - BS	EPA-8260	91.6			75	136	07/29/2020	DLC
Trichloroethene - BSD	EPA-8260	77.5	17		75	136	07/29/2020	DLC
1,2-Dichloropropane - BS	EPA-8260	98.0			50	150	07/29/2020	DLC
1,2-Dichloropropane - BSD	EPA-8260	82.8	17		50	150	07/29/2020	DLC
Dibromomethane - BS	EPA-8260	101			50	150	07/29/2020	DLC



**CERTIFICATE OF ANALYSIS**

CLIENT: Geotest Services, Inc.  
 741 Marine Dr.  
 Bellingham, WA 98225

CLIENT CONTACT: Lynni Bennett  
 CLIENT PROJECT: 20-0591 Queen MT.

DATE: 8/6/2020  
 ALS SDG#: EV20070106  
 WDOE ACCREDITATION: C601

**LABORATORY CONTROL SAMPLE RESULTS**

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
Dibromomethane - BSD	EPA-8260	86.4	16		50	150	07/29/2020	DLC
Bromodichloromethane - BS	EPA-8260	98.1			50	150	07/29/2020	DLC
Bromodichloromethane - BSD	EPA-8260	82.6	17		50	150	07/29/2020	DLC
Trans-1,3-Dichloropropene - BS	EPA-8260	106			50	150	07/29/2020	DLC
Trans-1,3-Dichloropropene - BSD	EPA-8260	91.1	15		50	150	07/29/2020	DLC
4-Methyl-2-Pentanone - BS	EPA-8260	104			50	150	07/29/2020	DLC
4-Methyl-2-Pentanone - BSD	EPA-8260	95.6	8		50	150	07/29/2020	DLC
Toluene - BS	EPA-8260	96.3			71.6	122.1	07/29/2020	DLC
Toluene - BSD	EPA-8260	80.3	18		71.6	122.1	07/29/2020	DLC
Cis-1,3-Dichloropropene - BS	EPA-8260	100			50	150	07/29/2020	DLC
Cis-1,3-Dichloropropene - BSD	EPA-8260	86.2	15		50	150	07/29/2020	DLC
1,1,2-Trichloroethane - BS	EPA-8260	107			50	150	07/29/2020	DLC
1,1,2-Trichloroethane - BSD	EPA-8260	92.1	15		50	150	07/29/2020	DLC
2-Hexanone - BS	EPA-8260	103			50	150	07/29/2020	DLC
2-Hexanone - BSD	EPA-8260	91.7	11		50	150	07/29/2020	DLC
1,3-Dichloropropane - BS	EPA-8260	106			50	150	07/29/2020	DLC
1,3-Dichloropropane - BSD	EPA-8260	94.2	12		50	150	07/29/2020	DLC
Tetrachloroethylene - BS	EPA-8260	95.3			50	150	07/29/2020	DLC
Tetrachloroethylene - BSD	EPA-8260	76.7	22		50	150	07/29/2020	DLC
Dibromochloromethane - BS	EPA-8260	109			50	150	07/29/2020	DLC
Dibromochloromethane - BSD	EPA-8260	95.9	13		50	150	07/29/2020	DLC
1,2-Dibromoethane - BS	EPA-8260	98.6			50	150	07/29/2020	DLC
1,2-Dibromoethane - BSD	EPA-8260	84.7	15		50	150	07/29/2020	DLC
Chlorobenzene - BS	EPA-8260	92.8			79	128	07/29/2020	DLC
Chlorobenzene - BSD	EPA-8260	78.2	17	SQ3	79	128	07/29/2020	DLC
1,1,1,2-Tetrachloroethane - BS	EPA-8260	97.4			50	150	07/29/2020	DLC
1,1,1,2-Tetrachloroethane - BSD	EPA-8260	82.0	17		50	150	07/29/2020	DLC
Ethylbenzene - BS	EPA-8260	90.4			50	150	07/29/2020	DLC
Ethylbenzene - BSD	EPA-8260	76.1	17		50	150	07/29/2020	DLC
m,p-Xylene - BS	EPA-8260	92.4			50	150	07/29/2020	DLC
m,p-Xylene - BSD	EPA-8260	76.4	19		50	150	07/29/2020	DLC
Styrene - BS	EPA-8260	96.4			50	150	07/29/2020	DLC
Styrene - BSD	EPA-8260	81.8	16		50	150	07/29/2020	DLC
o-Xylene - BS	EPA-8260	94.4			50	150	07/29/2020	DLC
o-Xylene - BSD	EPA-8260	79.5	17		50	150	07/29/2020	DLC
Bromoform - BS	EPA-8260	108			50	150	07/29/2020	DLC
Bromoform - BSD	EPA-8260	95.5	12		50	150	07/29/2020	DLC
Isopropylbenzene - BS	EPA-8260	92.4			50	150	07/29/2020	DLC
Isopropylbenzene - BSD	EPA-8260	78.1	17		50	150	07/29/2020	DLC
1,1,2,2-Tetrachloroethane - BS	EPA-8260	100			50	150	07/29/2020	DLC



**CERTIFICATE OF ANALYSIS**

CLIENT: Geotest Services, Inc.  
 741 Marine Dr.  
 Bellingham, WA 98225

CLIENT CONTACT: Lynni Bennett  
 CLIENT PROJECT: 20-0591 Queen MT.

DATE: 8/6/2020  
 ALS SDG#: EV20070106  
 WDOE ACCREDITATION: C601

**LABORATORY CONTROL SAMPLE RESULTS**

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
1,1,2,2-Tetrachloroethane - BSD	EPA-8260	87.4	14		50	150	07/29/2020	DLC
1,2,3-Trichloropropane - BS	EPA-8260	102			50	150	07/29/2020	DLC
1,2,3-Trichloropropane - BSD	EPA-8260	90.3	13		50	150	07/29/2020	DLC
Bromobenzene - BS	EPA-8260	90.9			50	150	07/29/2020	DLC
Bromobenzene - BSD	EPA-8260	77.5	16		50	150	07/29/2020	DLC
N-Propyl Benzene - BS	EPA-8260	88.9			50	150	07/29/2020	DLC
N-Propyl Benzene - BSD	EPA-8260	73.1	20		50	150	07/29/2020	DLC
2-Chlorotoluene - BS	EPA-8260	89.7			50	150	07/29/2020	DLC
2-Chlorotoluene - BSD	EPA-8260	74.9	18		50	150	07/29/2020	DLC
1,3,5-Trimethylbenzene - BS	EPA-8260	90.6			50	150	07/29/2020	DLC
1,3,5-Trimethylbenzene - BSD	EPA-8260	74.7	19		50	150	07/29/2020	DLC
4-Chlorotoluene - BS	EPA-8260	90.3			50	150	07/29/2020	DLC
4-Chlorotoluene - BSD	EPA-8260	74.7	19		50	150	07/29/2020	DLC
T-Butyl Benzene - BS	EPA-8260	95.0			50	150	07/29/2020	DLC
T-Butyl Benzene - BSD	EPA-8260	78.8	19		50	150	07/29/2020	DLC
1,2,4-Trimethylbenzene - BS	EPA-8260	89.4			50	150	07/29/2020	DLC
1,2,4-Trimethylbenzene - BSD	EPA-8260	74.5	18		50	150	07/29/2020	DLC
S-Butyl Benzene - BS	EPA-8260	90.0			50	150	07/29/2020	DLC
S-Butyl Benzene - BSD	EPA-8260	75.0	18		50	150	07/29/2020	DLC
P-Isopropyltoluene - BS	EPA-8260	89.9			50	150	07/29/2020	DLC
P-Isopropyltoluene - BSD	EPA-8260	73.8	20		50	150	07/29/2020	DLC
1,3-Dichlorobenzene - BS	EPA-8260	90.6			50	150	07/29/2020	DLC
1,3-Dichlorobenzene - BSD	EPA-8260	76.7	17		50	150	07/29/2020	DLC
1,4-Dichlorobenzene - BS	EPA-8260	90.0			50	150	07/29/2020	DLC
1,4-Dichlorobenzene - BSD	EPA-8260	76.2	17		50	150	07/29/2020	DLC
N-Butylbenzene - BS	EPA-8260	89.6			50	150	07/29/2020	DLC
N-Butylbenzene - BSD	EPA-8260	74.3	19		50	150	07/29/2020	DLC
1,2-Dichlorobenzene - BS	EPA-8260	95.2			50	150	07/29/2020	DLC
1,2-Dichlorobenzene - BSD	EPA-8260	80.8	16		50	150	07/29/2020	DLC
1,2-Dibromo 3-Chloropropane - BS	EPA-8260	83.5			50	150	07/29/2020	DLC
1,2-Dibromo 3-Chloropropane - BSD	EPA-8260	71.6	15		50	150	07/29/2020	DLC
1,2,4-Trichlorobenzene - BS	EPA-8260	93.7			50	150	07/29/2020	DLC
1,2,4-Trichlorobenzene - BSD	EPA-8260	78.4	18		50	150	07/29/2020	DLC
Hexachlorobutadiene - BS	EPA-8260	82.9			50	150	07/29/2020	DLC
Hexachlorobutadiene - BSD	EPA-8260	69.1	18		50	150	07/29/2020	DLC
Naphthalene - BS	EPA-8260	95.9			50	150	07/29/2020	DLC
Naphthalene - BSD	EPA-8260	85.5	11		50	150	07/29/2020	DLC
1,2,3-Trichlorobenzene - BS	EPA-8260	98.6			50	150	07/29/2020	DLC
1,2,3-Trichlorobenzene - BSD	EPA-8260	82.5	18		50	150	07/29/2020	DLC



**CERTIFICATE OF ANALYSIS**

CLIENT: Geotest Services, Inc.  
 741 Marine Dr.  
 Bellingham, WA 98225

CLIENT CONTACT: Lynni Bennett  
 CLIENT PROJECT: 20-0591 Queen MT.

DATE: 8/6/2020  
 ALS SDG#: EV20070106  
 WDOE ACCREDITATION: C601

**LABORATORY CONTROL SAMPLE RESULTS**

SQ3 - Spike outside of control limits due to sporadic marginal failure. All other spikes in extraction fraction within control limits. No corrective action taken.  
 SR1 - RPD outside of control limits.

**ALS Test Batch ID: 155814 - Soil by EPA-8270 SIM**

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
Naphthalene - BS	EPA-8270 SIM	81.4			20	150	07/24/2020	JMK
Naphthalene - BSD	EPA-8270 SIM	90.8	11		20	150	07/24/2020	JMK
2-Methylnaphthalene - BS	EPA-8270 SIM	85.3			20	150	07/24/2020	JMK
2-Methylnaphthalene - BSD	EPA-8270 SIM	96.1	12		20	150	07/24/2020	JMK
1-Methylnaphthalene - BS	EPA-8270 SIM	86.9			20	150	07/24/2020	JMK
1-Methylnaphthalene - BSD	EPA-8270 SIM	95.8	10		20	150	07/24/2020	JMK
Acenaphthylene - BS	EPA-8270 SIM	86.4			20	150	07/24/2020	JMK
Acenaphthylene - BSD	EPA-8270 SIM	97.5	12		20	150	07/24/2020	JMK
Acenaphthene - BS	EPA-8270 SIM	88.4			41	107	07/24/2020	JMK
Acenaphthene - BSD	EPA-8270 SIM	99.0	11		41	107	07/24/2020	JMK
Fluorene - BS	EPA-8270 SIM	91.6			20	150	07/24/2020	JMK
Fluorene - BSD	EPA-8270 SIM	102	11		20	150	07/24/2020	JMK
Phenanthrene - BS	EPA-8270 SIM	83.5			20	150	07/24/2020	JMK
Phenanthrene - BSD	EPA-8270 SIM	93.0	11		20	150	07/24/2020	JMK
Anthracene - BS	EPA-8270 SIM	79.1			20	150	07/24/2020	JMK
Anthracene - BSD	EPA-8270 SIM	91.7	15		20	150	07/24/2020	JMK
Fluoranthene - BS	EPA-8270 SIM	83.8			20	150	07/24/2020	JMK
Fluoranthene - BSD	EPA-8270 SIM	93.4	11		20	150	07/24/2020	JMK
Pyrene - BS	EPA-8270 SIM	99.5			18	136	07/24/2020	JMK
Pyrene - BSD	EPA-8270 SIM	106	6		18	136	07/24/2020	JMK
Benzo[A]Anthracene - BS	EPA-8270 SIM	78.4			20	150	07/24/2020	JMK
Benzo[A]Anthracene - BSD	EPA-8270 SIM	90.6	15		20	150	07/24/2020	JMK
Chrysene - BS	EPA-8270 SIM	92.6			20	150	07/24/2020	JMK
Chrysene - BSD	EPA-8270 SIM	102	10		20	150	07/24/2020	JMK
Benzo[B]Fluoranthene - BS	EPA-8270 SIM	76.8			20	150	07/24/2020	JMK
Benzo[B]Fluoranthene - BSD	EPA-8270 SIM	86.3	12		20	150	07/24/2020	JMK
Benzo[K]Fluoranthene - BS	EPA-8270 SIM	81.8			20	150	07/24/2020	JMK
Benzo[K]Fluoranthene - BSD	EPA-8270 SIM	91.4	11		20	150	07/24/2020	JMK
Benzo[A]Pyrene - BS	EPA-8270 SIM	60.4			20	150	07/24/2020	JMK
Benzo[A]Pyrene - BSD	EPA-8270 SIM	70.9	16		20	150	07/24/2020	JMK
Indeno[1,2,3-Cd]Pyrene - BS	EPA-8270 SIM	71.3			20	150	07/24/2020	JMK
Indeno[1,2,3-Cd]Pyrene - BSD	EPA-8270 SIM	82.0	14		20	150	07/24/2020	JMK
Dibenz[A,H]Anthracene - BS	EPA-8270 SIM	67.9			20	150	07/24/2020	JMK
Dibenz[A,H]Anthracene - BSD	EPA-8270 SIM	80.1	16		20	150	07/24/2020	JMK
Benzo[G,H,I]Perylene - BS	EPA-8270 SIM	76.1			20	150	07/24/2020	JMK
Benzo[G,H,I]Perylene - BSD	EPA-8270 SIM	88.0	15		20	150	07/24/2020	JMK



**CERTIFICATE OF ANALYSIS**

CLIENT: Geotest Services, Inc.  
 741 Marine Dr.  
 Bellingham, WA 98225

CLIENT CONTACT: Lynni Bennett  
 CLIENT PROJECT: 20-0591 Queen MT.

DATE: 8/6/2020  
 ALS SDG#: EV20070106  
 WDOE ACCREDITATION: C601

**LABORATORY CONTROL SAMPLE RESULTS**

**ALS Test Batch ID: 155952 - Soil by EPA-8270**

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
Pyridine - BS	EPA-8270	52.0			20	150	08/05/2020	JMK
Pyridine - BSD	EPA-8270	70.1	30		20	150	08/05/2020	JMK
N-Nitrosodimethylamine - BS	EPA-8270	45.3			20	150	08/05/2020	JMK
N-Nitrosodimethylamine - BSD	EPA-8270	56.9	23		20	150	08/05/2020	JMK
Phenol - BS	EPA-8270	77.7			36.1	131	08/05/2020	JMK
Phenol - BSD	EPA-8270	81.5	5		36.1	131	08/05/2020	JMK
Aniline - BS	EPA-8270	52.2			20	150	08/05/2020	JMK
Aniline - BSD	EPA-8270	61.4	16		20	150	08/05/2020	JMK
Bis(2-Chloroethyl)Ether - BS	EPA-8270	63.1			20	150	08/05/2020	JMK
Bis(2-Chloroethyl)Ether - BSD	EPA-8270	73.5	15		20	150	08/05/2020	JMK
2-Chlorophenol - BS	EPA-8270	69.8			59.9	111	08/05/2020	JMK
2-Chlorophenol - BSD	EPA-8270	78.6	12	SR1	59.9	111	08/05/2020	JMK
1,3-Dichlorobenzene - BS	EPA-8270	56.7			20	150	08/05/2020	JMK
1,3-Dichlorobenzene - BSD	EPA-8270	71.4	23		20	150	08/05/2020	JMK
1,4-Dichlorobenzene - BS	EPA-8270	59.2			44.3	122	08/05/2020	JMK
1,4-Dichlorobenzene - BSD	EPA-8270	74.2	22	SR1	44.3	122	08/05/2020	JMK
Benzyl Alcohol - BS	EPA-8270	72.5			20	150	08/05/2020	JMK
Benzyl Alcohol - BSD	EPA-8270	79.0	9		20	150	08/05/2020	JMK
1,2-Dichlorobenzene - BS	EPA-8270	59.2			20	150	08/05/2020	JMK
1,2-Dichlorobenzene - BSD	EPA-8270	72.0	20		20	150	08/05/2020	JMK
2-Methylphenol - BS	EPA-8270	69.7			20	150	08/05/2020	JMK
2-Methylphenol - BSD	EPA-8270	75.0	7		20	150	08/05/2020	JMK
Bis(2-Chloroisopropyl)Ether - BS	EPA-8270	38.8			20	150	08/05/2020	JMK
Bis(2-Chloroisopropyl)Ether - BSD	EPA-8270	45.3	15		20	150	08/05/2020	JMK
3&4-Methylphenol - BS	EPA-8270	79.9			20	150	08/05/2020	JMK
3&4-Methylphenol - BSD	EPA-8270	84.4	6		20	150	08/05/2020	JMK
N-Nitroso-Di-N-Propylamine - BS	EPA-8270	53.5			31.6	134	08/05/2020	JMK
N-Nitroso-Di-N-Propylamine - BSD	EPA-8270	59.3	10		31.6	134	08/05/2020	JMK
Hexachloroethane - BS	EPA-8270	11.4		SQ3	20	150	08/05/2020	JMK
Hexachloroethane - BSD	EPA-8270	14.8	26	DUP05	20	150	08/05/2020	JMK
Nitrobenzene - BS	EPA-8270	61.9			20	150	08/05/2020	JMK
Nitrobenzene - BSD	EPA-8270	72.2	15		20	150	08/05/2020	JMK
Isophorone - BS	EPA-8270	61.6			20	150	08/05/2020	JMK
Isophorone - BSD	EPA-8270	68.4	10		20	150	08/05/2020	JMK
2-Nitrophenol - BS	EPA-8270	59.7			20	150	08/05/2020	JMK
2-Nitrophenol - BSD	EPA-8270	69.4	15		20	150	08/05/2020	JMK
2,4-Dimethylphenol - BS	EPA-8270	75.9			20	150	08/05/2020	JMK
2,4-Dimethylphenol - BSD	EPA-8270	81.3	7		20	150	08/05/2020	JMK





**CERTIFICATE OF ANALYSIS**

CLIENT: Geotest Services, Inc.  
 741 Marine Dr.  
 Bellingham, WA 98225

CLIENT CONTACT: Lynni Bennett  
 CLIENT PROJECT: 20-0591 Queen MT.

DATE: 8/6/2020  
 ALS SDG#: EV20070106  
 WDOE ACCREDITATION: C601

**LABORATORY CONTROL SAMPLE RESULTS**

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
Bis(2-Chloroethoxy)Methane - BS	EPA-8270	70.5			20	150	08/05/2020	JMK
Bis(2-Chloroethoxy)Methane - BSD	EPA-8270	80.4	13		20	150	08/05/2020	JMK
2,4-Dichlorophenol - BS	EPA-8270	83.7			20	150	08/05/2020	JMK
2,4-Dichlorophenol - BSD	EPA-8270	92.3	10		20	150	08/05/2020	JMK
1,2,4-Trichlorobenzene - BS	EPA-8270	66.6			44.6	122	08/05/2020	JMK
1,2,4-Trichlorobenzene - BSD	EPA-8270	78.2	16		44.6	122	08/05/2020	JMK
Naphthalene - BS	EPA-8270	65.7			20	150	08/05/2020	JMK
Naphthalene - BSD	EPA-8270	75.8	14		20	150	08/05/2020	JMK
4-Chloroaniline - BS	EPA-8270	75.8			20	150	08/05/2020	JMK
4-Chloroaniline - BSD	EPA-8270	88.1	15		20	150	08/05/2020	JMK
Hexachlorobutadiene - BS	EPA-8270	63.3			20	150	08/05/2020	JMK
Hexachlorobutadiene - BSD	EPA-8270	75.3	17		20	150	08/05/2020	JMK
4-Chloro-3-Methylphenol - BS	EPA-8270	78.7			49.2	135	08/05/2020	JMK
4-Chloro-3-Methylphenol - BSD	EPA-8270	83.6	6		49.2	135	08/05/2020	JMK
2-Methylnaphthalene - BS	EPA-8270	71.5			20	150	08/05/2020	JMK
2-Methylnaphthalene - BSD	EPA-8270	79.7	11		20	150	08/05/2020	JMK
1-Methylnaphthalene - BS	EPA-8270	68.2			20	150	08/05/2020	JMK
1-Methylnaphthalene - BSD	EPA-8270	76.2	11		20	150	08/05/2020	JMK
Hexachlorocyclopentadiene - BS	EPA-8270	0		SQ3	20	150	08/05/2020	JMK
Hexachlorocyclopentadiene - BSD	EPA-8270	0	0	DUP05	20	150	08/05/2020	JMK
2,4,6-Trichlorophenol - BS	EPA-8270	75.1			20	150	08/05/2020	JMK
2,4,6-Trichlorophenol - BSD	EPA-8270	80.6	7		20	150	08/05/2020	JMK
2,4,5-Trichlorophenol - BS	EPA-8270	80.8			20	150	08/05/2020	JMK
2,4,5-Trichlorophenol - BSD	EPA-8270	85.7	6		20	150	08/05/2020	JMK
2-Chloronaphthalene - BS	EPA-8270	74.3			20	150	08/05/2020	JMK
2-Chloronaphthalene - BSD	EPA-8270	82.0	10		20	150	08/05/2020	JMK
2-Nitroaniline - BS	EPA-8270	63.8			20	150	08/05/2020	JMK
2-Nitroaniline - BSD	EPA-8270	67.3	5		20	150	08/05/2020	JMK
Acenaphthylene - BS	EPA-8270	74.8			20	150	08/05/2020	JMK
Acenaphthylene - BSD	EPA-8270	79.7	6		20	150	08/05/2020	JMK
Dimethylphthalate - BS	EPA-8270	74.8			20	150	08/05/2020	JMK
Dimethylphthalate - BSD	EPA-8270	81.0	8		20	150	08/05/2020	JMK
2,6-Dinitrotoluene - BS	EPA-8270	69.6			20	150	08/05/2020	JMK
2,6-Dinitrotoluene - BSD	EPA-8270	73.9	6		20	150	08/05/2020	JMK
Acenaphthene - BS	EPA-8270	71.4			49.3	117	08/05/2020	JMK
Acenaphthene - BSD	EPA-8270	77.0	8		49.3	117	08/05/2020	JMK
3-Nitroaniline - BS	EPA-8270	168		SQ1	20	150	08/05/2020	JMK
3-Nitroaniline - BSD	EPA-8270	177	5	DUP05	20	150	08/05/2020	JMK
2,4-Dinitrophenol - BS	EPA-8270	52.4			20	150	08/05/2020	JMK
2,4-Dinitrophenol - BSD	EPA-8270	52.1	1		20	150	08/05/2020	JMK



**CERTIFICATE OF ANALYSIS**

CLIENT: Geotest Services, Inc.  
 741 Marine Dr.  
 Bellingham, WA 98225

CLIENT CONTACT: Lynni Bennett  
 CLIENT PROJECT: 20-0591 Queen MT.

DATE: 8/6/2020  
 ALS SDG#: EV20070106  
 WDOE ACCREDITATION: C601

**LABORATORY CONTROL SAMPLE RESULTS**

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
4-Nitrophenol - BS	EPA-8270	107			29.8	137	08/05/2020	JMK
4-Nitrophenol - BSD	EPA-8270	109	2		29.8	137	08/05/2020	JMK
Dibenzofuran - BS	EPA-8270	77.8			20	150	08/05/2020	JMK
Dibenzofuran - BSD	EPA-8270	82.8	6		20	150	08/05/2020	JMK
2,4-Dinitrotoluene - BS	EPA-8270	69.8			55.3	130	08/05/2020	JMK
2,4-Dinitrotoluene - BSD	EPA-8270	75.6	8		55.3	130	08/05/2020	JMK
2,3,4,6-Tetrachlorophenol - BS	EPA-8270	78.0			20	150	08/05/2020	JMK
2,3,4,6-Tetrachlorophenol - BSD	EPA-8270	84.0	7		20	150	08/05/2020	JMK
Diethylphthalate - BS	EPA-8270	73.3			20	150	08/05/2020	JMK
Diethylphthalate - BSD	EPA-8270	78.6	7		20	150	08/05/2020	JMK
Fluorene - BS	EPA-8270	79.0			20	150	08/05/2020	JMK
Fluorene - BSD	EPA-8270	83.9	6		20	150	08/05/2020	JMK
4-Chlorophenyl-Phenylether - BS	EPA-8270	79.5			20	150	08/05/2020	JMK
4-Chlorophenyl-Phenylether - BSD	EPA-8270	85.7	8		20	150	08/05/2020	JMK
4-Nitroaniline - BS	EPA-8270	255		SQ1	20	150	08/05/2020	JMK
4-Nitroaniline - BSD	EPA-8270	262	3	DUP05	20	150	08/05/2020	JMK
4,6-Dinitro-2-Methylphenol - BS	EPA-8270	32.8			20	150	08/05/2020	JMK
4,6-Dinitro-2-Methylphenol - BSD	EPA-8270	35.9	9		20	150	08/05/2020	JMK
Azobenzene - BS	EPA-8270	60.7			20	150	08/05/2020	JMK
Azobenzene - BSD	EPA-8270	66.1	9		20	150	08/05/2020	JMK
4-Bromophenyl-Phenylether - BS	EPA-8270	82.8			20	150	08/05/2020	JMK
4-Bromophenyl-Phenylether - BSD	EPA-8270	89.1	7		20	150	08/05/2020	JMK
Hexachlorobenzene - BS	EPA-8270	78.0			20	150	08/05/2020	JMK
Hexachlorobenzene - BSD	EPA-8270	84.1	8		20	150	08/05/2020	JMK
Pentachlorophenol - BS	EPA-8270	73.4			41.3	113	08/05/2020	JMK
Pentachlorophenol - BSD	EPA-8270	82.2	11		41.3	113	08/05/2020	JMK
Phenanthrene - BS	EPA-8270	72.6			20	150	08/05/2020	JMK
Phenanthrene - BSD	EPA-8270	78.5	8		20	150	08/05/2020	JMK
Anthracene - BS	EPA-8270	75.9			20	150	08/05/2020	JMK
Anthracene - BSD	EPA-8270	82.4	8		20	150	08/05/2020	JMK
Carbazole - BS	EPA-8270	98.6			20	150	08/05/2020	JMK
Carbazole - BSD	EPA-8270	106	7		20	150	08/05/2020	JMK
Di-N-Butylphthalate - BS	EPA-8270	64.7			20	150	08/05/2020	JMK
Di-N-Butylphthalate - BSD	EPA-8270	69.7	7		20	150	08/05/2020	JMK
Fluoranthene - BS	EPA-8270	76.6			20	150	08/05/2020	JMK
Fluoranthene - BSD	EPA-8270	82.7	8		20	150	08/05/2020	JMK
Pyrene - BS	EPA-8270	62.8			57.4	145	08/05/2020	JMK
Pyrene - BSD	EPA-8270	68.7	9		57.4	145	08/05/2020	JMK
Butylbenzylphthalate - BS	EPA-8270	66.0			20	150	08/05/2020	JMK
Butylbenzylphthalate - BSD	EPA-8270	71.6	8		20	150	08/05/2020	JMK



**CERTIFICATE OF ANALYSIS**

CLIENT: Geotest Services, Inc.  
 741 Marine Dr.  
 Bellingham, WA 98225

CLIENT CONTACT: Lynni Bennett  
 CLIENT PROJECT: 20-0591 Queen MT.

DATE: 8/6/2020  
 ALS SDG#: EV20070106  
 WDOE ACCREDITATION: C601

**LABORATORY CONTROL SAMPLE RESULTS**

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
Benzo[A]Anthracene - BS	EPA-8270	71.4			20	150	08/05/2020	JMK
Benzo[A]Anthracene - BSD	EPA-8270	75.9	6		20	150	08/05/2020	JMK
Chrysene - BS	EPA-8270	68.0			20	150	08/05/2020	JMK
Chrysene - BSD	EPA-8270	72.8	7		20	150	08/05/2020	JMK
Bis(2-Ethylhexyl)Phthalate - BS	EPA-8270	65.3			20	150	08/05/2020	JMK
Bis(2-Ethylhexyl)Phthalate - BSD	EPA-8270	70.6	8		20	150	08/05/2020	JMK
Di-N-Octylphthalate - BS	EPA-8270	67.7			20	150	08/05/2020	JMK
Di-N-Octylphthalate - BSD	EPA-8270	72.3	7		20	150	08/05/2020	JMK
Benzo[B]Fluoranthene - BS	EPA-8270	82.7			20	150	08/05/2020	JMK
Benzo[B]Fluoranthene - BSD	EPA-8270	87.3	5		20	150	08/05/2020	JMK
Benzo[K]Fluoranthene - BS	EPA-8270	75.6			20	150	08/05/2020	JMK
Benzo[K]Fluoranthene - BSD	EPA-8270	83.6	10		20	150	08/05/2020	JMK
Benzo[A]Pyrene - BS	EPA-8270	67.6			20	150	08/05/2020	JMK
Benzo[A]Pyrene - BSD	EPA-8270	72.8	7		20	150	08/05/2020	JMK
Indeno[1,2,3-Cd]Pyrene - BS	EPA-8270	64.1			20	150	08/05/2020	JMK
Indeno[1,2,3-Cd]Pyrene - BSD	EPA-8270	66.6	4		20	150	08/05/2020	JMK
Dibenz[A,H]Anthracene - BS	EPA-8270	68.5			20	150	08/05/2020	JMK
Dibenz[A,H]Anthracene - BSD	EPA-8270	71.0	4		20	150	08/05/2020	JMK
Benzo[G,H,I]Perylene - BS	EPA-8270	61.0			20	150	08/05/2020	JMK
Benzo[G,H,I]Perylene - BSD	EPA-8270	63.9	5		20	150	08/05/2020	JMK

DUP05 - LCS/LCSD RPD exceeded the laboratory acceptance limit. Recovery met acceptance criteria.  
 SQ1 - Spike outside of control limits with a high bias. Associated compounds non-detect. No corrective action taken.  
 SQ3 - Spike outside of control limit

**ALS Test Batch ID: 155947 - Soil by EPA-8082**

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
PCB-1016 - BS	EPA-8082	69.5			50	150	07/31/2020	JMK
PCB-1016 - BSD	EPA-8082	72.9	5		50	150	07/31/2020	JMK
PCB-1260 - BS	EPA-8082	81.6			50	150	07/31/2020	JMK
PCB-1260 - BSD	EPA-8082	84.8	4		50	150	07/31/2020	JMK

**ALS Test Batch ID: 155948 - Soil by EPA-8081**

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
A-BHC - BS	EPA-8081	80.5			50	150	08/03/2020	JMK
A-BHC - BSD	EPA-8081	85.1	6		50	150	08/03/2020	JMK
G-BHC - BS	EPA-8081	87.8			33	155	08/03/2020	JMK
G-BHC - BSD	EPA-8081	87.8	0		33	155	08/03/2020	JMK
B-BHC - BS	EPA-8081	82.7			50	150	08/03/2020	JMK



**CERTIFICATE OF ANALYSIS**

CLIENT: Geotest Services, Inc.  
 741 Marine Dr.  
 Bellingham, WA 98225

CLIENT CONTACT: Lynni Bennett  
 CLIENT PROJECT: 20-0591 Queen MT.

DATE: 8/6/2020  
 ALS SDG#: EV20070106  
 WDOE ACCREDITATION: C601

**LABORATORY CONTROL SAMPLE RESULTS**

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
B-BHC - BSD	EPA-8081	89.8	8		50	150	08/03/2020	JMK
Heptachlor - BS	EPA-8081	93.3			49	142	08/03/2020	JMK
Heptachlor - BSD	EPA-8081	101	8		49	142	08/03/2020	JMK
D-BHC - BS	EPA-8081	88.0			50	150	08/03/2020	JMK
D-BHC - BSD	EPA-8081	88.8	1		50	150	08/03/2020	JMK
Aldrin - BS	EPA-8081	90.3			37	149	08/03/2020	JMK
Aldrin - BSD	EPA-8081	94.9	5		37	149	08/03/2020	JMK
Heptachlor Epoxide - BS	EPA-8081	90.4			50	150	08/03/2020	JMK
Heptachlor Epoxide - BSD	EPA-8081	94.5	4		50	150	08/03/2020	JMK
Endosulfan I - BS	EPA-8081	92.4			50	150	08/03/2020	JMK
Endosulfan I - BSD	EPA-8081	96.2	4		50	150	08/03/2020	JMK
4,4'-DDE - BS	EPA-8081	91.8			50	150	08/03/2020	JMK
4,4'-DDE - BSD	EPA-8081	94.9	3		50	150	08/03/2020	JMK
Dieldrin - BS	EPA-8081	93.7			65	137	08/03/2020	JMK
Dieldrin - BSD	EPA-8081	96.9	3		65	137	08/03/2020	JMK
Endrin - BS	EPA-8081	102			65	149	08/03/2020	JMK
Endrin - BSD	EPA-8081	105	3		65	149	08/03/2020	JMK
4,4'-DDD - BS	EPA-8081	103			50	150	08/03/2020	JMK
4,4'-DDD - BSD	EPA-8081	105	2		50	150	08/03/2020	JMK
Endosulfan II - BS	EPA-8081	95.7			50	150	08/03/2020	JMK
Endosulfan II - BSD	EPA-8081	100	4		50	150	08/03/2020	JMK
4,4'-DDT - BS	EPA-8081	98.9			60	152	08/03/2020	JMK
4,4'-DDT - BSD	EPA-8081	102	3		60	152	08/03/2020	JMK
Endrin Aldehyde - BS	EPA-8081	98.5			50	150	08/03/2020	JMK
Endrin Aldehyde - BSD	EPA-8081	99.6	1		50	150	08/03/2020	JMK
Endosulfan Sulfate - BS	EPA-8081	99.7			50	150	08/03/2020	JMK
Endosulfan Sulfate - BSD	EPA-8081	102	2		50	150	08/03/2020	JMK
Methoxychlor - BS	EPA-8081	103			50	150	08/03/2020	JMK
Methoxychlor - BSD	EPA-8081	106	3		50	150	08/03/2020	JMK

**ALS Test Batch ID: R366329 - Soil by EPA-7196**

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
Chromium (VI) - BS	EPA-7196	100			91	114	08/06/2020	JNF
Chromium (VI) - BSD	EPA-7196	101	1		91	114	08/06/2020	JNF

**ALS Test Batch ID: R365711 - Soil by EPA-7471**

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
Mercury - BS	EPA-7471	105			81.8	117	07/24/2020	RAL



**CERTIFICATE OF ANALYSIS**

CLIENT: Geotest Services, Inc.  
 741 Marine Dr.  
 Bellingham, WA 98225

CLIENT CONTACT: Lynni Bennett  
 CLIENT PROJECT: 20-0591 Queen MT.

DATE: 8/6/2020  
 ALS SDG#: EV20070106  
 WDOE ACCREDITATION: C601

**LABORATORY CONTROL SAMPLE RESULTS**

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
Mercury - BSD	EPA-7471	104	1		81.8	117	07/24/2020	RAL

**ALS Test Batch ID: 155788 - Soil by EPA-6020**

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS		ANALYSIS DATE	ANALYSIS BY
					MIN	MAX		
Arsenic - BS	EPA-6020	97.2			80	120	07/24/2020	RAL
Arsenic - BSD	EPA-6020	96.1	1		80	120	07/24/2020	RAL
Barium - BS	EPA-6020	95.5			80	120	07/24/2020	RAL
Barium - BSD	EPA-6020	96.3	1		80	120	07/24/2020	RAL
Cadmium - BS	EPA-6020	102			80	120	07/24/2020	RAL
Cadmium - BSD	EPA-6020	102	0		80	120	07/24/2020	RAL
Chromium - BS	EPA-6020	97.0			80	120	07/24/2020	RAL
Chromium - BSD	EPA-6020	96.2	1		80	120	07/24/2020	RAL
Lead - BS	EPA-6020	94.4			80	120	07/24/2020	RAL
Lead - BSD	EPA-6020	93.8	1		80	120	07/24/2020	RAL
Selenium - BS	EPA-6020	98.4			80	120	07/24/2020	RAL
Selenium - BSD	EPA-6020	97.7	1		80	120	07/24/2020	RAL
Silver - BS	EPA-6020	90.4			80	120	07/24/2020	RAL
Silver - BSD	EPA-6020	87.1	4		80	120	07/24/2020	RAL

APPROVED BY

Laboratory Director





ALS Environmental  
8620 Holly Drive, Suite 100  
Everett, WA 98208  
Phone (425) 356-2600  
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# Chain Of Custody/ Laboratory Analysis Request

ALS Job#

(Laboratory Use Only)

EX 20070106

Date 7/23/20 Page 1 Of 1

PROJECT ID: REPORT TO COMPANY: PROJECT MANAGER: ADDRESS: PHONE: E-MAIL: INVOICE TO COMPANY: ATTENTION: ADDRESS:	ANALYSIS REQUESTED					OTHER (Specify)																
	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA 8021	MTBE by EPA 8021	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	Pesticides by EPA 8081	Metals-MTCA-5	Metals Other (Specify)	TCLP-Metals	VOA	Semi-Vol	Pest	Herbs	NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?	
20-0591 Queen MT. GeoTEST Lynni Bennett 741 Marine Dr. Bellingham, WA 98225 3604100089 PO.#: 20-0591 Lynni@geotest-inc.com SAME																				5		
	1. Comp-1			7/23	1330	S																
	2. Comp-2				1400		X	X	X	X	X	X	X	X	X	X	X	X	X	X		
	3. Comp-3				1430		X	X	X	X	X	X	X	X	X	X	X	X	X	X		
	4. Comp-4				1500		X	X	X	X	X	X	X	X	X	X	X	X	X	X		
	5. Comp-5				1530		X	X	X	X	X	X	X	X	X	X	X	X	X	X		
	6.																					
	7.																					
	8.																					
	9.																					
	10.																					

SPECIAL INSTRUCTIONS: Please report level II QALC

SIGNATURES (Name, Company, Date, Time):

- Relinquished By: Dawn Taylor GT 7/24/20 12:20 pm  
Received By: Shawn Robins ALS 7/24/20 12:20 pm
- Relinquished By: \_\_\_\_\_  
Received By: \_\_\_\_\_

TURNAROUND REQUESTED in Business Days\*  
Organic, Metals & Inorganic Analysis  
OTHER:

Specify: \_\_\_\_\_

Standard SAME DAY 1 2 3 5 1

Fuels & Hydrocarbon Analysis  
Standard SAME DAY 1 3 3 1

\*Turnaround request less than standard may incur Rush Charges

**Table 12.1 Guidelines for Reuse of Petroleum-Contaminated Soil**

Parameter	Analytical Method	Soil Category (8)(9)(10)			
		1 No detectable Petroleum Components (mg/kg)	2 Commercial Fill Above Water Table (mg/kg)	3 Paving Base Material & Road Construction (mg/kg)	4 Landfill Daily Cover or Asphalt Manufacturing (mg/kg)
<b>Total Petroleum Hydrocarbons (1)(2)</b> See Table 7.1 for petroleum products that fall within these categories.					
Gasoline Range Organics	NWTPH-Gx	<5	5 - 30	>30 - 100	>100
Diesel Range Organics	NWTPH-Dx	<25	25 - 200	>200 - 500	>500
Heavy Fuels and Oils*	NWTPH-Dx	<100	100 - 200	>200 - 500	>500
Mineral Oil	NWTPH-Dx	<100	100 - 200	>200 - 500	>500
<b>Volatile Petroleum Components</b>					
Benzene	SW8260B	<0.005	0.005 - 0.03	0.03 or less	See Table 12.2
Ethyl benzene	SW8260B	<0.005	0.005 - 6	6 or less	>6
Toluene	SW8260B	<0.005	0.005 - 7	7 or less	>7
Xylenes (3)	SW8260B	<0.015	0.015 - 9	9 or less	>9
<b>Fuel Additives &amp; Blending Components</b>					
(MTBE) Methyl Tert-Butyl Ether	SW8260B	<0.005	0.005 - 0.1	0.1 or less	>0.1
Lead	SW6010A	<17	17 - 50	>50 - 220	See Table 12.2
<b>Other Petroleum Components</b>					
Polychlorinated (4) Biphenyls (PCBs)	SW8082	<0.04	<0.04	<0.04	See Table 12.2
Naphthalenes (5)	SW8260B	<0.05	0.05 - 5	5 or less	>5
cPAHs (6)	SW8270C	<0.05	0.05 - 0.1	>0.1 - 2	>2
<b>Other Petroleum Characteristics (Applies to soils contaminated with any petroleum product.)</b>					
Odors	Smell	No detectable odor			
Staining	Visual	No unusual color or staining			
Sheen Test	See Footnote # 7	No visible sheen			
<b>IMPORTANT: See Table 12.2 and the footnotes to this Table on the following pages!</b>					
<b>Test soil for the parameters specified in Table 7.2.</b>					
<b>*Does NOT include waste oil contaminated soils, which should be disposed of in a landfill.</b>					
<b>“&lt;” means less than; “&gt;” means greater than</b>					

**Table 12.2 Description and Recommended Best Management Practices for Soil Categories in Table 12.1 (continues on next page)**

Category	Acceptable Uses	Limitations
<p><b>Category 1 Soils:</b> Soils with no detectable/ quantifiable levels of petroleum hydrocarbons or constituents using the analytical methods listed in Table 7.3 and are not suspected of being contaminated with any other hazardous substances.</p>	<ul style="list-style-type: none"> <li>• Can be used anywhere the use is allowed under other regulations.</li> <li>• Any use allowed for Category 2, 3 &amp; 4 soils.</li> </ul>	<ul style="list-style-type: none"> <li>• These soils may have a slight petroleum odor, depending on the sensitivity of individuals, and this should be considered when reusing these soils.</li> </ul>
<p><b>Category 2 Soils:</b> Soils with residual levels of petroleum hydrocarbons that could have adverse impacts on the environment in some circumstances.</p>	<ul style="list-style-type: none"> <li>• Any use allowed for Category 3 &amp; 4 soils.</li> <li>• Backfill at cleanup sites above the water table.</li> <li>• Fill in commercial or industrial areas above the water table.</li> <li>• Road and bridge embankment construction in areas above the water table.</li> </ul>	<ul style="list-style-type: none"> <li>• Should be placed above the highest anticipated high water table. If seasonal groundwater elevation information is not available, place at least 10 feet above the current water table.</li> <li>• Should not be placed within 100 feet of any private drinking water well or within the 10 year wellhead protection area of a public water supply well.</li> <li>• Should not be placed in or directly adjacent to wetlands or surface water where contact with water is possible.</li> <li>• Should not be placed under a surface water infiltration facility or septic drain field.</li> <li>• Any other limitations in state or local regulations.</li> </ul>
<p><b>Category 3 Soils:</b> Soils with moderate levels of residual petroleum contamination that could have adverse impacts on the environment unless re-used in carefully controlled situations.</p>	<ul style="list-style-type: none"> <li>• Any use allowed for Category 4 soils.</li> <li>• Use as pavement base material under public and private paved streets and roads.</li> <li>• Use as pavement base material under commercial and industrial parking lots.</li> </ul>	<ul style="list-style-type: none"> <li>• Should be placed above the highest anticipated high water table. If seasonal ground water elevation information is not available, place at least 10 feet above the water table.</li> <li>• Should be a maximum of 2 feet thick to minimize potential for leaching or vapor impacts.</li> <li>• Should not be placed within 100 feet of any private drinking water well or within the 10 year wellhead protection area of a public water supply well.</li> <li>• Should not be placed in or directly adjacent to wetlands or surface water.</li> <li>• Should not be placed under a surface water infiltration facility or septic drain field.</li> <li>• When exposed, runoff from area in use should be contained or treated to prevent entrance to storm drains, surface water or wetlands.</li> <li>• Any other limitations in state or local regulations.</li> </ul>

**Table 12.2 Description and Recommended Best Management Practices for Soil Categories in Table 12.1 (continued)**

Category	Acceptable Uses	Limitations
<p><b>Category 4 Soils:</b> Soils with high levels of petroleum contamination that should not be re-used except in very limited circumstances.</p>	<ul style="list-style-type: none"> <li>• Use in the manufacture of asphalt.</li> <li>• Use as daily cover in a lined municipal solid waste or limited purpose landfill provided this is allowed under the landfill operating permit.</li> </ul>	<p><b><u>Landfill Limitations:</u></b></p> <p>The soil should be tested for and pass the following tests:</p> <ul style="list-style-type: none"> <li>➤ Free liquids test. Soils that contain free liquids cannot be landfilled without treatment.</li> <li>➤ TCLP for lead and benzene. Unless exempt under WAC 173-303-071(3)(t), soils that fail a TCLP for lead or benzene must be disposed of as hazardous waste.</li> <li>➤ Flammability test. Soils that fail this test must be disposed of as hazardous waste.</li> <li>➤ Bioassay test under WAC 173-303-100(5). Soils that fail this test must be disposed of as hazardous waste.</li> <li>➤ PCBs. Soils with a total PCB content of 2 ppm or more must be disposed of as hazardous waste.</li> </ul> <p>Soil used for daily cover should be stockpiled within the landfill lined fill area.</p> <p>Soil containing more than 10,000 mg/kg TPH should be buried immediately with other wastes or daily covered to limit potential worker exposure.</p> <p>Any additional limitations specified in the landfill permit or in other state or local regulations.</p> <p><b><u>Asphalt Manufacturing Limitations:</u></b></p> <p>Soil storage areas should be contained in a bermed area to minimize contact with surface water runoff from adjacent areas. Runoff from storage areas should be considered contaminated until tested to prove otherwise.</p> <p>Soil storage areas should also be lined and covered with a roof or secured tarp to minimize contact with precipitation and potential groundwater contamination. Leachate from storage areas should be considered contaminated until tested to prove otherwise.</p> <p>The soil should be tested for and pass the following tests:</p> <ul style="list-style-type: none"> <li>➤ TCLP for lead and benzene. Unless exempt under WAC 173-303-071(3)(t), soils that fail a TCLP for lead or benzene must be disposed of as hazardous waste.</li> <li>➤ Flammability test. Soils that fail this test must be disposed of as hazardous waste.</li> <li>➤ Bioassay test under WAC 173-303-100(5). Soils that fail this test must be disposed of as hazardous waste.</li> <li>➤ No detectable levels of PCBs in soil (&lt;0.04 mg/kg).</li> </ul> <p>Precautions should be taken to minimize worker exposure to soil storage piles and any dust or vapors from these piles prior to feeding into the asphalt batch plant.</p>

**IMPORTANT: See the following page for additional information!**

### **Notes to Table 12.1:**

Contaminated soils can be treated to achieve these concentrations but dilution with clean soil to achieve these concentrations is a violation of Washington State solid and hazardous waste laws.

(1) See Table 7.1 for a description of what products fall within these general categories. If the product released is unknown, use the limitations for gasoline range organics. If the soil is contaminated from releases from more than one product, use the limitations for both products. For example, if the release is a mixture of gasoline and diesel, the soil should be tested for components of both gas and diesel and the limitations for both fuels and their components used.

(2) The concentrations for diesel, heavy oil and mineral oil are not additive. Use the TPH product category most closely representing the TPH mixture and apply the limitations for that product to the mixture. ***The reuse of waste oil contaminated soil is not allowed due to the wide variety of contaminants likely to be present.***

(3) Value is total of m, o, & p xylenes.

(4) Value is the total of all PCBs. Only heavy oil and mineral oil contaminated soils need to be tested for PCBs. Soil contaminated with a spill from a regulated PCB containing device must be disposed of in a TSCA permitted landfill, regardless of the PCB concentration. Other PCB contaminated soils may be disposed of in a municipal solid waste landfill permitted to receive such materials, provided the concentration does not exceed 2 ppm PCBs (WAC 173-303-9904).

(5) Value is total of naphthalene, 1-methyl naphthalene and 2-methyl naphthalene. Only diesel and heavy oil contaminated soils need to be tested for naphthalenes.

(6) The value is the benzo(a)pyrene equivalent concentration of the following seven cPAHs, using the procedures in WAC 173-340-708(8). The seven cPAHs are as follows: benz(a)anthracene; benzo(b)fluoranthene; benzo(k)fluoranthene; benzo(a)pyrene; chrysene; dibenz(a,h)anthracene; and, indeno(1,2,3-cd)pyrene. Only diesel and heavy oil contaminated soils need to be tested for cPAHs. Soils contaminated with more than 1% polycyclic aromatic hydrocarbons, as that term is defined in WAC 173-303-040 (which is more expansive than the above list), must be disposed of as hazardous waste.

(7) No visible sheen observed on water when approximately one tablespoon of soil placed in approximately ½ liter of water held in a shallow pan (like a gold pan or similar container).

(8) A soil in a lower category can be used for uses specified in any higher category. This means that:

- A category 1 soil can be used for any use specified in categories 1, 2, 3 and 4.
- A category 2 soil can be used for any use specified in categories 2, 3 and 4.
- A categories 3 soil can be used for any use specified in categories 3 and 4.

(9) ***If an environmental site assessment or soil or groundwater analyses indicate contaminants other than common petroleum constituents and naturally occurring levels of metals are likely to be present in the soil of interest at the site (for example, solvents or pesticides), do not reuse the soil.*** The soil should instead be treated using appropriate technology to address all contaminants or landfilled at a solid waste or hazardous waste facility permitted to receive these materials.

(10) Soils in categories 2, 3 and 4 should be stockpiled consistent with the soil storage recommendations in Section 11.3 of this guidance.