Limited Site Investigation

Buse Timber & Sales

3812 28th Place Northeast

Everett, Snohomish County, Washington

September 17, 2018

Terracon Project No. 81187331

RIMS Project No. 18-002488-02

Prepared for:
Umpqua Bank
Coeur D Alene, Idaho

Prepared by:
Terracon Consultants, Inc.
Mountlake Terrace, Washington

September 17, 2018

Umpqua Bank
1233 N Northwood Center Ct
Coeur D Alene, ID 83814-6190

Attn: Mr. Michael Pereira

Re: **Limited Site Investigation**
Buse Timber & Sales
3812 28th PL NE
Everett, Snohomish County, Washington 98205
Terracon Project No. 81187362
RIMS Project No. 18-002488-02-1

Dear Mr. Pereira:

Terracon Consultants, Inc. (Terracon) is pleased to submit our report of Limited Site Investigation (LSI) activities completed at the site referenced above. The activities were completed to address the findings of the Phase I Environmental Site Assessment (ESA – Report No. 81187262) of the property dated June 20, 2018. Terracon conducted this LSI in general accordance with our proposal (proposal No. P81187331) dated June 20, 2018 and Master Environmental Services Agreement dated June 10, 2015.

Terracon has no present or contemplated future ownership interest or financial interest in the real estate that is the subject of this Environmental Assessment Report; and Terracon has no personal interest with respect to the subject matter of the Environmental Assessment Report of the parties involved and Terracon has no relationship with the property or the owners thereof which would prevent an independent analysis of the environmental or other conditions of the property.

Unless expressly authorized in writing by Umpqua Bank and Terracon, no one is permitted or intended to rely upon the findings, conclusions or recommendations found herein. This information is provided as a courtesy only and its accuracy has not been verified. The recipient accepts this information understanding that no representations or warranties are made with respect to this information and that recipient must make an independent determination of the accuracy of any information contained herein. The recipient acknowledges that Umpqua Bank has no responsibility for this information and the recipient releases Umpqua Bank from liability for any inaccuracy, mistake or other defect in this information.

Terracon appreciates this opportunity to provide environmental services to Umpqua Bank. Should you have any questions or require additional information, please do not hesitate to contact our office.

Sincerely,
Terracon Consultants, Inc.

Kyle Bennett, G.I.T.
Staff Geologist

Matt Wheaton, L.G., P.E.
Department Manager

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Limited Site Investigation

Buse Timber & Sales
3812 28th Place Northeast
Everett, Washington

Terracon Project No. 81187331
September 17, 2018

1.0 SITE DESCRIPTION

The approximate 60-acre site is located at 3812 28th Pl NE in Everett, Snohomish County, Washington (Snohomish County tax parcels 290504-0030-0600 and 290509-0020-1500) and consists of a lumber mill business. The site has been occupied by Buse Timber & Sales, a lumber mill company for approximately 70 years. The site contains eleven buildings and several modular sheds used as office space, storage, vehicle repair, manufacturing, and employee areas. Select lumbers are treated with a water-based anti-stain in an on-site dip tank and/or painted with a water-based end seal. There are several storage areas for the lumber and are shipped off-site by vehicles that are maintained and fueled on site. A Topographic Map showing the site location is included as Exhibit 1 and a Site Diagram is included as Exhibit 2 in Appendix A.

Terracon previously performed a Phase I ESA of the property for Umpqua Bank (Terracon Project No. 81187262, dated June 20, 2018), and identified the following:

- Given the duration of operation of vehicle maintenance at the site and our experience with similar facilities, there is the potential for undocumented releases to have occurred in the maintenance shed area.
- The former UST area has not been assessed for groundwater impacts, however a groundwater sample approximately 100 feet up-gradient of the area identified impacts of diesel-range hydrocarbons above cleanup levels. Given the duration of the UST operations, there is a potential for undocumented subsurface releases to have occurred.
- The historical washdown practices in the vehicle washdown area may have resulted in undocumented releases to the subsurface.
- Given the documented impacts of diesel-range hydrocarbons to soil and groundwater in the former fire pond area, there is a potential for remaining subsurface impacts.
- Based on the previously documented impacts of dioxins and furans in sediment samples common to lumber mills in addition to the duration of approximately 70 years of site operation, there is potential for site-wide impact to groundwater, soil and sediments.

As a part of our ESA, Terracon reviewed a Draft Phase II Environmental Site Assessment performed by Exponent in August 1998. The investigation consisted of sampling sediments in the drainage ditches surrounding the facility, sampling the storm drain system, as well as assessing soil and groundwater impacts. Samples were taken of sediment, storm drains, soil, and groundwater and were analyzed and tested for volatile organic compounds (VOCs), total petroleum hydrocarbons (TPH), and other petroleum compounds. Soil impacts of benzene are above current MTCA Method A cleanup levels were identified, in addition to groundwater impacts of vinyl chloride and diesel-range TPH above their respective current MTCA Method A cleanup levels. Some recommendations were made about AST compliance, OWSs and sediment excavation. A 2010 Phase II update was also provided and performed by Exponent. Investigations were limited only to the identified recommendations of the 1998 report. Exponent further provided recommendations of general practices but recommended no further investigation.

Based on our review of the 1998 and 2010 Exponent subsurface investigations, it appears that limited soil and groundwater sampling performed on-site identified numerous areas of soil, sediment, and groundwater impacts. These areas primarily consist of the former location of the fire pond, maintenance area and former dip tank location. Soil and groundwater appear to be impacted with diesel-range TPH above current Washington State Model Toxics Control Act (MTCA) cleanup levels. The identified 1998 dioxin concentration, expressed as 2,3,7,8 tetrachlorodibenzo-p-dioxin, also appears to be above current (2018) regulatory action levels. Furthermore, numerous other VOC, semi-VOCs (SVOC) and polychlorinated biphenyls have been identified at concentrations below MTCA cleanup levels, but given the limited number of samples collected during previous investigations and that the selected locations may not have been situated in areas sufficient to assess for potential releases, there is the potential for additional impacts to have been present at concentrations above MTCA cleanup levels in other areas of the site. Given the findings of the previous subsurface investigations, the historical site use as a lumber yard and associated impacts identified in soil, sediment and groundwater represent a REC to the site.

Based on the findings of the ESA, Terracon recommended that a subsurface investigation be completed in an effort to assess the above-referenced RECs.

2.0 SCOPE OF SERVICES

Terracon's scope of services included completion of the following tasks:

- Perform pre-mobilization activities including, public and private underground utility clearances and preparation of a site-specific health and safety plan;
- Advance six soil borings and collect soil and/or groundwater samples from each boring;
- Install six temporary groundwater monitoring wells in the borings;

- Complete laboratory analyses of soil and groundwater samples; and
- Prepare this Limited Site Investigation (LSI) summary report.

The objective of the scope of services for this LSI was to assess the potential presence of compounds of concern in subsurface soil and groundwater at the site that may have originated from the above-referenced RECs. The detected sampling results have been compared to the Washington State Department of Ecology (Ecology) Model Toxics Control Program (MTCA) to assess if compounds of concern exceed the applicable standards. The scope of services was not intended to identify every chemical possibly associated with the site or surrounding facilities or to establish corrective action costs.

Groundwater was not encountered or not adequate for sampling at the time of drilling in five of the six borings; therefore, groundwater samples were not collected as a part of this investigation in those five locations. In lieu of groundwater sampling, an additional soil sample was collected near the bottom of soil borings B1, B3, and B5.

2.1 Standard of Care

Terracon's services were performed in a manner consistent with generally accepted practices of the profession undertaken in similar studies in the same geographical area during the same time. Terracon makes no warranties, either express or implied, regarding the findings, conclusions, or recommendations. Please note that Terracon does not warrant the work of laboratories, regulatory agencies, or other third parties supplying information used in the preparation of the report. These LSI services were performed in accordance with the scope of work agreed with you, our client, as reflected in our proposal and were not restricted by ASTM E1903-11 *Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process*.

2.2 Additional Scope Limitations

Findings, conclusions, and recommendations resulting from these services are based upon information derived from the on-site activities and other services performed under this scope of work; such information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, non-detectable, or not present during these services. We cannot represent that the site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during this LSI. Subsurface conditions may vary from those encountered at specific borings or wells or during other surveys, tests, assessments, investigations, or exploratory services. The data, interpretations, findings, and our recommendations are based solely upon data obtained at the time and within the scope of these services.

2.3 Reliance

This report has been prepared for the exclusive use of Umpqua Bank, and any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the site) is prohibited without the express written authorization of Umpqua Bank and Terracon. Any unauthorized distribution or reuse is at Umpqua Bank's sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions, and limitations stated in the proposal, LSI report, and Terracon's Master Environmental Service Agreement (MESA). The limitation of liability defined in the terms and conditions is the aggregate limit of Terracon's liability to Umpqua Bank and all relying parties unless otherwise agreed in writing.

3.0 FIELD INVESTIGATION

Terracon has a commitment to the safety of all its employees. As such, and in accordance with our *Incident and Injury Free*® safety goals, Terracon conducted the fieldwork under a site-specific health and safety plan developed for this project. Work was performed using the Occupational Health and Safety Administration (OSHA) Level D work attire consisting of hard hats, safety glasses, protective gloves, and protective boots. In an effort to locate underground utilities in the work area, Terracon contacted the Washington State Utility Notification Center to arrange for public underground utility clearance at the site. In addition, a private utility location service was subcontracted by Terracon to identify the locations and depths of the various utilities located near the proposed borings.

3.1 Soil Sampling

Field activities were performed in four locations: two soil borings, identified as B1 and B2, were near the vehicle maintenance building; two soil borings, identified as B3 and B4, were advanced near the former underground storage tank area and adjacent to the on-site storm drain ditch; one soil boring, identified as B5, was advanced in the location of the former fire pond and dip tank, and; one soil boring, identified as B6, was advanced near the wash-down area and dip tank. Boring locations relative to site features are depicted on Exhibit 2 of Appendix A.

Terracon field representative Jeff Dobbins mobilized to the site on August 17, 2018 to oversee the drilling of soil borings B1 through B6. B1 through B6 were advanced by Holt Services, a Washington State-licensed driller, using a truck-mounted direct-push sampler drill rig equipped with disposable acetate sample sleeves. Throughout the drilling operation, soil samples were obtained continuously (to the extent practical) from five-foot long pushes driven into the ground using a 32 hertz, percussion hammer. The steel sampling tube was extracted from the hole and the liners were removed and split open. Non-disposable sampling equipment was cleaned using a non-phosphate soap wash and potable water rinse prior to the beginning of the project and before collecting each soil sample.

Direct-push borings were advanced to depths of approximately 10 to 20 feet below the ground surface (bgs).

Terracon field-screened soil samples for organic vapors using a calibrated photoionization detector (PID). This device provides a direct reading in parts per million (ppm) isobutylene equivalents. Upon removal of the sampler from the borehole, Terracon placed a portion of each sample in a sealable plastic bag. After a stabilization period, Terracon screened the headspace above the soil using the PID.

In addition, select soils were field-screened by a sheen test by placing soil into a shallow stainless-steel bowl of water and observing to see if a sheen emitted on top the water's surface.

A field log of each boring was maintained, including the thickness and depth of each soil unit encountered and the depth to the uppermost water table. Soil samples were observed to document soil lithology, color, and moisture content. Soils were logged in general accordance with American Society for Testing and Materials (ASTM) Practice Designation D-2488, *Standard Practice for Description of Soils (Visual-Manual Procedure)*. Exploration logs are included in Appendix B. The boring logs also include the field screening results for each soil boring.

In the absence of field indications, soil samples were collected from the depth interval most likely to be impacted, change in lithology, from the upper soil zone, at a depth equal or below the REC and/or the capillary fringe, as determined by Terracon's field representative.

A total of nine soil samples, one from each boring and one additional sample from B1, B3, and B5, were collected and submitted for laboratory analysis. Soil samples were extracted by hand using disposable gloves and placed directly into laboratory-supplied glassware.

Each sample container was labeled with the project number, date, time, boring number, and sample number. Sample containers were placed in a chilled cooler immediately after sampling, and subsequently transported to a Washington State-accredited laboratory under standard chain-of-custody procedures.

The borings were decommissioned using bentonite chips immediately upon the conclusion of field work for this investigation and capped to approximately match the existing ground surface.

3.2 Groundwater Sampling

At the time of drilling, groundwater was only observed in B1 and B2 at a depth of approximately 5 feet bgs. At the time of sampling, B1 did not produce an adequate amount of groundwater for sampling; therefore, a groundwater sample was not collected from B1.

One groundwater sample was collected from the temporary monitoring well B2, using disposable tubing and a peristaltic pump. Sample tubing intake depth was selected based on the screened interval of the well. Purging of the temporary well was attempted, as practical, based on groundwater recharge rates and volumes. Approximately one gallon of development water was removed from the well before groundwater appeared relatively free of sediment.

Please note that during sampling from temporary wells, groundwater often remains turbid and can contain suspended colloids, which may then be detected by the laboratory, potentially resulting in elevated contaminate concentrations. Therefore, without the benefit of permanent groundwater monitoring wells that are properly developed prior to groundwater sampling, groundwater analytical results may not be representative of actual on-site groundwater conditions.

The sample containers were labeled with the project number, date, time, and sample number and placed in a chilled cooler immediately after sampling. The sample containers were subsequently transported to a Washington state-certified laboratory, under standard chain-of-custody procedures.

At the completion of field activities, the temporary wells were removed from each boring and they were decommissioned using bentonite chips and capped to approximately match the existing ground surface.

4.0 RESULTS OF THE FIELD INVESTIGATION

4.1 Geology/Hydrogeology

In general, Terracon encountered gray sandy silt in the upper three feet, followed by gray silt with wood fragments to the boring termination depths. The boring logs attached in Appendix B detail the observed soil stratigraphy.

4.2 Field Screening

PID readings were not detected above 6.9 parts per million (ppm) in soil collected from the borings. Furthermore, sheens or other field indications (e.g., odors) of possible chemical impacts were not noted in any of the soils and/or purge water collected from temporary groundwater monitoring wells. The field screening results are summarized on the boring logs in Appendix B.

5.0 ANALYTICAL RESULTS

The selected soil samples and groundwater samples were analyzed for gasoline-, diesel-, and oil-range total petroleum hydrocarbons (TPH) by Northwest Method NWTPH-Gx/Dx, and volatile organic compounds (VOCs) by EPA Method 8260, semi-VOCs (SVOCs) by EPA Method 8270, polychlorinated biphenyls (PCBs) by EPA Method 8082, metals by EPA Method 6010/6020/200.8, and/or polychlorinated dibenzodioxins and polychlorinated dibenzofurans (dioxins and furans) by EPA Method 1613. Soil samples analyzed for gasoline-range TPH and VOCs were collected using EPA Method 5035 sampling kits.

Reported soil and groundwater concentrations were compared with the Washington State Department of Ecology (Ecology) Model Toxics Control Act (MTCA) Method A Cleanup Levels for unrestricted land use, as applicable, established under Chapter 70.105D RCW and its implementing regulation, MTCA Chapter 173-340 WAC. Where a MTCA Method A Cleanup level has not been established for a particular compound, the respective MTCA Method B Cleanup Level for cancer/non-cancer direct contact is applied for comparison. Reported soil dioxins/furans concentrations were reported in Toxicity Equivalent Factors (TEF) and compared to the mixtures of dioxins/furans established cleanup levels in accordance with WAC 173-340-708(8).

Data packages were checked for completeness immediately upon receipt from the laboratory to ensure that data and QA/QC information requested were present. Data quality was assessed by considering holding times, surrogate recovery, method blanks, matrix spike and matrix spike duplicate recovery, and detection limits. Based upon our interpretation of quality control information provided by the laboratories, it is our opinion that the overall dataset is useable as qualified for the purposes of this LSI.

5.1 Soil Analytical Results

The soil samples collected from B1-2.5 and B2-3 contained arsenic at concentrations of 35 milligrams per kilograms (mg/kg) and 41 mg/kg respectively. These concentrations exceed the respective MTCA Method A cleanup level of 20 mg/kg for arsenic.

The soil samples collected from B1-2.5, B1-6.5, and B2-3 contained chromium at concentrations of 67 mg/kg, 47 mg/kg, and 70 mg/kg respectively. The concentrations of total chromium in soil samples collected from B1 and B2 ranged from 47 mg/kg to 70 mg/kg; although these concentrations are below the MTCA Method A cleanup level of 2,000 mg/kg for total chromium, the concentration exceeds the hexavalent chromium MTCA Method A cleanup level of 19 mg/kg. The historic site use as a lumber mill indicates the potential for on-site use or source of chromium, and concentrations are most likely attributed to historic use of chromium. The highest concentration of total chromium (B2-3) was additionally analyzed for hexavalent chromium. The concentration of hexavalent chromium in B2-3 was not reported above laboratory MRLs,

therefore chromium concentrations were compared to MTCA Method A cleanup level of 2,000 mg/kg for total chromium.

The soil sample collected from B5-2.5, B5-18, and B6-3 contained concentrations of dioxins and furans. These concentrations were used to calculate the Toxicity Equivalent Factors (TEF). Since Method A cleanup levels have not been established, the TEF concentrations were compared against the MTCA Method B cleanup level for cancer direct contact of 12.8 nanograms per kilogram (ng/kg). The TEF for B5-2.5, B5-18, and B6-3 was 10.8 ng/kg, 0.499 ng/kg, and 0.718 ng/kg respectively. These concentrations were below the respective Method B cleanup level of 12.8 ng/kg.

The remaining soil samples results were either below the laboratory MRLs or below the MTCA Method A or MTCA Method B cleanup levels. The

The soil analytical results are summarized in Table 1 of Appendix C.

5.2 Groundwater Analytical Results

The groundwater sample collected from B2 contained arsenic at a concentration of 77 µg/l, which exceeds the respective MTCA Method A cleanup level of 5 µg/l.

The remaining groundwater sample results were either below the laboratory MRLs or below the MTCA Method A or MTCA Method B cleanup levels.

The groundwater analytical results are summarized in Table 2 of Appendix C.

6.0 INVESTIGATION DERIVED WASTE

One 16-gallon drum of drill cuttings and one 16-gallon drum of monitoring well purge/equipment decontamination water were containerized during the field activities. The drums have been properly disposed by a licensed disposal facility.

7.0 FINDINGS AND CONCLUSIONS

Based on the scope of services described in this report and subject to the limitations described herein, Terracon concludes the following.

Soil samples collected from B1 and B2 had concentrations of arsenic and/or chromium which exceeded their respective MTCA Method A cleanup levels. Chromated arsenicals, which includes chromated copper arsenate (CCA), is a group of pesticides containing chromium, copper, and/or arsenic that protect wood against termites, fungi and other pests that can

degrade or threaten the integrity of wood products. Chromated arsenicals-treated wood is used to produce commercial wood shake, shingles, permanent foundation support beams and other wood products, and is likely attributing to the elevated concentrations of chromium and arsenic. However, based on the additional analysis of the highest chromium concentration, the concentrations of chromium do not appear to be hexavalent chromium. Soil samples collected form B5 and B6 had concentrations of dioxins and furans. Although these concentrations are below their respective MTCA Method B cleanup level, they exceed the natural background concentrations of 5.2 ng/kg for dioxin and furan mixtures in soil per Ecology's *Natural Background for Dioxins/Furans in WA Soils,* Technical Memorandum #8 dated August 9, 2010. According to an Environmental Protection Agency (EPA) discussion on Persistent Bioaccumulative and Toxic (PBT) Chemical Program on Dioxins and Furans dated April 18, 2011, dioxin/furans are transported primarily through the air and are deposited on the surfaces of soils. Most dioxin/furans are introduced to the environment through the air as trace by-products of combustion. The historical site use as a lumber mill and on-site fire pond, it is presumed that the onsite detections in the site soils are attributed to trace by-products through air transportation and/or the direct deposition from on-site activities.

Terracon concludes that the operations at the site with a vehicle maintenance area, wash-down area, diesel UST area, fire pond and documented dioxins and furans appears to have previously contributed and may potentially continue to contribute to the release of select chemicals of concern to soils and/or groundwater; however, with the exception of arsenic in soil and groundwater it does not appear that a significant release to these areas has occurred which has contributed to a large-scale release. Although groundwater impacts were not identified, with the exception of arsenic, at concentrations exceeding the MTCA cleanup level, it should be understood that groundwater samples were not collected from other areas of the site. Regardless, soil sampling did not indicate widespread impacts that could have migrated in the local groundwater aquifer.

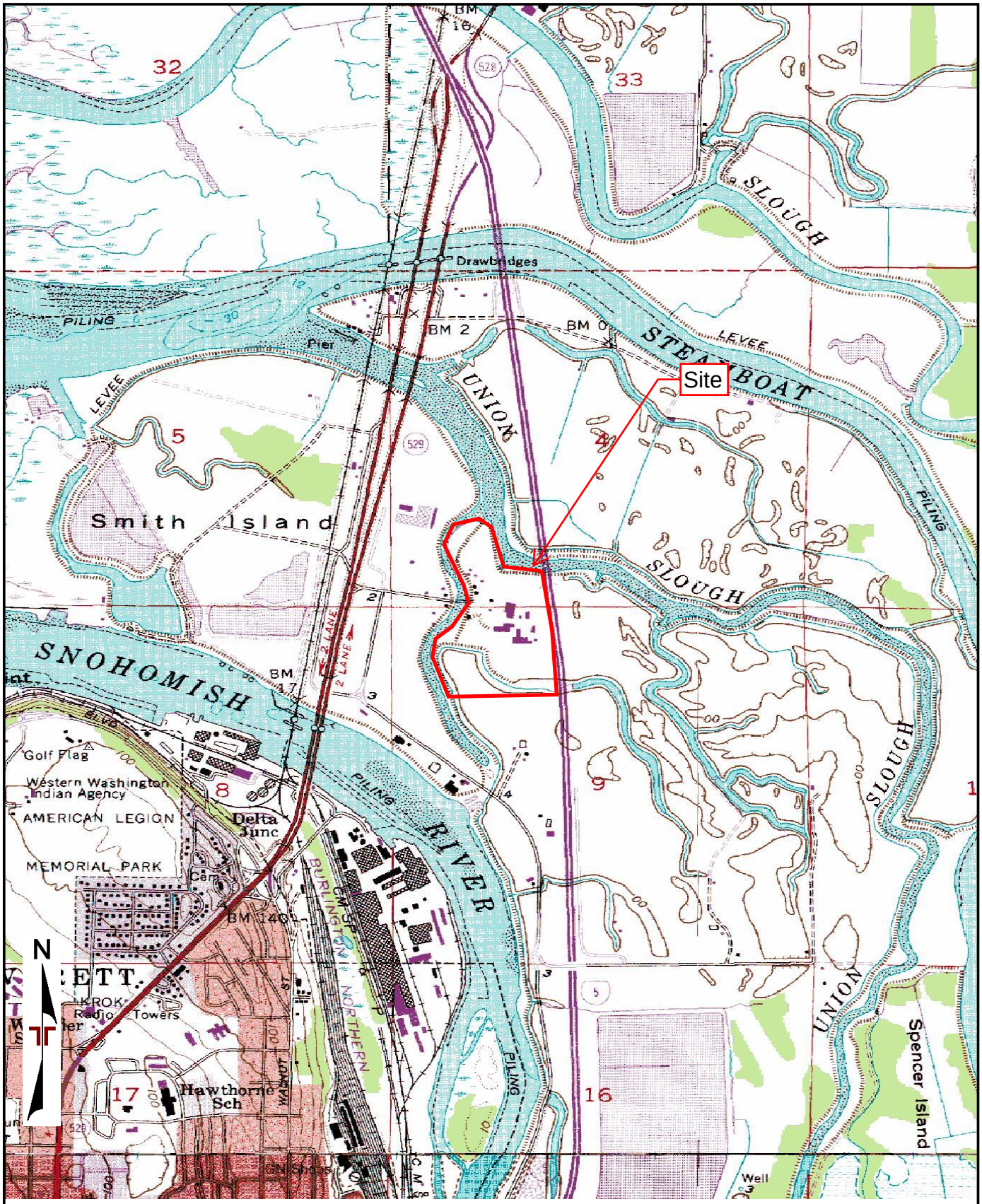
8.0 RECOMMENDATIONS

Based on the findings of this investigation, it appears that the arsenic concentrations identified are consistent with the current site use. While there are arsenic exceedances to the MTCA cleanup level, Terracon infers that they are limited to the site soil and groundwater within the limits of the site boundary. Therefore, unless the site use is proposed to change, Terracon does not recommend any additional investigations at this time. For a further degree of confidence with regard to onsite groundwater conditions, permanent groundwater monitoring wells would be required, although not recommended at this time.

With regards to the identified releases to soil exhibiting arsenic concentrations above MTCA action levels, a release report to Ecology is required per MTCA (Washington Administrative Code (WAC) 173-340-300 (2) (a)), which states: *"Any owner or operator, who has information that a hazardous substance has been released to the environment at the owner's or operator's*

facility and may be a threat to human health or the environment, shall report such information to the department within 90 days of discovery."

APPENDIX A – EXHIBITS



TOPOGRAPHIC MAP IMAGE COURTESY OF THE U.S. GEOLOGICAL SURVEY
QUADRANGLES INCLUDE: MARYSVILLE, WA (1973) and EVERETT, WA (1973).

Project Manager: EAD	Project No. 81187331	Terracon 21905 64th Ave W, Ste 100 Mountlake Terrace, WA 98043-2251	TOPOGRAPHIC MAP Buse Timber & Sales 3812 28th Pl NE Everett, Snohomish County, Washington	Exhibit 1
Drawn by: TRB	Scale: 1"=2,000'			
Checked by: MYW	File Name: Exhibit 1			
Approved by: MYW	Date: Aug 2018			

DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

B1 ● Boring number and approximate location

AERIAL PHOTOGRAPHY PROVIDED BY MICROSOFT BING MAPS

Project Manager: EAD	Project No. 81187331	Terracon	SITE DIAGRAM
Drawn by: TRB	Scale: AS SHOWN	21905 64th Ave W, Ste 100	Buse Timber & Sales
Checked by: MYW	File Name: Exhibit 2	Mountlake Terrace, WA 98043-2251	3812 28th Pl NE
Approved by: MYW	Date: Aug 2018		Everett, Snohomish County, Washington

Exhibit 2

APPENDIX B – TABLES

TABLE 1

SUMMARY OF SOIL ANALYTICAL RESULTS
Buse Timber & Sales
3812 28th Place Northeast
Everett, Washington

Terracon Project No. 81187331

All concentrations are in milligrams per kilogram (mg/kg)

Boring ID	Sample ID	Sample Date	Sample Depth (feet)	TPH			Metals[+,1]						VOCs [1]		Dioxins and Furans°
				Gasoline-Range	Diesel-Range	Oil-Range	Mercury	Arsenic	Total Chromium	Hexavalent Chromium (VI)	Lead	Other Metals	Acetone	Other VOCs	
MTCA Method A Cleanup Level				**100**	**2,000**	**2,000**	**2**	**20**	**2,000**	**19**	**250**	**Varies**	**72,000***	**Varies**	**12.8*‡**
B1	B1-2.5	8/17/18	2.5	ND (<3.0)	ND (<28)	ND (<56)	**0.034**	**35**	**67**	**--**	**57**	ND	**0.23**	ND	**--**
	B1-6.5	8/17/18	6.5	ND (<3.0)	ND (<25)	**91**	ND (<0.020)	**16**	**47**	**--**	**13**	ND	ND (<0.050)	ND	**--**
B2	B2-3	8/17/18	3	ND (<3.0)	ND (<29)	ND (<58)	**0.090**	**41**	**70**	ND (<5.0)	**31**	ND	**0.38**	ND	**--**
B3	B3-6.5	8/17/18	6.5	ND (<3.0)	ND (<28)	ND (<56)	**--**	**--**	**--**	**--**	**--**	--	**0.063**	ND	**--**
	B3-17.5	8/17/18	17.5	ND (<3.0)	ND (<25)	ND (<50)	**--**	**--**	**--**	**--**	**--**	--	ND (<0.050)	ND	**--**
B4	B4-7	8/17/18	7	ND (<3.0)	ND (<31)	ND (<62)	**--**	**--**	**--**	**--**	**--**	--	ND (<0.050)	ND	**--**
B5	B5-2.5	8/17/18	2.5	**3.5**	ND (<25)	**170**	**--**	**--**	**--**	**--**	**--**	--	ND (<0.050)	ND	**10.8**
	B5-18	8/17/18	18	ND (<3.0)	ND (<25)	ND (<50)	**--**	**--**	**--**	**--**	**--**	--	ND (<0.050)	ND	**0.499**
B6	B6-3	8/17/18	3	ND (<3.0)	ND (<26)	**58**	**--**	**--**	**--**	**--**	**--**	--	**0.23**	ND	**0.718**

Note: Concentrations detected above laboratory reporting limits are in **BOLD** type.
Concentrations detected above MTCA cleanup levels are in **BOLD RED** type and a shaded cell.
Compounds with no MTCA cleanup levels established are not included. See laboratory report for full list of analytes.

TPH - Total petroleum hydrocarbons
VOCs - Volatile organic compounds
MTCA - Model Toxics Control Act
RCRA - Resource Conservation and Recovery Act
ND - Not detected above laboratory reporting limits.
\+ - RCRA 8 Metals
* - MTCA Method B Cleanup Level - cancer/noncancer direct contact.
° - Toxicity equivalent concentrations in nanograms per kilogram (ng/kg)
‡ - Natural background concentration for dioxin and furan mixtures in upland soils (Ecology Technical Memorandum #8, 2010)
1 - See laboratory report for full list of analytes.

TABLE 2

SUMMARY OF GROUNDWATER ANALYTICAL RESULTS

Buse Timber & Sales
3812 28th Place Northeast
Everett, Washington

Terracon Project No. 81187331

All concentrations are in micrograms per liter (µg/L)

Sample ID	Sample Date	TPH			Metals[+,1]			VOCs[1]
		Gasoline-Range	Diesel-Range	Oil-Range	Arsenic	Chromium (VI)	Other Metals	
MTCA Method A Cleanup Level		**1,000**	**500**	**500**	**5**	**48**	**Varies**	**Varies**
B2	8/17/18	**260**	**450**	**400**	**77**	**9.2**	ND	ND

Note: Concentrations detected above laboratory reporting limits are in **BOLD** type.
Concentrations above MTCA cleanup levels are in **BOLD RED** and a shaded cell.

TPH - Total petroleum hydrocarbons
VOCs - Volatile organic compounds
RCRA - Resource Conservation and Recovery Act
MTCA - Model Toxics Control Act
ND - Not detected above laboratory reporting limits.
\+ - RCRA 8 metals
1 - See laboratory report for full list of analytes.

APPENDIX C – SOIL BORING LOGS

BORING LOG NO. B1

PROJECT: Buse Timber & Sales

CLIENT: Umpqua Bank
Coeur d'Alene, Idaho

SITE: 3812 28th Place Northeast
Everett, Washington

LOCATION See Exhibit 2.

DEPTH	MATERIAL DESCRIPTION	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	OVA/PID (ppm)	SAMPLE ID
0.2	**ASPHALT**					
0.8	**FILL - SAND WITH GRAVEL (SP)**, gray, moist					
1.5	**FILL - SAND (SP)**, gray, moist					
	SILT (ML), gray, moist				0.9	B1-2.5
5.0		5	▽			
	SAND (SP), gray, wet				0.0	B1-6.5
6.8						
	SILT (ML), gray, moist, abundant orange wood				0.3	
10.0		10				
	Boring Terminated at 10 Feet					

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

Advancement Method:
Direct push

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

Notes:

WATER LEVEL OBSERVATIONS

▽ *Depth to groundwater while drilling.*

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

Boring Started: 08-17-2018 | Boring Completed: 08-17-2018

Drill Rig: Geoprobe | Driller: Holt Services, Inc

Project No.: 81187331 | Exhibit: B-1

BORING LOG NO. B2

PROJECT: Buse Timber & Sales

CLIENT: Umpqua Bank
Coeur d'Alene, Idaho

SITE: 3812 28th Place Northeast
Everett, Washington

LOCATION See Exhibit 2.

GRAPHIC LOG	DEPTH	MATERIAL DESCRIPTION	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	OVA/PID (ppm)	SAMPLE ID
	0.8	**ASPHALT CONCRETE**					
	2.5	**FILL - SAND (SP)**, gray, moist					
	5.0	**SILT (ML)**, gray, moist				1.6	B2-3
	6.5	**SAND (SP)**, minor silt, gray, wet	5	▽		0.6	
	10.0	**SILT (ML)**, gray, moist, with orange wood				0.1	
		Boring Terminated at 10 Feet	10				

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

Advancement Method:
Direct push

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

Notes:

WATER LEVEL OBSERVATIONS

▽ *Depth to groundwater while drilling.*

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

Boring Started: 08-17-2018 | Boring Completed: 08-17-2018

Drill Rig: Geoprobe | Driller: Holt Services, Inc.

Project No.: 81187331 | Exhibit: B-2

BORING LOG NO. B3

PROJECT: Buse Timber & Sales

CLIENT: Umpqua Bank
Coeur d'Alene, Idaho

SITE: 3812 28th Place Northeast
Everett, Washington

LOCATION See Exhibit 2.

DEPTH	MATERIAL DESCRIPTION	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	OVA/PID (ppm)	SAMPLE ID
0.2	**ASPHALT**					
	FILL - WELL GRADED GRAVEL WITH SAND (GW), tan, slightly moist					
1.8	**SILT (ML)**, gray, moist, smelly				0.8	
		5				
					0.3	B3-6.5
	abundant orange and maroon wood				0.0	
		10			0.4	
	minor wood				1.0	
15.0						
	SILT WITH SAND (ML), gray, moist	15			0.4	
					0.1	B3-17.5
20.0		20				
	Boring Terminated at 20 Feet					

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

Advancement Method:
Direct push

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

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

Boring Started: 08-17-2018 | Boring Completed: 08-17-2018

Drill Rig: Geoprobe | Driller: Holt Services, Inc.

Project No.: 81187331 | Exhibit: B-3

BORING LOG NO. B4

PROJECT: Buse Timber & Sales

CLIENT: Umpqua Bank
Coeur d'Alene, Idaho

SITE: 3812 28th Place Northeast
Everett, Washington

LOCATION See Exhibit 2.

DEPTH	MATERIAL DESCRIPTION	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	OVA/PID (ppm)	SAMPLE ID
	TOPSOIL, tan, dry					
1.5	**SILT (ML)**, gray, moist, abundant vegetation				0.0	
					0.0	
	orange mottling					
	smelly, wood	5				
					0.7	B4-7
					0.2	
	no odor, no wood	10				
					0.0	
	trace sand	15			0.0	
					0.0	
20.0	***Boring Terminated at 20 Feet***	20				

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

Advancement Method:
Direct push

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

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

Boring Started: 08-17-2018 | Boring Completed: 08-17-2018

Drill Rig: Geoprobe | Driller: Holt Services, Inc.

Project No.: 81187331 | Exhibit: B-4

BORING LOG NO. B5

PROJECT: Buse Timber & Sales

CLIENT: Umpqua Bank
Coeur d'Alene, Idaho

SITE: 3812 28th Place Northeast
Everett, Washington

LOCATION See Exhibit 2.

DEPTH	MATERIAL DESCRIPTION	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	OVA/PID (ppm)	SAMPLE ID
0.5	**TOPSOIL**					
	FILL - SAND (SP), tan, dry grading down to moist					
2.0						
	SILT (ML), gray, moist				6.9	B5-2.5
	smelly, abundant wood from 5' to 6'	5			2.9	
	orange wood	10			0.0	
	trace sand, trace orange wood, no odor	15			0.0	B5-18
20.0		20				
	Boring Terminated at 20 Feet					

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

Advancement Method:
Direct push

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

Notes:

WATER LEVEL OBSERVATIONS
Groundwater not encountered

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

Boring Started: 08-17-2018 | Boring Completed: 08-17-2018
Drill Rig: Geoprobe | Driller: Holt Services, Inc.
Project No.: 81187331 | Exhibit: B-5

BORING LOG NO. B6

PROJECT: Buse Timber & Sales

CLIENT: Umpqua Bank
Coeur d'Alene, Idaho

SITE: 3812 28th Place Northeast
Everett, Washington

LOCATION See Exhibit 2.

DEPTH	MATERIAL DESCRIPTION	DEPTH (ft)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	OVA/PID (ppm)	SAMPLE ID
0.5	**ASPHALT**					
	FILL - SAND WITH GRAVEL (SP), gray, moist				0.7	
2.0	**SILT (ML)**, gray, moist, smelly				1.7	B6-3
	abundant wood	5			0.0	
		10			0.2	
11.0						
11.5	**SILTY SAND (SM)**, gray, moist, no wood, no odor				0.0	
	SILT (ML), gray, moist					
	some sand	15			1.0	
					0.0	
20.0	***Boring Terminated at 20 Feet***	20				

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

Advancement Method:
Direct push

Abandonment Method:
Boring backfilled with bentonite chips upon completion.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

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

Boring Started: 08-17-2018 | Boring Completed: 08-17-2018

Drill Rig: Geoprobe | Driller: Holt Services, Inc.

Project No.: 81187331 | Exhibit: B-6

APPENDIX D – ANALYTICAL REPORT

September 14, 2018

Mr. Eric Dubcak
Terracon
21905 - 64th Ave W, Suite 100
Mountlake Terrace, WA 98043

Dear Mr. Dubcak,

On August 17th, 10 samples were received by our laboratory and assigned our laboratory project number EV18080100. The project was identified as your 81187331. 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

Glen Perry
Technical Manager

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043	DATE:	9/14/2018
		ALS JOB#:	EV18080100
		ALS SAMPLE#:	EV18080100-01
CLIENT CONTACT:	Eric Dubcak	DATE RECEIVED:	08/17/2018
CLIENT PROJECT:	81187331	COLLECTION DATE:	8/17/2018 8:05:00 AM
CLIENT SAMPLE ID	B6-3	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	08/20/2018	JMK
TPH-Diesel Range	NWTPH-DX	U	26	1	MG/KG	08/22/2018	EBS
TPH-Oil Range	NWTPH-DX	**58**	50	1	MG/KG	08/22/2018	EBS
Dichlorodifluoromethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Chloromethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Vinyl Chloride	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Bromomethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Chloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Carbon Tetrachloride	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Trichlorofluoromethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Carbon Disulfide	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Acetone	EPA-8260	**0.23**	0.17	1	MG/KG	08/21/2018	DLC
1,1-Dichloroethene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Methylene Chloride	EPA-8260	U	0.020	1	MG/KG	08/20/2018	DLC
Acrylonitrile	EPA-8260	U	0.050	1	MG/KG	08/20/2018	DLC
Methyl T-Butyl Ether	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,1-Dichloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
2-Butanone	EPA-8260	U	0.13	1	MG/KG	08/21/2018	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
2,2-Dichloropropane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Bromochloromethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Chloroform	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,1,1-Trichloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,1-Dichloropropene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2-Dichloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Benzene	EPA-8260	U	0.0050	1	MG/KG	08/20/2018	DLC
Trichloroethene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2-Dichloropropane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Dibromomethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Bromodichloromethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Trans-1,3-Dichloropropene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
4-Methyl-2-Pentanone	EPA-8260	U	0.050	1	MG/KG	08/20/2018	DLC
Toluene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,1,2-Trichloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
2-Hexanone	EPA-8260	U	0.050	1	MG/KG	08/20/2018	DLC
1,3-Dichloropropane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC

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ALS Group USA, Corp dba ALS Environmental

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CERTIFICATE OF ANALYSIS

CLIENT:	Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043	DATE:	9/14/2018
		ALS JOB#:	EV18080100
		ALS SAMPLE#:	EV18080100-01
CLIENT CONTACT:	Eric Dubcak	DATE RECEIVED:	08/17/2018
CLIENT PROJECT:	81187331	COLLECTION DATE:	8/17/2018 8:05:00 AM
CLIENT SAMPLE ID	B6-3	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Tetrachloroethylene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Dibromochloromethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2-Dibromoethane	EPA-8260	U	0.0050	1	MG/KG	08/20/2018	DLC
Chlorobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Ethylbenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
m,p-Xylene	EPA-8260	U	0.020	1	MG/KG	08/20/2018	DLC
Styrene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
o-Xylene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Bromoform	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Isopropylbenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2,3-Trichloropropane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Bromobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
N-Propyl Benzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
2-Chlorotoluene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
4-Chlorotoluene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
T-Butyl Benzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
S-Butyl Benzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
P-Isopropyltoluene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,3-Dichlorobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,4-Dichlorobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
N-Butylbenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2-Dichlorobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	0.050	1	MG/KG	08/20/2018	DLC
1,2,4-Trichlorobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Hexachlorobutadiene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Naphthalene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Pyridine	EPA-8270	U	0.20	1	MG/KG	08/23/2018	JMK
N-Nitrosodimethylamine	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Phenol	EPA-8270	U	0.11	1	MG/KG	08/23/2018	JMK
Aniline	EPA-8270	U	0.12	1	MG/KG	08/23/2018	JMK
Bis(2-Chloroethyl)Ether	EPA-8270	U	0.26	1	MG/KG	08/23/2018	JMK
2-Chlorophenol	EPA-8270	U	0.26	1	MG/KG	08/23/2018	JMK
1,3-Dichlorobenzene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
1,4-Dichlorobenzene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK

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CERTIFICATE OF ANALYSIS

CLIENT:	Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043	DATE:	9/14/2018
		ALS JOB#:	EV18080100
		ALS SAMPLE#:	EV18080100-01
CLIENT CONTACT:	Eric Dubcak	DATE RECEIVED:	08/17/2018
CLIENT PROJECT:	81187331	COLLECTION DATE:	8/17/2018 8:05:00 AM
CLIENT SAMPLE ID	B6-3	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Benzyl Alcohol	EPA-8270	U	0.14	1	MG/KG	08/23/2018	JMK
1,2-Dichlorobenzene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2-Methylphenol	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	0.33	1	MG/KG	08/23/2018	JMK
3&4-Methylphenol	EPA-8270	U	0.11	1	MG/KG	08/23/2018	JMK
N-Nitroso-Di-N-Propylamine	EPA-8270	U	0.25	1	MG/KG	08/23/2018	JMK
Hexachloroethane	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Nitrobenzene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Isophorone	EPA-8270	U	0.19	1	MG/KG	08/23/2018	JMK
2-Nitrophenol	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2,4-Dimethylphenol	EPA-8270	U	0.17	1	MG/KG	08/23/2018	JMK
Benzoic Acid	EPA-8270	U	1.9	1	MG/KG	08/23/2018	JMK
Bis(2-Chloroethoxy)Methane	EPA-8270	U	0.32	1	MG/KG	08/23/2018	JMK
2,4-Dichlorophenol	EPA-8270	U	0.65	1	MG/KG	08/23/2018	JMK
1,2,4-Trichlorobenzene	EPA-8270	U	0.19	1	MG/KG	08/23/2018	JMK
Naphthalene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
4-Chloroaniline	EPA-8270	U	1.5	1	MG/KG	08/23/2018	JMK
2,6-Dichlorophenol	EPA-8270	U	0.49	1	MG/KG	08/23/2018	JMK
Hexachlorobutadiene	EPA-8270	U	0.50	1	MG/KG	08/23/2018	JMK
4-Chloro-3-Methylphenol	EPA-8270	U	0.86	1	MG/KG	08/23/2018	JMK
2-Methylnaphthalene	EPA-8270	U	0.41	1	MG/KG	08/23/2018	JMK
1-Methylnaphthalene	EPA-8270	U	0.47	1	MG/KG	08/23/2018	JMK
Hexachlorocyclopentadiene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2,4,6-Trichlorophenol	EPA-8270	U	0.11	1	MG/KG	08/23/2018	JMK
2,4,5-Trichlorophenol	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2-Chloronaphthalene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2-Nitroaniline	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Acenaphthylene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Dimethylphthalate	EPA-8270	U	0.11	1	MG/KG	08/23/2018	JMK
2,6-Dinitrotoluene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Acenaphthene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
3-Nitroaniline	EPA-8270	U	1.5	1	MG/KG	08/23/2018	JMK
2,4-Dinitrophenol	EPA-8270	U	0.14	1	MG/KG	08/23/2018	JMK
4-Nitrophenol	EPA-8270	U	0.14	1	MG/KG	08/23/2018	JMK
Dibenzofuran	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2,4-Dinitrotoluene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2,3,4,6-Tetrachlorophenol	EPA-8270	U	0.13	1	MG/KG	08/23/2018	JMK
Diethylphthalate	EPA-8270	U	0.11	1	MG/KG	08/23/2018	JMK
Fluorene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK

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ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043	DATE: ALS JOB#: ALS SAMPLE#:	9/14/2018 EV18080100 EV18080100-01
CLIENT CONTACT:	Eric Dubcak	DATE RECEIVED:	08/17/2018
CLIENT PROJECT:	81187331	COLLECTION DATE:	8/17/2018 8:05:00 AM
CLIENT SAMPLE ID	B6-3	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
4-Chlorophenyl-Phenylether	EPA-8270	U	0.11	1	MG/KG	08/23/2018	JMK
4-Nitroaniline	EPA-8270	U	0.34	1	MG/KG	08/23/2018	JMK
4,6-Dinitro-2-Methylphenol	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
N-Nitrosodiphenylamine	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Azobenzene	EPA-8270	U	0.12	1	MG/KG	08/23/2018	JMK
4-Bromophenyl-Phenylether	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Hexachlorobenzene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Pentachlorophenol	EPA-8270	U	0.50	1	MG/KG	08/23/2018	JMK
Phenanthrene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Anthracene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Carbazole	EPA-8270	U	0.29	1	MG/KG	08/23/2018	JMK
Di-N-Butylphthalate	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Fluoranthene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Pyrene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Butylbenzylphthalate	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
3,3-Dichlorobenzidine	EPA-8270	U	0.45	1	MG/KG	08/23/2018	JMK
Benzo[A]Anthracene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Chrysene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Di-N-Octylphthalate	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Benzo[B]Fluoranthene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Benzo[K]Fluoranthene	EPA-8270	U	0.11	1	MG/KG	08/23/2018	JMK
Benzo[A]Pyrene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Dibenz[A,H]Anthracene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Benzo[G,H,I]Perylene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**74.9**	08/20/2018	JMK
C25	NWTPH-DX	**78.5**	08/22/2018	EBS
1,2-Dichloroethane-d4	EPA-8260	**99.8**	08/20/2018	DLC
1,2-Dichloroethane-d4	EPA-8260	**96.9**	08/21/2018	DLC
Toluene-d8	EPA-8260	**111**	08/20/2018	DLC
Toluene-d8	EPA-8260	**103**	08/21/2018	DLC
4-Bromofluorobenzene	EPA-8260	**99.7**	08/20/2018	DLC
4-Bromofluorobenzene	EPA-8260	**84.7**	08/21/2018	DLC
2-Fluorophenol	EPA-8270	**108**	08/23/2018	JMK
Phenol-d5	EPA-8270	**104**	08/23/2018	JMK

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CERTIFICATE OF ANALYSIS

CLIENT:	Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043	DATE:	9/14/2018
		ALS JOB#:	EV18080100
		ALS SAMPLE#:	EV18080100-01
CLIENT CONTACT:	Eric Dubcak	DATE RECEIVED:	08/17/2018
CLIENT PROJECT:	81187331	COLLECTION DATE:	8/17/2018 8:05:00 AM
CLIENT SAMPLE ID	B6-3	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
Nitrobenzene-d5	EPA-8270	**88.1**	08/23/2018	JMK
2-Fluorobiphenyl	EPA-8270	**84.0**	08/23/2018	JMK
2,4,6-Tribromophenol	EPA-8270	**93.7**	08/23/2018	JMK
Terphenyl-d14	EPA-8270	**93.8**	08/23/2018	JMK

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

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CERTIFICATE OF ANALYSIS

CLIENT:	Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043	DATE: ALS JOB#: ALS SAMPLE#:	9/14/2018 EV18080100 EV18080100-02
CLIENT CONTACT:	Eric Dubcak	DATE RECEIVED:	08/17/2018
CLIENT PROJECT:	81187331	COLLECTION DATE:	8/17/2018 9:50:00 AM
CLIENT SAMPLE ID	B4-7	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	08/20/2018	JMK
TPH-Diesel Range	NWTPH-DX	U	31	1	MG/KG	08/22/2018	EBS
TPH-Oil Range	NWTPH-DX	U	62	1	MG/KG	08/22/2018	EBS
Dichlorodifluoromethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Chloromethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Vinyl Chloride	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Bromomethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Chloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Carbon Tetrachloride	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Trichlorofluoromethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Carbon Disulfide	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Acetone	EPA-8260	U	0.050	1	MG/KG	08/20/2018	DLC
1,1-Dichloroethene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Methylene Chloride	EPA-8260	U	0.020	1	MG/KG	08/20/2018	DLC
Acrylonitrile	EPA-8260	U	0.050	1	MG/KG	08/20/2018	DLC
Methyl T-Butyl Ether	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,1-Dichloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
2-Butanone	EPA-8260	U	0.050	1	MG/KG	08/20/2018	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
2,2-Dichloropropane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Bromochloromethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Chloroform	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,1,1-Trichloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,1-Dichloropropene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2-Dichloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Benzene	EPA-8260	U	0.0050	1	MG/KG	08/20/2018	DLC
Trichloroethene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2-Dichloropropane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Dibromomethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Bromodichloromethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Trans-1,3-Dichloropropene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
4-Methyl-2-Pentanone	EPA-8260	U	0.050	1	MG/KG	08/20/2018	DLC
Toluene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,1,2-Trichloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
2-Hexanone	EPA-8260	U	0.050	1	MG/KG	08/20/2018	DLC
1,3-Dichloropropane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Tetrachloroethylene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC

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ALS Group USA, Corp dba ALS Environmental

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CERTIFICATE OF ANALYSIS

CLIENT:	Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043	DATE: ALS JOB#: ALS SAMPLE#:	9/14/2018 EV18080100 EV18080100-02
CLIENT CONTACT:	Eric Dubcak	DATE RECEIVED:	08/17/2018
CLIENT PROJECT:	81187331	COLLECTION DATE:	8/17/2018 9:50:00 AM
CLIENT SAMPLE ID	B4-7	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dibromochloromethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2-Dibromoethane	EPA-8260	U	0.0050	1	MG/KG	08/20/2018	DLC
Chlorobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Ethylbenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
m,p-Xylene	EPA-8260	U	0.020	1	MG/KG	08/20/2018	DLC
Styrene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
o-Xylene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Bromoform	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Isopropylbenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2,3-Trichloropropane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Bromobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
N-Propyl Benzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
2-Chlorotoluene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
4-Chlorotoluene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
T-Butyl Benzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
S-Butyl Benzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
P-Isopropyltoluene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,3-Dichlorobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,4-Dichlorobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
N-Butylbenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2-Dichlorobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	0.050	1	MG/KG	08/20/2018	DLC
1,2,4-Trichlorobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Hexachlorobutadiene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Naphthalene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Pyridine	EPA-8270	U	0.20	1	MG/KG	08/23/2018	JMK
N-Nitrosodimethylamine	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Phenol	EPA-8270	U	0.13	1	MG/KG	08/23/2018	JMK
Aniline	EPA-8270	U	0.15	1	MG/KG	08/23/2018	JMK
Bis(2-Chloroethyl)Ether	EPA-8270	U	0.31	1	MG/KG	08/23/2018	JMK
2-Chlorophenol	EPA-8270	U	0.32	1	MG/KG	08/23/2018	JMK
1,3-Dichlorobenzene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
1,4-Dichlorobenzene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Benzyl Alcohol	EPA-8270	U	0.17	1	MG/KG	08/23/2018	JMK

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CERTIFICATE OF ANALYSIS

CLIENT:	Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043	DATE:	9/14/2018
		ALS JOB#:	EV18080100
		ALS SAMPLE#:	EV18080100-02
CLIENT CONTACT:	Eric Dubcak	DATE RECEIVED:	08/17/2018
CLIENT PROJECT:	81187331	COLLECTION DATE:	8/17/2018 9:50:00 AM
CLIENT SAMPLE ID	B4-7	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
1,2-Dichlorobenzene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2-Methylphenol	EPA-8270	U	0.11	1	MG/KG	08/23/2018	JMK
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	0.41	1	MG/KG	08/23/2018	JMK
3&4-Methylphenol	EPA-8270	U	0.14	1	MG/KG	08/23/2018	JMK
N-Nitroso-Di-N-Propylamine	EPA-8270	U	0.31	1	MG/KG	08/23/2018	JMK
Hexachloroethane	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Nitrobenzene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Isophorone	EPA-8270	U	0.23	1	MG/KG	08/23/2018	JMK
2-Nitrophenol	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2,4-Dimethylphenol	EPA-8270	U	0.21	1	MG/KG	08/23/2018	JMK
Benzoic Acid	EPA-8270	U	2.3	1	MG/KG	08/23/2018	JMK
Bis(2-Chloroethoxy)Methane	EPA-8270	U	0.39	1	MG/KG	08/23/2018	JMK
2,4-Dichlorophenol	EPA-8270	U	0.80	1	MG/KG	08/23/2018	JMK
1,2,4-Trichlorobenzene	EPA-8270	U	0.23	1	MG/KG	08/23/2018	JMK
Naphthalene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
4-Chloroaniline	EPA-8270	U	1.8	1	MG/KG	08/23/2018	JMK
2,6-Dichlorophenol	EPA-8270	U	0.60	1	MG/KG	08/23/2018	JMK
Hexachlorobutadiene	EPA-8270	U	0.50	1	MG/KG	08/23/2018	JMK
4-Chloro-3-Methylphenol	EPA-8270	U	1.1	1	MG/KG	08/23/2018	JMK
2-Methylnaphthalene	EPA-8270	U	0.50	1	MG/KG	08/23/2018	JMK
1-Methylnaphthalene	EPA-8270	U	0.58	1	MG/KG	08/23/2018	JMK
Hexachlorocyclopentadiene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2,4,6-Trichlorophenol	EPA-8270	U	0.13	1	MG/KG	08/23/2018	JMK
2,4,5-Trichlorophenol	EPA-8270	U	0.13	1	MG/KG	08/23/2018	JMK
2-Chloronaphthalene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2-Nitroaniline	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Acenaphthylene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Dimethylphthalate	EPA-8270	U	0.14	1	MG/KG	08/23/2018	JMK
2,6-Dinitrotoluene	EPA-8270	U	0.12	1	MG/KG	08/23/2018	JMK
Acenaphthene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
3-Nitroaniline	EPA-8270	U	1.9	1	MG/KG	08/23/2018	JMK
2,4-Dinitrophenol	EPA-8270	U	0.17	1	MG/KG	08/23/2018	JMK
4-Nitrophenol	EPA-8270	U	0.18	1	MG/KG	08/23/2018	JMK
Dibenzofuran	EPA-8270	U	0.11	1	MG/KG	08/23/2018	JMK
2,4-Dinitrotoluene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2,3,4,6-Tetrachlorophenol	EPA-8270	U	0.16	1	MG/KG	08/23/2018	JMK
Diethylphthalate	EPA-8270	U	0.14	1	MG/KG	08/23/2018	JMK
Fluorene	EPA-8270	U	0.11	1	MG/KG	08/23/2018	JMK
4-Chlorophenyl-Phenylether	EPA-8270	U	0.14	1	MG/KG	08/23/2018	JMK

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CERTIFICATE OF ANALYSIS

CLIENT:	Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043	DATE: ALS JOB#: ALS SAMPLE#:	9/14/2018 EV18080100 EV18080100-02
CLIENT CONTACT:	Eric Dubcak	DATE RECEIVED:	08/17/2018
CLIENT PROJECT:	81187331	COLLECTION DATE:	8/17/2018 9:50:00 AM
CLIENT SAMPLE ID	B4-7	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
4-Nitroaniline	EPA-8270	U	0.41	1	MG/KG	08/23/2018	JMK
4,6-Dinitro-2-Methylphenol	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
N-Nitrosodiphenylamine	EPA-8270	U	0.11	1	MG/KG	08/23/2018	JMK
Azobenzene	EPA-8270	U	0.14	1	MG/KG	08/23/2018	JMK
4-Bromophenyl-Phenylether	EPA-8270	U	0.12	1	MG/KG	08/23/2018	JMK
Hexachlorobenzene	EPA-8270	U	0.12	1	MG/KG	08/23/2018	JMK
Pentachlorophenol	EPA-8270	U	0.50	1	MG/KG	08/23/2018	JMK
Phenanthrene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Anthracene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Carbazole	EPA-8270	U	0.35	1	MG/KG	08/23/2018	JMK
Di-N-Butylphthalate	EPA-8270	U	0.11	1	MG/KG	08/23/2018	JMK
Fluoranthene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Pyrene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Butylbenzylphthalate	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
3,3-Dichlorobenzidine	EPA-8270	U	0.56	1	MG/KG	08/23/2018	JMK
Benzo[A]Anthracene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Chrysene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Di-N-Octylphthalate	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Benzo[B]Fluoranthene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Benzo[K]Fluoranthene	EPA-8270	U	0.14	1	MG/KG	08/23/2018	JMK
Benzo[A]Pyrene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Dibenz[A,H]Anthracene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Benzo[G,H,I]Perylene	EPA-8270	U	0.11	1	MG/KG	08/23/2018	JMK

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**70.3**	08/20/2018	JMK
C25	NWTPH-DX	**70.6**	08/22/2018	EBS
1,2-Dichloroethane-d4	EPA-8260	**95.6**	08/20/2018	DLC
Toluene-d8	EPA-8260	**110**	08/20/2018	DLC
4-Bromofluorobenzene	EPA-8260	**95.2**	08/20/2018	DLC
2-Fluorophenol	EPA-8270	**103**	08/23/2018	JMK
Phenol-d5	EPA-8270	**95.0**	08/23/2018	JMK
Nitrobenzene-d5	EPA-8270	**86.5**	08/23/2018	JMK
2-Fluorobiphenyl	EPA-8270	**83.0**	08/23/2018	JMK
2,4,6-Tribromophenol	EPA-8270	**88.9**	08/23/2018	JMK
Terphenyl-d14	EPA-8270	**89.6**	08/23/2018	JMK

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CERTIFICATE OF ANALYSIS

CLIENT:	Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043	DATE:	9/14/2018
		ALS JOB#:	EV18080100
		ALS SAMPLE#:	EV18080100-02
CLIENT CONTACT:	Eric Dubcak	DATE RECEIVED:	08/17/2018
CLIENT PROJECT:	81187331	COLLECTION DATE:	8/17/2018 9:50:00 AM
CLIENT SAMPLE ID	B4-7	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

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

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CERTIFICATE OF ANALYSIS

CLIENT:	Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043	DATE:	9/14/2018
		ALS JOB#:	EV18080100
		ALS SAMPLE#:	EV18080100-03
CLIENT CONTACT:	Eric Dubcak	DATE RECEIVED:	08/17/2018
CLIENT PROJECT:	81187331	COLLECTION DATE:	8/17/2018 11:05:00 AM
CLIENT SAMPLE ID	B3-6.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	08/20/2018	JMK
TPH-Diesel Range	NWTPH-DX	U	28	1	MG/KG	08/22/2018	EBS
TPH-Oil Range	NWTPH-DX	U	56	1	MG/KG	08/22/2018	EBS
Dichlorodifluoromethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Chloromethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Vinyl Chloride	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Bromomethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Chloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Carbon Tetrachloride	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Trichlorofluoromethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Carbon Disulfide	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Acetone	EPA-8260	**0.063**	0.050	1	MG/KG	08/20/2018	DLC
1,1-Dichloroethene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Methylene Chloride	EPA-8260	U	0.020	1	MG/KG	08/20/2018	DLC
Acrylonitrile	EPA-8260	U	0.050	1	MG/KG	08/20/2018	DLC
Methyl T-Butyl Ether	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,1-Dichloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
2-Butanone	EPA-8260	U	0.050	1	MG/KG	08/20/2018	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
2,2-Dichloropropane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Bromochloromethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Chloroform	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,1,1-Trichloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,1-Dichloropropene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2-Dichloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Benzene	EPA-8260	U	0.0050	1	MG/KG	08/20/2018	DLC
Trichloroethene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2-Dichloropropane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Dibromomethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Bromodichloromethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Trans-1,3-Dichloropropene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
4-Methyl-2-Pentanone	EPA-8260	U	0.050	1	MG/KG	08/20/2018	DLC
Toluene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,1,2-Trichloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
2-Hexanone	EPA-8260	U	0.050	1	MG/KG	08/20/2018	DLC
1,3-Dichloropropane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Tetrachloroethylene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
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CERTIFICATE OF ANALYSIS

CLIENT:	Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043	DATE: ALS JOB#: ALS SAMPLE#:	9/14/2018 EV18080100 EV18080100-03
CLIENT CONTACT:	Eric Dubcak	DATE RECEIVED:	08/17/2018
CLIENT PROJECT:	81187331	COLLECTION DATE:	8/17/2018 11:05:00 AM
CLIENT SAMPLE ID	B3-6.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dibromochloromethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2-Dibromoethane	EPA-8260	U	0.0050	1	MG/KG	08/20/2018	DLC
Chlorobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Ethylbenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
m,p-Xylene	EPA-8260	U	0.020	1	MG/KG	08/20/2018	DLC
Styrene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
o-Xylene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Bromoform	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Isopropylbenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2,3-Trichloropropane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Bromobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
N-Propyl Benzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
2-Chlorotoluene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
4-Chlorotoluene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
T-Butyl Benzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
S-Butyl Benzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
P-Isopropyltoluene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,3-Dichlorobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,4-Dichlorobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
N-Butylbenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2-Dichlorobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	0.050	1	MG/KG	08/20/2018	DLC
1,2,4-Trichlorobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Hexachlorobutadiene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Naphthalene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Pyridine	EPA-8270	U	0.20	1	MG/KG	08/23/2018	JMK
N-Nitrosodimethylamine	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Phenol	EPA-8270	U	0.11	1	MG/KG	08/23/2018	JMK
Aniline	EPA-8270	U	0.13	1	MG/KG	08/23/2018	JMK
Bis(2-Chloroethyl)Ether	EPA-8270	U	0.27	1	MG/KG	08/23/2018	JMK
2-Chlorophenol	EPA-8270	U	0.27	1	MG/KG	08/23/2018	JMK
1,3-Dichlorobenzene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
1,4-Dichlorobenzene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Benzyl Alcohol	EPA-8270	U	0.14	1	MG/KG	08/23/2018	JMK

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CERTIFICATE OF ANALYSIS

CLIENT:	Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043	DATE:	9/14/2018
		ALS JOB#:	EV18080100
		ALS SAMPLE#:	EV18080100-03
CLIENT CONTACT:	Eric Dubcak	DATE RECEIVED:	08/17/2018
CLIENT PROJECT:	81187331	COLLECTION DATE:	8/17/2018 11:05:00 AM
CLIENT SAMPLE ID	B3-6.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
1,2-Dichlorobenzene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2-Methylphenol	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	0.35	1	MG/KG	08/23/2018	JMK
3&4-Methylphenol	EPA-8270	U	0.12	1	MG/KG	08/23/2018	JMK
N-Nitroso-Di-N-Propylamine	EPA-8270	U	0.26	1	MG/KG	08/23/2018	JMK
Hexachloroethane	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Nitrobenzene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Isophorone	EPA-8270	U	0.20	1	MG/KG	08/23/2018	JMK
2-Nitrophenol	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2,4-Dimethylphenol	EPA-8270	U	0.18	1	MG/KG	08/23/2018	JMK
Benzoic Acid	EPA-8270	U	2.0	1	MG/KG	08/23/2018	JMK
Bis(2-Chloroethoxy)Methane	EPA-8270	U	0.34	1	MG/KG	08/23/2018	JMK
2,4-Dichlorophenol	EPA-8270	U	0.68	1	MG/KG	08/23/2018	JMK
1,2,4-Trichlorobenzene	EPA-8270	U	0.20	1	MG/KG	08/23/2018	JMK
Naphthalene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
4-Chloroaniline	EPA-8270	U	1.6	1	MG/KG	08/23/2018	JMK
2,6-Dichlorophenol	EPA-8270	U	0.51	1	MG/KG	08/23/2018	JMK
Hexachlorobutadiene	EPA-8270	U	0.50	1	MG/KG	08/23/2018	JMK
4-Chloro-3-Methylphenol	EPA-8270	U	0.90	1	MG/KG	08/23/2018	JMK
2-Methylnaphthalene	EPA-8270	U	0.43	1	MG/KG	08/23/2018	JMK
1-Methylnaphthalene	EPA-8270	U	0.49	1	MG/KG	08/23/2018	JMK
Hexachlorocyclopentadiene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2,4,6-Trichlorophenol	EPA-8270	U	0.11	1	MG/KG	08/23/2018	JMK
2,4,5-Trichlorophenol	EPA-8270	U	0.11	1	MG/KG	08/23/2018	JMK
2-Chloronaphthalene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2-Nitroaniline	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Acenaphthylene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Dimethylphthalate	EPA-8270	U	0.12	1	MG/KG	08/23/2018	JMK
2,6-Dinitrotoluene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Acenaphthene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
3-Nitroaniline	EPA-8270	U	1.6	1	MG/KG	08/23/2018	JMK
2,4-Dinitrophenol	EPA-8270	U	0.15	1	MG/KG	08/23/2018	JMK
4-Nitrophenol	EPA-8270	U	0.15	1	MG/KG	08/23/2018	JMK
Dibenzofuran	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2,4-Dinitrotoluene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2,3,4,6-Tetrachlorophenol	EPA-8270	U	0.14	1	MG/KG	08/23/2018	JMK
Diethylphthalate	EPA-8270	U	0.12	1	MG/KG	08/23/2018	JMK
Fluorene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
4-Chlorophenyl-Phenylether	EPA-8270	U	0.12	1	MG/KG	08/23/2018	JMK

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CERTIFICATE OF ANALYSIS

CLIENT:	Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043	DATE: ALS JOB#: ALS SAMPLE#:	9/14/2018 EV18080100 EV18080100-03
CLIENT CONTACT:	Eric Dubcak	DATE RECEIVED:	08/17/2018
CLIENT PROJECT:	81187331	COLLECTION DATE:	8/17/2018 11:05:00 AM
CLIENT SAMPLE ID	B3-6.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
4-Nitroaniline	EPA-8270	U	0.35	1	MG/KG	08/23/2018	JMK
4,6-Dinitro-2-Methylphenol	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
N-Nitrosodiphenylamine	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Azobenzene	EPA-8270	U	0.12	1	MG/KG	08/23/2018	JMK
4-Bromophenyl-Phenylether	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Hexachlorobenzene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Pentachlorophenol	EPA-8270	U	0.50	1	MG/KG	08/23/2018	JMK
Phenanthrene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Anthracene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Carbazole	EPA-8270	U	0.30	1	MG/KG	08/23/2018	JMK
Di-N-Butylphthalate	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Fluoranthene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Pyrene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Butylbenzylphthalate	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
3,3-Dichlorobenzidine	EPA-8270	U	0.48	1	MG/KG	08/23/2018	JMK
Benzo[A]Anthracene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Chrysene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Di-N-Octylphthalate	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Benzo[B]Fluoranthene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Benzo[K]Fluoranthene	EPA-8270	U	0.12	1	MG/KG	08/23/2018	JMK
Benzo[A]Pyrene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Dibenz[A,H]Anthracene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Benzo[G,H,I]Perylene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**68.4**	08/20/2018	JMK
C25	NWTPH-DX	**76.0**	08/22/2018	EBS
1,2-Dichloroethane-d4	EPA-8260	**99.7**	08/20/2018	DLC
Toluene-d8	EPA-8260	**109**	08/20/2018	DLC
4-Bromofluorobenzene	EPA-8260	**93.3**	08/20/2018	DLC
2-Fluorophenol	EPA-8270	**104**	08/23/2018	JMK
Phenol-d5	EPA-8270	**102**	08/23/2018	JMK
Nitrobenzene-d5	EPA-8270	**86.6**	08/23/2018	JMK
2-Fluorobiphenyl	EPA-8270	**81.6**	08/23/2018	JMK
2,4,6-Tribromophenol	EPA-8270	**89.8**	08/23/2018	JMK
Terphenyl-d14	EPA-8270	**89.2**	08/23/2018	JMK

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CERTIFICATE OF ANALYSIS

CLIENT:	Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043	DATE:	9/14/2018
		ALS JOB#:	EV18080100
		ALS SAMPLE#:	EV18080100-03
CLIENT CONTACT:	Eric Dubcak	DATE RECEIVED:	08/17/2018
CLIENT PROJECT:	81187331	COLLECTION DATE:	8/17/2018 11:05:00 AM
CLIENT SAMPLE ID	B3-6.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

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

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CERTIFICATE OF ANALYSIS

CLIENT:	Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043	DATE:	9/14/2018
		ALS JOB#:	EV18080100
		ALS SAMPLE#:	EV18080100-04
CLIENT CONTACT:	Eric Dubcak	DATE RECEIVED:	08/17/2018
CLIENT PROJECT:	81187331	COLLECTION DATE:	8/17/2018 11:25:00 AM
CLIENT SAMPLE ID	B3-17.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	08/20/2018	JMK
TPH-Diesel Range	NWTPH-DX	U	25	1	MG/KG	08/22/2018	EBS
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	08/22/2018	EBS
Dichlorodifluoromethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Chloromethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Vinyl Chloride	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Bromomethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Chloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Carbon Tetrachloride	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Trichlorofluoromethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Carbon Disulfide	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Acetone	EPA-8260	U	0.050	1	MG/KG	08/20/2018	DLC
1,1-Dichloroethene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Methylene Chloride	EPA-8260	U	0.020	1	MG/KG	08/20/2018	DLC
Acrylonitrile	EPA-8260	U	0.050	1	MG/KG	08/20/2018	DLC
Methyl T-Butyl Ether	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,1-Dichloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
2-Butanone	EPA-8260	U	0.050	1	MG/KG	08/20/2018	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
2,2-Dichloropropane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Bromochloromethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Chloroform	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,1,1-Trichloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,1-Dichloropropene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2-Dichloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Benzene	EPA-8260	U	0.0050	1	MG/KG	08/20/2018	DLC
Trichloroethene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2-Dichloropropane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Dibromomethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Bromodichloromethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Trans-1,3-Dichloropropene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
4-Methyl-2-Pentanone	EPA-8260	U	0.050	1	MG/KG	08/20/2018	DLC
Toluene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,1,2-Trichloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
2-Hexanone	EPA-8260	U	0.050	1	MG/KG	08/20/2018	DLC
1,3-Dichloropropane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Tetrachloroethylene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC

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CERTIFICATE OF ANALYSIS

CLIENT:	Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043	DATE:	9/14/2018
		ALS JOB#:	EV18080100
		ALS SAMPLE#:	EV18080100-04
CLIENT CONTACT:	Eric Dubcak	DATE RECEIVED:	08/17/2018
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CLIENT SAMPLE ID	B3-17.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dibromochloromethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2-Dibromoethane	EPA-8260	U	0.0050	1	MG/KG	08/20/2018	DLC
Chlorobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Ethylbenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
m,p-Xylene	EPA-8260	U	0.020	1	MG/KG	08/20/2018	DLC
Styrene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
o-Xylene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Bromoform	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Isopropylbenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2,3-Trichloropropane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Bromobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
N-Propyl Benzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
2-Chlorotoluene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
4-Chlorotoluene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
T-Butyl Benzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
S-Butyl Benzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
P-Isopropyltoluene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,3-Dichlorobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,4-Dichlorobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
N-Butylbenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2-Dichlorobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	0.050	1	MG/KG	08/20/2018	DLC
1,2,4-Trichlorobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Hexachlorobutadiene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Naphthalene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Pyridine	EPA-8270	U	0.20	1	MG/KG	08/23/2018	JMK
N-Nitrosodimethylamine	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Phenol	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Aniline	EPA-8270	U	0.12	1	MG/KG	08/23/2018	JMK
Bis(2-Chloroethyl)Ether	EPA-8270	U	0.25	1	MG/KG	08/23/2018	JMK
2-Chlorophenol	EPA-8270	U	0.25	1	MG/KG	08/23/2018	JMK
1,3-Dichlorobenzene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
1,4-Dichlorobenzene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Benzyl Alcohol	EPA-8270	U	0.13	1	MG/KG	08/23/2018	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
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CERTIFICATE OF ANALYSIS

CLIENT:	Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043	DATE:	9/14/2018
		ALS JOB#:	EV18080100
		ALS SAMPLE#:	EV18080100-04
CLIENT CONTACT:	Eric Dubcak	DATE RECEIVED:	08/17/2018
CLIENT PROJECT:	81187331	COLLECTION DATE:	8/17/2018 11:25:00 AM
CLIENT SAMPLE ID	B3-17.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
1,2-Dichlorobenzene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2-Methylphenol	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	0.32	1	MG/KG	08/23/2018	JMK
3&4-Methylphenol	EPA-8270	U	0.11	1	MG/KG	08/23/2018	JMK
N-Nitroso-Di-N-Propylamine	EPA-8270	U	0.25	1	MG/KG	08/23/2018	JMK
Hexachloroethane	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Nitrobenzene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Isophorone	EPA-8270	U	0.18	1	MG/KG	08/23/2018	JMK
2-Nitrophenol	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2,4-Dimethylphenol	EPA-8270	U	0.16	1	MG/KG	08/23/2018	JMK
Benzoic Acid	EPA-8270	U	1.8	1	MG/KG	08/23/2018	JMK
Bis(2-Chloroethoxy)Methane	EPA-8270	U	0.30	1	MG/KG	08/23/2018	JMK
2,4-Dichlorophenol	EPA-8270	U	0.62	1	MG/KG	08/23/2018	JMK
1,2,4-Trichlorobenzene	EPA-8270	U	0.18	1	MG/KG	08/23/2018	JMK
Naphthalene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
4-Chloroaniline	EPA-8270	U	1.4	1	MG/KG	08/23/2018	JMK
2,6-Dichlorophenol	EPA-8270	U	0.46	1	MG/KG	08/23/2018	JMK
Hexachlorobutadiene	EPA-8270	U	0.50	1	MG/KG	08/23/2018	JMK
4-Chloro-3-Methylphenol	EPA-8270	U	0.81	1	MG/KG	08/23/2018	JMK
2-Methylnaphthalene	EPA-8270	U	0.39	1	MG/KG	08/23/2018	JMK
1-Methylnaphthalene	EPA-8270	U	0.45	1	MG/KG	08/23/2018	JMK
Hexachlorocyclopentadiene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2,4,6-Trichlorophenol	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2,4,5-Trichlorophenol	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2-Chloronaphthalene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2-Nitroaniline	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Acenaphthylene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Dimethylphthalate	EPA-8270	U	0.11	1	MG/KG	08/23/2018	JMK
2,6-Dinitrotoluene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Acenaphthene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
3-Nitroaniline	EPA-8270	U	1.5	1	MG/KG	08/23/2018	JMK
2,4-Dinitrophenol	EPA-8270	U	0.13	1	MG/KG	08/23/2018	JMK
4-Nitrophenol	EPA-8270	U	0.14	1	MG/KG	08/23/2018	JMK
Dibenzofuran	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2,4-Dinitrotoluene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2,3,4,6-Tetrachlorophenol	EPA-8270	U	0.13	1	MG/KG	08/23/2018	JMK
Diethylphthalate	EPA-8270	U	0.11	1	MG/KG	08/23/2018	JMK
Fluorene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
4-Chlorophenyl-Phenylether	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK

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CERTIFICATE OF ANALYSIS

CLIENT:	Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043	DATE:	9/14/2018
		ALS JOB#:	EV18080100
		ALS SAMPLE#:	EV18080100-04
CLIENT CONTACT:	Eric Dubcak	DATE RECEIVED:	08/17/2018
CLIENT PROJECT:	81187331	COLLECTION DATE:	8/17/2018 11:25:00 AM
CLIENT SAMPLE ID	B3-17.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
4-Nitroaniline	EPA-8270	U	0.32	1	MG/KG	08/23/2018	JMK
4,6-Dinitro-2-Methylphenol	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
N-Nitrosodiphenylamine	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Azobenzene	EPA-8270	U	0.11	1	MG/KG	08/23/2018	JMK
4-Bromophenyl-Phenylether	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Hexachlorobenzene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Pentachlorophenol	EPA-8270	U	0.50	1	MG/KG	08/23/2018	JMK
Phenanthrene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Anthracene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Carbazole	EPA-8270	U	0.27	1	MG/KG	08/23/2018	JMK
Di-N-Butylphthalate	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Fluoranthene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Pyrene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Butylbenzylphthalate	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
3,3-Dichlorobenzidine	EPA-8270	U	0.43	1	MG/KG	08/23/2018	JMK
Benzo[A]Anthracene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Chrysene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Di-N-Octylphthalate	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Benzo[B]Fluoranthene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Benzo[K]Fluoranthene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Benzo[A]Pyrene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Dibenz[A,H]Anthracene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Benzo[G,H,I]Perylene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**77.7**	08/20/2018	JMK
C25	NWTPH-DX	**81.5**	08/22/2018	EBS
1,2-Dichloroethane-d4	EPA-8260	**97.3**	08/20/2018	DLC
Toluene-d8	EPA-8260	**106**	08/20/2018	DLC
4-Bromofluorobenzene	EPA-8260	**91.1**	08/20/2018	DLC
2-Fluorophenol	EPA-8270	**99.7**	08/23/2018	JMK
Phenol-d5	EPA-8270	**96.6**	08/23/2018	JMK
Nitrobenzene-d5	EPA-8270	**83.7**	08/23/2018	JMK
2-Fluorobiphenyl	EPA-8270	**78.6**	08/23/2018	JMK
2,4,6-Tribromophenol	EPA-8270	**82.9**	08/23/2018	JMK
Terphenyl-d14	EPA-8270	**87.3**	08/23/2018	JMK

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CERTIFICATE OF ANALYSIS

CLIENT:	Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043	DATE:	9/14/2018
		ALS JOB#:	EV18080100
		ALS SAMPLE#:	EV18080100-04
CLIENT CONTACT:	Eric Dubcak	DATE RECEIVED:	08/17/2018
CLIENT PROJECT:	81187331	COLLECTION DATE:	8/17/2018 11:25:00 AM
CLIENT SAMPLE ID	B3-17.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

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

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CERTIFICATE OF ANALYSIS

CLIENT:	Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043	DATE:	9/14/2018
		ALS JOB#:	EV18080100
		ALS SAMPLE#:	EV18080100-05
CLIENT CONTACT:	Eric Dubcak	DATE RECEIVED:	08/17/2018
CLIENT PROJECT:	81187331	COLLECTION DATE:	8/17/2018 2:35:00 PM
CLIENT SAMPLE ID	B1-6.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	08/20/2018	JMK
TPH-Diesel Range	NWTPH-DX	U	25	1	MG/KG	08/22/2018	EBS
TPH-Oil Range	NWTPH-DX	**91**	50	1	MG/KG	08/22/2018	EBS
Dichlorodifluoromethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Chloromethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Vinyl Chloride	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Bromomethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Chloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Carbon Tetrachloride	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Trichlorofluoromethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Carbon Disulfide	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Acetone	EPA-8260	U	0.050	1	MG/KG	08/20/2018	DLC
1,1-Dichloroethene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Methylene Chloride	EPA-8260	U	0.020	1	MG/KG	08/20/2018	DLC
Acrylonitrile	EPA-8260	U	0.050	1	MG/KG	08/20/2018	DLC
Methyl T-Butyl Ether	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,1-Dichloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
2-Butanone	EPA-8260	U	0.050	1	MG/KG	08/20/2018	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
2,2-Dichloropropane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Bromochloromethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Chloroform	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,1,1-Trichloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,1-Dichloropropene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2-Dichloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Benzene	EPA-8260	U	0.0050	1	MG/KG	08/20/2018	DLC
Trichloroethene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2-Dichloropropane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Dibromomethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Bromodichloromethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Trans-1,3-Dichloropropene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
4-Methyl-2-Pentanone	EPA-8260	U	0.050	1	MG/KG	08/20/2018	DLC
Toluene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,1,2-Trichloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
2-Hexanone	EPA-8260	U	0.050	1	MG/KG	08/20/2018	DLC
1,3-Dichloropropane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Tetrachloroethylene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC

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CERTIFICATE OF ANALYSIS

CLIENT:	Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043	DATE:	9/14/2018
		ALS JOB#:	EV18080100
		ALS SAMPLE#:	EV18080100-05
CLIENT CONTACT:	Eric Dubcak	DATE RECEIVED:	08/17/2018
CLIENT PROJECT:	81187331	COLLECTION DATE:	8/17/2018 2:35:00 PM
CLIENT SAMPLE ID	B1-6.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dibromochloromethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2-Dibromoethane	EPA-8260	U	0.0050	1	MG/KG	08/20/2018	DLC
Chlorobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Ethylbenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
m,p-Xylene	EPA-8260	U	0.020	1	MG/KG	08/20/2018	DLC
Styrene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
o-Xylene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Bromoform	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Isopropylbenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2,3-Trichloropropane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Bromobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
N-Propyl Benzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
2-Chlorotoluene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
4-Chlorotoluene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
T-Butyl Benzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
S-Butyl Benzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
P-Isopropyltoluene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,3-Dichlorobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,4-Dichlorobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
N-Butylbenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2-Dichlorobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	0.050	1	MG/KG	08/20/2018	DLC
1,2,4-Trichlorobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Hexachlorobutadiene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Naphthalene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Pyridine	EPA-8270	U	0.20	1	MG/KG	08/23/2018	JMK
N-Nitrosodimethylamine	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Phenol	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Aniline	EPA-8270	U	0.11	1	MG/KG	08/23/2018	JMK
Bis(2-Chloroethyl)Ether	EPA-8270	U	0.25	1	MG/KG	08/23/2018	JMK
2-Chlorophenol	EPA-8270	U	0.25	1	MG/KG	08/23/2018	JMK
1,3-Dichlorobenzene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
1,4-Dichlorobenzene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Benzyl Alcohol	EPA-8270	U	0.12	1	MG/KG	08/23/2018	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

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CERTIFICATE OF ANALYSIS

CLIENT:	Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043	DATE:	9/14/2018
		ALS JOB#:	EV18080100
		ALS SAMPLE#:	EV18080100-05
CLIENT CONTACT:	Eric Dubcak	DATE RECEIVED:	08/17/2018
CLIENT PROJECT:	81187331	COLLECTION DATE:	8/17/2018 2:35:00 PM
CLIENT SAMPLE ID	B1-6.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
1,2-Dichlorobenzene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2-Methylphenol	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	0.30	1	MG/KG	08/23/2018	JMK
3&4-Methylphenol	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
N-Nitroso-Di-N-Propylamine	EPA-8270	U	0.25	1	MG/KG	08/23/2018	JMK
Hexachloroethane	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Nitrobenzene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Isophorone	EPA-8270	U	0.17	1	MG/KG	08/23/2018	JMK
2-Nitrophenol	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2,4-Dimethylphenol	EPA-8270	U	0.15	1	MG/KG	08/23/2018	JMK
Benzoic Acid	EPA-8270	U	1.7	1	MG/KG	08/23/2018	JMK
Bis(2-Chloroethoxy)Methane	EPA-8270	U	0.29	1	MG/KG	08/23/2018	JMK
2,4-Dichlorophenol	EPA-8270	U	0.58	1	MG/KG	08/23/2018	JMK
1,2,4-Trichlorobenzene	EPA-8270	U	0.17	1	MG/KG	08/23/2018	JMK
Naphthalene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
4-Chloroaniline	EPA-8270	U	1.3	1	MG/KG	08/23/2018	JMK
2,6-Dichlorophenol	EPA-8270	U	0.43	1	MG/KG	08/23/2018	JMK
Hexachlorobutadiene	EPA-8270	U	0.50	1	MG/KG	08/23/2018	JMK
4-Chloro-3-Methylphenol	EPA-8270	U	0.76	1	MG/KG	08/23/2018	JMK
2-Methylnaphthalene	EPA-8270	U	0.36	1	MG/KG	08/23/2018	JMK
1-Methylnaphthalene	EPA-8270	U	0.42	1	MG/KG	08/23/2018	JMK
Hexachlorocyclopentadiene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2,4,6-Trichlorophenol	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2,4,5-Trichlorophenol	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2-Chloronaphthalene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2-Nitroaniline	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Acenaphthylene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Dimethylphthalate	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2,6-Dinitrotoluene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Acenaphthene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
3-Nitroaniline	EPA-8270	U	1.4	1	MG/KG	08/23/2018	JMK
2,4-Dinitrophenol	EPA-8270	U	0.12	1	MG/KG	08/23/2018	JMK
4-Nitrophenol	EPA-8270	U	0.13	1	MG/KG	08/23/2018	JMK
Dibenzofuran	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2,4-Dinitrotoluene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2,3,4,6-Tetrachlorophenol	EPA-8270	U	0.12	1	MG/KG	08/23/2018	JMK
Diethylphthalate	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Fluorene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
4-Chlorophenyl-Phenylether	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK

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CERTIFICATE OF ANALYSIS

CLIENT:	Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043	DATE:	9/14/2018
		ALS JOB#:	EV18080100
		ALS SAMPLE#:	EV18080100-05
CLIENT CONTACT:	Eric Dubcak	DATE RECEIVED:	08/17/2018
CLIENT PROJECT:	81187331	COLLECTION DATE:	8/17/2018 2:35:00 PM
CLIENT SAMPLE ID	B1-6.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
4-Nitroaniline	EPA-8270	U	0.30	1	MG/KG	08/23/2018	JMK
4,6-Dinitro-2-Methylphenol	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
N-Nitrosodiphenylamine	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Azobenzene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
4-Bromophenyl-Phenylether	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Hexachlorobenzene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Pentachlorophenol	EPA-8270	U	0.50	1	MG/KG	08/23/2018	JMK
Phenanthrene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Anthracene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Carbazole	EPA-8270	U	0.25	1	MG/KG	08/23/2018	JMK
Di-N-Butylphthalate	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Fluoranthene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Pyrene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Butylbenzylphthalate	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
3,3-Dichlorobenzidine	EPA-8270	U	0.40	1	MG/KG	08/23/2018	JMK
Benzo[A]Anthracene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Chrysene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Di-N-Octylphthalate	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Benzo[B]Fluoranthene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Benzo[K]Fluoranthene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Benzo[A]Pyrene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Dibenz[A,H]Anthracene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Benzo[G,H,I]Perylene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
PCB-1016	EPA-8082	U	0.10	1	MG/KG	08/20/2018	JMK
PCB-1221	EPA-8082	U	0.10	1	MG/KG	08/20/2018	JMK
PCB-1232	EPA-8082	U	0.10	1	MG/KG	08/20/2018	JMK
PCB-1242	EPA-8082	U	0.10	1	MG/KG	08/20/2018	JMK
PCB-1248	EPA-8082	U	0.10	1	MG/KG	08/20/2018	JMK
PCB-1254	EPA-8082	U	0.10	1	MG/KG	08/20/2018	JMK
PCB-1260	EPA-8082	U	0.10	1	MG/KG	08/20/2018	JMK
PCB-1268	EPA-8082	U	0.10	1	MG/KG	08/20/2018	JMK
Mercury	EPA-7471	U	0.020	1	MG/KG	08/23/2018	RAL
Arsenic	EPA-6020	**16**	0.78	1	MG/KG	08/22/2018	RAL
Cadmium	EPA-6020	U	0.24	1	MG/KG	08/22/2018	RAL
Chromium	EPA-6020	**47**	0.39	1	MG/KG	08/22/2018	RAL
Lead	EPA-6020	**13**	0.25	1	MG/KG	08/22/2018	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043	DATE: ALS JOB#: ALS SAMPLE#:	9/14/2018 EV18080100 EV18080100-05
CLIENT CONTACT:	Eric Dubcak	DATE RECEIVED:	08/17/2018
CLIENT PROJECT:	81187331	COLLECTION DATE:	8/17/2018 2:35:00 PM
CLIENT SAMPLE ID	B1-6.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**61.7**	08/20/2018	JMK
C25	NWTPH-DX	**82.8**	08/22/2018	EBS
1,2-Dichloroethane-d4	EPA-8260	**99.8**	08/20/2018	DLC
Toluene-d8	EPA-8260	**110**	08/20/2018	DLC
4-Bromofluorobenzene	EPA-8260	**96.3**	08/20/2018	DLC
2-Fluorophenol	EPA-8270	**99.2**	08/23/2018	JMK
Phenol-d5	EPA-8270	**97.6**	08/23/2018	JMK
Nitrobenzene-d5	EPA-8270	**84.8**	08/23/2018	JMK
2-Fluorobiphenyl	EPA-8270	**80.6**	08/23/2018	JMK
2,4,6-Tribromophenol	EPA-8270	**88.4**	08/23/2018	JMK
Terphenyl-d14	EPA-8270	**87.5**	08/23/2018	JMK
TCMX	EPA-8082	**97.2**	08/20/2018	JMK
DCB	EPA-8082	**85.1**	08/20/2018	JMK

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

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CERTIFICATE OF ANALYSIS

CLIENT:	Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043	DATE: ALS JOB#: ALS SAMPLE#:	9/14/2018 EV18080100 EV18080100-06
CLIENT CONTACT:	Eric Dubcak	DATE RECEIVED:	08/17/2018
CLIENT PROJECT:	81187331	COLLECTION DATE:	8/17/2018 2:30:00 PM
CLIENT SAMPLE ID	B1-2.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	08/20/2018	JMK
TPH-Diesel Range	NWTPH-DX	U	28	1	MG/KG	08/22/2018	EBS
TPH-Oil Range	NWTPH-DX	U	56	1	MG/KG	08/22/2018	EBS
Dichlorodifluoromethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Chloromethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Vinyl Chloride	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Bromomethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Chloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Carbon Tetrachloride	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Trichlorofluoromethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Carbon Disulfide	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Acetone	EPA-8260	**0.23**	0.20	1	MG/KG	08/21/2018	DLC
1,1-Dichloroethene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Methylene Chloride	EPA-8260	U	0.020	1	MG/KG	08/20/2018	DLC
Acrylonitrile	EPA-8260	U	0.050	1	MG/KG	08/20/2018	DLC
Methyl T-Butyl Ether	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,1-Dichloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
2-Butanone	EPA-8260	U	0.15	1	MG/KG	08/21/2018	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
2,2-Dichloropropane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Bromochloromethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Chloroform	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,1,1-Trichloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,1-Dichloropropene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2-Dichloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Benzene	EPA-8260	U	0.0050	1	MG/KG	08/20/2018	DLC
Trichloroethene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2-Dichloropropane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Dibromomethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Bromodichloromethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Trans-1,3-Dichloropropene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
4-Methyl-2-Pentanone	EPA-8260	U	0.050	1	MG/KG	08/20/2018	DLC
Toluene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,1,2-Trichloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
2-Hexanone	EPA-8260	U	0.050	1	MG/KG	08/20/2018	DLC
1,3-Dichloropropane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Tetrachloroethylene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC

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CERTIFICATE OF ANALYSIS

CLIENT:	Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043	DATE:	9/14/2018
		ALS JOB#:	EV18080100
		ALS SAMPLE#:	EV18080100-06
CLIENT CONTACT:	Eric Dubcak	DATE RECEIVED:	08/17/2018
CLIENT PROJECT:	81187331	COLLECTION DATE:	8/17/2018 2:30:00 PM
CLIENT SAMPLE ID	B1-2.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dibromochloromethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2-Dibromoethane	EPA-8260	U	0.0050	1	MG/KG	08/20/2018	DLC
Chlorobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Ethylbenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
m,p-Xylene	EPA-8260	U	0.020	1	MG/KG	08/20/2018	DLC
Styrene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
o-Xylene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Bromoform	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Isopropylbenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2,3-Trichloropropane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Bromobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
N-Propyl Benzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
2-Chlorotoluene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
4-Chlorotoluene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
T-Butyl Benzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
S-Butyl Benzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
P-Isopropyltoluene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,3-Dichlorobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,4-Dichlorobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
N-Butylbenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2-Dichlorobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	0.050	1	MG/KG	08/20/2018	DLC
1,2,4-Trichlorobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Hexachlorobutadiene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Naphthalene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Pyridine	EPA-8270	U	0.20	1	MG/KG	08/23/2018	JMK
N-Nitrosodimethylamine	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Phenol	EPA-8270	U	0.12	1	MG/KG	08/23/2018	JMK
Aniline	EPA-8270	U	0.14	1	MG/KG	08/23/2018	JMK
Bis(2-Chloroethyl)Ether	EPA-8270	U	0.28	1	MG/KG	08/23/2018	JMK
2-Chlorophenol	EPA-8270	U	0.29	1	MG/KG	08/23/2018	JMK
1,3-Dichlorobenzene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
1,4-Dichlorobenzene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Benzyl Alcohol	EPA-8270	U	0.15	1	MG/KG	08/23/2018	JMK

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CERTIFICATE OF ANALYSIS

CLIENT:	Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043	DATE:	9/14/2018
		ALS JOB#:	EV18080100
		ALS SAMPLE#:	EV18080100-06
CLIENT CONTACT:	Eric Dubcak	DATE RECEIVED:	08/17/2018
CLIENT PROJECT:	81187331	COLLECTION DATE:	8/17/2018 2:30:00 PM
CLIENT SAMPLE ID	B1-2.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
1,2-Dichlorobenzene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2-Methylphenol	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	0.37	1	MG/KG	08/23/2018	JMK
3&4-Methylphenol	EPA-8270	U	0.13	1	MG/KG	08/23/2018	JMK
N-Nitroso-Di-N-Propylamine	EPA-8270	U	0.28	1	MG/KG	08/23/2018	JMK
Hexachloroethane	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Nitrobenzene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Isophorone	EPA-8270	U	0.21	1	MG/KG	08/23/2018	JMK
2-Nitrophenol	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2,4-Dimethylphenol	EPA-8270	U	0.19	1	MG/KG	08/23/2018	JMK
Benzoic Acid	EPA-8270	U	2.1	1	MG/KG	08/23/2018	JMK
Bis(2-Chloroethoxy)Methane	EPA-8270	U	0.36	1	MG/KG	08/23/2018	JMK
2,4-Dichlorophenol	EPA-8270	U	0.73	1	MG/KG	08/23/2018	JMK
1,2,4-Trichlorobenzene	EPA-8270	U	0.21	1	MG/KG	08/23/2018	JMK
Naphthalene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
4-Chloroaniline	EPA-8270	U	1.7	1	MG/KG	08/23/2018	JMK
2,6-Dichlorophenol	EPA-8270	U	0.54	1	MG/KG	08/23/2018	JMK
Hexachlorobutadiene	EPA-8270	U	0.50	1	MG/KG	08/23/2018	JMK
4-Chloro-3-Methylphenol	EPA-8270	U	0.95	1	MG/KG	08/23/2018	JMK
2-Methylnaphthalene	EPA-8270	U	0.45	1	MG/KG	08/23/2018	JMK
1-Methylnaphthalene	EPA-8270	U	0.52	1	MG/KG	08/23/2018	JMK
Hexachlorocyclopentadiene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2,4,6-Trichlorophenol	EPA-8270	U	0.12	1	MG/KG	08/23/2018	JMK
2,4,5-Trichlorophenol	EPA-8270	U	0.12	1	MG/KG	08/23/2018	JMK
2-Chloronaphthalene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2-Nitroaniline	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Acenaphthylene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Dimethylphthalate	EPA-8270	U	0.12	1	MG/KG	08/23/2018	JMK
2,6-Dinitrotoluene	EPA-8270	U	0.11	1	MG/KG	08/23/2018	JMK
Acenaphthene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
3-Nitroaniline	EPA-8270	U	1.7	1	MG/KG	08/23/2018	JMK
2,4-Dinitrophenol	EPA-8270	U	0.16	1	MG/KG	08/23/2018	JMK
4-Nitrophenol	EPA-8270	U	0.16	1	MG/KG	08/23/2018	JMK
Dibenzofuran	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2,4-Dinitrotoluene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2,3,4,6-Tetrachlorophenol	EPA-8270	U	0.15	1	MG/KG	08/23/2018	JMK
Diethylphthalate	EPA-8270	U	0.12	1	MG/KG	08/23/2018	JMK
Fluorene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
4-Chlorophenyl-Phenylether	EPA-8270	U	0.12	1	MG/KG	08/23/2018	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
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CERTIFICATE OF ANALYSIS

CLIENT:	Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043	DATE:	9/14/2018
		ALS JOB#:	EV18080100
		ALS SAMPLE#:	EV18080100-06
CLIENT CONTACT:	Eric Dubcak	DATE RECEIVED:	08/17/2018
CLIENT PROJECT:	81187331	COLLECTION DATE:	8/17/2018 2:30:00 PM
CLIENT SAMPLE ID	B1-2.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
4-Nitroaniline	EPA-8270	U	0.37	1	MG/KG	08/23/2018	JMK
4,6-Dinitro-2-Methylphenol	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
N-Nitrosodiphenylamine	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Azobenzene	EPA-8270	U	0.13	1	MG/KG	08/23/2018	JMK
4-Bromophenyl-Phenylether	EPA-8270	U	0.11	1	MG/KG	08/23/2018	JMK
Hexachlorobenzene	EPA-8270	U	0.11	1	MG/KG	08/23/2018	JMK
Pentachlorophenol	EPA-8270	U	0.50	1	MG/KG	08/23/2018	JMK
Phenanthrene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Anthracene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Carbazole	EPA-8270	U	0.32	1	MG/KG	08/23/2018	JMK
Di-N-Butylphthalate	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Fluoranthene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Pyrene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Butylbenzylphthalate	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
3,3-Dichlorobenzidine	EPA-8270	U	0.51	1	MG/KG	08/23/2018	JMK
Benzo[A]Anthracene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Chrysene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Di-N-Octylphthalate	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Benzo[B]Fluoranthene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Benzo[K]Fluoranthene	EPA-8270	U	0.12	1	MG/KG	08/23/2018	JMK
Benzo[A]Pyrene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Dibenz[A,H]Anthracene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Benzo[G,H,I]Perylene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
PCB-1016	EPA-8082	U	0.10	1	MG/KG	08/20/2018	JMK
PCB-1221	EPA-8082	U	0.10	1	MG/KG	08/20/2018	JMK
PCB-1232	EPA-8082	U	0.10	1	MG/KG	08/20/2018	JMK
PCB-1242	EPA-8082	U	0.10	1	MG/KG	08/20/2018	JMK
PCB-1248	EPA-8082	U	0.10	1	MG/KG	08/20/2018	JMK
PCB-1254	EPA-8082	U	0.10	1	MG/KG	08/20/2018	JMK
PCB-1260	EPA-8082	U	0.10	1	MG/KG	08/20/2018	JMK
PCB-1268	EPA-8082	U	0.10	1	MG/KG	08/20/2018	JMK
Mercury	EPA-7471	**0.034**	0.020	1	MG/KG	08/23/2018	RAL
Arsenic	EPA-6020	**35**	0.94	1	MG/KG	08/22/2018	RAL
Cadmium	EPA-6020	U	0.29	1	MG/KG	08/22/2018	RAL
Chromium	EPA-6020	**67**	0.48	1	MG/KG	08/22/2018	RAL
Lead	EPA-6020	**57**	0.30	1	MG/KG	08/22/2018	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043	DATE: ALS JOB#: ALS SAMPLE#:	9/14/2018 EV18080100 EV18080100-06
CLIENT CONTACT:	Eric Dubcak	DATE RECEIVED:	08/17/2018
CLIENT PROJECT:	81187331	COLLECTION DATE:	8/17/2018 2:30:00 PM
CLIENT SAMPLE ID	B1-2.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**52.5 SUR11**	08/20/2018	JMK
C25	NWTPH-DX	**75.7**	08/22/2018	EBS
1,2-Dichloroethane-d4	EPA-8260	**98.7**	08/20/2018	DLC
1,2-Dichloroethane-d4	EPA-8260	**96.1**	08/21/2018	DLC
Toluene-d8	EPA-8260	**109**	08/20/2018	DLC
Toluene-d8	EPA-8260	**104**	08/21/2018	DLC
4-Bromofluorobenzene	EPA-8260	**93.6**	08/20/2018	DLC
4-Bromofluorobenzene	EPA-8260	**84.7**	08/21/2018	DLC
2-Fluorophenol	EPA-8270	**105**	08/23/2018	JMK
Phenol-d5	EPA-8270	**103**	08/23/2018	JMK
Nitrobenzene-d5	EPA-8270	**88.0**	08/23/2018	JMK
2-Fluorobiphenyl	EPA-8270	**83.6**	08/23/2018	JMK
2,4,6-Tribromophenol	EPA-8270	**90.6**	08/23/2018	JMK
Terphenyl-d14	EPA-8270	**89.4**	08/23/2018	JMK
TCMX	EPA-8082	**103**	08/20/2018	JMK
DCB	EPA-8082	**84.8**	08/20/2018	JMK

U - Analyte analyzed for but not detected at level above reporting limit.
SUR11 -Surrogate recovery was below acceptance limits. Re-extraction and/or reanalysis confirm low recovery caused by matrix interferences.

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CERTIFICATE OF ANALYSIS

CLIENT:	Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043	DATE:	9/14/2018
		ALS JOB#:	EV18080100
		ALS SAMPLE#:	EV18080100-07
CLIENT CONTACT:	Eric Dubcak	DATE RECEIVED:	08/17/2018
CLIENT PROJECT:	81187331	COLLECTION DATE:	8/17/2018 12:55:00 PM
CLIENT SAMPLE ID	B5-2.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	**3.5**	3.0	1	MG/KG	08/20/2018	JMK
TPH-Diesel Range	NWTPH-DX	U	25	1	MG/KG	08/22/2018	EBS
TPH-Oil Range	NWTPH-DX	**170**	50	1	MG/KG	08/22/2018	EBS
Dichlorodifluoromethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Chloromethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Vinyl Chloride	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Bromomethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Chloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Carbon Tetrachloride	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Trichlorofluoromethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Carbon Disulfide	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Acetone	EPA-8260	U	0.050	1	MG/KG	08/20/2018	DLC
1,1-Dichloroethene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Methylene Chloride	EPA-8260	U	0.020	1	MG/KG	08/20/2018	DLC
Acrylonitrile	EPA-8260	U	0.050	1	MG/KG	08/20/2018	DLC
Methyl T-Butyl Ether	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,1-Dichloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
2-Butanone	EPA-8260	U	0.050	1	MG/KG	08/20/2018	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
2,2-Dichloropropane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Bromochloromethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Chloroform	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,1,1-Trichloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,1-Dichloropropene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2-Dichloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Benzene	EPA-8260	U	0.0050	1	MG/KG	08/20/2018	DLC
Trichloroethene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2-Dichloropropane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Dibromomethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Bromodichloromethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Trans-1,3-Dichloropropene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
4-Methyl-2-Pentanone	EPA-8260	U	0.050	1	MG/KG	08/20/2018	DLC
Toluene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,1,2-Trichloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
2-Hexanone	EPA-8260	U	0.050	1	MG/KG	08/20/2018	DLC
1,3-Dichloropropane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Tetrachloroethylene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC

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CERTIFICATE OF ANALYSIS

CLIENT:	Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043	DATE:	9/14/2018
		ALS JOB#:	EV18080100
		ALS SAMPLE#:	EV18080100-07
CLIENT CONTACT:	Eric Dubcak	DATE RECEIVED:	08/17/2018
CLIENT PROJECT:	81187331	COLLECTION DATE:	8/17/2018 12:55:00 PM
CLIENT SAMPLE ID	B5-2.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dibromochloromethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2-Dibromoethane	EPA-8260	U	0.0050	1	MG/KG	08/20/2018	DLC
Chlorobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Ethylbenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
m,p-Xylene	EPA-8260	U	0.020	1	MG/KG	08/20/2018	DLC
Styrene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
o-Xylene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Bromoform	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Isopropylbenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2,3-Trichloropropane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Bromobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
N-Propyl Benzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
2-Chlorotoluene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
4-Chlorotoluene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
T-Butyl Benzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2,4-Trimethylbenzene	EPA-8260	**0.013**	0.010	1	MG/KG	08/20/2018	DLC
S-Butyl Benzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
P-Isopropyltoluene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,3-Dichlorobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,4-Dichlorobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
N-Butylbenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2-Dichlorobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	0.050	1	MG/KG	08/20/2018	DLC
1,2,4-Trichlorobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Hexachlorobutadiene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Naphthalene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Pyridine	EPA-8270	U	0.20	1	MG/KG	08/23/2018	JMK
N-Nitrosodimethylamine	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Phenol	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Aniline	EPA-8270	U	0.12	1	MG/KG	08/23/2018	JMK
Bis(2-Chloroethyl)Ether	EPA-8270	U	0.25	1	MG/KG	08/23/2018	JMK
2-Chlorophenol	EPA-8270	U	0.26	1	MG/KG	08/23/2018	JMK
1,3-Dichlorobenzene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
1,4-Dichlorobenzene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Benzyl Alcohol	EPA-8270	U	0.13	1	MG/KG	08/23/2018	JMK

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CERTIFICATE OF ANALYSIS

CLIENT:	Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043	DATE:	9/14/2018
		ALS JOB#:	EV18080100
		ALS SAMPLE#:	EV18080100-07
CLIENT CONTACT:	Eric Dubcak	DATE RECEIVED:	08/17/2018
CLIENT PROJECT:	81187331	COLLECTION DATE:	8/17/2018 12:55:00 PM
CLIENT SAMPLE ID	B5-2.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
1,2-Dichlorobenzene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2-Methylphenol	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	0.33	1	MG/KG	08/23/2018	JMK
3&4-Methylphenol	EPA-8270	U	0.11	1	MG/KG	08/23/2018	JMK
N-Nitroso-Di-N-Propylamine	EPA-8270	U	0.25	1	MG/KG	08/23/2018	JMK
Hexachloroethane	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Nitrobenzene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Isophorone	EPA-8270	U	0.18	1	MG/KG	08/23/2018	JMK
2-Nitrophenol	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2,4-Dimethylphenol	EPA-8270	U	0.17	1	MG/KG	08/23/2018	JMK
Benzoic Acid	EPA-8270	U	1.9	1	MG/KG	08/23/2018	JMK
Bis(2-Chloroethoxy)Methane	EPA-8270	U	0.32	1	MG/KG	08/23/2018	JMK
2,4-Dichlorophenol	EPA-8270	U	0.64	1	MG/KG	08/23/2018	JMK
1,2,4-Trichlorobenzene	EPA-8270	U	0.19	1	MG/KG	08/23/2018	JMK
Naphthalene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
4-Chloroaniline	EPA-8270	U	1.5	1	MG/KG	08/23/2018	JMK
2,6-Dichlorophenol	EPA-8270	U	0.48	1	MG/KG	08/23/2018	JMK
Hexachlorobutadiene	EPA-8270	U	0.50	1	MG/KG	08/23/2018	JMK
4-Chloro-3-Methylphenol	EPA-8270	U	0.85	1	MG/KG	08/23/2018	JMK
2-Methylnaphthalene	EPA-8270	U	0.40	1	MG/KG	08/23/2018	JMK
1-Methylnaphthalene	EPA-8270	U	0.46	1	MG/KG	08/23/2018	JMK
Hexachlorocyclopentadiene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2,4,6-Trichlorophenol	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2,4,5-Trichlorophenol	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2-Chloronaphthalene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2-Nitroaniline	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Acenaphthylene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Dimethylphthalate	EPA-8270	U	0.11	1	MG/KG	08/23/2018	JMK
2,6-Dinitrotoluene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Acenaphthene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
3-Nitroaniline	EPA-8270	U	1.5	1	MG/KG	08/23/2018	JMK
2,4-Dinitrophenol	EPA-8270	U	0.14	1	MG/KG	08/23/2018	JMK
4-Nitrophenol	EPA-8270	U	0.14	1	MG/KG	08/23/2018	JMK
Dibenzofuran	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2,4-Dinitrotoluene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2,3,4,6-Tetrachlorophenol	EPA-8270	U	0.13	1	MG/KG	08/23/2018	JMK
Diethylphthalate	EPA-8270	U	0.11	1	MG/KG	08/23/2018	JMK
Fluorene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
4-Chlorophenyl-Phenylether	EPA-8270	U	0.11	1	MG/KG	08/23/2018	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
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CERTIFICATE OF ANALYSIS

CLIENT:	Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043	DATE: ALS JOB#: ALS SAMPLE#:	9/14/2018 EV18080100 EV18080100-07
CLIENT CONTACT:	Eric Dubcak	DATE RECEIVED:	08/17/2018
CLIENT PROJECT:	81187331	COLLECTION DATE:	8/17/2018 12:55:00 PM
CLIENT SAMPLE ID	B5-2.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
4-Nitroaniline	EPA-8270	U	0.33	1	MG/KG	08/23/2018	JMK
4,6-Dinitro-2-Methylphenol	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
N-Nitrosodiphenylamine	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Azobenzene	EPA-8270	U	0.12	1	MG/KG	08/23/2018	JMK
4-Bromophenyl-Phenylether	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Hexachlorobenzene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Pentachlorophenol	EPA-8270	U	0.50	1	MG/KG	08/23/2018	JMK
Phenanthrene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Anthracene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Carbazole	EPA-8270	U	0.28	1	MG/KG	08/23/2018	JMK
Di-N-Butylphthalate	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Fluoranthene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Pyrene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Butylbenzylphthalate	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
3,3-Dichlorobenzidine	EPA-8270	U	0.45	1	MG/KG	08/23/2018	JMK
Benzo[A]Anthracene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Chrysene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Di-N-Octylphthalate	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Benzo[B]Fluoranthene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Benzo[K]Fluoranthene	EPA-8270	U	0.11	1	MG/KG	08/23/2018	JMK
Benzo[A]Pyrene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Dibenz[A,H]Anthracene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Benzo[G,H,I]Perylene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**75.6**	08/20/2018	JMK
C25	NWTPH-DX	**83.6**	08/22/2018	EBS
1,2-Dichloroethane-d4	EPA-8260	**98.4**	08/20/2018	DLC
Toluene-d8	EPA-8260	**109**	08/20/2018	DLC
4-Bromofluorobenzene	EPA-8260	**105**	08/20/2018	DLC
2-Fluorophenol	EPA-8270	**96.7**	08/23/2018	JMK
Phenol-d5	EPA-8270	**93.0**	08/23/2018	JMK
Nitrobenzene-d5	EPA-8270	**81.1**	08/23/2018	JMK
2-Fluorobiphenyl	EPA-8270	**76.1**	08/23/2018	JMK
2,4,6-Tribromophenol	EPA-8270	**85.5**	08/23/2018	JMK
Terphenyl-d14	EPA-8270	**81.3**	08/23/2018	JMK

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CERTIFICATE OF ANALYSIS

CLIENT:	Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043	DATE:	9/14/2018
		ALS JOB#:	EV18080100
		ALS SAMPLE#:	EV18080100-07
CLIENT CONTACT:	Eric Dubcak	DATE RECEIVED:	08/17/2018
CLIENT PROJECT:	81187331	COLLECTION DATE:	8/17/2018 12:55:00 PM
CLIENT SAMPLE ID	B5-2.5	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

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

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CERTIFICATE OF ANALYSIS

CLIENT:	Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043	DATE:	9/14/2018
		ALS JOB#:	EV18080100
		ALS SAMPLE#:	EV18080100-08
CLIENT CONTACT:	Eric Dubcak	DATE RECEIVED:	08/17/2018
CLIENT PROJECT:	81187331	COLLECTION DATE:	8/17/2018 1:05:00 PM
CLIENT SAMPLE ID	B5-18	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	08/20/2018	JMK
TPH-Diesel Range	NWTPH-DX	U	25	1	MG/KG	08/24/2018	EBS
TPH-Oil Range	NWTPH-DX	U	50	1	MG/KG	08/24/2018	EBS
Dichlorodifluoromethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Chloromethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Vinyl Chloride	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Bromomethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Chloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Carbon Tetrachloride	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Trichlorofluoromethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Carbon Disulfide	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Acetone	EPA-8260	U	0.050	1	MG/KG	08/20/2018	DLC
1,1-Dichloroethene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Methylene Chloride	EPA-8260	U	0.020	1	MG/KG	08/20/2018	DLC
Acrylonitrile	EPA-8260	U	0.050	1	MG/KG	08/20/2018	DLC
Methyl T-Butyl Ether	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,1-Dichloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
2-Butanone	EPA-8260	U	0.050	1	MG/KG	08/20/2018	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
2,2-Dichloropropane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Bromochloromethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Chloroform	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,1,1-Trichloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,1-Dichloropropene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2-Dichloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Benzene	EPA-8260	U	0.0050	1	MG/KG	08/20/2018	DLC
Trichloroethene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2-Dichloropropane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Dibromomethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Bromodichloromethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Trans-1,3-Dichloropropene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
4-Methyl-2-Pentanone	EPA-8260	U	0.050	1	MG/KG	08/20/2018	DLC
Toluene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,1,2-Trichloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
2-Hexanone	EPA-8260	U	0.050	1	MG/KG	08/20/2018	DLC
1,3-Dichloropropane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Tetrachloroethylene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC

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CERTIFICATE OF ANALYSIS

CLIENT:	Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043	DATE:	9/14/2018
		ALS JOB#:	EV18080100
		ALS SAMPLE#:	EV18080100-08
CLIENT CONTACT:	Eric Dubcak	DATE RECEIVED:	08/17/2018
CLIENT PROJECT:	81187331	COLLECTION DATE:	8/17/2018 1:05:00 PM
CLIENT SAMPLE ID	B5-18	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dibromochloromethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2-Dibromoethane	EPA-8260	U	0.0050	1	MG/KG	08/20/2018	DLC
Chlorobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Ethylbenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
m,p-Xylene	EPA-8260	U	0.020	1	MG/KG	08/20/2018	DLC
Styrene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
o-Xylene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Bromoform	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Isopropylbenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2,3-Trichloropropane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Bromobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
N-Propyl Benzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
2-Chlorotoluene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
4-Chlorotoluene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
T-Butyl Benzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
S-Butyl Benzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
P-Isopropyltoluene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,3-Dichlorobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,4-Dichlorobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
N-Butylbenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2-Dichlorobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	0.050	1	MG/KG	08/20/2018	DLC
1,2,4-Trichlorobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Hexachlorobutadiene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Naphthalene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Pyridine	EPA-8270	U	0.20	1	MG/KG	08/23/2018	JMK
N-Nitrosodimethylamine	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Phenol	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Aniline	EPA-8270	U	0.12	1	MG/KG	08/23/2018	JMK
Bis(2-Chloroethyl)Ether	EPA-8270	U	0.25	1	MG/KG	08/23/2018	JMK
2-Chlorophenol	EPA-8270	U	0.25	1	MG/KG	08/23/2018	JMK
1,3-Dichlorobenzene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
1,4-Dichlorobenzene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Benzyl Alcohol	EPA-8270	U	0.13	1	MG/KG	08/23/2018	JMK

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CERTIFICATE OF ANALYSIS

CLIENT:	Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043	DATE:	9/14/2018
		ALS JOB#:	EV18080100
		ALS SAMPLE#:	EV18080100-08
CLIENT CONTACT:	Eric Dubcak	DATE RECEIVED:	08/17/2018
CLIENT PROJECT:	81187331	COLLECTION DATE:	8/17/2018 1:05:00 PM
CLIENT SAMPLE ID	B5-18	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
1,2-Dichlorobenzene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2-Methylphenol	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	0.32	1	MG/KG	08/23/2018	JMK
3&4-Methylphenol	EPA-8270	U	0.11	1	MG/KG	08/23/2018	JMK
N-Nitroso-Di-N-Propylamine	EPA-8270	U	0.25	1	MG/KG	08/23/2018	JMK
Hexachloroethane	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Nitrobenzene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Isophorone	EPA-8270	U	0.18	1	MG/KG	08/23/2018	JMK
2-Nitrophenol	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2,4-Dimethylphenol	EPA-8270	U	0.16	1	MG/KG	08/23/2018	JMK
Benzoic Acid	EPA-8270	U	1.8	1	MG/KG	08/23/2018	JMK
Bis(2-Chloroethoxy)Methane	EPA-8270	U	0.31	1	MG/KG	08/23/2018	JMK
2,4-Dichlorophenol	EPA-8270	U	0.63	1	MG/KG	08/23/2018	JMK
1,2,4-Trichlorobenzene	EPA-8270	U	0.18	1	MG/KG	08/23/2018	JMK
Naphthalene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
4-Chloroaniline	EPA-8270	U	1.5	1	MG/KG	08/23/2018	JMK
2,6-Dichlorophenol	EPA-8270	U	0.47	1	MG/KG	08/23/2018	JMK
Hexachlorobutadiene	EPA-8270	U	0.50	1	MG/KG	08/23/2018	JMK
4-Chloro-3-Methylphenol	EPA-8270	U	0.83	1	MG/KG	08/23/2018	JMK
2-Methylnaphthalene	EPA-8270	U	0.39	1	MG/KG	08/23/2018	JMK
1-Methylnaphthalene	EPA-8270	U	0.45	1	MG/KG	08/23/2018	JMK
Hexachlorocyclopentadiene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2,4,6-Trichlorophenol	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2,4,5-Trichlorophenol	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2-Chloronaphthalene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2-Nitroaniline	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Acenaphthylene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Dimethylphthalate	EPA-8270	U	0.11	1	MG/KG	08/23/2018	JMK
2,6-Dinitrotoluene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Acenaphthene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
3-Nitroaniline	EPA-8270	U	1.5	1	MG/KG	08/23/2018	JMK
2,4-Dinitrophenol	EPA-8270	U	0.14	1	MG/KG	08/23/2018	JMK
4-Nitrophenol	EPA-8270	U	0.14	1	MG/KG	08/23/2018	JMK
Dibenzofuran	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2,4-Dinitrotoluene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2,3,4,6-Tetrachlorophenol	EPA-8270	U	0.13	1	MG/KG	08/23/2018	JMK
Diethylphthalate	EPA-8270	U	0.11	1	MG/KG	08/23/2018	JMK
Fluorene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
4-Chlorophenyl-Phenylether	EPA-8270	U	0.11	1	MG/KG	08/23/2018	JMK

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CERTIFICATE OF ANALYSIS

CLIENT:	Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043	DATE: ALS JOB#: ALS SAMPLE#:	9/14/2018 EV18080100 EV18080100-08
CLIENT CONTACT:	Eric Dubcak	DATE RECEIVED:	08/17/2018
CLIENT PROJECT:	81187331	COLLECTION DATE:	8/17/2018 1:05:00 PM
CLIENT SAMPLE ID	B5-18	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
4-Nitroaniline	EPA-8270	U	0.33	1	MG/KG	08/23/2018	JMK
4,6-Dinitro-2-Methylphenol	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
N-Nitrosodiphenylamine	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Azobenzene	EPA-8270	U	0.11	1	MG/KG	08/23/2018	JMK
4-Bromophenyl-Phenylether	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Hexachlorobenzene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Pentachlorophenol	EPA-8270	U	0.50	1	MG/KG	08/23/2018	JMK
Phenanthrene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Anthracene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Carbazole	EPA-8270	U	0.28	1	MG/KG	08/23/2018	JMK
Di-N-Butylphthalate	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Fluoranthene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Pyrene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Butylbenzylphthalate	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
3,3-Dichlorobenzidine	EPA-8270	U	0.44	1	MG/KG	08/23/2018	JMK
Benzo[A]Anthracene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Chrysene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Di-N-Octylphthalate	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Benzo[B]Fluoranthene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Benzo[K]Fluoranthene	EPA-8270	U	0.11	1	MG/KG	08/23/2018	JMK
Benzo[A]Pyrene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Dibenz[A,H]Anthracene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Benzo[G,H,I]Perylene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**75.9**	08/20/2018	JMK
C25	NWTPH-DX	**84.4**	08/24/2018	EBS
1,2-Dichloroethane-d4	EPA-8260	**100**	08/20/2018	DLC
Toluene-d8	EPA-8260	**106**	08/20/2018	DLC
4-Bromofluorobenzene	EPA-8260	**93.4**	08/20/2018	DLC
2-Fluorophenol	EPA-8270	**95.7**	08/23/2018	JMK
Phenol-d5	EPA-8270	**94.1**	08/23/2018	JMK
Nitrobenzene-d5	EPA-8270	**81.7**	08/23/2018	JMK
2-Fluorobiphenyl	EPA-8270	**80.0**	08/23/2018	JMK
2,4,6-Tribromophenol	EPA-8270	**89.1**	08/23/2018	JMK
Terphenyl-d14	EPA-8270	**94.5**	08/23/2018	JMK

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
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CERTIFICATE OF ANALYSIS

CLIENT:	Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043	DATE:	9/14/2018
		ALS JOB#:	EV18080100
		ALS SAMPLE#:	EV18080100-08
CLIENT CONTACT:	Eric Dubcak	DATE RECEIVED:	08/17/2018
CLIENT PROJECT:	81187331	COLLECTION DATE:	8/17/2018 1:05:00 PM
CLIENT SAMPLE ID	B5-18	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

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

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CERTIFICATE OF ANALYSIS

CLIENT:	Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043	DATE:	9/14/2018
		ALS JOB#:	EV18080100
		ALS SAMPLE#:	EV18080100-09
CLIENT CONTACT:	Eric Dubcak	DATE RECEIVED:	08/17/2018
CLIENT PROJECT:	81187331	COLLECTION DATE:	8/17/2018 1:45:00 PM
CLIENT SAMPLE ID	B2-3	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	3.0	1	MG/KG	08/20/2018	JMK
TPH-Diesel Range	NWTPH-DX	U	29	1	MG/KG	08/24/2018	EBS
TPH-Oil Range	NWTPH-DX	U	58	1	MG/KG	08/24/2018	EBS
Dichlorodifluoromethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Chloromethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Vinyl Chloride	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Bromomethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Chloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Carbon Tetrachloride	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Trichlorofluoromethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Carbon Disulfide	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Acetone	EPA-8260	**0.38**	0.22	1	MG/KG	08/21/2018	DLC
1,1-Dichloroethene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Methylene Chloride	EPA-8260	U	0.020	1	MG/KG	08/20/2018	DLC
Acrylonitrile	EPA-8260	U	0.050	1	MG/KG	08/20/2018	DLC
Methyl T-Butyl Ether	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,1-Dichloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
2-Butanone	EPA-8260	U	0.17	1	MG/KG	08/21/2018	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
2,2-Dichloropropane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Bromochloromethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Chloroform	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,1,1-Trichloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,1-Dichloropropene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2-Dichloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Benzene	EPA-8260	U	0.0050	1	MG/KG	08/20/2018	DLC
Trichloroethene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2-Dichloropropane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Dibromomethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Bromodichloromethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Trans-1,3-Dichloropropene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
4-Methyl-2-Pentanone	EPA-8260	U	0.050	1	MG/KG	08/20/2018	DLC
Toluene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,1,2-Trichloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
2-Hexanone	EPA-8260	U	0.050	1	MG/KG	08/20/2018	DLC
1,3-Dichloropropane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Tetrachloroethylene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC

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CERTIFICATE OF ANALYSIS

CLIENT:	Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043	DATE:	9/14/2018
		ALS JOB#:	EV18080100
		ALS SAMPLE#:	EV18080100-09
CLIENT CONTACT:	Eric Dubcak	DATE RECEIVED:	08/17/2018
CLIENT PROJECT:	81187331	COLLECTION DATE:	8/17/2018 1:45:00 PM
CLIENT SAMPLE ID	B2-3	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dibromochloromethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2-Dibromoethane	EPA-8260	U	0.0050	1	MG/KG	08/20/2018	DLC
Chlorobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Ethylbenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
m,p-Xylene	EPA-8260	U	0.020	1	MG/KG	08/20/2018	DLC
Styrene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
o-Xylene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Bromoform	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Isopropylbenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2,3-Trichloropropane	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Bromobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
N-Propyl Benzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
2-Chlorotoluene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
4-Chlorotoluene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
T-Butyl Benzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
S-Butyl Benzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
P-Isopropyltoluene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,3-Dichlorobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,4-Dichlorobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
N-Butylbenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2-Dichlorobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	0.050	1	MG/KG	08/20/2018	DLC
1,2,4-Trichlorobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Hexachlorobutadiene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Naphthalene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	0.010	1	MG/KG	08/20/2018	DLC
Pyridine	EPA-8270	U	0.20	1	MG/KG	08/23/2018	JMK
N-Nitrosodimethylamine	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Phenol	EPA-8270	U	0.12	1	MG/KG	08/23/2018	JMK
Aniline	EPA-8270	U	0.14	1	MG/KG	08/23/2018	JMK
Bis(2-Chloroethyl)Ether	EPA-8270	U	0.29	1	MG/KG	08/23/2018	JMK
2-Chlorophenol	EPA-8270	U	0.30	1	MG/KG	08/23/2018	JMK
1,3-Dichlorobenzene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
1,4-Dichlorobenzene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Benzyl Alcohol	EPA-8270	U	0.15	1	MG/KG	08/23/2018	JMK

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CERTIFICATE OF ANALYSIS

CLIENT:	Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043	DATE:	9/14/2018
		ALS JOB#:	EV18080100
		ALS SAMPLE#:	EV18080100-09
CLIENT CONTACT:	Eric Dubcak	DATE RECEIVED:	08/17/2018
CLIENT PROJECT:	81187331	COLLECTION DATE:	8/17/2018 1:45:00 PM
CLIENT SAMPLE ID	B2-3	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
1,2-Dichlorobenzene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2-Methylphenol	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	0.38	1	MG/KG	08/23/2018	JMK
3&4-Methylphenol	EPA-8270	U	0.13	1	MG/KG	08/23/2018	JMK
N-Nitroso-Di-N-Propylamine	EPA-8270	U	0.28	1	MG/KG	08/23/2018	JMK
Hexachloroethane	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Nitrobenzene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Isophorone	EPA-8270	U	0.21	1	MG/KG	08/23/2018	JMK
2-Nitrophenol	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2,4-Dimethylphenol	EPA-8270	U	0.19	1	MG/KG	08/23/2018	JMK
Benzoic Acid	EPA-8270	U	2.2	1	MG/KG	08/23/2018	JMK
Bis(2-Chloroethoxy)Methane	EPA-8270	U	0.37	1	MG/KG	08/23/2018	JMK
2,4-Dichlorophenol	EPA-8270	U	0.74	1	MG/KG	08/23/2018	JMK
1,2,4-Trichlorobenzene	EPA-8270	U	0.21	1	MG/KG	08/23/2018	JMK
Naphthalene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
4-Chloroaniline	EPA-8270	U	1.7	1	MG/KG	08/23/2018	JMK
2,6-Dichlorophenol	EPA-8270	U	0.55	1	MG/KG	08/23/2018	JMK
Hexachlorobutadiene	EPA-8270	U	0.50	1	MG/KG	08/23/2018	JMK
4-Chloro-3-Methylphenol	EPA-8270	U	0.98	1	MG/KG	08/23/2018	JMK
2-Methylnaphthalene	EPA-8270	U	0.46	1	MG/KG	08/23/2018	JMK
1-Methylnaphthalene	EPA-8270	U	0.54	1	MG/KG	08/23/2018	JMK
Hexachlorocyclopentadiene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2,4,6-Trichlorophenol	EPA-8270	U	0.12	1	MG/KG	08/23/2018	JMK
2,4,5-Trichlorophenol	EPA-8270	U	0.12	1	MG/KG	08/23/2018	JMK
2-Chloronaphthalene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2-Nitroaniline	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Acenaphthylene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Dimethylphthalate	EPA-8270	U	0.13	1	MG/KG	08/23/2018	JMK
2,6-Dinitrotoluene	EPA-8270	U	0.11	1	MG/KG	08/23/2018	JMK
Acenaphthene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
3-Nitroaniline	EPA-8270	U	1.8	1	MG/KG	08/23/2018	JMK
2,4-Dinitrophenol	EPA-8270	U	0.16	1	MG/KG	08/23/2018	JMK
4-Nitrophenol	EPA-8270	U	0.16	1	MG/KG	08/23/2018	JMK
Dibenzofuran	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2,4-Dinitrotoluene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
2,3,4,6-Tetrachlorophenol	EPA-8270	U	0.15	1	MG/KG	08/23/2018	JMK
Diethylphthalate	EPA-8270	U	0.13	1	MG/KG	08/23/2018	JMK
Fluorene	EPA-8270	U	0.11	1	MG/KG	08/23/2018	JMK
4-Chlorophenyl-Phenylether	EPA-8270	U	0.13	1	MG/KG	08/23/2018	JMK

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CERTIFICATE OF ANALYSIS

CLIENT:	Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043	DATE:	9/14/2018
		ALS JOB#:	EV18080100
		ALS SAMPLE#:	EV18080100-09
CLIENT CONTACT:	Eric Dubcak	DATE RECEIVED:	08/17/2018
CLIENT PROJECT:	81187331	COLLECTION DATE:	8/17/2018 1:45:00 PM
CLIENT SAMPLE ID	B2-3	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
4-Nitroaniline	EPA-8270	U	0.38	1	MG/KG	08/23/2018	JMK
4,6-Dinitro-2-Methylphenol	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
N-Nitrosodiphenylamine	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Azobenzene	EPA-8270	U	0.13	1	MG/KG	08/23/2018	JMK
4-Bromophenyl-Phenylether	EPA-8270	U	0.11	1	MG/KG	08/23/2018	JMK
Hexachlorobenzene	EPA-8270	U	0.11	1	MG/KG	08/23/2018	JMK
Pentachlorophenol	EPA-8270	U	0.50	1	MG/KG	08/23/2018	JMK
Phenanthrene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Anthracene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Carbazole	EPA-8270	U	0.32	1	MG/KG	08/23/2018	JMK
Di-N-Butylphthalate	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Fluoranthene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Pyrene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Butylbenzylphthalate	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
3,3-Dichlorobenzidine	EPA-8270	U	0.52	1	MG/KG	08/23/2018	JMK
Benzo[A]Anthracene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Chrysene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Di-N-Octylphthalate	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Benzo[B]Fluoranthene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Benzo[K]Fluoranthene	EPA-8270	U	0.13	1	MG/KG	08/23/2018	JMK
Benzo[A]Pyrene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Dibenz[A,H]Anthracene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
Benzo[G,H,I]Perylene	EPA-8270	U	0.10	1	MG/KG	08/23/2018	JMK
PCB-1016	EPA-8082	U	0.10	1	MG/KG	08/20/2018	JMK
PCB-1221	EPA-8082	U	0.10	1	MG/KG	08/20/2018	JMK
PCB-1232	EPA-8082	U	0.10	1	MG/KG	08/20/2018	JMK
PCB-1242	EPA-8082	U	0.10	1	MG/KG	08/20/2018	JMK
PCB-1248	EPA-8082	U	0.10	1	MG/KG	08/20/2018	JMK
PCB-1254	EPA-8082	U	0.10	1	MG/KG	08/20/2018	JMK
PCB-1260	EPA-8082	U	0.10	1	MG/KG	08/20/2018	JMK
PCB-1268	EPA-8082	U	0.10	1	MG/KG	08/20/2018	JMK
Chromium (VI)	EPA-7196	U	5.0	1	MG/KG	09/14/2018	JMK
Mercury	EPA-7471	**0.090**	0.020	1	MG/KG	08/23/2018	RAL
Arsenic	EPA-6020	**41**	0.97	1	MG/KG	08/22/2018	RAL
Cadmium	EPA-6020	U	0.30	1	MG/KG	08/22/2018	RAL
Chromium	EPA-6020	**70**	0.49	1	MG/KG	08/22/2018	RAL
Lead	EPA-6020	**31**	0.31	1	MG/KG	08/22/2018	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043	DATE: ALS JOB#: ALS SAMPLE#:	9/14/2018 EV18080100 EV18080100-09
CLIENT CONTACT:	Eric Dubcak	DATE RECEIVED:	08/17/2018
CLIENT PROJECT:	81187331	COLLECTION DATE:	8/17/2018 1:45:00 PM
CLIENT SAMPLE ID	B2-3	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**63.4**	08/20/2018	JMK
C25	NWTPH-DX	**73.1**	08/24/2018	EBS
1,2-Dichloroethane-d4	EPA-8260	**99.2**	08/20/2018	DLC
1,2-Dichloroethane-d4	EPA-8260	**95.4**	08/21/2018	DLC
Toluene-d8	EPA-8260	**111**	08/20/2018	DLC
Toluene-d8	EPA-8260	**102**	08/21/2018	DLC
4-Bromofluorobenzene	EPA-8260	**97.1**	08/20/2018	DLC
4-Bromofluorobenzene	EPA-8260	**84.6**	08/21/2018	DLC
2-Fluorophenol	EPA-8270	**104**	08/23/2018	JMK
Phenol-d5	EPA-8270	**102**	08/23/2018	JMK
Nitrobenzene-d5	EPA-8270	**87.8**	08/23/2018	JMK
2-Fluorobiphenyl	EPA-8270	**82.6**	08/23/2018	JMK
2,4,6-Tribromophenol	EPA-8270	**91.9**	08/23/2018	JMK
Terphenyl-d14	EPA-8270	**89.1**	08/23/2018	JMK
TCMX	EPA-8082	**99.4**	08/20/2018	JMK
DCB	EPA-8082	**92.2**	08/20/2018	JMK

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

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CERTIFICATE OF ANALYSIS

CLIENT:	Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043	DATE:	9/14/2018
		ALS JOB#:	EV18080100
		ALS SAMPLE#:	EV18080100-10
CLIENT CONTACT:	Eric Dubcak	DATE RECEIVED:	08/17/2018
CLIENT PROJECT:	81187331	COLLECTION DATE:	8/17/2018 2:10:00 PM
CLIENT SAMPLE ID	B2	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	**260**	50	1	UG/L	08/20/2018	DLC
TPH-Diesel Range	NWTPH-DX	**450**	130	1	UG/L	08/21/2018	EBS
TPH-Oil Range	NWTPH-DX	**400**	250	1	UG/L	08/21/2018	EBS
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	08/20/2018	DLC
Chloromethane	EPA-8260	U	2.0	1	UG/L	08/20/2018	DLC
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	08/20/2018	DLC
Bromomethane	EPA-8260	U	2.0	1	UG/L	08/20/2018	DLC
Chloroethane	EPA-8260	U	2.0	1	UG/L	08/20/2018	DLC
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	08/20/2018	DLC
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	08/20/2018	DLC
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	08/20/2018	DLC
Acetone	EPA-8260	U	25	1	UG/L	08/20/2018	DLC
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	08/20/2018	DLC
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	08/20/2018	DLC
Acrylonitrile	EPA-8260	U	10	1	UG/L	08/20/2018	DLC
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	08/20/2018	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	08/20/2018	DLC
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	08/20/2018	DLC
2-Butanone	EPA-8260	U	10	1	UG/L	08/20/2018	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	08/20/2018	DLC
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	08/20/2018	DLC
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	08/20/2018	DLC
Chloroform	EPA-8260	U	2.0	1	UG/L	08/20/2018	DLC
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	08/20/2018	DLC
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	08/20/2018	DLC
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	08/20/2018	DLC
Benzene	EPA-8260	U	2.0	1	UG/L	08/20/2018	DLC
Trichloroethene	EPA-8260	U	2.0	1	UG/L	08/20/2018	DLC
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	08/20/2018	DLC
Dibromomethane	EPA-8260	U	2.0	1	UG/L	08/20/2018	DLC
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	08/20/2018	DLC
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	08/20/2018	DLC
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	08/20/2018	DLC
Toluene	EPA-8260	U	2.0	1	UG/L	08/20/2018	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	08/20/2018	DLC
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	08/20/2018	DLC
2-Hexanone	EPA-8260	U	10	1	UG/L	08/20/2018	DLC
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	08/20/2018	DLC
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	08/20/2018	DLC

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CERTIFICATE OF ANALYSIS

CLIENT:	Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043	DATE:	9/14/2018
		ALS JOB#:	EV18080100
		ALS SAMPLE#:	EV18080100-10
CLIENT CONTACT:	Eric Dubcak	DATE RECEIVED:	08/17/2018
CLIENT PROJECT:	81187331	COLLECTION DATE:	8/17/2018 2:10:00 PM
CLIENT SAMPLE ID	B2	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	08/20/2018	DLC
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	08/20/2018	DLC
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	08/20/2018	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	08/20/2018	DLC
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	08/20/2018	DLC
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	08/20/2018	DLC
Styrene	EPA-8260	U	2.0	1	UG/L	08/20/2018	DLC
o-Xylene	EPA-8260	U	2.0	1	UG/L	08/20/2018	DLC
Bromoform	EPA-8260	U	2.0	1	UG/L	08/20/2018	DLC
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	08/20/2018	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	08/20/2018	DLC
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	08/20/2018	DLC
Bromobenzene	EPA-8260	U	2.0	1	UG/L	08/20/2018	DLC
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	08/20/2018	DLC
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	08/20/2018	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	08/20/2018	DLC
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	08/20/2018	DLC
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	08/20/2018	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	08/20/2018	DLC
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	08/20/2018	DLC
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	08/20/2018	DLC
1,3-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	08/20/2018	DLC
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	08/20/2018	DLC
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	08/20/2018	DLC
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	08/20/2018	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	08/20/2018	DLC
1,2,4-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	08/20/2018	DLC
Hexachlorobutadiene	EPA-8260	U	2.0	1	UG/L	08/20/2018	DLC
Naphthalene	EPA-8260	U	2.0	1	UG/L	08/20/2018	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	08/20/2018	DLC
Pyridine	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
N-Nitrosodimethylamine	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
Phenol	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
Aniline	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
Bis(2-Chloroethyl)Ether	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
2-Chlorophenol	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
1,3-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
1,4-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
Benzyl Alcohol	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK

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CERTIFICATE OF ANALYSIS

CLIENT:	Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043	DATE:	9/14/2018
		ALS JOB#:	EV18080100
		ALS SAMPLE#:	EV18080100-10
CLIENT CONTACT:	Eric Dubcak	DATE RECEIVED:	08/17/2018
CLIENT PROJECT:	81187331	COLLECTION DATE:	8/17/2018 2:10:00 PM
CLIENT SAMPLE ID	B2	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
1,2-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
2-Methylphenol	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
3&4-Methylphenol	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
N-Nitroso-Di-N-Propylamine	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
Hexachloroethane	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
Nitrobenzene	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
Isophorone	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
2-Nitrophenol	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
2,4-Dimethylphenol	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
Benzoic Acid	EPA-8270	U	10	1	UG/L	08/23/2018	JMK
Bis(2-Chloroethoxy)Methane	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
2,4-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
1,2,4-Trichlorobenzene	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
Naphthalene	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
4-Chloroaniline	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
2,6-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
Hexachlorobutadiene	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
4-Chloro-3-Methylphenol	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
2-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
1-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
Hexachlorocyclopentadiene	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
2,4,6-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
2,4,5-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
2-Chloronaphthalene	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
2-Nitroaniline	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
Acenaphthylene	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
Dimethylphthalate	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
2,6-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
Acenaphthene	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
3-Nitroaniline	EPA-8270	U	5.0	1	UG/L	08/23/2018	JMK
2,4-Dinitrophenol	EPA-8270	U	10	1	UG/L	08/23/2018	JMK
4-Nitrophenol	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
Dibenzofuran	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
2,4-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
2,3,4,6-Tetrachlorophenol	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
Diethylphthalate	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
Fluorene	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
4-Chlorophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK

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CERTIFICATE OF ANALYSIS

CLIENT:	Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043	DATE:	9/14/2018
		ALS JOB#:	EV18080100
		ALS SAMPLE#:	EV18080100-10
CLIENT CONTACT:	Eric Dubcak	DATE RECEIVED:	08/17/2018
CLIENT PROJECT:	81187331	COLLECTION DATE:	8/17/2018 2:10:00 PM
CLIENT SAMPLE ID	B2	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
4-Nitroaniline	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
4,6-Dinitro-2-Methylphenol	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
N-Nitrosodiphenylamine	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
Azobenzene	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
4-Bromophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
Hexachlorobenzene	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
Pentachlorophenol	EPA-8270	U	5.0	1	UG/L	08/23/2018	JMK
Phenanthrene	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
Anthracene	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
Carbazole	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
Di-N-Butylphthalate	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
Fluoranthene	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
Pyrene	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
Butylbenzylphthalate	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
3,3-Dichlorobenzidine	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
Benzo[A]Anthracene	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
Chrysene	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
Di-N-Octylphthalate	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
Benzo[B]Fluoranthene	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
Benzo[K]Fluoranthene	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
Benzo[A]Pyrene	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
Dibenz[A,H]Anthracene	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
Benzo[G,H,I]Perylene	EPA-8270	U	2.0	1	UG/L	08/23/2018	JMK
PCB-1016	EPA-8082	U	0.10	1	UG/L	08/22/2018	PAB
PCB-1221	EPA-8082	U	0.10	1	UG/L	08/22/2018	PAB
PCB-1232	EPA-8082	U	0.10	1	UG/L	08/22/2018	PAB
PCB-1242	EPA-8082	U	0.10	1	UG/L	08/22/2018	PAB
PCB-1248	EPA-8082	U	0.10	1	UG/L	08/22/2018	PAB
PCB-1254	EPA-8082	U	0.10	1	UG/L	08/22/2018	PAB
PCB-1260	EPA-8082	U	0.10	1	UG/L	08/22/2018	PAB
PCB-1268	EPA-8082	U	0.10	1	UG/L	08/22/2018	PAB
Mercury	EPA-245.1	U	0.20	1	UG/L	08/23/2018	RAL
Arsenic	EPA-200.8	**77**	1.0	1	UG/L	08/22/2018	RAL
Cadmium	EPA-200.8	U	1.0	1	UG/L	08/22/2018	RAL
Chromium	EPA-200.8	**9.2**	2.0	1	UG/L	08/22/2018	RAL
Lead	EPA-200.8	U	1.0	1	UG/L	08/22/2018	RAL

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CERTIFICATE OF ANALYSIS

CLIENT:	Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043	DATE: ALS JOB#: ALS SAMPLE#:	9/14/2018 EV18080100 EV18080100-10
CLIENT CONTACT:	Eric Dubcak	DATE RECEIVED:	08/17/2018
CLIENT PROJECT:	81187331	COLLECTION DATE:	8/17/2018 2:10:00 PM
CLIENT SAMPLE ID	B2	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	NWTPH-GX	**92.7**	08/20/2018	DLC
C25	NWTPH-DX	**85.4**	08/21/2018	EBS
1,2-Dichloroethane-d4	EPA-8260	**95.5**	08/20/2018	DLC
Toluene-d8	EPA-8260	**104**	08/20/2018	DLC
4-Bromofluorobenzene	EPA-8260	**95.5**	08/20/2018	DLC
2-Fluorophenol	EPA-8270	**53.7**	08/23/2018	JMK
Phenol-d5	EPA-8270	**33.0**	08/23/2018	JMK
Nitrobenzene-d5	EPA-8270	**106**	08/23/2018	JMK
2-Fluorobiphenyl	EPA-8270	**81.9**	08/23/2018	JMK
2,4,6-Tribromophenol	EPA-8270	**111**	08/23/2018	JMK
Terphenyl-d14	EPA-8270	**94.5**	08/23/2018	JMK
TCMX	EPA-8082	**60.1**	08/22/2018	PAB
DCB	EPA-8082	**31.6**	08/22/2018	PAB

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

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CERTIFICATE OF ANALYSIS

CLIENT: Terracon
21905 - 64th Ave W, Suite 100
Mountlake Terrace, WA 98043

CLIENT CONTACT: Eric Dubcak
CLIENT PROJECT: 81187331

DATE: 9/14/2018
ALS SDG#: EV18080100
WDOE ACCREDITATION: C601

LABORATORY BLANK RESULTS

MBG-082018S - Batch 131764 - Soil by NWTPH-GX

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	MG/KG	3.0	08/20/2018	JMK

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

MBG-082018W2 - Batch 131717 - Water by NWTPH-GX

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	U	UG/L	50	08/20/2018	DLC

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

MB-082218S - Batch 131767 - Soil by NWTPH-DX

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range	NWTPH-DX	U	MG/KG	25	08/22/2018	EBS
TPH-Oil Range	NWTPH-DX	U	MG/KG	50	08/22/2018	EBS

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

MB-082018W - Batch 131807 - Water by NWTPH-DX

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range	NWTPH-DX	U	UG/L	130	08/21/2018	EBS
TPH-Oil Range	NWTPH-DX	U	UG/L	250	08/21/2018	EBS

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

MB-082018S - Batch 131743 - Soil by EPA-8260

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	MG/KG	0.010	08/20/2018	DLC
Chloromethane	EPA-8260	U	MG/KG	0.010	08/20/2018	DLC
Vinyl Chloride	EPA-8260	U	MG/KG	0.010	08/20/2018	DLC
Bromomethane	EPA-8260	U	MG/KG	0.010	08/20/2018	DLC
Chloroethane	EPA-8260	U	MG/KG	0.010	08/20/2018	DLC
Carbon Tetrachloride	EPA-8260	U	MG/KG	0.010	08/20/2018	DLC
Trichlorofluoromethane	EPA-8260	U	MG/KG	0.010	08/20/2018	DLC
Carbon Disulfide	EPA-8260	U	MG/KG	0.010	08/20/2018	DLC
Acetone	EPA-8260	U	MG/KG	0.050	08/20/2018	DLC
1,1-Dichloroethene	EPA-8260	U	MG/KG	0.010	08/20/2018	DLC
Methylene Chloride	EPA-8260	U	MG/KG	0.020	08/20/2018	DLC
Acrylonitrile	EPA-8260	U	MG/KG	0.050	08/20/2018	DLC

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CERTIFICATE OF ANALYSIS

CLIENT:	Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043	DATE:	9/14/2018
		ALS SDG#:	EV18080100
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Eric Dubcak		
CLIENT PROJECT:	81187331		

LABORATORY BLANK RESULTS

MB-082018S - Batch 131743 - Soil by EPA-8260

Methyl T-Butyl Ether	EPA-8260	U	MG/KG	0.010	08/20/2018	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	MG/KG	0.010	08/20/2018	DLC
1,1-Dichloroethane	EPA-8260	U	MG/KG	0.010	08/20/2018	DLC
2-Butanone	EPA-8260	U	MG/KG	0.050	08/20/2018	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	MG/KG	0.010	08/20/2018	DLC
2,2-Dichloropropane	EPA-8260	U	MG/KG	0.010	08/20/2018	DLC
Bromochloromethane	EPA-8260	U	MG/KG	0.010	08/20/2018	DLC
Chloroform	EPA-8260	U	MG/KG	0.010	08/20/2018	DLC
1,1,1-Trichloroethane	EPA-8260	U	MG/KG	0.010	08/20/2018	DLC
1,1-Dichloropropene	EPA-8260	U	MG/KG	0.010	08/20/2018	DLC
1,2-Dichloroethane	EPA-8260	U	MG/KG	0.010	08/20/2018	DLC
Benzene	EPA-8260	U	MG/KG	0.0050	08/20/2018	DLC
Trichloroethene	EPA-8260	U	MG/KG	0.010	08/20/2018	DLC
1,2-Dichloropropane	EPA-8260	U	MG/KG	0.010	08/20/2018	DLC
Dibromomethane	EPA-8260	U	MG/KG	0.010	08/20/2018	DLC
Bromodichloromethane	EPA-8260	U	MG/KG	0.010	08/20/2018	DLC
Trans-1,3-Dichloropropene	EPA-8260	U	MG/KG	0.010	08/20/2018	DLC
4-Methyl-2-Pentanone	EPA-8260	U	MG/KG	0.050	08/20/2018	DLC
Toluene	EPA-8260	U	MG/KG	0.010	08/20/2018	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	MG/KG	0.010	08/20/2018	DLC
1,1,2-Trichloroethane	EPA-8260	U	MG/KG	0.010	08/20/2018	DLC
2-Hexanone	EPA-8260	U	MG/KG	0.050	08/20/2018	DLC
1,3-Dichloropropane	EPA-8260	U	MG/KG	0.010	08/20/2018	DLC
Tetrachloroethylene	EPA-8260	U	MG/KG	0.010	08/20/2018	DLC
Dibromochloromethane	EPA-8260	U	MG/KG	0.010	08/20/2018	DLC
1,2-Dibromoethane	EPA-8260	U	MG/KG	0.0050	08/20/2018	DLC
Chlorobenzene	EPA-8260	U	MG/KG	0.010	08/20/2018	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	U	MG/KG	0.010	08/20/2018	DLC
Ethylbenzene	EPA-8260	U	MG/KG	0.010	08/20/2018	DLC
m,p-Xylene	EPA-8260	U	MG/KG	0.020	08/20/2018	DLC
Styrene	EPA-8260	U	MG/KG	0.010	08/20/2018	DLC
o-Xylene	EPA-8260	U	MG/KG	0.010	08/20/2018	DLC
Bromoform	EPA-8260	U	MG/KG	0.010	08/20/2018	DLC
Isopropylbenzene	EPA-8260	U	MG/KG	0.010	08/20/2018	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	U	MG/KG	0.010	08/20/2018	DLC
1,2,3-Trichloropropane	EPA-8260	U	MG/KG	0.010	08/20/2018	DLC
Bromobenzene	EPA-8260	U	MG/KG	0.010	08/20/2018	DLC
N-Propyl Benzene	EPA-8260	U	MG/KG	0.010	08/20/2018	DLC
2-Chlorotoluene	EPA-8260	U	MG/KG	0.010	08/20/2018	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	MG/KG	0.010	08/20/2018	DLC
4-Chlorotoluene	EPA-8260	U	MG/KG	0.010	08/20/2018	DLC

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CERTIFICATE OF ANALYSIS

CLIENT: Terracon
21905 - 64th Ave W, Suite 100
Mountlake Terrace, WA 98043

CLIENT CONTACT: Eric Dubcak
CLIENT PROJECT: 81187331

DATE: 9/14/2018
ALS SDG#: EV18080100
WDOE ACCREDITATION: C601

LABORATORY BLANK RESULTS

MB-082018S - Batch 131743 - Soil by EPA-8260

T-Butyl Benzene	EPA-8260	U	MG/KG	0.010	08/20/2018	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	MG/KG	0.010	08/20/2018	DLC
S-Butyl Benzene	EPA-8260	U	MG/KG	0.010	08/20/2018	DLC
P-Isopropyltoluene	EPA-8260	U	MG/KG	0.010	08/20/2018	DLC
1,3-Dichlorobenzene	EPA-8260	U	MG/KG	0.010	08/20/2018	DLC
1,4-Dichlorobenzene	EPA-8260	U	MG/KG	0.010	08/20/2018	DLC
N-Butylbenzene	EPA-8260	U	MG/KG	0.010	08/20/2018	DLC
1,2-Dichlorobenzene	EPA-8260	U	MG/KG	0.010	08/20/2018	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	MG/KG	0.050	08/20/2018	DLC
1,2,4-Trichlorobenzene	EPA-8260	U	MG/KG	0.010	08/20/2018	DLC
Hexachlorobutadiene	EPA-8260	U	MG/KG	0.010	08/20/2018	DLC
Naphthalene	EPA-8260	U	MG/KG	0.010	08/20/2018	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	MG/KG	0.010	08/20/2018	DLC

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

MB-082018W - Batch 131691 - Water by EPA-8260

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	UG/L	2.0	08/20/2018	DLC
Chloromethane	EPA-8260	U	UG/L	2.0	08/20/2018	DLC
Vinyl Chloride	EPA-8260	U	UG/L	0.20	08/20/2018	DLC
Bromomethane	EPA-8260	U	UG/L	2.0	08/20/2018	DLC
Chloroethane	EPA-8260	U	UG/L	2.0	08/20/2018	DLC
Carbon Tetrachloride	EPA-8260	U	UG/L	2.0	08/20/2018	DLC
Trichlorofluoromethane	EPA-8260	U	UG/L	2.0	08/20/2018	DLC
Carbon Disulfide	EPA-8260	U	UG/L	2.0	08/20/2018	DLC
Acetone	EPA-8260	U	UG/L	25	08/20/2018	DLC
1,1-Dichloroethene	EPA-8260	U	UG/L	2.0	08/20/2018	DLC
Methylene Chloride	EPA-8260	U	UG/L	5.0	08/20/2018	DLC
Acrylonitrile	EPA-8260	U	UG/L	10	08/20/2018	DLC
Methyl T-Butyl Ether	EPA-8260	U	UG/L	2.0	08/20/2018	DLC
Trans-1,2-Dichloroethene	EPA-8260	U	UG/L	2.0	08/20/2018	DLC
1,1-Dichloroethane	EPA-8260	U	UG/L	2.0	08/20/2018	DLC
2-Butanone	EPA-8260	U	UG/L	10	08/20/2018	DLC
Cis-1,2-Dichloroethene	EPA-8260	U	UG/L	2.0	08/20/2018	DLC
2,2-Dichloropropane	EPA-8260	U	UG/L	2.0	08/20/2018	DLC
Bromochloromethane	EPA-8260	U	UG/L	2.0	08/20/2018	DLC
Chloroform	EPA-8260	U	UG/L	2.0	08/20/2018	DLC
1,1,1-Trichloroethane	EPA-8260	U	UG/L	2.0	08/20/2018	DLC
1,1-Dichloropropene	EPA-8260	U	UG/L	2.0	08/20/2018	DLC
1,2-Dichloroethane	EPA-8260	U	UG/L	2.0	08/20/2018	DLC

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CERTIFICATE OF ANALYSIS

CLIENT: Terracon
21905 - 64th Ave W, Suite 100
Mountlake Terrace, WA 98043

CLIENT CONTACT: Eric Dubcak
CLIENT PROJECT: 81187331

DATE: 9/14/2018
ALS SDG#: EV18080100
WDOE ACCREDITATION: C601

LABORATORY BLANK RESULTS

MB-082018W - Batch 131691 - Water by EPA-8260

Benzene	EPA-8260	U	UG/L	2.0	08/20/2018	DLC
Trichloroethene	EPA-8260	U	UG/L	2.0	08/20/2018	DLC
1,2-Dichloropropane	EPA-8260	U	UG/L	2.0	08/20/2018	DLC
Dibromomethane	EPA-8260	U	UG/L	2.0	08/20/2018	DLC
Bromodichloromethane	EPA-8260	U	UG/L	2.0	08/20/2018	DLC
Trans-1,3-Dichloropropene	EPA-8260	U	UG/L	2.0	08/20/2018	DLC
4-Methyl-2-Pentanone	EPA-8260	U	UG/L	10	08/20/2018	DLC
Toluene	EPA-8260	U	UG/L	2.0	08/20/2018	DLC
Cis-1,3-Dichloropropene	EPA-8260	U	UG/L	2.0	08/20/2018	DLC
1,1,2-Trichloroethane	EPA-8260	U	UG/L	2.0	08/20/2018	DLC
2-Hexanone	EPA-8260	U	UG/L	10	08/20/2018	DLC
1,3-Dichloropropane	EPA-8260	U	UG/L	2.0	08/20/2018	DLC
Tetrachloroethylene	EPA-8260	U	UG/L	2.0	08/20/2018	DLC
Dibromochloromethane	EPA-8260	U	UG/L	2.0	08/20/2018	DLC
1,2-Dibromoethane	EPA-8260	U	UG/L	0.010	08/20/2018	DLC
Chlorobenzene	EPA-8260	U	UG/L	2.0	08/20/2018	DLC
1,1,1,2-Tetrachloroethane	EPA-8260	U	UG/L	2.0	08/20/2018	DLC
Ethylbenzene	EPA-8260	U	UG/L	2.0	08/20/2018	DLC
m,p-Xylene	EPA-8260	U	UG/L	4.0	08/20/2018	DLC
Styrene	EPA-8260	U	UG/L	2.0	08/20/2018	DLC
o-Xylene	EPA-8260	U	UG/L	2.0	08/20/2018	DLC
Bromoform	EPA-8260	U	UG/L	2.0	08/20/2018	DLC
Isopropylbenzene	EPA-8260	U	UG/L	2.0	08/20/2018	DLC
1,1,2,2-Tetrachloroethane	EPA-8260	U	UG/L	2.0	08/20/2018	DLC
1,2,3-Trichloropropane	EPA-8260	U	UG/L	2.0	08/20/2018	DLC
Bromobenzene	EPA-8260	U	UG/L	2.0	08/20/2018	DLC
N-Propyl Benzene	EPA-8260	U	UG/L	2.0	08/20/2018	DLC
2-Chlorotoluene	EPA-8260	U	UG/L	2.0	08/20/2018	DLC
1,3,5-Trimethylbenzene	EPA-8260	U	UG/L	2.0	08/20/2018	DLC
4-Chlorotoluene	EPA-8260	U	UG/L	2.0	08/20/2018	DLC
T-Butyl Benzene	EPA-8260	U	UG/L	2.0	08/20/2018	DLC
1,2,4-Trimethylbenzene	EPA-8260	U	UG/L	2.0	08/20/2018	DLC
S-Butyl Benzene	EPA-8260	U	UG/L	2.0	08/20/2018	DLC
P-Isopropyltoluene	EPA-8260	U	UG/L	2.0	08/20/2018	DLC
1,3-Dichlorobenzene	EPA-8260	U	UG/L	2.0	08/20/2018	DLC
1,4-Dichlorobenzene	EPA-8260	U	UG/L	2.0	08/20/2018	DLC
N-Butylbenzene	EPA-8260	U	UG/L	2.0	08/20/2018	DLC
1,2-Dichlorobenzene	EPA-8260	U	UG/L	2.0	08/20/2018	DLC
1,2-Dibromo 3-Chloropropane	EPA-8260	U	UG/L	10	08/20/2018	DLC
1,2,4-Trichlorobenzene	EPA-8260	U	UG/L	2.0	08/20/2018	DLC
Hexachlorobutadiene	EPA-8260	U	UG/L	2.0	08/20/2018	DLC

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CERTIFICATE OF ANALYSIS

CLIENT:	Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043	DATE:	9/14/2018
		ALS SDG#:	EV18080100
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Eric Dubcak		
CLIENT PROJECT:	81187331		

LABORATORY BLANK RESULTS

MB-082018W - Batch 131691 - Water by EPA-8260

Naphthalene	EPA-8260	U	UG/L	2.0	08/20/2018	DLC
1,2,3-Trichlorobenzene	EPA-8260	U	UG/L	2.0	08/20/2018	DLC

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

MB-082118S - Batch 131827 - Soil by EPA-8270

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Pyridine	EPA-8270	U	MG/KG	0.20	08/23/2018	JMK
N-Nitrosodimethylamine	EPA-8270	U	MG/KG	0.10	08/23/2018	JMK
Phenol	EPA-8270	U	MG/KG	0.10	08/23/2018	JMK
Aniline	EPA-8270	U	MG/KG	0.10	08/23/2018	JMK
Bis(2-Chloroethyl)Ether	EPA-8270	U	MG/KG	0.25	08/23/2018	JMK
2-Chlorophenol	EPA-8270	U	MG/KG	0.25	08/23/2018	JMK
1,3-Dichlorobenzene	EPA-8270	U	MG/KG	0.10	08/23/2018	JMK
1,4-Dichlorobenzene	EPA-8270	U	MG/KG	0.10	08/23/2018	JMK
Benzyl Alcohol	EPA-8270	U	MG/KG	0.10	08/23/2018	JMK
1,2-Dichlorobenzene	EPA-8270	U	MG/KG	0.10	08/23/2018	JMK
2-Methylphenol	EPA-8270	U	MG/KG	0.10	08/23/2018	JMK
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	MG/KG	0.25	08/23/2018	JMK
3&4-Methylphenol	EPA-8270	U	MG/KG	0.10	08/23/2018	JMK
N-Nitroso-Di-N-Propylamine	EPA-8270	U	MG/KG	0.25	08/23/2018	JMK
Hexachloroethane	EPA-8270	U	MG/KG	0.10	08/23/2018	JMK
Nitrobenzene	EPA-8270	U	MG/KG	0.10	08/23/2018	JMK
Isophorone	EPA-8270	U	MG/KG	0.10	08/23/2018	JMK
2-Nitrophenol	EPA-8270	U	MG/KG	0.10	08/23/2018	JMK
2,4-Dimethylphenol	EPA-8270	U	MG/KG	0.10	08/23/2018	JMK
Benzoic Acid	EPA-8270	U	MG/KG	1.0	08/23/2018	JMK
Bis(2-Chloroethoxy)Methane	EPA-8270	U	MG/KG	0.25	08/23/2018	JMK
2,4-Dichlorophenol	EPA-8270	U	MG/KG	0.50	08/23/2018	JMK
1,2,4-Trichlorobenzene	EPA-8270	U	MG/KG	0.10	08/23/2018	JMK
Naphthalene	EPA-8270	U	MG/KG	0.10	08/23/2018	JMK
4-Chloroaniline	EPA-8270	U	MG/KG	1.0	08/23/2018	JMK
2,6-Dichlorophenol	EPA-8270	U	MG/KG	0.25	08/23/2018	JMK
Hexachlorobutadiene	EPA-8270	U	MG/KG	0.50	08/23/2018	JMK
4-Chloro-3-Methylphenol	EPA-8270	U	MG/KG	0.50	08/23/2018	JMK
2-Methylnaphthalene	EPA-8270	U	MG/KG	0.25	08/23/2018	JMK
1-Methylnaphthalene	EPA-8270	U	MG/KG	0.25	08/23/2018	JMK
Hexachlorocyclopentadiene	EPA-8270	U	MG/KG	0.10	08/23/2018	JMK
2,4,6-Trichlorophenol	EPA-8270	U	MG/KG	0.10	08/23/2018	JMK
2,4,5-Trichlorophenol	EPA-8270	U	MG/KG	0.10	08/23/2018	JMK
2-Chloronaphthalene	EPA-8270	U	MG/KG	0.10	08/23/2018	JMK

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CERTIFICATE OF ANALYSIS

CLIENT:	Terracon 21905 - 64th Ave W, Suite 100 Mountlake Terrace, WA 98043	DATE:	9/14/2018
		ALS SDG#:	EV18080100
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Eric Dubcak		
CLIENT PROJECT:	81187331		

LABORATORY BLANK RESULTS

MB-082118S - Batch 131827 - Soil by EPA-8270

2-Nitroaniline	EPA-8270	U	MG/KG	0.10	08/23/2018	JMK
Acenaphthylene	EPA-8270	U	MG/KG	0.10	08/23/2018	JMK
Dimethylphthalate	EPA-8270	U	MG/KG	0.10	08/23/2018	JMK
2,6-Dinitrotoluene	EPA-8270	U	MG/KG	0.10	08/23/2018	JMK
Acenaphthene	EPA-8270	U	MG/KG	0.10	08/23/2018	JMK
3-Nitroaniline	EPA-8270	U	MG/KG	1.0	08/23/2018	JMK
2,4-Dinitrophenol	EPA-8270	U	MG/KG	0.10	08/23/2018	JMK
4-Nitrophenol	EPA-8270	U	MG/KG	0.10	08/23/2018	JMK
Dibenzofuran	EPA-8270	U	MG/KG	0.10	08/23/2018	JMK
2,4-Dinitrotoluene	EPA-8270	U	MG/KG	0.10	08/23/2018	JMK
2,3,4,6-Tetrachlorophenol	EPA-8270	U	MG/KG	0.10	08/23/2018	JMK
Diethylphthalate	EPA-8270	U	MG/KG	0.10	08/23/2018	JMK
Fluorene	EPA-8270	U	MG/KG	0.10	08/23/2018	JMK
4-Chlorophenyl-Phenylether	EPA-8270	U	MG/KG	0.10	08/23/2018	JMK
4-Nitroaniline	EPA-8270	U	MG/KG	0.25	08/23/2018	JMK
4,6-Dinitro-2-Methylphenol	EPA-8270	U	MG/KG	0.10	08/23/2018	JMK
N-Nitrosodiphenylamine	EPA-8270	U	MG/KG	0.10	08/23/2018	JMK
Azobenzene	EPA-8270	U	MG/KG	0.10	08/23/2018	JMK
4-Bromophenyl-Phenylether	EPA-8270	U	MG/KG	0.10	08/23/2018	JMK
Hexachlorobenzene	EPA-8270	U	MG/KG	0.10	08/23/2018	JMK
Pentachlorophenol	EPA-8270	U	MG/KG	0.50	08/23/2018	JMK
Phenanthrene	EPA-8270	U	MG/KG	0.10	08/23/2018	JMK
Anthracene	EPA-8270	U	MG/KG	0.10	08/23/2018	JMK
Carbazole	EPA-8270	U	MG/KG	0.25	08/23/2018	JMK
Di-N-Butylphthalate	EPA-8270	U	MG/KG	0.10	08/23/2018	JMK
Fluoranthene	EPA-8270	U	MG/KG	0.10	08/23/2018	JMK
Pyrene	EPA-8270	U	MG/KG	0.10	08/23/2018	JMK
Butylbenzylphthalate	EPA-8270	U	MG/KG	0.10	08/23/2018	JMK
3,3-Dichlorobenzidine	EPA-8270	U	MG/KG	0.25	08/23/2018	JMK
Benzo[A]Anthracene	EPA-8270	U	MG/KG	0.10	08/23/2018	JMK
Chrysene	EPA-8270	U	MG/KG	0.10	08/23/2018	JMK
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	MG/KG	0.10	08/23/2018	JMK
Di-N-Octylphthalate	EPA-8270	U	MG/KG	0.10	08/23/2018	JMK
Benzo[B]Fluoranthene	EPA-8270	U	MG/KG	0.10	08/23/2018	JMK
Benzo[K]Fluoranthene	EPA-8270	U	MG/KG	0.10	08/23/2018	JMK
Benzo[A]Pyrene	EPA-8270	U	MG/KG	0.10	08/23/2018	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	MG/KG	0.10	08/23/2018	JMK
Dibenz[A,H]Anthracene	EPA-8270	U	MG/KG	0.10	08/23/2018	JMK
Benzo[G,H,I]Perylene	EPA-8270	U	MG/KG	0.10	08/23/2018	JMK

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

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CERTIFICATE OF ANALYSIS

CLIENT: Terracon
21905 - 64th Ave W, Suite 100
Mountlake Terrace, WA 98043

CLIENT CONTACT: Eric Dubcak
CLIENT PROJECT: 81187331

DATE: 9/14/2018
ALS SDG#: EV18080100
WDOE ACCREDITATION: C601

LABORATORY BLANK RESULTS

MB-082318W - Batch 131851 - Water by EPA-8270

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Pyridine	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
N-Nitrosodimethylamine	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
Phenol	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
Aniline	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
Bis(2-Chloroethyl)Ether	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
2-Chlorophenol	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
1,3-Dichlorobenzene	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
1,4-Dichlorobenzene	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
Benzyl Alcohol	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
1,2-Dichlorobenzene	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
2-Methylphenol	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
3&4-Methylphenol	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
N-Nitroso-Di-N-Propylamine	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
Hexachloroethane	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
Nitrobenzene	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
Isophorone	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
2-Nitrophenol	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
2,4-Dimethylphenol	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
Benzoic Acid	EPA-8270	U	UG/L	10	08/23/2018	JMK
Bis(2-Chloroethoxy)Methane	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
2,4-Dichlorophenol	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
1,2,4-Trichlorobenzene	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
Naphthalene	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
4-Chloroaniline	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
2,6-Dichlorophenol	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
Hexachlorobutadiene	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
4-Chloro-3-Methylphenol	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
2-Methylnaphthalene	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
1-Methylnaphthalene	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
Hexachlorocyclopentadiene	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
2,4,6-Trichlorophenol	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
2,4,5-Trichlorophenol	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
2-Chloronaphthalene	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
2-Nitroaniline	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
Acenaphthylene	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
Dimethylphthalate	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
2,6-Dinitrotoluene	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
Acenaphthene	EPA-8270	U	UG/L	2.0	08/23/2018	JMK

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Mountlake Terrace, WA 98043

CLIENT CONTACT: Eric Dubcak
CLIENT PROJECT: 81187331

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WDOE ACCREDITATION: C601

LABORATORY BLANK RESULTS

MB-082318W - Batch 131851 - Water by EPA-8270

3-Nitroaniline	EPA-8270	U	UG/L	5.0	08/23/2018	JMK
2,4-Dinitrophenol	EPA-8270	U	UG/L	10	08/23/2018	JMK
4-Nitrophenol	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
Dibenzofuran	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
2,4-Dinitrotoluene	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
2,3,4,6-Tetrachlorophenol	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
Diethylphthalate	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
Fluorene	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
4-Chlorophenyl-Phenylether	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
4-Nitroaniline	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
4,6-Dinitro-2-Methylphenol	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
N-Nitrosodiphenylamine	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
Azobenzene	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
4-Bromophenyl-Phenylether	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
Hexachlorobenzene	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
Pentachlorophenol	EPA-8270	U	UG/L	5.0	08/23/2018	JMK
Phenanthrene	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
Anthracene	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
Carbazole	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
Di-N-Butylphthalate	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
Fluoranthene	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
Pyrene	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
Butylbenzylphthalate	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
3,3-Dichlorobenzidine	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
Benzo[A]Anthracene	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
Chrysene	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
Di-N-Octylphthalate	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
Benzo[B]Fluoranthene	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
Benzo[K]Fluoranthene	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
Benzo[A]Pyrene	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
Dibenz[A,H]Anthracene	EPA-8270	U	UG/L	2.0	08/23/2018	JMK
Benzo[G,H,I]Perylene	EPA-8270	U	UG/L	2.0	08/23/2018	JMK

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

MB-082018S - Batch 131842 - Soil by EPA-8082

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
PCB-1016	EPA-8082	U	MG/KG	0.10	08/20/2018	JMK
PCB-1221	EPA-8082	U	MG/KG	0.10	08/20/2018	JMK

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WDOE ACCREDITATION: C601

LABORATORY BLANK RESULTS

MB-082018S - Batch 131842 - Soil by EPA-8082

PCB-1232	EPA-8082	U	MG/KG	0.10	08/20/2018	JMK
PCB-1242	EPA-8082	U	MG/KG	0.10	08/20/2018	JMK
PCB-1248	EPA-8082	U	MG/KG	0.10	08/20/2018	JMK
PCB-1254	EPA-8082	U	MG/KG	0.10	08/20/2018	JMK
PCB-1260	EPA-8082	U	MG/KG	0.10	08/20/2018	JMK
PCB-1268	EPA-8082	U	MG/KG	0.10	08/20/2018	JMK

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

MB-082018W - Batch 131799 - Water by EPA-8082

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
PCB-1016	EPA-8082	U	UG/L	0.10	08/22/2018	PAB
PCB-1221	EPA-8082	U	UG/L	0.10	08/22/2018	PAB
PCB-1232	EPA-8082	U	UG/L	0.10	08/22/2018	PAB
PCB-1242	EPA-8082	U	UG/L	0.10	08/22/2018	PAB
PCB-1248	EPA-8082	U	UG/L	0.10	08/22/2018	PAB
PCB-1254	EPA-8082	U	UG/L	0.10	08/22/2018	PAB
PCB-1260	EPA-8082	U	UG/L	0.10	08/22/2018	PAB
PCB-1268	EPA-8082	U	UG/L	0.10	08/22/2018	PAB

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

MBLK-R323419 - Batch R323419 - Soil by EPA-7196

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Chromium (VI)	EPA-7196	U	MG/KG	5.0	09/14/2018	JMK

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

MBLK-R322340 - Batch R322340 - Soil by EPA-7471

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	U	MG/KG	0.020	08/23/2018	RAL

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

MBLK-R322339 - Batch R322339 - Water by EPA-245.1

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-245.1	U	UG/L	0.20	08/23/2018	RAL

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		ALS SDG#:	EV18080100
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Eric Dubcak		
CLIENT PROJECT:	81187331		

LABORATORY BLANK RESULTS

MB-082118S - Batch 131751 - Soil by EPA-6020

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Arsenic	EPA-6020	U	MG/KG	0.20	08/22/2018	RAL
Cadmium	EPA-6020	U	MG/KG	0.10	08/22/2018	RAL
Chromium	EPA-6020	U	MG/KG	0.10	08/22/2018	RAL
Lead	EPA-6020	U	MG/KG	0.10	08/22/2018	RAL

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

MB-082118W - Batch 131752 - Water by EPA-200.8

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Arsenic	EPA-200.8	U	UG/L	1.0	08/22/2018	RAL
Cadmium	EPA-200.8	U	UG/L	1.0	08/22/2018	RAL
Chromium	EPA-200.8	U	UG/L	2.0	08/22/2018	RAL
Lead	EPA-200.8	U	UG/L	1.0	08/22/2018	RAL

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LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 131764 - Soil by NWTPH-GX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range - BS	NWTPH-GX	**100**			66.5	122.7	08/20/2018	JMK
TPH-Volatile Range - BSD	NWTPH-GX	**97.7**	**3**		66.5	122.7	08/20/2018	JMK

ALS Test Batch ID: 131717 - Water by NWTPH-GX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range - BS	NWTPH-GX	**90.2**			66.5	122.7	08/20/2018	DLC
TPH-Volatile Range - BSD	NWTPH-GX	**103**	**13**		66.5	122.7	08/20/2018	DLC

ALS Test Batch ID: 131767 - Soil by NWTPH-DX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range - BS	NWTPH-DX	**96.1**			75.5	122.1	08/22/2018	EBS
TPH-Diesel Range - BSD	NWTPH-DX	**95.0**	**1**		75.5	122.1	08/22/2018	EBS

ALS Test Batch ID: 131807 - Water by NWTPH-DX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range - BS	NWTPH-DX	**85.9**			67	125.2	08/21/2018	EBS
TPH-Diesel Range - BSD	NWTPH-DX	**81.8**	**5**		67	125.2	08/21/2018	EBS

ALS Test Batch ID: 131743 - Soil by EPA-8260

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane - BS	EPA-8260	**100**			50	150	08/20/2018	DLC
Dichlorodifluoromethane - BSD	EPA-8260	**98.6**	**2**		50	150	08/20/2018	DLC
Chloromethane - BS	EPA-8260	**103**			50	150	08/20/2018	DLC
Chloromethane - BSD	EPA-8260	**100**	**3**		50	150	08/20/2018	DLC
Vinyl Chloride - BS	EPA-8260	**92.4**			50	150	08/20/2018	DLC
Vinyl Chloride - BSD	EPA-8260	**90.9**	**2**		50	150	08/20/2018	DLC
Bromomethane - BS	EPA-8260	**107**			50	150	08/20/2018	DLC
Bromomethane - BSD	EPA-8260	**102**	**5**		50	150	08/20/2018	DLC
Chloroethane - BS	EPA-8260	**104**			50	150	08/20/2018	DLC
Chloroethane - BSD	EPA-8260	**104**	**0**		50	150	08/20/2018	DLC
Carbon Tetrachloride - BS	EPA-8260	**112**			50	150	08/20/2018	DLC
Carbon Tetrachloride - BSD	EPA-8260	**111**	**1**		50	150	08/20/2018	DLC
Trichlorofluoromethane - BS	EPA-8260	**108**			50	150	08/20/2018	DLC
Trichlorofluoromethane - BSD	EPA-8260	**107**	**2**		50	150	08/20/2018	DLC
Carbon Disulfide - BS	EPA-8260	**111**			50	150	08/20/2018	DLC

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LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Carbon Disulfide - BSD	EPA-8260	**108**	**3**		50	150	08/20/2018	DLC
Acetone - BS	EPA-8260	**85.6**			50	150	08/20/2018	DLC
Acetone - BSD	EPA-8260	**83.4**	**3**		50	150	08/20/2018	DLC
1,1-Dichloroethene - BS	EPA-8260	**99.0**			73	138	08/20/2018	DLC
1,1-Dichloroethene - BSD	EPA-8260	**97.3**	**2**		73	138	08/20/2018	DLC
Methylene Chloride - BS	EPA-8260	**111**			50	150	08/20/2018	DLC
Methylene Chloride - BSD	EPA-8260	**114**	**3**		50	150	08/20/2018	DLC
Acrylonitrile - BS	EPA-8260	**97.3**			50	150	08/20/2018	DLC
Acrylonitrile - BSD	EPA-8260	**94.9**	**3**		50	150	08/20/2018	DLC
Methyl T-Butyl Ether - BS	EPA-8260	**108**			50	150	08/20/2018	DLC
Methyl T-Butyl Ether - BSD	EPA-8260	**107**	**2**		50	150	08/20/2018	DLC
Trans-1,2-Dichloroethene - BS	EPA-8260	**108**			50	150	08/20/2018	DLC
Trans-1,2-Dichloroethene - BSD	EPA-8260	**104**	**4**		50	150	08/20/2018	DLC
1,1-Dichloroethane - BS	EPA-8260	**102**			50	150	08/20/2018	DLC
1,1-Dichloroethane - BSD	EPA-8260	**93.1**	**9**		50	150	08/20/2018	DLC
2-Butanone - BS	EPA-8260	**76.7**			50	150	08/20/2018	DLC
2-Butanone - BSD	EPA-8260	**71.0**	**8**		50	150	08/20/2018	DLC
Cis-1,2-Dichloroethene - BS	EPA-8260	**103**			50	150	08/20/2018	DLC
Cis-1,2-Dichloroethene - BSD	EPA-8260	**99.8**	**3**		50	150	08/20/2018	DLC
2,2-Dichloropropane - BS	EPA-8260	**111**			50	150	08/20/2018	DLC
2,2-Dichloropropane - BSD	EPA-8260	**108**	**2**		50	150	08/20/2018	DLC
Bromochloromethane - BS	EPA-8260	**95.2**			50	150	08/20/2018	DLC
Bromochloromethane - BSD	EPA-8260	**94.5**	**1**		50	150	08/20/2018	DLC
Chloroform - BS	EPA-8260	**114**			50	150	08/20/2018	DLC
Chloroform - BSD	EPA-8260	**112**	**2**		50	150	08/20/2018	DLC
1,1,1-Trichloroethane - BS	EPA-8260	**103**			50	150	08/20/2018	DLC
1,1,1-Trichloroethane - BSD	EPA-8260	**101**	**2**		50	150	08/20/2018	DLC
1,1-Dichloropropene - BS	EPA-8260	**100**			50	150	08/20/2018	DLC
1,1-Dichloropropene - BSD	EPA-8260	**98.3**	**2**		50	150	08/20/2018	DLC
1,2-Dichloroethane - BS	EPA-8260	**93.6**			50	150	08/20/2018	DLC
1,2-Dichloroethane - BSD	EPA-8260	**92.1**	**2**		50	150	08/20/2018	DLC
Benzene - BS	EPA-8260	**94.3**			75	138	08/20/2018	DLC
Benzene - BSD	EPA-8260	**92.5**	**2**		75	138	08/20/2018	DLC
Trichloroethene - BS	EPA-8260	**97.0**			75	136	08/20/2018	DLC
Trichloroethene - BSD	EPA-8260	**94.9**	**2**		75	136	08/20/2018	DLC
1,2-Dichloropropane - BS	EPA-8260	**95.0**			50	150	08/20/2018	DLC
1,2-Dichloropropane - BSD	EPA-8260	**92.9**	**2**		50	150	08/20/2018	DLC
Dibromomethane - BS	EPA-8260	**97.5**			50	150	08/20/2018	DLC
Dibromomethane - BSD	EPA-8260	**94.4**	**3**		50	150	08/20/2018	DLC
Bromodichloromethane - BS	EPA-8260	**95.4**			50	150	08/20/2018	DLC

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LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Bromodichloromethane - BSD	EPA-8260	**93.9**	**2**		50	150	08/20/2018	DLC
Trans-1,3-Dichloropropene - BS	EPA-8260	**116**			50	150	08/20/2018	DLC
Trans-1,3-Dichloropropene - BSD	EPA-8260	**116**	**0**		50	150	08/20/2018	DLC
4-Methyl-2-Pentanone - BS	EPA-8260	**79.5**			50	150	08/20/2018	DLC
4-Methyl-2-Pentanone - BSD	EPA-8260	**79.0**	**1**		50	150	08/20/2018	DLC
Toluene - BS	EPA-8260	**97.3**			71.6	122.1	08/20/2018	DLC
Toluene - BSD	EPA-8260	**94.1**	**3**		71.6	122.1	08/20/2018	DLC
Cis-1,3-Dichloropropene - BS	EPA-8260	**106**			50	150	08/20/2018	DLC
Cis-1,3-Dichloropropene - BSD	EPA-8260	**104**	**2**		50	150	08/20/2018	DLC
1,1,2-Trichloroethane - BS	EPA-8260	**100**			50	150	08/20/2018	DLC
1,1,2-Trichloroethane - BSD	EPA-8260	**101**	**0**		50	150	08/20/2018	DLC
2-Hexanone - BS	EPA-8260	**70.4**			50	150	08/20/2018	DLC
2-Hexanone - BSD	EPA-8260	**63.3**	**11**		50	150	08/20/2018	DLC
1,3-Dichloropropane - BS	EPA-8260	**97.1**			50	150	08/20/2018	DLC
1,3-Dichloropropane - BSD	EPA-8260	**96.5**	**1**		50	150	08/20/2018	DLC
Tetrachloroethylene - BS	EPA-8260	**111**			50	150	08/20/2018	DLC
Tetrachloroethylene - BSD	EPA-8260	**111**	**0**		50	150	08/20/2018	DLC
Dibromochloromethane - BS	EPA-8260	**110**			50	150	08/20/2018	DLC
Dibromochloromethane - BSD	EPA-8260	**110**	**1**		50	150	08/20/2018	DLC
1,2-Dibromoethane - BS	EPA-8260	**106**			50	150	08/20/2018	DLC
1,2-Dibromoethane - BSD	EPA-8260	**105**	**0**		50	150	08/20/2018	DLC
Chlorobenzene - BS	EPA-8260	**111**			79	128	08/20/2018	DLC
Chlorobenzene - BSD	EPA-8260	**110**	**1**		79	128	08/20/2018	DLC
1,1,1,2-Tetrachloroethane - BS	EPA-8260	**105**			50	150	08/20/2018	DLC
1,1,1,2-Tetrachloroethane - BSD	EPA-8260	**105**	**0**		50	150	08/20/2018	DLC
Ethylbenzene - BS	EPA-8260	**103**			50	150	08/20/2018	DLC
Ethylbenzene - BSD	EPA-8260	**102**	**1**		50	150	08/20/2018	DLC
m,p-Xylene - BS	EPA-8260	**104**			50	150	08/20/2018	DLC
m,p-Xylene - BSD	EPA-8260	**104**	**1**		50	150	08/20/2018	DLC
Styrene - BS	EPA-8260	**112**			50	150	08/20/2018	DLC
Styrene - BSD	EPA-8260	**113**	**1**		50	150	08/20/2018	DLC
o-Xylene - BS	EPA-8260	**115**			50	150	08/20/2018	DLC
o-Xylene - BSD	EPA-8260	**114**	**0**		50	150	08/20/2018	DLC
Bromoform - BS	EPA-8260	**125**			50	150	08/20/2018	DLC
Bromoform - BSD	EPA-8260	**124**	**1**		50	150	08/20/2018	DLC
Isopropylbenzene - BS	EPA-8260	**112**			50	150	08/20/2018	DLC
Isopropylbenzene - BSD	EPA-8260	**112**	**0**		50	150	08/20/2018	DLC
1,1,2,2-Tetrachloroethane - BS	EPA-8260	**91.3**			50	150	08/20/2018	DLC
1,1,2,2-Tetrachloroethane - BSD	EPA-8260	**91.4**	**0**		50	150	08/20/2018	DLC
1,2,3-Trichloropropane - BS	EPA-8260	**94.5**			50	150	08/20/2018	DLC

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CERTIFICATE OF ANALYSIS

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21905 - 64th Ave W, Suite 100
Mountlake Terrace, WA 98043

CLIENT CONTACT: Eric Dubcak
CLIENT PROJECT: 81187331

DATE: 9/14/2018
ALS SDG#: EV18080100
WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
1,2,3-Trichloropropane - BSD	EPA-8260	**92.8**	**2**		50	150	08/20/2018	DLC
Bromobenzene - BS	EPA-8260	**102**			50	150	08/20/2018	DLC
Bromobenzene - BSD	EPA-8260	**101**	**1**		50	150	08/20/2018	DLC
N-Propyl Benzene - BS	EPA-8260	**93.6**			50	150	08/20/2018	DLC
N-Propyl Benzene - BSD	EPA-8260	**92.0**	**2**		50	150	08/20/2018	DLC
2-Chlorotoluene - BS	EPA-8260	**102**			50	150	08/20/2018	DLC
2-Chlorotoluene - BSD	EPA-8260	**102**	**0**		50	150	08/20/2018	DLC
1,3,5-Trimethylbenzene - BS	EPA-8260	**102**			50	150	08/20/2018	DLC
1,3,5-Trimethylbenzene - BSD	EPA-8260	**100**	**1**		50	150	08/20/2018	DLC
4-Chlorotoluene - BS	EPA-8260	**101**			50	150	08/20/2018	DLC
4-Chlorotoluene - BSD	EPA-8260	**101**	**1**		50	150	08/20/2018	DLC
T-Butyl Benzene - BS	EPA-8260	**126**			50	150	08/20/2018	DLC
T-Butyl Benzene - BSD	EPA-8260	**125**	**1**		50	150	08/20/2018	DLC
1,2,4-Trimethylbenzene - BS	EPA-8260	**102**			50	150	08/20/2018	DLC
1,2,4-Trimethylbenzene - BSD	EPA-8260	**100**	**2**		50	150	08/20/2018	DLC
S-Butyl Benzene - BS	EPA-8260	**100**			50	150	08/20/2018	DLC
S-Butyl Benzene - BSD	EPA-8260	**99.1**	**1**		50	150	08/20/2018	DLC
P-Isopropyltoluene - BS	EPA-8260	**105**			50	150	08/20/2018	DLC
P-Isopropyltoluene - BSD	EPA-8260	**104**	**1**		50	150	08/20/2018	DLC
1,3-Dichlorobenzene - BS	EPA-8260	**98.3**			50	150	08/20/2018	DLC
1,3-Dichlorobenzene - BSD	EPA-8260	**97.6**	**1**		50	150	08/20/2018	DLC
1,4-Dichlorobenzene - BS	EPA-8260	**104**			50	150	08/20/2018	DLC
1,4-Dichlorobenzene - BSD	EPA-8260	**103**	**1**		50	150	08/20/2018	DLC
N-Butylbenzene - BS	EPA-8260	**96.1**			50	150	08/20/2018	DLC
N-Butylbenzene - BSD	EPA-8260	**95.4**	**1**		50	150	08/20/2018	DLC
1,2-Dichlorobenzene - BS	EPA-8260	**96.4**			50	150	08/20/2018	DLC
1,2-Dichlorobenzene - BSD	EPA-8260	**97.0**	**1**		50	150	08/20/2018	DLC
1,2-Dibromo 3-Chloropropane - BS	EPA-8260	**89.5**			50	150	08/20/2018	DLC
1,2-Dibromo 3-Chloropropane - BSD	EPA-8260	**88.4**	**1**		50	150	08/20/2018	DLC
1,2,4-Trichlorobenzene - BS	EPA-8260	**110**			50	150	08/20/2018	DLC
1,2,4-Trichlorobenzene - BSD	EPA-8260	**108**	**2**		50	150	08/20/2018	DLC
Hexachlorobutadiene - BS	EPA-8260	**119**			50	150	08/20/2018	DLC
Hexachlorobutadiene - BSD	EPA-8260	**118**	**1**		50	150	08/20/2018	DLC
Naphthalene - BS	EPA-8260	**106**			50	150	08/20/2018	DLC
Naphthalene - BSD	EPA-8260	**105**	**2**		50	150	08/20/2018	DLC
1,2,3-Trichlorobenzene - BS	EPA-8260	**105**			50	150	08/20/2018	DLC
1,2,3-Trichlorobenzene - BSD	EPA-8260	**105**	**0**		50	150	08/20/2018	DLC

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CLIENT PROJECT: 81187331

DATE: 9/14/2018
ALS SDG#: EV18080100
WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 131691 - Water by EPA-8260

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane - BS	EPA-8260	**111**			50	150	08/20/2018	DLC
Dichlorodifluoromethane - BSD	EPA-8260	**111**	**0**		50	150	08/20/2018	DLC
Chloromethane - BS	EPA-8260	**75.6**			50	150	08/20/2018	DLC
Chloromethane - BSD	EPA-8260	**75.8**	**0**		50	150	08/20/2018	DLC
Vinyl Chloride - BS	EPA-8260	**97.0**			50	150	08/20/2018	DLC
Vinyl Chloride - BSD	EPA-8260	**98.7**	**2**		50	150	08/20/2018	DLC
Bromomethane - BS	EPA-8260	**103**			50	150	08/20/2018	DLC
Bromomethane - BSD	EPA-8260	**108**	**4**		50	150	08/20/2018	DLC
Chloroethane - BS	EPA-8260	**105**			50	150	08/20/2018	DLC
Chloroethane - BSD	EPA-8260	**105**	**0**		50	150	08/20/2018	DLC
Carbon Tetrachloride - BS	EPA-8260	**92.1**			50	150	08/20/2018	DLC
Carbon Tetrachloride - BSD	EPA-8260	**94.6**	**3**		50	150	08/20/2018	DLC
Trichlorofluoromethane - BS	EPA-8260	**100**			50	150	08/20/2018	DLC
Trichlorofluoromethane - BSD	EPA-8260	**103**	**3**		50	150	08/20/2018	DLC
Carbon Disulfide - BS	EPA-8260	**102**			50	150	08/20/2018	DLC
Carbon Disulfide - BSD	EPA-8260	**104**	**2**		50	150	08/20/2018	DLC
Acetone - BS	EPA-8260	**71.1**			50	150	08/20/2018	DLC
Acetone - BSD	EPA-8260	**72.3**	**2**		50	150	08/20/2018	DLC
1,1-Dichloroethene - BS	EPA-8260	**99.1**			72.5	136	08/20/2018	DLC
1,1-Dichloroethene - BSD	EPA-8260	**101**	**2**		72.5	136	08/20/2018	DLC
Methylene Chloride - BS	EPA-8260	**87.4**			50	150	08/20/2018	DLC
Methylene Chloride - BSD	EPA-8260	**90.9**	**4**		50	150	08/20/2018	DLC
Acrylonitrile - BS	EPA-8260	**99.9**			50	150	08/20/2018	DLC
Acrylonitrile - BSD	EPA-8260	**102**	**2**		50	150	08/20/2018	DLC
Methyl T-Butyl Ether - BS	EPA-8260	**104**			50	150	08/20/2018	DLC
Methyl T-Butyl Ether - BSD	EPA-8260	**106**	**1**		50	150	08/20/2018	DLC
Trans-1,2-Dichloroethene - BS	EPA-8260	**103**			50	150	08/20/2018	DLC
Trans-1,2-Dichloroethene - BSD	EPA-8260	**104**	**1**		50	150	08/20/2018	DLC
1,1-Dichloroethane - BS	EPA-8260	**103**			50	150	08/20/2018	DLC
1,1-Dichloroethane - BSD	EPA-8260	**104**	**1**		50	150	08/20/2018	DLC
2-Butanone - BS	EPA-8260	**71.4**			50	150	08/20/2018	DLC
2-Butanone - BSD	EPA-8260	**71.9**	**1**		50	150	08/20/2018	DLC
Cis-1,2-Dichloroethene - BS	EPA-8260	**106**			50	150	08/20/2018	DLC
Cis-1,2-Dichloroethene - BSD	EPA-8260	**107**	**1**		50	150	08/20/2018	DLC
2,2-Dichloropropane - BS	EPA-8260	**133**			50	150	08/20/2018	DLC
2,2-Dichloropropane - BSD	EPA-8260	**133**	**0**		50	150	08/20/2018	DLC
Bromochloromethane - BS	EPA-8260	**104**			50	150	08/20/2018	DLC
Bromochloromethane - BSD	EPA-8260	**106**	**1**		50	150	08/20/2018	DLC
Chloroform - BS	EPA-8260	**98.9**			50	150	08/20/2018	DLC

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WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Chloroform - BSD	EPA-8260	**99.9**	**1**		50	150	08/20/2018	DLC
1,1,1-Trichloroethane - BS	EPA-8260	**102**			50	150	08/20/2018	DLC
1,1,1-Trichloroethane - BSD	EPA-8260	**104**	**2**		50	150	08/20/2018	DLC
1,1-Dichloropropene - BS	EPA-8260	**101**			50	150	08/20/2018	DLC
1,1-Dichloropropene - BSD	EPA-8260	**103**	**1**		50	150	08/20/2018	DLC
1,2-Dichloroethane - BS	EPA-8260	**94.2**			50	150	08/20/2018	DLC
1,2-Dichloroethane - BSD	EPA-8260	**95.7**	**2**		50	150	08/20/2018	DLC
Benzene - BS	EPA-8260	**98.0**			74.7	143	08/20/2018	DLC
Benzene - BSD	EPA-8260	**99.3**	**1**		74.7	143	08/20/2018	DLC
Trichloroethene - BS	EPA-8260	**98.5**			74.4	141	08/20/2018	DLC
Trichloroethene - BSD	EPA-8260	**99.6**	**1**		74.4	141	08/20/2018	DLC
1,2-Dichloropropane - BS	EPA-8260	**102**			50	150	08/20/2018	DLC
1,2-Dichloropropane - BSD	EPA-8260	**103**	**1**		50	150	08/20/2018	DLC
Dibromomethane - BS	EPA-8260	**100**			50	150	08/20/2018	DLC
Dibromomethane - BSD	EPA-8260	**102**	**2**		50	150	08/20/2018	DLC
Bromodichloromethane - BS	EPA-8260	**101**			50	150	08/20/2018	DLC
Bromodichloromethane - BSD	EPA-8260	**102**	**2**		50	150	08/20/2018	DLC
Trans-1,3-Dichloropropene - BS	EPA-8260	**110**			50	150	08/20/2018	DLC
Trans-1,3-Dichloropropene - BSD	EPA-8260	**111**	**1**		50	150	08/20/2018	DLC
4-Methyl-2-Pentanone - BS	EPA-8260	**75.3**			50	150	08/20/2018	DLC
4-Methyl-2-Pentanone - BSD	EPA-8260	**76.0**	**1**		50	150	08/20/2018	DLC
Toluene - BS	EPA-8260	**103**			71.7	139	08/20/2018	DLC
Toluene - BSD	EPA-8260	**104**	**1**		71.7	139	08/20/2018	DLC
Cis-1,3-Dichloropropene - BS	EPA-8260	**106**			50	150	08/20/2018	DLC
Cis-1,3-Dichloropropene - BSD	EPA-8260	**107**	**1**		50	150	08/20/2018	DLC
1,1,2-Trichloroethane - BS	EPA-8260	**107**			50	150	08/20/2018	DLC
1,1,2-Trichloroethane - BSD	EPA-8260	**108**	**1**		50	150	08/20/2018	DLC
2-Hexanone - BS	EPA-8260	**75.3**			50	150	08/20/2018	DLC
2-Hexanone - BSD	EPA-8260	**75.4**	**0**		50	150	08/20/2018	DLC
1,3-Dichloropropane - BS	EPA-8260	**104**			50	150	08/20/2018	DLC
1,3-Dichloropropane - BSD	EPA-8260	**105**	**1**		50	150	08/20/2018	DLC
Tetrachloroethylene - BS	EPA-8260	**109**			50	150	08/20/2018	DLC
Tetrachloroethylene - BSD	EPA-8260	**111**	**2**		50	150	08/20/2018	DLC
Dibromochloromethane - BS	EPA-8260	**111**			50	150	08/20/2018	DLC
Dibromochloromethane - BSD	EPA-8260	**112**	**1**		50	150	08/20/2018	DLC
1,2-Dibromoethane - BS	EPA-8260	**109**			50	150	08/20/2018	DLC
1,2-Dibromoethane - BSD	EPA-8260	**110**	**1**		50	150	08/20/2018	DLC
Chlorobenzene - BS	EPA-8260	**110**			73	131	08/20/2018	DLC
Chlorobenzene - BSD	EPA-8260	**111**	**1**		73	131	08/20/2018	DLC
1,1,1,2-Tetrachloroethane - BS	EPA-8260	**112**			50	150	08/20/2018	DLC

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LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
1,1,1,2-Tetrachloroethane - BSD	EPA-8260	**112**	**0**		50	150	08/20/2018	DLC
Ethylbenzene - BS	EPA-8260	**108**			50	150	08/20/2018	DLC
Ethylbenzene - BSD	EPA-8260	**109**	**1**		50	150	08/20/2018	DLC
m,p-Xylene - BS	EPA-8260	**110**			50	150	08/20/2018	DLC
m,p-Xylene - BSD	EPA-8260	**110**	**0**		50	150	08/20/2018	DLC
Styrene - BS	EPA-8260	**111**			50	150	08/20/2018	DLC
Styrene - BSD	EPA-8260	**111**	**0**		50	150	08/20/2018	DLC
o-Xylene - BS	EPA-8260	**111**			50	150	08/20/2018	DLC
o-Xylene - BSD	EPA-8260	**111**	**0**		50	150	08/20/2018	DLC
Bromoform - BS	EPA-8260	**110**			50	150	08/20/2018	DLC
Bromoform - BSD	EPA-8260	**111**	**1**		50	150	08/20/2018	DLC
Isopropylbenzene - BS	EPA-8260	**110**			50	150	08/20/2018	DLC
Isopropylbenzene - BSD	EPA-8260	**110**	**0**		50	150	08/20/2018	DLC
1,1,2,2-Tetrachloroethane - BS	EPA-8260	**99.2**			50	150	08/20/2018	DLC
1,1,2,2-Tetrachloroethane - BSD	EPA-8260	**100**	**1**		50	150	08/20/2018	DLC
1,2,3-Trichloropropane - BS	EPA-8260	**100**			50	150	08/20/2018	DLC
1,2,3-Trichloropropane - BSD	EPA-8260	**101**	**1**		50	150	08/20/2018	DLC
Bromobenzene - BS	EPA-8260	**108**			50	150	08/20/2018	DLC
Bromobenzene - BSD	EPA-8260	**110**	**2**		50	150	08/20/2018	DLC
N-Propyl Benzene - BS	EPA-8260	**103**			50	150	08/20/2018	DLC
N-Propyl Benzene - BSD	EPA-8260	**104**	**1**		50	150	08/20/2018	DLC
2-Chlorotoluene - BS	EPA-8260	**103**			50	150	08/20/2018	DLC
2-Chlorotoluene - BSD	EPA-8260	**103**	**1**		50	150	08/20/2018	DLC
1,3,5-Trimethylbenzene - BS	EPA-8260	**105**			50	150	08/20/2018	DLC
1,3,5-Trimethylbenzene - BSD	EPA-8260	**105**	**1**		50	150	08/20/2018	DLC
4-Chlorotoluene - BS	EPA-8260	**103**			50	150	08/20/2018	DLC
4-Chlorotoluene - BSD	EPA-8260	**104**	**1**		50	150	08/20/2018	DLC
T-Butyl Benzene - BS	EPA-8260	**99.4**			50	150	08/20/2018	DLC
T-Butyl Benzene - BSD	EPA-8260	**100**	**1**		50	150	08/20/2018	DLC
1,2,4-Trimethylbenzene - BS	EPA-8260	**104**			50	150	08/20/2018	DLC
1,2,4-Trimethylbenzene - BSD	EPA-8260	**106**	**1**		50	150	08/20/2018	DLC
S-Butyl Benzene - BS	EPA-8260	**104**			50	150	08/20/2018	DLC
S-Butyl Benzene - BSD	EPA-8260	**105**	**1**		50	150	08/20/2018	DLC
P-Isopropyltoluene - BS	EPA-8260	**107**			50	150	08/20/2018	DLC
P-Isopropyltoluene - BSD	EPA-8260	**108**	**1**		50	150	08/20/2018	DLC
1,3-Dichlorobenzene - BS	EPA-8260	**108**			50	150	08/20/2018	DLC
1,3-Dichlorobenzene - BSD	EPA-8260	**110**	**2**		50	150	08/20/2018	DLC
1,4-Dichlorobenzene - BS	EPA-8260	**108**			50	150	08/20/2018	DLC
1,4-Dichlorobenzene - BSD	EPA-8260	**109**	**0**		50	150	08/20/2018	DLC
N-Butylbenzene - BS	EPA-8260	**105**			50	150	08/20/2018	DLC

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LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
N-Butylbenzene - BSD	EPA-8260	**106**	**0**		50	150	08/20/2018	DLC
1,2-Dichlorobenzene - BS	EPA-8260	**108**			50	150	08/20/2018	DLC
1,2-Dichlorobenzene - BSD	EPA-8260	**109**	**1**		50	150	08/20/2018	DLC
1,2-Dibromo 3-Chloropropane - BS	EPA-8260	**96.4**			50	150	08/20/2018	DLC
1,2-Dibromo 3-Chloropropane - BSD	EPA-8260	**97.5**	**1**		50	150	08/20/2018	DLC
1,2,4-Trichlorobenzene - BS	EPA-8260	**113**			50	150	08/20/2018	DLC
1,2,4-Trichlorobenzene - BSD	EPA-8260	**114**	**1**		50	150	08/20/2018	DLC
Hexachlorobutadiene - BS	EPA-8260	**112**			50	150	08/20/2018	DLC
Hexachlorobutadiene - BSD	EPA-8260	**114**	**1**		50	150	08/20/2018	DLC
Naphthalene - BS	EPA-8260	**110**			50	150	08/20/2018	DLC
Naphthalene - BSD	EPA-8260	**111**	**1**		50	150	08/20/2018	DLC
1,2,3-Trichlorobenzene - BS	EPA-8260	**113**			50	150	08/20/2018	DLC
1,2,3-Trichlorobenzene - BSD	EPA-8260	**114**	**1**		50	150	08/20/2018	DLC

ALS Test Batch ID: 131827 - Soil by EPA-8270

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Pyridine - BS	EPA-8270	**62.5**			20	150	08/23/2018	JMK
Pyridine - BSD	EPA-8270	**73.3**	**16**		20	150	08/23/2018	JMK
N-Nitrosodimethylamine - BS	EPA-8270	**91.9**			20	150	08/23/2018	JMK
N-Nitrosodimethylamine - BSD	EPA-8270	**99.8**	**8**		20	150	08/23/2018	JMK
Phenol - BS	EPA-8270	**84.1**			36.1	131	08/23/2018	JMK
Phenol - BSD	EPA-8270	**88.2**	**5**		36.1	131	08/23/2018	JMK
Aniline - BS	EPA-8270	**80.4**			20	150	08/23/2018	JMK
Aniline - BSD	EPA-8270	**84.2**	**5**		20	150	08/23/2018	JMK
Bis(2-Chloroethyl)Ether - BS	EPA-8270	**85.9**			20	150	08/23/2018	JMK
Bis(2-Chloroethyl)Ether - BSD	EPA-8270	**88.3**	**3**		20	150	08/23/2018	JMK
2-Chlorophenol - BS	EPA-8270	**82.1**			59.9	111	08/23/2018	JMK
2-Chlorophenol - BSD	EPA-8270	**85.8**	**4**		59.9	111	08/23/2018	JMK
1,3-Dichlorobenzene - BS	EPA-8270	**76.0**			20	150	08/23/2018	JMK
1,3-Dichlorobenzene - BSD	EPA-8270	**80.3**	**6**		20	150	08/23/2018	JMK
1,4-Dichlorobenzene - BS	EPA-8270	**77.2**			44.3	122	08/23/2018	JMK
1,4-Dichlorobenzene - BSD	EPA-8270	**82.3**	**6**		44.3	122	08/23/2018	JMK
Benzyl Alcohol - BS	EPA-8270	**101**			20	150	08/23/2018	JMK
Benzyl Alcohol - BSD	EPA-8270	**106**	**5**		20	150	08/23/2018	JMK
1,2-Dichlorobenzene - BS	EPA-8270	**78.1**			20	150	08/23/2018	JMK
1,2-Dichlorobenzene - BSD	EPA-8270	**81.7**	**5**		20	150	08/23/2018	JMK
2-Methylphenol - BS	EPA-8270	**80.6**			20	150	08/23/2018	JMK
2-Methylphenol - BSD	EPA-8270	**85.4**	**6**		20	150	08/23/2018	JMK
Bis(2-Chloroisopropyl)Ether - BS	EPA-8270	**82.2**			20	150	08/23/2018	JMK

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CERTIFICATE OF ANALYSIS

CLIENT: Terracon
21905 - 64th Ave W, Suite 100
Mountlake Terrace, WA 98043

CLIENT CONTACT: Eric Dubcak
CLIENT PROJECT: 81187331

DATE: 9/14/2018
ALS SDG#: EV18080100
WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Bis(2-Chloroisopropyl)Ether - BSD	EPA-8270	**84.5**	**3**		20	150	08/23/2018	JMK
3&4-Methylphenol - BS	EPA-8270	**83.6**			20	150	08/23/2018	JMK
3&4-Methylphenol - BSD	EPA-8270	**86.9**	**4**		20	150	08/23/2018	JMK
N-Nitroso-Di-N-Propylamine - BS	EPA-8270	**95.8**			31.6	134	08/23/2018	JMK
N-Nitroso-Di-N-Propylamine - BSD	EPA-8270	**100**	**5**		31.6	134	08/23/2018	JMK
Hexachloroethane - BS	EPA-8270	**75.2**			20	150	08/23/2018	JMK
Hexachloroethane - BSD	EPA-8270	**79.1**	**5**		20	150	08/23/2018	JMK
Nitrobenzene - BS	EPA-8270	**80.9**			20	150	08/23/2018	JMK
Nitrobenzene - BSD	EPA-8270	**84.2**	**4**		20	150	08/23/2018	JMK
Isophorone - BS	EPA-8270	**61.3**			20	150	08/23/2018	JMK
Isophorone - BSD	EPA-8270	**63.7**	**4**		20	150	08/23/2018	JMK
2-Nitrophenol - BS	EPA-8270	**84.5**			20	150	08/23/2018	JMK
2-Nitrophenol - BSD	EPA-8270	**86.0**	**2**		20	150	08/23/2018	JMK
2,4-Dimethylphenol - BS	EPA-8270	**60.3**			20	150	08/23/2018	JMK
2,4-Dimethylphenol - BSD	EPA-8270	**65.7**	**9**		20	150	08/23/2018	JMK
Bis(2-Chloroethoxy)Methane - BS	EPA-8270	**81.0**			20	150	08/23/2018	JMK
Bis(2-Chloroethoxy)Methane - BSD	EPA-8270	**84.1**	**4**		20	150	08/23/2018	JMK
2,4-Dichlorophenol - BS	EPA-8270	**83.5**			20	150	08/23/2018	JMK
2,4-Dichlorophenol - BSD	EPA-8270	**87.7**	**5**		20	150	08/23/2018	JMK
1,2,4-Trichlorobenzene - BS	EPA-8270	**76.5**			44.6	122	08/23/2018	JMK
1,2,4-Trichlorobenzene - BSD	EPA-8270	**78.8**	**3**		44.6	122	08/23/2018	JMK
Naphthalene - BS	EPA-8270	**78.2**			20	150	08/23/2018	JMK
Naphthalene - BSD	EPA-8270	**81.6**	**4**		20	150	08/23/2018	JMK
4-Chloroaniline - BS	EPA-8270	**76.9**			20	150	08/23/2018	JMK
4-Chloroaniline - BSD	EPA-8270	**81.0**	**5**		20	150	08/23/2018	JMK
Hexachlorobutadiene - BS	EPA-8270	**74.5**			20	150	08/23/2018	JMK
Hexachlorobutadiene - BSD	EPA-8270	**78.0**	**5**		20	150	08/23/2018	JMK
4-Chloro-3-Methylphenol - BS	EPA-8270	**88.0**			49.2	135	08/23/2018	JMK
4-Chloro-3-Methylphenol - BSD	EPA-8270	**91.0**	**3**		49.2	135	08/23/2018	JMK
2-Methylnaphthalene - BS	EPA-8270	**84.1**			20	150	08/23/2018	JMK
2-Methylnaphthalene - BSD	EPA-8270	**86.5**	**3**		20	150	08/23/2018	JMK
1-Methylnaphthalene - BS	EPA-8270	**78.2**			20	150	08/23/2018	JMK
1-Methylnaphthalene - BSD	EPA-8270	**80.7**	**3**		20	150	08/23/2018	JMK
Hexachlorocyclopentadiene - BS	EPA-8270	**83.4**			20	150	08/23/2018	JMK
Hexachlorocyclopentadiene - BSD	EPA-8270	**85.0**	**2**		20	150	08/23/2018	JMK
2,4,6-Trichlorophenol - BS	EPA-8270	**90.4**			20	150	08/23/2018	JMK
2,4,6-Trichlorophenol - BSD	EPA-8270	**91.8**	**2**		20	150	08/23/2018	JMK
2,4,5-Trichlorophenol - BS	EPA-8270	**89.2**			20	150	08/23/2018	JMK
2,4,5-Trichlorophenol - BSD	EPA-8270	**91.1**	**2**		20	150	08/23/2018	JMK
2-Chloronaphthalene - BS	EPA-8270	**82.3**			20	150	08/23/2018	JMK

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LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
2-Chloronaphthalene - BSD	EPA-8270	**82.8**	**1**		20	150	08/23/2018	JMK
2-Nitroaniline - BS	EPA-8270	**163**		S	20	150	08/23/2018	JMK
2-Nitroaniline - BSD	EPA-8270	**167**	**2**	S	20	150	08/23/2018	JMK
Acenaphthylene - BS	EPA-8270	**84.5**			20	150	08/23/2018	JMK
Acenaphthylene - BSD	EPA-8270	**86.1**	**2**		20	150	08/23/2018	JMK
Dimethylphthalate - BS	EPA-8270	**84.8**			20	150	08/23/2018	JMK
Dimethylphthalate - BSD	EPA-8270	**85.4**	**1**		20	150	08/23/2018	JMK
2,6-Dinitrotoluene - BS	EPA-8270	**88.1**			20	150	08/23/2018	JMK
2,6-Dinitrotoluene - BSD	EPA-8270	**89.9**	**2**		20	150	08/23/2018	JMK
Acenaphthene - BS	EPA-8270	**82.9**			49.3	117	08/23/2018	JMK
Acenaphthene - BSD	EPA-8270	**84.0**	**1**		49.3	117	08/23/2018	JMK
3-Nitroaniline - BS	EPA-8270	**163**		S	20	150	08/23/2018	JMK
3-Nitroaniline - BSD	EPA-8270	**167**	**2**	S	20	150	08/23/2018	JMK
2,4-Dinitrophenol - BS	EPA-8270	**85.1**			20	150	08/23/2018	JMK
2,4-Dinitrophenol - BSD	EPA-8270	**86.4**	**2**		20	150	08/23/2018	JMK
4-Nitrophenol - BS	EPA-8270	**102**			29.8	137	08/23/2018	JMK
4-Nitrophenol - BSD	EPA-8270	**104**	**2**		29.8	137	08/23/2018	JMK
Dibenzofuran - BS	EPA-8270	**84.7**			20	150	08/23/2018	JMK
Dibenzofuran - BSD	EPA-8270	**86.0**	**2**		20	150	08/23/2018	JMK
2,4-Dinitrotoluene - BS	EPA-8270	**87.6**			55.3	130	08/23/2018	JMK
2,4-Dinitrotoluene - BSD	EPA-8270	**89.0**	**2**		55.3	130	08/23/2018	JMK
2,3,4,6-Tetrachlorophenol - BS	EPA-8270	**92.6**			20	150	08/23/2018	JMK
2,3,4,6-Tetrachlorophenol - BSD	EPA-8270	**93.8**	**1**		20	150	08/23/2018	JMK
Diethylphthalate - BS	EPA-8270	**84.6**			20	150	08/23/2018	JMK
Diethylphthalate - BSD	EPA-8270	**84.7**	**0**		20	150	08/23/2018	JMK
Fluorene - BS	EPA-8270	**87.0**			20	150	08/23/2018	JMK
Fluorene - BSD	EPA-8270	**86.6**	**0**		20	150	08/23/2018	JMK
4-Chlorophenyl-Phenylether - BS	EPA-8270	**85.8**			20	150	08/23/2018	JMK
4-Chlorophenyl-Phenylether - BSD	EPA-8270	**85.9**	**0**		20	150	08/23/2018	JMK
4-Nitroaniline - BS	EPA-8270	**650**		S	20	150	08/23/2018	JMK
4-Nitroaniline - BSD	EPA-8270	**773**	**17**	S	20	150	08/23/2018	JMK
4,6-Dinitro-2-Methylphenol - BS	EPA-8270	**99.1**			20	150	08/23/2018	JMK
4,6-Dinitro-2-Methylphenol - BSD	EPA-8270	**103**	**4**		20	150	08/23/2018	JMK
Azobenzene - BS	EPA-8270	**83.7**			20	150	08/23/2018	JMK
Azobenzene - BSD	EPA-8270	**86.3**	**3**		20	150	08/23/2018	JMK
4-Bromophenyl-Phenylether - BS	EPA-8270	**86.4**			20	150	08/23/2018	JMK
4-Bromophenyl-Phenylether - BSD	EPA-8270	**88.5**	**2**		20	150	08/23/2018	JMK
Hexachlorobenzene - BS	EPA-8270	**83.1**			20	150	08/23/2018	JMK
Hexachlorobenzene - BSD	EPA-8270	**86.0**	**3**		20	150	08/23/2018	JMK
Pentachlorophenol - BS	EPA-8270	**87.5**			41.3	113	08/23/2018	JMK

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LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Pentachlorophenol - BSD	EPA-8270	**91.7**	**5**		41.3	113	08/23/2018	JMK
Phenanthrene - BS	EPA-8270	**83.3**			20	150	08/23/2018	JMK
Phenanthrene - BSD	EPA-8270	**86.6**	**4**		20	150	08/23/2018	JMK
Anthracene - BS	EPA-8270	**81.6**			20	150	08/23/2018	JMK
Anthracene - BSD	EPA-8270	**85.7**	**5**		20	150	08/23/2018	JMK
Carbazole - BS	EPA-8270	**96.9**			20	150	08/23/2018	JMK
Carbazole - BSD	EPA-8270	**111**	**14**		20	150	08/23/2018	JMK
Di-N-Butylphthalate - BS	EPA-8270	**87.5**			20	150	08/23/2018	JMK
Di-N-Butylphthalate - BSD	EPA-8270	**88.7**	**1**		20	150	08/23/2018	JMK
Fluoranthene - BS	EPA-8270	**87.4**			20	150	08/23/2018	JMK
Fluoranthene - BSD	EPA-8270	**89.2**	**2**		20	150	08/23/2018	JMK
Pyrene - BS	EPA-8270	**84.4**			57.4	145	08/23/2018	JMK
Pyrene - BSD	EPA-8270	**86.8**	**3**		57.4	145	08/23/2018	JMK
Butylbenzylphthalate - BS	EPA-8270	**89.0**			20	150	08/23/2018	JMK
Butylbenzylphthalate - BSD	EPA-8270	**90.4**	**2**		20	150	08/23/2018	JMK
Benzo[A]Anthracene - BS	EPA-8270	**85.3**			20	150	08/23/2018	JMK
Benzo[A]Anthracene - BSD	EPA-8270	**87.0**	**2**		20	150	08/23/2018	JMK
Chrysene - BS	EPA-8270	**81.5**			20	150	08/23/2018	JMK
Chrysene - BSD	EPA-8270	**83.2**	**2**		20	150	08/23/2018	JMK
Bis(2-Ethylhexyl)Phthalate - BS	EPA-8270	**91.5**			20	150	08/23/2018	JMK
Bis(2-Ethylhexyl)Phthalate - BSD	EPA-8270	**93.2**	**2**		20	150	08/23/2018	JMK
Di-N-Octylphthalate - BS	EPA-8270	**88.7**			20	150	08/23/2018	JMK
Di-N-Octylphthalate - BSD	EPA-8270	**90.2**	**2**		20	150	08/23/2018	JMK
Benzo[B]Fluoranthene - BS	EPA-8270	**86.7**			20	150	08/23/2018	JMK
Benzo[B]Fluoranthene - BSD	EPA-8270	**88.4**	**2**		20	150	08/23/2018	JMK
Benzo[K]Fluoranthene - BS	EPA-8270	**85.1**			20	150	08/23/2018	JMK
Benzo[K]Fluoranthene - BSD	EPA-8270	**86.5**	**2**		20	150	08/23/2018	JMK
Benzo[A]Pyrene - BS	EPA-8270	**85.6**			20	150	08/23/2018	JMK
Benzo[A]Pyrene - BSD	EPA-8270	**86.9**	**2**		20	150	08/23/2018	JMK
Indeno[1,2,3-Cd]Pyrene - BS	EPA-8270	**94.6**			20	150	08/23/2018	JMK
Indeno[1,2,3-Cd]Pyrene - BSD	EPA-8270	**95.0**	**0**		20	150	08/23/2018	JMK
Dibenz[A,H]Anthracene - BS	EPA-8270	**94.7**			20	150	08/23/2018	JMK
Dibenz[A,H]Anthracene - BSD	EPA-8270	**95.0**	**0**		20	150	08/23/2018	JMK
Benzo[G,H,I]Perylene - BS	EPA-8270	**91.3**			20	150	08/23/2018	JMK
Benzo[G,H,I]Perylene - BSD	EPA-8270	**90.7**	**1**		20	150	08/23/2018	JMK

S - Outside of control limits.

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LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 131851 - Water by EPA-8270

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Pyridine - BS	EPA-8270	**18.6**		SQ3	20	150	08/23/2018	JMK
Pyridine - BSD	EPA-8270	**19.6**	**5**	SQ3	20	150	08/23/2018	JMK
N-Nitrosodimethylamine - BS	EPA-8270	**40.8**			20	150	08/23/2018	JMK
N-Nitrosodimethylamine - BSD	EPA-8270	**44.5**	**9**		20	150	08/23/2018	JMK
Phenol - BS	EPA-8270	**26.5**			5	84	08/23/2018	JMK
Phenol - BSD	EPA-8270	**27.3**	**3**		5	84	08/23/2018	JMK
Aniline - BS	EPA-8270	**25.9**			20	150	08/23/2018	JMK
Aniline - BSD	EPA-8270	**26.0**	**0**		20	150	08/23/2018	JMK
Bis(2-Chloroethyl)Ether - BS	EPA-8270	**93.5**			20	150	08/23/2018	JMK
Bis(2-Chloroethyl)Ether - BSD	EPA-8270	**90.6**	**3**		20	150	08/23/2018	JMK
2-Chlorophenol - BS	EPA-8270	**74.0**			45	111	08/23/2018	JMK
2-Chlorophenol - BSD	EPA-8270	**75.1**	**2**		45	111	08/23/2018	JMK
1,3-Dichlorobenzene - BS	EPA-8270	**48.7**			20	150	08/23/2018	JMK
1,3-Dichlorobenzene - BSD	EPA-8270	**75.9**	**44**		20	150	08/23/2018	JMK
1,4-Dichlorobenzene - BS	EPA-8270	**50.7**			27.1	114	08/23/2018	JMK
1,4-Dichlorobenzene - BSD	EPA-8270	**77.8**	**42**		27.1	114	08/23/2018	JMK
Benzyl Alcohol - BS	EPA-8270	**62.2**			20	150	08/23/2018	JMK
Benzyl Alcohol - BSD	EPA-8270	**62.9**	**1**		20	150	08/23/2018	JMK
1,2-Dichlorobenzene - BS	EPA-8270	**52.1**			20	150	08/23/2018	JMK
1,2-Dichlorobenzene - BSD	EPA-8270	**77.3**	**39**		20	150	08/23/2018	JMK
2-Methylphenol - BS	EPA-8270	**63.8**			20	150	08/23/2018	JMK
2-Methylphenol - BSD	EPA-8270	**64.0**	**0**		20	150	08/23/2018	JMK
Bis(2-Chloroisopropyl)Ether - BS	EPA-8270	**82.6**			20	150	08/23/2018	JMK
Bis(2-Chloroisopropyl)Ether - BSD	EPA-8270	**83.2**	**1**		20	150	08/23/2018	JMK
3&4-Methylphenol - BS	EPA-8270	**58.3**			20	150	08/23/2018	JMK
3&4-Methylphenol - BSD	EPA-8270	**57.7**	**1**		20	150	08/23/2018	JMK
N-Nitroso-Di-N-Propylamine - BS	EPA-8270	**100**			42.2	119	08/23/2018	JMK
N-Nitroso-Di-N-Propylamine - BSD	EPA-8270	**101**	**0**		42.2	119	08/23/2018	JMK
Hexachloroethane - BS	EPA-8270	**44.0**			20	150	08/23/2018	JMK
Hexachloroethane - BSD	EPA-8270	**77.5**	**55**		20	150	08/23/2018	JMK
Nitrobenzene - BS	EPA-8270	**79.7**			20	150	08/23/2018	JMK
Nitrobenzene - BSD	EPA-8270	**85.9**	**7**		20	150	08/23/2018	JMK
Isophorone - BS	EPA-8270	**76.3**			20	150	08/23/2018	JMK
Isophorone - BSD	EPA-8270	**80.1**	**5**		20	150	08/23/2018	JMK
2-Nitrophenol - BS	EPA-8270	**86.4**			20	150	08/23/2018	JMK
2-Nitrophenol - BSD	EPA-8270	**84.7**	**2**		20	150	08/23/2018	JMK
2,4-Dimethylphenol - BS	EPA-8270	**71.7**			20	150	08/23/2018	JMK
2,4-Dimethylphenol - BSD	EPA-8270	**76.3**	**6**		20	150	08/23/2018	JMK
Bis(2-Chloroethoxy)Methane - BS	EPA-8270	**80.1**			20	150	08/23/2018	JMK

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LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Bis(2-Chloroethoxy)Methane - BSD	EPA-8270	**84.9**	**6**		20	150	08/23/2018	JMK
2,4-Dichlorophenol - BS	EPA-8270	**79.8**			20	150	08/23/2018	JMK
2,4-Dichlorophenol - BSD	EPA-8270	**83.2**	**4**		20	150	08/23/2018	JMK
1,2,4-Trichlorobenzene - BS	EPA-8270	**51.5**			29.4	120	08/23/2018	JMK
1,2,4-Trichlorobenzene - BSD	EPA-8270	**76.6**	**39**		29.4	120	08/23/2018	JMK
Naphthalene - BS	EPA-8270	**60.7**			20	150	08/23/2018	JMK
Naphthalene - BSD	EPA-8270	**76.3**	**23**		20	150	08/23/2018	JMK
4-Chloroaniline - BS	EPA-8270	**61.3**			20	150	08/23/2018	JMK
4-Chloroaniline - BSD	EPA-8270	**74.8**	**20**		20	150	08/23/2018	JMK
Hexachlorobutadiene - BS	EPA-8270	**43.0**			20	150	08/23/2018	JMK
Hexachlorobutadiene - BSD	EPA-8270	**75.0**	**54**		20	150	08/23/2018	JMK
4-Chloro-3-Methylphenol - BS	EPA-8270	**81.9**			44	113	08/23/2018	JMK
4-Chloro-3-Methylphenol - BSD	EPA-8270	**85.1**	**4**		44	113	08/23/2018	JMK
2-Methylnaphthalene - BS	EPA-8270	**67.0**			20	150	08/23/2018	JMK
2-Methylnaphthalene - BSD	EPA-8270	**82.5**	**21**		20	150	08/23/2018	JMK
1-Methylnaphthalene - BS	EPA-8270	**65.8**			20	150	08/23/2018	JMK
1-Methylnaphthalene - BSD	EPA-8270	**76.1**	**15**		20	150	08/23/2018	JMK
Hexachlorocyclopentadiene - BS	EPA-8270	**40.1**			20	150	08/23/2018	JMK
Hexachlorocyclopentadiene - BSD	EPA-8270	**73.7**	**59**		20	150	08/23/2018	JMK
2,4,6-Trichlorophenol - BS	EPA-8270	**83.3**			20	150	08/23/2018	JMK
2,4,6-Trichlorophenol - BSD	EPA-8270	**90.0**	**8**		20	150	08/23/2018	JMK
2,4,5-Trichlorophenol - BS	EPA-8270	**82.4**			20	150	08/23/2018	JMK
2,4,5-Trichlorophenol - BSD	EPA-8270	**88.7**	**7**		20	150	08/23/2018	JMK
2-Chloronaphthalene - BS	EPA-8270	**65.4**			20	150	08/23/2018	JMK
2-Chloronaphthalene - BSD	EPA-8270	**81.9**	**22**		20	150	08/23/2018	JMK
2-Nitroaniline - BS	EPA-8270	**163**		SQ1	20	150	08/23/2018	JMK
2-Nitroaniline - BSD	EPA-8270	**169**	**4**	S	20	150	08/23/2018	JMK
Acenaphthylene - BS	EPA-8270	**78.0**			20	150	08/23/2018	JMK
Acenaphthylene - BSD	EPA-8270	**87.9**	**12**		20	150	08/23/2018	JMK
Dimethylphthalate - BS	EPA-8270	**81.9**			20	150	08/23/2018	JMK
Dimethylphthalate - BSD	EPA-8270	**84.2**	**3**		20	150	08/23/2018	JMK
2,6-Dinitrotoluene - BS	EPA-8270	**83.6**			20	150	08/23/2018	JMK
2,6-Dinitrotoluene - BSD	EPA-8270	**87.1**	**4**		20	150	08/23/2018	JMK
Acenaphthene - BS	EPA-8270	**72.4**			41	107	08/23/2018	JMK
Acenaphthene - BSD	EPA-8270	**81.0**	**11**		41	107	08/23/2018	JMK
3-Nitroaniline - BS	EPA-8270	**163**		SQ1	20	150	08/23/2018	JMK
3-Nitroaniline - BSD	EPA-8270	**169**	**4**	S	20	150	08/23/2018	JMK
2,4-Dinitrophenol - BS	EPA-8270	**74.6**			20	150	08/23/2018	JMK
2,4-Dinitrophenol - BSD	EPA-8270	**83.2**	**11**		20	150	08/23/2018	JMK
4-Nitrophenol - BS	EPA-8270	**34.8**			5	63	08/23/2018	JMK

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ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Terracon
21905 - 64th Ave W, Suite 100
Mountlake Terrace, WA 98043

CLIENT CONTACT: Eric Dubcak
CLIENT PROJECT: 81187331

DATE: 9/14/2018
ALS SDG#: EV18080100
WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
4-Nitrophenol - BSD	EPA-8270	**35.2**	**1**		5	63	08/23/2018	JMK
Dibenzofuran - BS	EPA-8270	**79.1**			20	150	08/23/2018	JMK
Dibenzofuran - BSD	EPA-8270	**85.8**	**8**		20	150	08/23/2018	JMK
2,4-Dinitrotoluene - BS	EPA-8270	**83.2**			53.1	136	08/23/2018	JMK
2,4-Dinitrotoluene - BSD	EPA-8270	**85.1**	**2**		53.1	136	08/23/2018	JMK
2,3,4,6-Tetrachlorophenol - BS	EPA-8270	**84.9**			20	150	08/23/2018	JMK
2,3,4,6-Tetrachlorophenol - BSD	EPA-8270	**86.1**	**1**		20	150	08/23/2018	JMK
Diethylphthalate - BS	EPA-8270	**84.7**			20	150	08/23/2018	JMK
Diethylphthalate - BSD	EPA-8270	**83.4**	**2**		20	150	08/23/2018	JMK
Fluorene - BS	EPA-8270	**79.7**			20	150	08/23/2018	JMK
Fluorene - BSD	EPA-8270	**83.8**	**5**		20	150	08/23/2018	JMK
4-Chlorophenyl-Phenylether - BS	EPA-8270	**77.1**			20	150	08/23/2018	JMK
4-Chlorophenyl-Phenylether - BSD	EPA-8270	**83.1**	**8**		20	150	08/23/2018	JMK
4-Nitroaniline - BS	EPA-8270	**97.4**			20	150	08/23/2018	JMK
4-Nitroaniline - BSD	EPA-8270	**94.7**	**3**		20	150	08/23/2018	JMK
4,6-Dinitro-2-Methylphenol - BS	EPA-8270	**90.3**			20	150	08/23/2018	JMK
4,6-Dinitro-2-Methylphenol - BSD	EPA-8270	**94.7**	**5**		20	150	08/23/2018	JMK
Azobenzene - BS	EPA-8270	**81.7**			20	150	08/23/2018	JMK
Azobenzene - BSD	EPA-8270	**88.0**	**7**		20	150	08/23/2018	JMK
4-Bromophenyl-Phenylether - BS	EPA-8270	**78.8**			20	150	08/23/2018	JMK
4-Bromophenyl-Phenylether - BSD	EPA-8270	**85.8**	**8**		20	150	08/23/2018	JMK
Hexachlorobenzene - BS	EPA-8270	**76.7**			20	150	08/23/2018	JMK
Hexachlorobenzene - BSD	EPA-8270	**81.0**	**5**		20	150	08/23/2018	JMK
Pentachlorophenol - BS	EPA-8270	**77.6**			33	124	08/23/2018	JMK
Pentachlorophenol - BSD	EPA-8270	**81.0**	**4**		33	124	08/23/2018	JMK
Phenanthrene - BS	EPA-8270	**78.8**			20	150	08/23/2018	JMK
Phenanthrene - BSD	EPA-8270	**83.2**	**5**		20	150	08/23/2018	JMK
Anthracene - BS	EPA-8270	**81.3**			20	150	08/23/2018	JMK
Anthracene - BSD	EPA-8270	**85.8**	**5**		20	150	08/23/2018	JMK
Carbazole - BS	EPA-8270	**54.9**			20	150	08/23/2018	JMK
Carbazole - BSD	EPA-8270	**59.9**	**9**		20	150	08/23/2018	JMK
Di-N-Butylphthalate - BS	EPA-8270	**85.3**			20	150	08/23/2018	JMK
Di-N-Butylphthalate - BSD	EPA-8270	**88.2**	**3**		20	150	08/23/2018	JMK
Fluoranthene - BS	EPA-8270	**81.8**			20	150	08/23/2018	JMK
Fluoranthene - BSD	EPA-8270	**84.6**	**3**		20	150	08/23/2018	JMK
Pyrene - BS	EPA-8270	**79.3**			18	136	08/23/2018	JMK
Pyrene - BSD	EPA-8270	**85.3**	**7**		18	136	08/23/2018	JMK
Butylbenzylphthalate - BS	EPA-8270	**87.3**			20	150	08/23/2018	JMK
Butylbenzylphthalate - BSD	EPA-8270	**92.1**	**5**		20	150	08/23/2018	JMK
Benzo[A]Anthracene - BS	EPA-8270	**80.9**			20	150	08/23/2018	JMK

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ALS Environmental

CERTIFICATE OF ANALYSIS

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21905 - 64th Ave W, Suite 100
Mountlake Terrace, WA 98043

CLIENT CONTACT: Eric Dubcak
CLIENT PROJECT: 81187331

DATE: 9/14/2018
ALS SDG#: EV18080100
WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Benzo[A]Anthracene - BSD	EPA-8270	**84.0**	**4**		20	150	08/23/2018	JMK
Chrysene - BS	EPA-8270	**76.7**			20	150	08/23/2018	JMK
Chrysene - BSD	EPA-8270	**79.5**	**4**		20	150	08/23/2018	JMK
Bis(2-Ethylhexyl)Phthalate - BS	EPA-8270	**89.2**			20	150	08/23/2018	JMK
Bis(2-Ethylhexyl)Phthalate - BSD	EPA-8270	**94.3**	**6**		20	150	08/23/2018	JMK
Di-N-Octylphthalate - BS	EPA-8270	**85.6**			20	150	08/23/2018	JMK
Di-N-Octylphthalate - BSD	EPA-8270	**87.7**	**2**		20	150	08/23/2018	JMK
Benzo[B]Fluoranthene - BS	EPA-8270	**82.0**			20	150	08/23/2018	JMK
Benzo[B]Fluoranthene - BSD	EPA-8270	**87.3**	**6**		20	150	08/23/2018	JMK
Benzo[K]Fluoranthene - BS	EPA-8270	**81.0**			20	150	08/23/2018	JMK
Benzo[K]Fluoranthene - BSD	EPA-8270	**84.3**	**4**		20	150	08/23/2018	JMK
Benzo[A]Pyrene - BS	EPA-8270	**81.4**			20	150	08/23/2018	JMK
Benzo[A]Pyrene - BSD	EPA-8270	**83.9**	**3**		20	150	08/23/2018	JMK
Indeno[1,2,3-Cd]Pyrene - BS	EPA-8270	**87.0**			20	150	08/23/2018	JMK
Indeno[1,2,3-Cd]Pyrene - BSD	EPA-8270	**87.0**	**0**		20	150	08/23/2018	JMK
Dibenz[A,H]Anthracene - BS	EPA-8270	**88.2**			20	150	08/23/2018	JMK
Dibenz[A,H]Anthracene - BSD	EPA-8270	**88.4**	**0**		20	150	08/23/2018	JMK
Benzo[G,H,I]Perylene - BS	EPA-8270	**81.9**			20	150	08/23/2018	JMK
Benzo[G,H,I]Perylene - BSD	EPA-8270	**83.3**	**2**		20	150	08/23/2018	JMK

SQ1 - Spike outside of control limits with a high bias. Associated compounds non-detect. No corrective action taken.
SQ3 - Spike outside of control limits due to sporadic marginal failure. All other spikes in extraction fraction within control limits.

ALS Test Batch ID: 131842 - Soil by EPA-8082

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
PCB-1016 - BS	EPA-8082	**80.0**			50	150	08/20/2018	JMK
PCB-1016 - BSD	EPA-8082	**85.1**	**6**		50	150	08/20/2018	JMK
PCB-1260 - BS	EPA-8082	**79.3**			50	150	08/20/2018	JMK
PCB-1260 - BSD	EPA-8082	**86.1**	**8**		50	150	08/20/2018	JMK

ALS Test Batch ID: 131799 - Water by EPA-8082

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
PCB-1016 - BS	EPA-8082	**84.1**			44	152	08/22/2018	PAB
PCB-1016 - BSD	EPA-8082	**101**	**18**		44	152	08/22/2018	PAB
PCB-1260 - BS	EPA-8082	**103**			44	152	08/22/2018	PAB
PCB-1260 - BSD	EPA-8082	**112**	**8**		44	152	08/22/2018	PAB

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CERTIFICATE OF ANALYSIS

CLIENT: Terracon
21905 - 64th Ave W, Suite 100
Mountlake Terrace, WA 98043

CLIENT CONTACT: Eric Dubcak
CLIENT PROJECT: 81187331

DATE: 9/14/2018
ALS SDG#: EV18080100
WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: R323419 - Soil by EPA-7196

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Chromium (VI) - BS	EPA-7196	**98.0**			91	114	09/14/2018	JMK
Chromium (VI) - BSD	EPA-7196	**99.0**	**1**		91	114	09/14/2018	JMK

ALS Test Batch ID: R322340 - Soil by EPA-7471

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Mercury - BS	EPA-7471	**102**			81.8	117	08/23/2018	RAL
Mercury - BSD	EPA-7471	**103**	**1**		81.8	117	08/23/2018	RAL

ALS Test Batch ID: R322339 - Water by EPA-245.1

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Mercury - BS	EPA-245.1	**109**			80.6	118	08/23/2018	RAL
Mercury - BSD	EPA-245.1	**107**	**1**		80.6	118	08/23/2018	RAL

ALS Test Batch ID: 131751 - Soil by EPA-6020

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Arsenic - BS	EPA-6020	**101**			80	120	08/22/2018	RAL
Arsenic - BSD	EPA-6020	**100**	**1**		80	120	08/22/2018	RAL
Cadmium - BS	EPA-6020	**103**			80	120	08/22/2018	RAL
Cadmium - BSD	EPA-6020	**102**	**0**		80	120	08/22/2018	RAL
Chromium - BS	EPA-6020	**103**			80	120	08/22/2018	RAL
Chromium - BSD	EPA-6020	**103**	**0**		80	120	08/22/2018	RAL
Lead - BS	EPA-6020	**104**			80	120	08/22/2018	RAL
Lead - BSD	EPA-6020	**102**	**2**		80	120	08/22/2018	RAL

ALS Test Batch ID: 131752 - Water by EPA-200.8

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Arsenic - BS	EPA-200.8	**104**			89.1	110	08/22/2018	RAL
Arsenic - BSD	EPA-200.8	**102**	**2**		89.1	110	08/22/2018	RAL
Cadmium - BS	EPA-200.8	**106**			89.4	109	08/22/2018	RAL
Cadmium - BSD	EPA-200.8	**104**	**1**		89.4	109	08/22/2018	RAL
Chromium - BS	EPA-200.8	**105**			88.3	110.2	08/22/2018	RAL
Chromium - BSD	EPA-200.8	**103**	**2**		88.3	110.2	08/22/2018	RAL
Lead - BS	EPA-200.8	**103**			87.5	107	08/22/2018	RAL
Lead - BSD	EPA-200.8	**102**	**1**		87.5	107	08/22/2018	RAL

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CERTIFICATE OF ANALYSIS

APPROVED BY

Technical Manager

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Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only): EV1808000

Date 8/17/18 Page 1 Of 1

PROJECT ID: 81187331
REPORT TO COMPANY: Terracon
PROJECT MANAGER: Eric Dubcak
ADDRESS: 21905 64th Ave W, Ste 100
Mountlake Terrace, WA 98043
PHONE: 425.771.3304 P.O. #:
E-MAIL: eric.dubcak@terracon.com, jeff.dobbins@terracon.com
INVOICE TO COMPANY: Same as above
ATTENTION:
ADDRESS:

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA 8021 ☐ BTEX by EPA 8260 ☐	MTBE by EPA 8021 ☐ MTBE by EPA 8260 ☐	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA 8270 SIM	PCB by EPA 8082 ☐ Pesticides by EPA 8081 ☐	Metals-MTCA-5 ☐ RCRA-8 ☐ Pri Pol ☐ TAL ☐	Metals Other (Specify)	TCLP-Metals ☐ VOA ☐ Semi-Vol ☐ Pest ☐ Herbs ☐	OTHER (Specify): Furans/Dioxins			Hexavalent Chromium				NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. B6-3	8/17/18	805	soil	1		X	X				X			X						X								
2. B4-7		950		2		X	X				X			X														
3. B3-6.5		1105		3		X	X				X			X														
4. B3-17.5		1125		4		X	X				X			X														
5. B1-6.5		1435		5		X	X				X			X		X	X											
6. B1-2.5		1430		6		X	X				X			X		X	X											
7. B5-2.5		1255		7		X	X				X			X						X								
8. B5-18		1305		8		X	X				X			X						X								
9. B2-3		1345	↓	9		X	X				X			X		X	X						(X)					
10. B2	↓	1410	Water	10		X	X				X			X		X	X											

SPECIAL INSTRUCTIONS: (X) Added 9/11/18 on 3day TAT

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: Jeff Dobbins, Terracon, 8/17/18 1620
   Received By: Shawn Robinson ALS 8/17/18 1620
2. Relinquished By: _____
   Received By: _____

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: 10 (Standard) | 5 | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis: (5) (Standard) | 3 | 1 | SAME DAY

OTHER: Specify: _____

*Turnaround request less than standard may incur Rush Charges

August 31, 2018 Service Request No:E1800770

Rick Bagan
ALS Environmental
8620 Holly Drive #100
Everett, WA 98208

Laboratory Results for: EV18080100 Dioxins Furans Analysis

Dear Rick,

Enclosed are the results of the sample(s) submitted to our laboratory August 21, 2018
For your reference, these analyses have been assigned our service request number **E1800770.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the final complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. In accordance to the TNI 2009 Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Please contact me if you have any questions. My extension is 2284. You may also contact me via email at Nicole.Brown@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Nicole Brown
Project Manager

ADDRESS 10450 Stancliff Rd., Suite 210, Houston, TX 77099
PHONE +1 713 266 1599 | FAX +1 713 266 0130
ALS Group USA, Corp.
dba ALS Environmental

Certificate of Analysis

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Environmental

Client:	ALS Group USA, Corp – Everett, WA	**Service Request No.:**	E1800770
Project:	EV18080100 Dioxins Furans Analysis	**Date Received:**	08/21/18
Sample Matrix:	Soil		

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Two soil samples were received for analysis at ALS Environmental in Houston on 08/21/18.

The samples were received at 13.8 °C in good condition and are consistent with the accompanying chain of custody form. Dioxin/furan compounds are stable at room temperature. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

Data Validation Notes and Discussion

B flags – Method Blanks

The Method Blank EQ1800346-01 contained low levels of 1234678-HpCDD, 1234678-HpCDF, OCDD and OCDF below the Method Reporting Limit (MRL). The associated compounds in the samples are flagged with 'B' flags where the sample result is less than ten times the level detected in the method blank.

MS/MSD

EQ1800346: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in lieu of an MS/MSD for this extraction batch.

2378-TCDF

Samples analyzed on the DB-5MSUI column were analyzed under conditions where sufficient separation between 2,3,7,8-TCDF and its closest eluter was achieved. Confirmation of this result was not required.

K flags

EMPC - When the ion abundance ratios associated with a particular compound are outside the QC limits, samples are flagged with a 'K' flag. A 'K' flag indicates an estimated maximum possible concentration for the associated compound.

Detection Limits

Detection limits are calculated for each analyte in each sample by measuring the height of the noise level for each quantitation ion for the associated labeled standard. The concentration equivalent to 2.5 times the height of the noise is then calculated using the appropriate response factor and the weight of the sample. The calculated concentration equals the detection limit.

The TEQ Summary results for each sample have been calculated by ALS/Houston to include:

- WHO-2005 TEFs, The 2005 World Health Organization Reevaluation of Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-Like Compounds (M. Van den Berg et al., Toxicological Sciences 93(2):223-241, 2006)
- Non-detected compounds are not included in the 'Total'

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

Client: ALS Environmental - Everett **Service Request:**E1800770

Project: EV18080100 Dioxins Furans Analysis

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E1800770-001	EV18080100-07 B5-2.5	8/17/2018	1255
E1800770-002	EV18080100-08 B5-18	8/17/2018	1305

Service Request Summary

Folder #: **E1800770**
Client Name: ALS Environmental - Everett
Project Name: EV18080100 Dioxins Furans Analysis
Project Number:

Report To: Rick Bagan
ALS Environmental
8620 Holly Drive #100
Everett, WA 98208
USA
Phone Number: 425-356-2600
Cell Number:
Fax Number:
E-mail: rick.bagan@alsglobal.com

Project Chemist: Nicole Brown
Originating Lab: HOUSTON
Logged By: ALOPEZ
Date Received: 08/21/18
Internal Due Date: 8/31/2018
QAP: LAB QAP
Qualifier Set: HRMS Qualifier Set
Formset: Lab Standard
Merged?: N
Report to MDL?: Y
P.O. Number: 32-EV18080100
EDD: No EDD Specified

2 4 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved
Location: EHRMS-WIC 1C
Pressure Gas:

				HOUSTON	
Lab Samp No.	**Client Samp No**	**Matrix**	**Collected**	Dioxins Furans/1613B	Total Solids/ALS SOP
E1800770-001	EV18080100-07	Soil	08/17/18 1255	II	II
E1800770-002	EV18080100-08	Soil	08/17/18 1305	II	II

Folder Comments:

Client requested results by noon 8/31

Data Qualifiers

HRMS Qualifier Set

B	Indicates the associated analyte was found in the method blank at >1/10th the reported value.
E	Estimated value. The reported concentration is above the calibration range of the instrument.
H	Sample extracted and/or analyzed out of suggested holding time.
J	Estimated value. The reported concentration is below the MRL.
K	The ion abundance ratio between the primary and secondary ions were outside of theoretical acceptance limits.The concentration of this analyte should be considered as an estimate.
P	Chlorodiphenyl ether interference was present at the retention time of the target analyte. Reported result should be considered an estimate.
Q	Monitored lock-mass indicates matrix-interference. Reported result is estimated.
S	Signal saturated detector. Result reported from dilution.
U	Compound was analyzed for, but was not detected (ND).
X	See Case Narrative.
Y	Isotopically Labeled Standard recovery outside of acceptance limits. In all cases, the signal-to-nois ratios are greater than 10:1, making the recoveries acceptable.
i	The MDL/MRL have been elevated due to a matrix interference.

ALS Laboratory Group

Acronyms

Cal	Calibration
Conc	CONCentration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

ALS Environmental

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01	11/30/2019
Arizona Department of Health Services	AZ0793	5/27/2019
Arkansas Department of Environmental Quality	17-027-0	3/27/2019
California Department of Health Services	2452	4/30/2019
Florida Department of Health	E87611	7/31/2019
Illinois Environmental Protection Agency	004112	5/29/2019
Kansas Department of Health and Environment	E-10406	7/31/2019
Louisiana Department of Environmental Quality	03048	6/30/2019
Louisiana Department of Health and Hospitals	LA150026	12/31/2018
Maine Center for Disease Control and Prevention	2014019	6/5/2020
Minnesota Department of Health	840911	12/31/2018
New Jersey Department of Environmental Protection	NLC140001	6/30/2019
New York Department of Health	11707	4/1/2019
Oklahoma Department of Environmental Quality	2014 124	8/31/2019
Pennsylvania Department of Environmental Protection	68-03441	6/30/2019
Tennessee Department of Environment and Concervation	04016	6/30/2019
Texas Commision on Environmental Quality	TX104704231-17-18	4/30/2019
Utah Department of Health Environmental Laboratory Certification	TX02694	7/3/2019
Washington Department of Health	c819	11/14/2018
West Virginia Department of Environmental Protection	347	6/30/2019

ALS ENVIRONMENTAL – Houston
Data Processing/Form Production and Peer Review Signatures

SR# Unique ID: E1800770 | DB-5MSUI | SPB-Octyl

First Level - Data Processing - to be filled by person generating the forms

Date:	Analyst:	Samples:
08/31/18	[signature]	001, 002

Second Level - Data Review – to be filled by person doing peer review

Date:	Analyst:	Samples:
08/31/18	LM	001, 002

Chain of Custody

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

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

Chain Of Custody/ Laboratory Analysis Request

E1800770 5
ALS Environmental
EV18080100 Dioxins Furans Analysis

Date 8/20/18 Page 1 Of 1

PROJECT ID:	EV18080100
REPORT TO COMPANY:	ALS Environmental
PROJECT MANAGER:	Rick Bagan
ADDRESS:	8620 Holly Drive #100 Everett WA 98208
PHONE: (425) 356-2600	P.O. #: 32-EV18080100
E-MAIL:	rick.bagan@alsglobal.com
INVOICE TO COMPANY:	
ATTENTION:	Same
ADDRESS:	

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA 8021 ☐ BTEX by EPA 8260 ☐	MTBE by EPA 8021 ☐ MTBE by EPA 8260 ☐	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA 8270 SIM	PCB by EPA 8082 ☐ Pesticides by EPA 8081 ☐	Metals-MTCA-5 ☐ RCRA-8 ☐ Pri Pol ☐ TAL ☐	Metals Other (Specify)	TCLP-Metals ☐ VOA ☐ Semi-Vol ☐ Pest ☐ Herbs ☐	OTHER (Specify)	Dioxins/Furans by EPA-1613					NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. EV18080100-07	8/17/18	1255	S																	X					1	
2. EV18080100-08	8/17/18	1305	S																	X					1	
3.																										
4.																										
5.																										
6.																										
7.																										
8.																										
9.																										
10.																										

SPECIAL INSTRUCTIONS Please email results by noon 8/31/18 (ALS National Contract Terracon)

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: Shawn Robinson ALS 8/20/18 9:58 am
   Received By:
2. Relinquished By:
   Received By: ALS 8/21/18 0858

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis
10 Standard | 5 | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis
5 Standard | 3 | 1 | SAME DAY

OTHER:
Specify:

*Turnaround request less than standard may incur Rush Charges

Cooler Receipt Form

ALS Environmental

Project Chemist NB

Client/Project ALS Everett, WA / EV18080100 Thermometer ID SM04

Date/Time Received: 8/21/18 0850 Initials: NB Date/Time Logged in: 8/21/18 Initials NB

1. Method of delivery: ○ US Mail ● Fed Ex ○ UPS ○ DHL ○ Courier ○ Client
2. Samples received in: ● Cooler ○ Box ○ Envelope ○ Other
3. Were custody seals on coolers? ○ Yes ● No If yes, how many and where?
   Were they intact? ○ Yes ○ No ● N/A
   Were they signed and dated? ○ Yes ○ No ● N/A
4. Packing Material: ○ Inserts ○ Baggies ● Bubble Wrap ● Gel Packs ○ Wet Ice ○ Sleeves ○ Other
5. Foreign or Regulated Soil? ○ Yes ● No Location of Sampling:

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
8133 8630 1880		8/21/18	1503	NB	13.4/13.8	☐
						☐
						☐
						☐

6. Were custody papers properly filled out (ink, signed, dated, etc)? ● Yes ○ No
7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ● Yes ○ No
8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ● Yes ○ No
9. Were appropriate bottles/containers and volumes received for the requested tests? ● Yes ○ No
10. Did sample labels and tags agree with custody documents? ● Yes ○ No

Notes, Discrepancies, & Resolutions:

Service request Label:

E1800770 5
ALS Environmental
EV18080100 Dioxins Furans Analysis

10450 Stancliff Rd., Suite 210
Houston, TX 77099
T: +1 713 266 1599
F: +1 713 266 1599
www.alsglobal.com

SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

Cooler Custody Seals (desirable, mandatory if specified in SAP):

- ✓ Intact on outside of cooler, signed and dated

Chain-of-Custody (COC) documentation (mandatory):

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sampleThe COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

Sample Integrity (mandatory):

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

Temperature Requirement (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6ºC.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10ºC.
- ✓ Air samples are shipped and stored cold, at 0 to 6ºC
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report

Preparation Information Benchsheets

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Preparation Information Benchsheet

Prep Run#: 320792 **Prep WorkFlow:** OrgExtS(365) **Status:** Prepped
Team: Semivoa GCMS/TWOODS **Prep Method:** Method Soxhlet **Prep Date/Time:** 8/28/18 11:00 AM

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E1800770-001	EV18080100-07	.01	1613B/Dioxins Furans			Soil	10.756g	Brown Mud
2	E1800770-002	EV18080100-08	.01	1613B/Dioxins Furans			Soil	10.596g	Grey Mud
3	E1800777-001	sludge	.01	1613B/Dioxins Furans			Sludge, Solid	10.566g	Brown Mud
4	EQ1800346-01	MB		1613B/Dioxins Furans			Solid	10.213g	
5	EQ1800346-02	LCS		1613B/Dioxins Furans			Solid	10.064g	
6	EQ1800346-03	DLCS		1613B/Dioxins Furans			Solid	10.283g	
7	J1805887-001	71623	.02	1613B/Dioxins Furans			Solid	10.259g	Brown + White Cardboard
8	K1806860-001	NDL38G16001-11 18-0863-001	.01	1613B/Dioxins Furans			Pulp Sheet	10.110g	APOSEY K- BALANCE -48 / White Paper Strips
9	K1807007-001	7/11/2018 18-0833-001	.01	1613B/Dioxins Furans			Paper	10.059g	White Paper Squares
10	K1807307-001	GT 18-030803015	.01	1613B/Dioxins Furans			Pulp Sheet	10.157g	White Paper Strips
11	K1807321-004	Composite	.01	1613B/Dioxins Furans			Paperboard	10.045g	Brown Paper Strips
12	K1807491-001	18-040807003	.02	1613B/Dioxins Furans			Paperboard	10.099g	White Paper Strips

Spiking Solutions

Name: 1613B Matrix Working Standard Inventory ID 192373 Logbook Ref: 192373 AL 8/9/18 2-20 ng/mL Expires On: 02/05/2019

EQ1800346-02	100.00µL	EQ1800346-03	100.00µL

Name: 8290/1613B Cleanup Working Standard Inventory ID 192605 Logbook Ref: TW 08/20/18 192605 8NG/ML Expires On: 10/27/2018

E1800770-001	100.00µL	E1800770-002	100.00µL	E1800777-001	100.00µL	EQ1800346-01	100.00µL	EQ1800346-02	100.00µL	EQ1800346-03	100.00µL
J1805887-001	100.00µL	K1806860-001	100.00µL	K1807007-001	100.00µL	K1807307-001	100.00µL	K1807321-004	100.00µL	K1807491-001	100.00µL

Name: 1613B Labeled Working Standard Inventory ID 192722 Logbook Ref: 192719 JG 8/27/18 2-4ngml Expires On: 01/09/2019

E1800770-001	1,000.00µL	E1800770-002	1,000.00µL	E1800777-001	1,000.00µL	EQ1800346-01	1,000.00µL	EQ1800346-02	1,000.00µL	EQ1800346-03	1,000.00µL
J1805887-001	1,000.00µL	K1806860-001	1,000.00µL	K1807007-001	1,000.00µL	K1807307-001	1,000.00µL	K1807321-004	1,000.00µL	K1807491-001	1,000.00µL

Preparation Materials

Carbon, High Purity	AL 8/10/18 (192392)	Ethyl Acetate 99.9% Minimum EtOAc	tw ethyl acet 080218 (192158)	Glass Wool	GLASS WOOL (190875)
Hexanes 95%	AL 7/30/18 (192056)	Dichloromethane (Methylene Chloride) 99.9% MeCl2	AL 6/28/18 (191236)	Sodium Hydroxide 1N NaOH	TW 6/14/18 (191093)
Sodium Sulfate Anhydrous Reagent Grade Na2SO4	AL 7/30/18 (192040)	Tridecane (n-Tridecane)	AL 7/30/18 (192037)	Silica Gel	AL 7/30/18 (192039)
sulfuric acid	SULFURIC ACID (190871)	Toluene 99.9% Minimum	AL 8/24/18 (192703)		

Preparation Information Benchsheet

Prep Run#: 320792 **Prep WorkFlow:** OrgExtS(365) **Status:** Prepped
Team: Semivoa GCMS/TWOODS **Prep Method:** Method Soxhlet **Prep Date/Time:** 8/28/18 11:00 AM

Preparation Steps

Step:	Extraction	Step:	Acid Clean	Step:	Silica Gel Clean	Step:	Final Volume
Started:	8/28/18 11:00	Started:	8/29/18 13:00	Started:	8/30/18 09:00	Started:	8/30/18 12:00
Finished:	8/29/18 07:00	Finished:	8/29/18 14:00	Finished:	8/30/18 12:00	Finished:	8/30/18 15:00
By:	ALOPEZ	By:	ALOPEZ	By:	ALOPEZ	By:	ALOPEZ
Comments		Comments		Comments		Comments	

Comments: _____

Reviewed By: _____ Date: _____

Chain of Custody

Relinquished By: _____ Date: _____ Extracts Examined

Received By: _____ Date: _____ Yes No

E1800770 17 of 39

Analytical Results

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Client:	ALS Environmental - Everett	**Service Request:**	E1800770
Project:	EV18080100 Dioxins Furans Analysis	**Date Collected:**	08/17/18 12:55
Sample Matrix:	Soil	**Date Received:**	08/21/18 08:58
Sample Name:	EV18080100-07	**Units:**	ng/Kg
Lab Code:	E1800770-001	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	08/31/18 03:48
Prep Method:	Method Soxhlet	**Date Extracted:**	8/28/18
Sample Amount:	10.756g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P614375	**Blank File Name:**	P614371
ICAL Date:	03/29/18	**Cal Ver. File Name:**	P614368

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	0.294	**JK**	0.125	0.677	0.39	1.000	1
1,2,3,7,8-PeCDD	1.40	**J**	0.0641	3.38	1.50	1.001	1
1,2,3,4,7,8-HxCDD	1.58	**J**	0.104	3.38	1.39	1.000	1
1,2,3,6,7,8-HxCDD	14.4		0.115	3.38	1.28	1.000	1
1,2,3,7,8,9-HxCDD	4.04		0.101	3.38	1.23	1.008	1
1,2,3,4,6,7,8-HpCDD	126		0.124	3.38	1.05	1.000	1
OCDD	589		0.234	6.77	0.91	1.000	1
2,3,7,8-TCDF	0.808		0.0695	0.677	0.69	1.001	1
1,2,3,7,8-PeCDF	0.704	**JK**	0.118	3.38	1.89	1.001	1
2,3,4,7,8-PeCDF	2.01	**J**	0.120	3.38	1.66	1.002	1
1,2,3,4,7,8-HxCDF	3.72		0.196	3.38	1.29	1.000	1
1,2,3,6,7,8-HxCDF	3.94		0.201	3.38	1.28	1.000	1
1,2,3,7,8,9-HxCDF	0.988	**J**	0.210	3.38	1.24	1.001	1
2,3,4,6,7,8-HxCDF	8.89		0.201	3.38	1.22	1.000	1
1,2,3,4,6,7,8-HpCDF	294		0.366	3.38	1.06	1.000	1
1,2,3,4,7,8,9-HpCDF	6.41		0.402	3.38	1.02	1.000	1
OCDF	669		0.0762	6.77	0.90	1.004	1

Client:	ALS Environmental - Everett	**Service Request:**	E1800770
Project:	EV18080100 Dioxins Furans Analysis	**Date Collected:**	08/17/18 12:55
Sample Matrix:	Soil	**Date Received:**	08/21/18 08:58
Sample Name:	EV18080100-07	**Units:**	ng/Kg
Lab Code:	E1800770-001	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	08/31/18 03:48
Prep Method:	Method Soxhlet	**Date Extracted:**	8/28/18
Sample Amount:	10.756g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P614375	**Blank File Name:**	P614371
ICAL Date:	03/29/18	**Cal Ver. File Name:**	P614368

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	11.1		0.125	0.677	0.80		1
Total Penta-Dioxins	15.5		0.0641	3.38	1.59		1
Total Hexa-Dioxins	74.4		0.106	3.38	1.28		1
Total Hepta-Dioxins	164		0.124	3.38	1.08		1
Total Tetra-Furans	15.8		0.0695	0.677	0.70		1
Total Penta-Furans	29.8		0.119	3.38	1.56		1
Total Hexa-Furans	268		0.202	3.38	1.23		1
Total Hepta-Furans	940		0.382	3.38	1.06		1

Client:	ALS Environmental - Everett	**Service Request:**	E1800770
Project:	EV18080100 Dioxins Furans Analysis	**Date Collected:**	08/17/18 12:55
Sample Matrix:	Soil	**Date Received:**	08/21/18 08:58
Sample Name:	EV18080100-07	**Units:**	Percent
Lab Code:	E1800770-001	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	08/31/18 03:48
Prep Method:	Method Soxhlet	**Date Extracted:**	8/28/18
Sample Amount:	10.756g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P614375	**Blank File Name:**	P614371
ICAL Date:	03/29/18	**Cal Ver. File Name:**	P614368

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	959.592	48		25-164	0.79	1.030
13C-1,2,3,7,8-PeCDD	2000	1291.071	65		25-181	1.58	1.246
13C-1,2,3,4,7,8-HxCDD	2000	1367.171	68		32-141	1.28	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1211.423	61		28-130	1.27	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1349.927	67		23-140	1.07	1.071
13C-OCDD	4000	1654.399	41		17-157	0.92	1.141
13C-2,3,7,8-TCDF	2000	1267.534	63		24-169	0.79	0.988
13C-1,2,3,7,8-PeCDF	2000	1513.672	76		24-185	1.60	1.192
13C-2,3,4,7,8-PeCDF	2000	1377.535	69		21-178	1.60	1.233
13C-1,2,3,4,7,8-HxCDF	2000	1549.245	77		26-152	0.54	0.968
13C-1,2,3,6,7,8-HxCDF	2000	1360.346	68		26-123	0.53	0.971
13C-1,2,3,7,8,9-HxCDF	2000	1702.232	85		29-147	0.53	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1456.253	73		28-136	0.54	0.986
13C-1,2,3,4,6,7,8-HpCDF	2000	1332.030	67		28-143	0.46	1.046
13C-1,2,3,4,7,8,9-HpCDF	2000	1566.301	78		26-138	0.46	1.083
37Cl-2,3,7,8-TCDD	800	574.225	72		35-197	NA	1.030

Client:	ALS Environmental - Everett	**Service Request:**	E1800770
Project:	EV18080100 Dioxins Furans Analysis	**Date Collected:**	08/17/18 12:55
Sample Matrix:	Soil	**Date Received:**	08/21/18 08:58
Sample Name:	EV18080100-07	**Units:**	ng/Kg
Lab Code:	E1800770-001	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Soxhlet

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	**0.294**	0.125	0.677	1	1	0.294
1,2,3,7,8-PeCDD	**1.40**	0.0641	3.38	1	1	1.40
1,2,3,4,7,8-HxCDD	**1.58**	0.104	3.38	1	0.1	0.158
1,2,3,6,7,8-HxCDD	**14.4**	0.115	3.38	1	0.1	1.44
1,2,3,7,8,9-HxCDD	**4.04**	0.101	3.38	1	0.1	0.404
1,2,3,4,6,7,8-HpCDD	**126**	0.124	3.38	1	0.01	1.26
OCDD	**589**	0.234	6.77	1	0.0003	0.177
2,3,7,8-TCDF	**0.808**	0.0695	0.677	1	0.1	0.0808
1,2,3,7,8-PeCDF	**0.704**	0.118	3.38	1	0.03	0.0211
2,3,4,7,8-PeCDF	**2.01**	0.120	3.38	1	0.3	0.603
1,2,3,4,7,8-HxCDF	**3.72**	0.196	3.38	1	0.1	0.372
1,2,3,6,7,8-HxCDF	**3.94**	0.201	3.38	1	0.1	0.394
1,2,3,7,8,9-HxCDF	**0.988**	0.210	3.38	1	0.1	0.0988
2,3,4,6,7,8-HxCDF	**8.89**	0.201	3.38	1	0.1	0.889
1,2,3,4,6,7,8-HpCDF	**294**	0.366	3.38	1	0.01	2.94
1,2,3,4,7,8,9-HpCDF	**6.41**	0.402	3.38	1	0.01	0.0641
OCDF	**669**	0.0762	6.77	1	0.0003	0.201
		Total TEQ				10.8

2005 WHO TEFs, ND = 0

Client:	ALS Environmental - Everett	**Service Request:**	E1800770
Project:	EV18080100 Dioxins Furans Analysis	**Date Collected:**	08/17/18 12:55
Sample Matrix:	Soil	**Date Received:**	08/21/18 08:58
Sample Name:	EV18080100-07	**Units:**	Percent
Lab Code:	E1800770-001	**Basis:**	As Received

Total Solids

Analysis Method:	ALS SOP	**Date Analyzed:**	08/30/18 10:46
	6.944g		NA
			E-Balance-01

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Solids	68.7		-	-			1

Client:	ALS Environmental - Everett	**Service Request:**	E1800770
Project:	EV18080100 Dioxins Furans Analysis	**Date Collected:**	08/17/18 13:05
Sample Matrix:	Soil	**Date Received:**	08/21/18 08:58
Sample Name:	EV18080100-08	**Units:**	ng/Kg
Lab Code:	E1800770-002	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	08/31/18 04:37
Prep Method:	Method Soxhlet	**Date Extracted:**	8/28/18
Sample Amount:	10.596g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P614376	**Blank File Name:**	P614371
ICAL Date:	03/29/18	**Cal Ver. File Name:**	P614368

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	0.323**JK**		0.166	0.648	0.60	1.001	1
1,2,3,7,8-PeCDD	ND	U	0.0599	3.24			1
1,2,3,4,7,8-HxCDD	ND	U	0.0445	3.24			1
1,2,3,6,7,8-HxCDD	0.0939**JK**		0.0493	3.24	0.73	1.000	1
1,2,3,7,8,9-HxCDD	0.0859**JK**		0.0431	3.24	0.84	1.008	1
1,2,3,4,6,7,8-HpCDD	3.06**J**		0.0608	3.24	1.06	1.001	1
OCDD	44.9		0.130	6.48	0.93	1.000	1
2,3,7,8-TCDF	0.593**J**		0.0423	0.648	0.77	1.001	1
1,2,3,7,8-PeCDF	0.0806**JK**		0.0479	3.24	1.05	1.001	1
2,3,4,7,8-PeCDF	ND	U	0.0480	3.24			1
1,2,3,4,7,8-HxCDF	0.166**JK**		0.0310	3.24	1.60	1.000	1
1,2,3,6,7,8-HxCDF	0.0856**JK**		0.0349	3.24	1.49	1.000	1
1,2,3,7,8,9-HxCDF	0.0980**JK**		0.0335	3.24	1.52	1.000	1
2,3,4,6,7,8-HxCDF	0.0640**J**		0.0300	3.24	1.10	1.000	1
1,2,3,4,6,7,8-HpCDF	0.759**J**		0.0360	3.24	1.02	1.000	1
1,2,3,4,7,8,9-HpCDF	0.110**JK**		0.0402	3.24	1.42	1.000	1
OCDF	7.13		0.108	6.48	0.92	1.004	1

Client:	ALS Environmental - Everett	**Service Request:**	E1800770
Project:	EV18080100 Dioxins Furans Analysis	**Date Collected:**	08/17/18 13:05
Sample Matrix:	Soil	**Date Received:**	08/21/18 08:58
Sample Name:	EV18080100-08	**Units:**	ng/Kg
Lab Code:	E1800770-002	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	08/31/18 04:37
Prep Method:	Method Soxhlet	**Date Extracted:**	8/28/18
Sample Amount:	10.596g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P614376	**Blank File Name:**	P614371
ICAL Date:	03/29/18	**Cal Ver. File Name:**	P614368

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	1.13		0.166	0.648	0.79		1
Total Penta-Dioxins	ND	U	0.0599	3.24			1
Total Hexa-Dioxins	0.925**J**		0.0456	3.24	1.29		1
Total Hepta-Dioxins	6.99		0.0608	3.24	1.07		1
Total Tetra-Furans	0.679		0.0423	0.648	0.70		1
Total Penta-Furans	ND	U	0.0479	3.24			1
Total Hexa-Furans	1.21**J**		0.0323	3.24	1.14		1
Total Hepta-Furans	0.759**J**		0.0379	3.24	1.02		1

Client:	ALS Environmental - Everett	**Service Request:**	E1800770
Project:	EV18080100 Dioxins Furans Analysis	**Date Collected:**	08/17/18 13:05
Sample Matrix:	Soil	**Date Received:**	08/21/18 08:58
Sample Name:	EV18080100-08	**Units:**	Percent
Lab Code:	E1800770-002	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	08/31/18 04:37
Prep Method:	Method Soxhlet	**Date Extracted:**	8/28/18
Sample Amount:	10.596g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P614376	**Blank File Name:**	P614371
ICAL Date:	03/29/18	**Cal Ver. File Name:**	P614368

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	683.335	34		25-164	0.78	1.030
13C-1,2,3,7,8-PeCDD	2000	991.517	50		25-181	1.57	1.246
13C-1,2,3,4,7,8-HxCDD	2000	1144.676	57		32-141	1.28	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1018.464	51		28-130	1.27	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1100.406	55		23-140	1.09	1.071
13C-OCDD	4000	1350.696	34		17-157	0.92	1.141
13C-2,3,7,8-TCDF	2000	899.459	45		24-169	0.78	0.988
13C-1,2,3,7,8-PeCDF	2000	1137.501	57		24-185	1.60	1.192
13C-2,3,4,7,8-PeCDF	2000	1051.085	53		21-178	1.59	1.233
13C-1,2,3,4,7,8-HxCDF	2000	1252.542	63		26-152	0.55	0.968
13C-1,2,3,6,7,8-HxCDF	2000	1018.803	51		26-123	0.53	0.971
13C-1,2,3,7,8,9-HxCDF	2000	1354.034	68		29-147	0.54	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1203.505	60		28-136	0.53	0.986
13C-1,2,3,4,6,7,8-HpCDF	2000	1108.054	55		28-143	0.46	1.046
13C-1,2,3,4,7,8,9-HpCDF	2000	1294.871	65		26-138	0.46	1.083
37Cl-2,3,7,8-TCDD	800	419.459	52		35-197	NA	1.030

Client:	ALS Environmental - Everett	**Service Request:**	E1800770
Project:	EV18080100 Dioxins Furans Analysis	**Date Collected:**	08/17/18 13:05
Sample Matrix:	Soil	**Date Received:**	08/21/18 08:58
Sample Name:	EV18080100-08	**Units:**	ng/Kg
Lab Code:	E1800770-002	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Soxhlet

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	**0.323**	0.166	0.648	1	1	0.323
1,2,3,7,8-PeCDD	ND	0.0599	3.24	1	1	
1,2,3,4,7,8-HxCDD	ND	0.0445	3.24	1	0.1	
1,2,3,6,7,8-HxCDD	**0.0939**	0.0493	3.24	1	0.1	0.00939
1,2,3,7,8,9-HxCDD	**0.0859**	0.0431	3.24	1	0.1	0.00859
1,2,3,4,6,7,8-HpCDD	**3.06**	0.0608	3.24	1	0.01	0.0306
OCDD	**44.9**	0.130	6.48	1	0.0003	0.0135
2,3,7,8-TCDF	**0.593**	0.0423	0.648	1	0.1	0.0593
1,2,3,7,8-PeCDF	**0.0806**	0.0479	3.24	1	0.03	0.00242
2,3,4,7,8-PeCDF	ND	0.0480	3.24	1	0.3	
1,2,3,4,7,8-HxCDF	**0.166**	0.0310	3.24	1	0.1	0.0166
1,2,3,6,7,8-HxCDF	**0.0856**	0.0349	3.24	1	0.1	0.00856
1,2,3,7,8,9-HxCDF	**0.0980**	0.0335	3.24	1	0.1	0.00980
2,3,4,6,7,8-HxCDF	**0.0640**	0.0300	3.24	1	0.1	0.00640
1,2,3,4,6,7,8-HpCDF	**0.759**	0.0360	3.24	1	0.01	0.00759
1,2,3,4,7,8,9-HpCDF	**0.110**	0.0402	3.24	1	0.01	0.00110
OCDF	**7.13**	0.108	6.48	1	0.0003	0.00214
		Total TEQ				0.499

2005 WHO TEFs, ND = 0

Client:	ALS Environmental - Everett	**Service Request:**	E1800770
Project:	EV18080100 Dioxins Furans Analysis	**Date Collected:**	08/17/18 13:05
Sample Matrix:	Soil	**Date Received:**	08/21/18 08:58
Sample Name:	EV18080100-08	**Units:**	Percent
Lab Code:	E1800770-002	**Basis:**	As Received

Total Solids

Analysis Method:	ALS SOP	**Date Analyzed:**	08/30/18 10:46
	5.88g		NA
			E-Balance-01

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Solids	72.8		-	-			1

Client:	ALS Environmental - Everett	**Service Request:**	E1800770
Project:	EV18080100 Dioxins Furans Analysis	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ng/Kg
Lab Code:	EQ1800346-01	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	08/31/18 00:31
Prep Method:	Method Soxhlet	**Date Extracted:**	8/28/18
Sample Amount:	10.213g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P614371	**Blank File Name:**	P614371
ICAL Date:	03/29/18	**Cal Ver. File Name:**	P614368

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.135	0.490			1
1,2,3,7,8-PeCDD	ND	U	0.0371	2.45			1
1,2,3,4,7,8-HxCDD	ND	U	0.0219	2.45			1
1,2,3,6,7,8-HxCDD	ND	U	0.0242	2.45			1
1,2,3,7,8,9-HxCDD	ND	U	0.0211	2.45			1
1,2,3,4,6,7,8-HpCDD	0.104**J**		0.0215	2.45	1.02	1.000	1
OCDD	0.522**JK**		0.0930	4.90	1.29	1.000	1
2,3,7,8-TCDF	ND	U	0.0525	0.490			1
1,2,3,7,8-PeCDF	ND	U	0.0246	2.45			1
2,3,4,7,8-PeCDF	ND	U	0.0254	2.45			1
1,2,3,4,7,8-HxCDF	ND	U	0.0167	2.45			1
1,2,3,6,7,8-HxCDF	ND	U	0.0153	2.45			1
1,2,3,7,8,9-HxCDF	ND	U	0.0194	2.45			1
2,3,4,6,7,8-HxCDF	ND	U	0.0164	2.45			1
1,2,3,4,6,7,8-HpCDF	0.0361**J**		0.0187	2.45	0.95	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U	0.0232	2.45			1
OCDF	0.203**JK**		0.0860	4.90	0.73	1.005	1

Client:	ALS Environmental - Everett	**Service Request:**	E1800770
Project:	EV18080100 Dioxins Furans Analysis	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ng/Kg
Lab Code:	EQ1800346-01	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	08/31/18 00:31
Prep Method:	Method Soxhlet	**Date Extracted:**	8/28/18
Sample Amount:	10.213g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P614371	**Blank File Name:**	P614371
ICAL Date:	03/29/18	**Cal Ver. File Name:**	P614368

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	ND	U	0.135	0.490			1
Total Penta-Dioxins	ND	U	0.0371	2.45			1
Total Hexa-Dioxins	ND	U	0.0223	2.45			1
Total Hepta-Dioxins	0.248**J**		0.0215	2.45	0.95		1
Total Tetra-Furans	ND	U	0.0525	0.490			1
Total Penta-Furans	ND	U	0.0250	2.45			1
Total Hexa-Furans	ND	U	0.0169	2.45			1
Total Hepta-Furans	0.0533**J**		0.0206	2.45	0.95		1

Client:	ALS Environmental - Everett	**Service Request:**	E1800770
Project:	EV18080100 Dioxins Furans Analysis	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	Percent
Lab Code:	EQ1800346-01	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	08/31/18 00:31
Prep Method:	Method Soxhlet	**Date Extracted:**	8/28/18
Sample Amount:	10.213g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P614371	**Blank File Name:**	P614371
ICAL Date:	03/29/18	**Cal Ver. File Name:**	P614368

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	801.114	40		25-164	0.78	1.030
13C-1,2,3,7,8-PeCDD	2000	1120.956	56		25-181	1.57	1.247
13C-1,2,3,4,7,8-HxCDD	2000	1287.564	64		32-141	1.27	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1077.807	54		28-130	1.25	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1218.386	61		23-140	1.08	1.071
13C-OCDD	4000	1454.995	36		17-157	0.92	1.141
13C-2,3,7,8-TCDF	2000	1059.217	53		24-169	0.79	0.988
13C-1,2,3,7,8-PeCDF	2000	1306.856	65		24-185	1.60	1.193
13C-2,3,4,7,8-PeCDF	2000	1189.104	59		21-178	1.59	1.234
13C-1,2,3,4,7,8-HxCDF	2000	1414.797	71		26-152	0.53	0.968
13C-1,2,3,6,7,8-HxCDF	2000	1288.655	64		26-123	0.53	0.971
13C-1,2,3,7,8,9-HxCDF	2000	1368.791	68		29-147	0.54	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1309.666	65		28-136	0.54	0.986
13C-1,2,3,4,6,7,8-HpCDF	2000	1219.753	61		28-143	0.46	1.046
13C-1,2,3,4,7,8,9-HpCDF	2000	1305.279	65		26-138	0.46	1.083
37Cl-2,3,7,8-TCDD	800	457.839	57		35-197	NA	1.031

Accuracy & Precision

ALS Environmental - Houston HRMS
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Phone (713)266-1599 Fax (713)266-0130
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Client:	ALS Environmental - Everett	**Service Request:**	E1800770
Project:	EV18080100 Dioxins Furans Analysis	**Date Analyzed:**	08/31/18
Sample Matrix:	Soil	**Date Extracted:**	08/28/18

Duplicate Lab Control Sample Summary
Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Units:**	ng/Kg
Prep Method:	Method Soxhlet	**Basis:**	Dry
		Analysis Lot:	604995

	Lab Control Sample EQ1800346-02			Duplicate Lab Control Sample EQ1800346-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
1,2,3,4,6,7,8-HpCDD	89.5	99.4	90	87.3	97.2	90	70-140	2	50
1,2,3,4,7,8-HxCDD	114	99.4	115	102	97.2	105	70-164	11	50
1,2,3,6,7,8-HxCDD	111	99.4	111	109	97.2	112	76-134	2	50
1,2,3,7,8,9-HxCDD	115	99.4	116	93.9	97.2	97	64-162	20	50
1,2,3,7,8-PeCDD	107	99.4	108	106	97.2	109	70-142	1	50
2,3,7,8-TCDD	26.9	19.9	136	26.9	19.4	138	67-158	<1	50
OCDD	208	199	105	206	194	106	78-144	1	50
1,2,3,4,6,7,8-HpCDF	103	99.4	104	103	97.2	106	82-122	<1	50
1,2,3,4,7,8,9-HpCDF	108	99.4	109	106	97.2	109	78-138	2	50
1,2,3,4,7,8-HxCDF	106	99.4	107	107	97.2	110	72-134	<1	50
1,2,3,6,7,8-HxCDF	104	99.4	105	104	97.2	107	84-130	<1	50
1,2,3,7,8,9-HxCDF	103	99.4	104	103	97.2	106	78-130	<1	50
1,2,3,7,8-PeCDF	99.8	99.4	100	99.3	97.2	102	80-134	<1	50
2,3,4,6,7,8-HxCDF	105	99.4	106	106	97.2	109	70-156	<1	50
2,3,4,7,8-PeCDF	109	99.4	110	109	97.2	112	68-160	<1	50
2,3,7,8-TCDF	19.3	19.9	97	19.2	19.4	99	75-158	<1	50
OCDF	259	199	130	273	194	140	63-170	5	50

Client:	ALS Environmental - Everett	**Service Request:**	E1800770
Project:	EV18080100 Dioxins Furans Analysis	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	ng/Kg
Lab Code:	EQ1800346-02	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	08/31/18 05:26
Prep Method:	Method Soxhlet	**Date Extracted:**	8/28/18
Sample Amount:	10.064g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P614377	**Blank File Name:**	P614371
ICAL Date:	03/29/18	**Cal Ver. File Name:**	P614368

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	26.9		0.0885	0.497	0.78	1.001	1
1,2,3,7,8-PeCDD	107		0.0321	2.48	1.55	1.001	1
1,2,3,4,7,8-HxCDD	114		0.0268	2.48	1.24	1.000	1
1,2,3,6,7,8-HxCDD	111		0.0193	2.48	1.28	1.000	1
1,2,3,7,8,9-HxCDD	115		0.0208	2.48	1.25	1.007	1
1,2,3,4,6,7,8-HpCDD	89.5		0.0205	2.48	1.06	1.000	1
OCDD	208		0.141	4.97	0.90	1.000	1
2,3,7,8-TCDF	19.3		0.0296	0.497	0.79	1.001	1
1,2,3,7,8-PeCDF	99.8		0.0240	2.48	1.60	1.000	1
2,3,4,7,8-PeCDF	109		0.0251	2.48	1.59	1.001	1
1,2,3,4,7,8-HxCDF	106		0.0270	2.48	1.26	1.000	1
1,2,3,6,7,8-HxCDF	104		0.0256	2.48	1.26	1.000	1
1,2,3,7,8,9-HxCDF	103		0.0305	2.48	1.27	1.000	1
2,3,4,6,7,8-HxCDF	105		0.0263	2.48	1.25	1.000	1
1,2,3,4,6,7,8-HpCDF	103		0.0913	2.48	1.06	1.000	1
1,2,3,4,7,8,9-HpCDF	108		0.115	2.48	1.07	1.000	1
OCDF	259		0.258	4.97	0.91	1.004	1

Client:	ALS Environmental - Everett	**Service Request:**	E1800770
Project:	EV18080100 Dioxins Furans Analysis	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	ng/Kg
Lab Code:	EQ1800346-02	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	08/31/18 05:26
Prep Method:	Method Soxhlet	**Date Extracted:**	8/28/18
Sample Amount:	10.064g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P614377	**Blank File Name:**	P614371
ICAL Date:	03/29/18	**Cal Ver. File Name:**	P614368

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	26.9		0.0885	0.497	0.78		1
Total Penta-Dioxins	107		0.0321	2.48	1.55		1
Total Hexa-Dioxins	340		0.0220	2.48	1.24		1
Total Hepta-Dioxins	89.5		0.0205	2.48	1.06		1
Total Tetra-Furans	19.5		0.0296	0.497	0.87		1
Total Penta-Furans	211		0.0246	2.48	1.68		1
Total Hexa-Furans	418		0.0272	2.48	1.26		1
Total Hepta-Furans	211		0.102	2.48	1.06		1

Client:	ALS Environmental - Everett	**Service Request:**	E1800770
Project:	EV18080100 Dioxins Furans Analysis	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	Percent
Lab Code:	EQ1800346-02	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	08/31/18 05:26
Prep Method:	Method Soxhlet	**Date Extracted:**	8/28/18
Sample Amount:	10.064g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P614377	**Blank File Name:**	P614371
ICAL Date:	03/29/18	**Cal Ver. File Name:**	P614368

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	933.509	47		25-164	0.78	1.030
13C-1,2,3,7,8-PeCDD	2000	1204.542	60		25-181	1.57	1.247
13C-1,2,3,4,7,8-HxCDD	2000	1054.539	53		32-141	1.26	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1174.258	59		28-130	1.28	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1362.388	68		23-140	1.07	1.071
13C-OCDD	4000	1673.722	42		17-157	0.92	1.141
13C-2,3,7,8-TCDF	2000	1271.012	64		24-169	0.79	0.988
13C-1,2,3,7,8-PeCDF	2000	1450.338	73		24-185	1.59	1.193
13C-2,3,4,7,8-PeCDF	2000	1298.481	65		21-178	1.61	1.234
13C-1,2,3,4,7,8-HxCDF	2000	1548.648	77		26-152	0.53	0.968
13C-1,2,3,6,7,8-HxCDF	2000	1423.211	71		26-123	0.53	0.971
13C-1,2,3,7,8,9-HxCDF	2000	1545.852	77		29-147	0.53	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1491.931	75		28-136	0.53	0.986
13C-1,2,3,4,6,7,8-HpCDF	2000	1350.527	68		28-143	0.46	1.046
13C-1,2,3,4,7,8,9-HpCDF	2000	1456.496	73		26-138	0.46	1.083
37Cl-2,3,7,8-TCDD	800	533.818	67		35-197	NA	1.031

Client:	ALS Environmental - Everett	**Service Request:**	E1800770
Project:	EV18080100 Dioxins Furans Analysis	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	ng/Kg
Lab Code:	EQ1800346-03	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	08/31/18 06:16
Prep Method:	Method Soxhlet	**Date Extracted:**	8/28/18
Sample Amount:	10.283g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P614378	**Blank File Name:**	P614371
ICAL Date:	03/29/18	**Cal Ver. File Name:**	P614368

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	26.9		0.134	0.486	0.77	1.001	1
1,2,3,7,8-PeCDD	106		0.0366	2.43	1.56	1.001	1
1,2,3,4,7,8-HxCDD	102		0.0223	2.43	1.28	1.000	1
1,2,3,6,7,8-HxCDD	109		0.0251	2.43	1.29	1.001	1
1,2,3,7,8,9-HxCDD	93.9		0.0217	2.43	1.27	1.008	1
1,2,3,4,6,7,8-HpCDD	87.3		0.0304	2.43	1.09	1.000	1
OCDD	206		0.216	4.86	0.91	1.000	1
2,3,7,8-TCDF	19.2		0.0477	0.486	0.79	1.001	1
1,2,3,7,8-PeCDF	99.3		0.0224	2.43	1.58	1.001	1
2,3,4,7,8-PeCDF	109		0.0228	2.43	1.58	1.001	1
1,2,3,4,7,8-HxCDF	107		0.0232	2.43	1.25	1.000	1
1,2,3,6,7,8-HxCDF	104		0.0224	2.43	1.26	1.000	1
1,2,3,7,8,9-HxCDF	103		0.0315	2.43	1.28	1.000	1
2,3,4,6,7,8-HxCDF	106		0.0244	2.43	1.25	1.000	1
1,2,3,4,6,7,8-HpCDF	103		0.108	2.43	1.05	1.000	1
1,2,3,4,7,8,9-HpCDF	106		0.134	2.43	1.04	1.000	1
OCDF	273		0.0840	4.86	0.92	1.005	1

Client:	ALS Environmental - Everett	**Service Request:**	E1800770
Project:	EV18080100 Dioxins Furans Analysis	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	ng/Kg
Lab Code:	EQ1800346-03	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	08/31/18 06:16
Prep Method:	Method Soxhlet	**Date Extracted:**	8/28/18
Sample Amount:	10.283g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P614378	**Blank File Name:**	P614371
ICAL Date:	03/29/18	**Cal Ver. File Name:**	P614368

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	26.9		0.134	0.486	0.77		1
Total Penta-Dioxins	106		0.0366	2.43	1.56		1
Total Hexa-Dioxins	305		0.0230	2.43	1.28		1
Total Hepta-Dioxins	87.3		0.0304	2.43	1.09		1
Total Tetra-Furans	19.7		0.0477	0.486	0.75		1
Total Penta-Furans	210		0.0226	2.43	1.57		1
Total Hexa-Furans	420		0.0249	2.43	1.25		1
Total Hepta-Furans	209		0.119	2.43	1.05		1

Client:	ALS Environmental - Everett	**Service Request:**	E1800770
Project:	EV18080100 Dioxins Furans Analysis	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	Percent
Lab Code:	EQ1800346-03	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	08/31/18 06:16
Prep Method:	Method Soxhlet	**Date Extracted:**	8/28/18
Sample Amount:	10.283g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P614378	**Blank File Name:**	P614371
ICAL Date:	03/29/18	**Cal Ver. File Name:**	P614368

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	736.042	37		25-164	0.80	1.030
13C-1,2,3,7,8-PeCDD	2000	1040.857	52		25-181	1.58	1.246
13C-1,2,3,4,7,8-HxCDD	2000	1166.940	58		32-141	1.30	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1042.527	52		28-130	1.27	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1098.275	55		23-140	1.06	1.072
13C-OCDD	4000	1115.351	28		17-157	0.91	1.141
13C-2,3,7,8-TCDF	2000	1026.925	51		24-169	0.79	0.988
13C-1,2,3,7,8-PeCDF	2000	1210.293	61		24-185	1.60	1.192
13C-2,3,4,7,8-PeCDF	2000	1108.816	55		21-178	1.59	1.234
13C-1,2,3,4,7,8-HxCDF	2000	1342.117	67		26-152	0.53	0.968
13C-1,2,3,6,7,8-HxCDF	2000	1238.835	62		26-123	0.54	0.971
13C-1,2,3,7,8,9-HxCDF	2000	1167.654	58		29-147	0.53	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1221.330	61		28-136	0.54	0.986
13C-1,2,3,4,6,7,8-HpCDF	2000	1099.595	55		28-143	0.46	1.046
13C-1,2,3,4,7,8,9-HpCDF	2000	1151.933	58		26-138	0.45	1.083
37Cl-2,3,7,8-TCDD	800	427.768	53		35-197	NA	1.031

September 13, 2018 Service Request No:E1800806

Rick Bagan
ALS Environmental
8620 Holly Drive #100
Everett, WA 98208

Laboratory Results for: EV18080100

Dear Rick,

Enclosed are the results of the sample(s) submitted to our laboratory September 04, 2018
For your reference, these analyses have been assigned our service request number **E1800806.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the final complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. In accordance to the TNI 2009 Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Please contact me if you have any questions. My direct line is 281-575-2146. You may also contact me via email at Corey.Grandits@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Corey Grandits
Project Manager

ADDRESS 10450 Stancliff Rd., Suite 210, Houston, TX 77099
PHONE +1 281 530 5656 | FAX +1 281 561 6125
ALS Group USA, Corp.
dba ALS Environmental

Certificate of Analysis

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Environmental

Client:	ALS Environmental - Everett	**Service Request No.:**	E1800806
Project:	EV18080100	**Date Received:**	09/04/18
Sample Matrix:	Soil		

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

One soil sample was received for analysis at ALS Environmental in Houston on 09/04/18.

The sample was received at 23.5°C in good condition and is consistent with the accompanying chain of custody form. Dioxin/furan compounds are stable at room temperature. The sample was stored in a refrigerator at 4°C upon receipt at the laboratory.

Data Validation Notes and Discussion

Precision and Accuracy:

EQ1800356: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in lieu of a MS/MSD for this extraction batch. The LCS and DLCS recoveries are within control limits.

B flags – Method Blanks

The Method Blank EQ1800356-01 contained low levels of select target compounds above the EDL however below the Method Reporting Limit (MRL).

The associated compounds in the samples are flagged with 'B' flags where the sample result is less than ten times the level detected in the method blank.

Y flag – Cleanup Standard

The recovery for the cleanup standard, 37Cl-2,3,7,8-TCDD is below control limits in the Method Blank. The sample results are not affected since this labeled standard is provided as a means of demonstrating that both the sample extraction and subsequent cleanup steps performed as expected, and is not used in quantitation of target analytes.

Y flags – Labeled Standards

Select labeled standards recovered below control limits in the Method Blank.

Quantification of the native 2,3,7,8-substituted congeners is based on isotopic dilution, which automatically corrects for variation in extraction efficiency and provides accurate values even with poor recovery. Samples that had recoveries of labeled standards outside the acceptance limits are qualified with 'Y' flags on the Labeled Compound summary pages. In all cases, the signal-to-noise ratios are greater than 10:1 and detection limits were below the Method Reporting Limits.

K flags

EMPC - When the ion abundance ratios associated with a particular compound are outside the QC limits, samples are flagged with a 'K' flag. A 'K' flag indicates an estimated maximum possible concentration for the associated compound.

2378-TCDF

Samples analyzed on the DB-5MSUI column were analyzed under conditions where sufficient separation between 2,3,7,8-TCDF and its closest eluter was achieved. Confirmation of this result was not required.

Detection Limits

Detection limits are calculated for each analyte in each sample by measuring the height of the noise level for each quantitation ion for the associated labeled standard. The concentration equivalent to 2.5 times the height of the noise is then calculated using the appropriate response factor and the weight of the sample. The calculated concentration equals the detection limit.

The TEQ Summary results for each sample have been calculated by ALS/Houston to include:

- WHO-2005 TEFs, The 2005 World Health Organization Reevaluation of Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-Like Compounds (M. Van den Berg et al., Toxicological Sciences 93(2):223-241, 2006)
- 2378-TCDF from the DB-225 column, when confirmation required
- Non-detected compounds are not included in the 'Total'

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Client: ALS Environmental - Everett **Service Request:**E1800806
Project: EV18080100

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E1800806-001	EV18080100-01 B6-3	8/17/2018	0805

Service Request Summary

Folder #: **E1800806**
Client Name: ALS Environmental - Everett
Project Name: EV18080100
Project Number:

Report To: Rick Bagan
ALS Environmental
8620 Holly Drive #100
Everett, WA 98208
USA
Phone Number: 425-356-2600
Cell Number:
Fax Number:
E-mail: rick.bagan@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: ALOPEZ
Date Received: 09/04/18
Internal Due Date: 9/14/2018
QAP: LAB QAP
Qualifier Set: HRMS Qualifier Set
Formset: Lab Standard
Merged?: N, Y
Report to MDL?: Y
P.O. Number: EV18080100
EDD: No EDD Specified

1 4 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved
1 -N/A N/A
Location: EHRMS-WIC 9B, SMO
Pressure Gas:

				HOUSTON	
Lab Samp No.	**Client Samp No**	**Matrix**	**Collected**	Dioxins Furans/1613B	Total Solids/ALS SOP
E1800806-001	EV18080100-01	Soil	08/17/18 0805	II	II

Service Request Summary

Folder #: **E1800806**
Client Name: ALS Environmental - Everett
Project Name: EV18080100
Project Number:

Report To: Rick Bagan
ALS Environmental
8620 Holly Drive #100
Everett, WA 98208
USA
Phone Number: 425-356-2600
Cell Number:
Fax Number:
E-mail: rick.bagan@alsglobal.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: ALOPEZ
Date Received: 09/04/18
Internal Due Date: 9/14/2018
QAP: LAB QAP
Qualifier Set: HRMS Qualifier Set
Formset: Lab Standard
Merged?: N, Y
Report to MDL?: Y
P.O. Number: EV18080100
EDD: No EDD Specified

1 4 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved
1 -N/A N/A

Location: EHRMS-WIC 9B, SMO

Pressure Gas:

Data Qualifiers

HRMS Qualifier Set

B Indicates the associated analyte was found in the method blank at >1/10th the reported value.

E Estimated value. The reported concentration is above the calibration range of the instrument.

H Sample extracted and/or analyzed out of suggested holding time.

J Estimated value. The reported concentration is below the MRL.

K The ion abundance ratio between the primary and secondary ions were outside of theoretical acceptance limits.The concentration of this analyte should be considered as an estimate.

P Chlorodiphenyl ether interference was present at the retention time of the target analyte. Reported result should be considered an estimate.

Q Monitored lock-mass indicates matrix-interference. Reported result is estimated.

S Signal saturated detector. Result reported from dilution.

U Compound was analyzed for, but was not detected (ND).

X See Case Narrative.

Y Isotopically Labeled Standard recovery outside of acceptance limits. In all cases, the signal-to-nois ratios are greater than 10:1, making the recoveries acceptable.

i The MDL/MRL have been elevated due to a matrix interference.

ALS Laboratory Group

Acronyms

Cal	Calibration
Conc	CONCentration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

ALS Environmental

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01	11/30/2019
Arizona Department of Health Services	AZ0793	5/27/2019
Arkansas Department of Environmental Quality	17-027-0	3/27/2019
California Department of Health Services	2452	4/30/2019
Florida Department of Health	E87611	7/31/2019
Illinois Environmental Protection Agency	004112	5/29/2019
Kansas Department of Health and Environment	E-10406	7/31/2019
Louisiana Department of Environmental Quality	03048	6/30/2019
Louisiana Department of Health and Hospitals	LA150026	12/31/2018
Maine Center for Disease Control and Prevention	2014019	6/5/2020
Minnesota Department of Health	840911	12/31/2018
New Jersey Department of Environmental Protection	NLC140001	6/30/2019
New York Department of Health	11707	4/1/2019
Oklahoma Department of Environmental Quality	2014 124	8/31/2019
Pennsylvania Department of Environmental Protection	68-03441	6/30/2019
Tennessee Department of Environment and Concervation	04016	6/30/2019
Texas Commision on Environmental Quality	TX104704231-17-18	4/30/2019
Utah Department of Health Environmental Laboratory Certification	TX02694	7/3/2019
Washington Department of Health	c819	11/14/2018
West Virginia Department of Environmental Protection	347	6/30/2019

ALS ENVIRONMENTAL – Houston
Data Processing/Form Production and Peer Review Signatures

SR# Unique ID E1800806 DB-5MSUI SPB-Octyl

First Level - Data Processing - to be filled by person generating the forms

Date:	Analyst:	Samples:
09/13/18	LKL	001

Second Level - Data Review – to be filled by person doing peer review

Date:	Analyst:	Samples:
9/13/18	LG	001

Chain of Custody

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
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Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only)

Date 8/31/18 Page 1 Of 1

PROJECT ID:	EV18080100
REPORT TO COMPANY:	ALS Environmental
PROJECT MANAGER:	Rick Bagan
ADDRESS:	8620 Holly Drive #100
	Everett WA 98208
PHONE:	(425) 356-2600 P.O. #: 32-EV18080100-1
E-MAIL:	rick.bagan@alsglobal.com
INVOICE TO COMPANY:	
ATTENTION:	Same
ADDRESS:	

ANALYSIS REQUESTED

OTHER (Specify)

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA 8021 ☐ BTEX by EPA 8260 ☐	MTBE by EPA 8021 ☐ MTBE by EPA 8260 ☐	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA 8270 SIM	PCB by EPA 8082 ☐ Pesticides by EPA 8081 ☐	Metals-MTCA-5 ☐ RCRA-8 ☐ Pri Pol ☐ TAL ☐	Metals Other (Specify)	TCLP-Metals ☐ VOA ☐ Semi-Vol ☐ Pest ☐ Herbs ☐	OTHER (Specify)	NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. EV18080100-01	8/17/18	0805	S																X Dioxins/Furans by EPA-1613	1	
2.																						
3.																						
4.																						
5.																						
6.																						
7.																						
8.																						
9.																						
10.																						

E1800806
ALS Environmental
Dioxin
5

SPECIAL INSTRUCTIONS Please email results by noon 9/11/18 or AS SOON AS POSSIBLE RUSH PLEASE. Thank you. (ALS National Contract for Terracon)

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: Shawn Robinson ALS 8/31/18 2:45pm
   Received By: ALS 9/4/18 11:10
2. Relinquished By:
   Received By:

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: 10 Standard | 5 | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis: 5 Standard | 3 | 1 | SAME DAY

OTHER:
Specify:

*Turnaround request less than standard may incur Rush Charges

Cooler Receipt Form

Project Chemist NB

Client/Project ALS Environmental

Thermometer ID SHG 4

Date/Time Received: 9/4/18 11:10 Initials: AL

Date/Time Logged in: 9/4/18 Initials AL

1. Method of delivery: ○ US Mail ✓ Fed Ex ○ UPS ○ DHL ○ Courier ○ Client

2. Samples received in: ✓ Cooler ○ Box ○ Envelope ○ Other

3. Were custody seals on coolers? ○ Yes ✓ No

Were they intact? ○ Yes ○ No ✓ N/A

Were they signed and dated? ○ Yes ○ No ✓ N/A

If yes, how many and where? No Seals

4. Packing Material: ○ Inserts ○ Baggies ○ Bubble Wrap ✓ Gel Packs ○ Wet Ice ○ Sleeves ✓ Other Packing Paper

5. Foreign or Regulated Soil? ○ Yes ✓ No Location of Sampling:

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
8133 8630 1857		9/4/18	11:30	AL	23.1/23.5	☐
						☐
						☐
						☐

6. Were custody papers properly filled out (ink, signed, dated, etc)? ✓ Yes ○ No

7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ✓ Yes ○ No

8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ✓ Yes ○ No

9. Were appropriate bottles/containers and volumes received for the requested tests? ✓ Yes ○ No

10. Did sample labels and tags agree with custody documents? ✓ Yes ○ No

Notes, Discrepancies, & Resolutions:

Service request Label:

E1800806
ALS Environmental
Dioxin
5

10450 Stancliff Rd., Suite 210
Houston, TX 77099
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SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

Cooler Custody Seals (desirable, mandatory if specified in SAP):

- ✓ Intact on outside of cooler, signed and dated

Chain-of-Custody (COC) documentation (mandatory):

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sampleThe COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

Sample Integrity (mandatory):

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

Temperature Requirement (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6ºC.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10ºC.
- ✓ Air samples are shipped and stored cold, at 0 to 6ºC
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report

Preparation Information Benchsheets

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Preparation Information Benchsheet

Prep Run#: 321237 **Prep WorkFlow:** OrgExtS(365) **Status:** Prepped
Team: Semivoa GCMS/ALOPEZ **Prep Method:** Method Soxhlet **Prep Date/Time:** 9/5/18 11:00 AM

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E1800790-003	SD1808301130JTM	.01	1613B/Dioxins Furans			Sediment	10.172g	Black Mud
2	E1800804-001	18-08018	.01	1613B/Dioxins Furans			Solid	10.468g	Brown Sand + Rocks
3	E1800804-002	18-08019	.01	1613B/Dioxins Furans			Solid	10.852g	Brown Sand + Rocks
4	E1800806-001	EV18080100-01	.01	1613B/Dioxins Furans			Soil	10.020g	Brown Mud
5	E1800807-001	HS18090008-01	.01	1613B/Dioxins Furans			Soil	10.820g	Black Dirt
6	E1800807-002	HS18090008-02	.01	1613B/Dioxins Furans			Soil	10.345g	Black Dirt
7	E1800807-003	HS18090008-03	.01	1613B/Dioxins Furans			Soil	10.599g	Brown Dirt
8	E1800807-004	HS18090008-04	.01	1613B/Dioxins Furans			Soil	10.099g	Black Dirt
9	EQ1800356-01	MB		1613B/Dioxins Furans			Solid	10.438g	
10	EQ1800356-02	LCS		1613B/Dioxins Furans			Solid	10.061g	
11	EQ1800356-03	DLCS		1613B/Dioxins Furans			Solid	10.185g	
12	J1806201-007	72126 8-01-2018 23:21	.03	1613B/Dioxins Furans			Solid	10.684g	Brown + White Cardboard
13	K1808066-001	Clarifier solids, screw press	.01	1613B/Dioxins Furans			Soil	10.167g	Brown Paper Pulp

Spiking Solutions

Name: 1613B Labeled Working Standard Inventory ID 192472 Logbook Ref: 192471 2-4NGML JG 8/15/18 Expires On: 01/09/2019

E1800790-003	1,000.00µL	E1800804-001	1,000.00µL	E1800804-002	1,000.00µL	E1800806-001	1,000.00µL	E1800807-001	1,000.00µL	E1800807-002	1,000.00µL
E1800807-003	1,000.00µL	E1800807-004	1,000.00µL	EQ1800356-01	1,000.00µL	EQ1800356-02	1,000.00µL	EQ1800356-03	1,000.00µL	J1806201-007	1,000.00µL
K1808066-001	1,000.00µL										

Name: 1613B Labeled Working Standard Inventory ID 192719 Logbook Ref: 192719 JG 8/27/18 2-4ngml Expires On: 01/09/2019

E1800807-001	1,000.00µL	E1800807-002	1,000.00µL	E1800807-003	1,000.00µL	E1800807-004	1,000.00µL

Name: 1613B Matrix Working Standard Inventory ID 192792 Logbook Ref: 192792 AL 8/29/18 2-20 ng/mL Expires On: 02/25/2019

EQ1800356-02	100.00µL	EQ1800356-03	100.00µL

Name: 8290/1613B Cleanup Working Standard Inventory ID 192951 Logbook Ref: 192951 tw 090618 8ng/ml Expires On: 10/27/2018

E1800790-003	100.00µL	E1800804-001	100.00µL	E1800804-002	100.00µL	E1800806-001	100.00µL	E1800807-001	100.00µL	E1800807-002	100.00µL
E1800807-003	100.00µL	E1800807-004	100.00µL	EQ1800356-01	100.00µL	EQ1800356-02	100.00µL	EQ1800356-03	100.00µL	J1806201-007	100.00µL
K1808066-001	100.00µL										

Preparation Information Benchsheet

Prep Run#: 321237 **Prep WorkFlow:** OrgExtS(365) **Status:** Prepped
Team: Semivoa GCMS/ALOPEZ **Prep Method:** Method Soxhlet **Prep Date/Time:** 9/5/18 11:00 AM

Preparation Materials

Carbon, High Purity	AL 8/10/18 (192392)	Ethyl Acetate 99.9% Minimum EtOAc	tw ethyl acet 080218 (192158)	Glass Wool	AL 8/20/18 (192604)
Hexanes 95%	AL 9/4/18 (192875)	Dichloromethane (Methylene Chloride) 99.9% MeCl2	AL 9/5/18 (192924)	Sodium Chloride Reagent Grade NaCl	AL 3/23/18 (188853)
Sodium Sulfate Anhydrous Reagent Grade Na2SO4	AL 7/30/18 (192040)	Tridecane (n-Tridecane)	AL 7/30/18 (192037)	Silica Gel	AL 7/30/18 (192039)
Toluene 99.9% Minimum	AL 9/4/18 (192874)	sulfuric acid	SULFURIC ACID (190871)	Sodium Hydroxide 1N NaOH	TW 6/14/18 (191093)

Preparation Steps

Step:	Extraction	Step:	Acid Clean	Step:	Silica Gel Clean	Step:	Final Volume
Started:	9/5/18 11:00	Started:	9/10/18 08:00	Started:	9/10/18 10:00	Started:	9/11/18 11:00
Finished:	9/6/18 07:00	Finished:	9/10/18 09:00	Finished:	9/10/18 13:00	Finished:	9/11/18 14:00
By:	ALOPEZ	By:	ALOPEZ	By:	ALOPEZ	By:	ALOPEZ
Comments		Comments		Comments		Comments	

Comments: _____

Reviewed By: _____ Date: _____

Chain of Custody

Relinquished By: _____ Date: _____ Extracts Examined

Received By: _____ Date: _____ Yes No

Analytical Results

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Client:	ALS Environmental - Everett	**Service Request:**	E1800806
Project:	EV18080100	**Date Collected:**	08/17/18 08:05
Sample Matrix:	Soil	**Date Received:**	09/04/18 11:10
Sample Name:	EV18080100-01	**Units:**	ng/Kg
Lab Code:	E1800806-001	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	09/11/18 21:38
Prep Method:	Method Soxhlet	**Date Extracted:**	9/5/18
Sample Amount:	10.020g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P517584	**Blank File Name:**	P614520
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P517575

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.214	0.753			1
1,2,3,7,8-PeCDD	0.271**JK**		0.0961	3.76	0.91	1.001	1
1,2,3,4,7,8-HxCDD	ND	U	0.180	3.76			1
1,2,3,6,7,8-HxCDD	ND	U	0.189	3.76			1
1,2,3,7,8,9-HxCDD	ND	U	0.180	3.76			1
1,2,3,4,6,7,8-HpCDD	2.61**J**		0.0454	3.76	1.08	1.000	1
OCDD	31.8		0.152	7.53	0.87	1.000	1
2,3,7,8-TCDF	0.499**JK**		0.122	0.753	0.59	1.001	1
1,2,3,7,8-PeCDF	0.264**J**		0.152	3.76	1.73	1.000	1
2,3,4,7,8-PeCDF	0.811**J**		0.151	3.76	1.37	1.002	1
1,2,3,4,7,8-HxCDF	0.243**BJ**		0.0446	3.76	1.06	1.000	1
1,2,3,6,7,8-HxCDF	0.281**BJ**		0.0395	3.76	1.12	1.000	1
1,2,3,7,8,9-HxCDF	0.150**BJ**		0.0434	3.76	1.19	1.001	1
2,3,4,6,7,8-HxCDF	0.380**BJ**		0.0401	3.76	1.21	1.000	1
1,2,3,4,6,7,8-HpCDF	0.492**BJ**		0.0640	3.76	0.96	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U	0.0791	3.76			1
OCDF	0.867**BJK**		0.158	7.53	1.23	1.005	1

Client:	ALS Environmental - Everett	**Service Request:**	E1800806
Project:	EV18080100	**Date Collected:**	08/17/18 08:05
Sample Matrix:	Soil	**Date Received:**	09/04/18 11:10
Sample Name:	EV18080100-01	**Units:**	ng/Kg
Lab Code:	E1800806-001	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	09/11/18 21:38
Prep Method:	Method Soxhlet	**Date Extracted:**	9/5/18
Sample Amount:	10.020g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P517584	**Blank File Name:**	P614520
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P517575

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	10.4		0.214	0.753	0.75		1
Total Penta-Dioxins	4.72		0.0961	3.76	1.39		1
Total Hexa-Dioxins	1.27**J**		0.183	3.76	1.26		1
Total Hepta-Dioxins	5.88		0.0454	3.76	1.01		1
Total Tetra-Furans	10.2		0.122	0.753	0.69		1
Total Penta-Furans	6.56		0.151	3.76	1.47		1
Total Hexa-Furans	2.45**J**		0.0417	3.76	1.15		1
Total Hepta-Furans	0.930**J**		0.0709	3.76	0.96		1

Client:	ALS Environmental - Everett	**Service Request:**	E1800806
Project:	EV18080100	**Date Collected:**	08/17/18 08:05
Sample Matrix:	Soil	**Date Received:**	09/04/18 11:10
Sample Name:	EV18080100-01	**Units:**	Percent
Lab Code:	E1800806-001	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	09/11/18 21:38
Prep Method:	Method Soxhlet	**Date Extracted:**	9/5/18
Sample Amount:	10.020g	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P517584	**Blank File Name:**	P614520
ICAL Date:	01/24/18	**Cal Ver. File Name:**	P517575

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	952.472	48		25-164	0.79	1.022
13C-1,2,3,7,8-PeCDD	2000	1637.607	82		25-181	1.58	1.194
13C-1,2,3,4,7,8-HxCDD	2000	1286.584	64		32-141	1.28	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1267.622	63		28-130	1.27	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	1393.305	70		23-140	1.07	1.067
13C-OCDD	4000	1848.317	46		17-157	0.91	1.141
13C-2,3,7,8-TCDF	2000	1072.508	54		24-169	0.80	0.992
13C-1,2,3,7,8-PeCDF	2000	1364.889	68		24-185	1.58	1.150
13C-2,3,4,7,8-PeCDF	2000	1385.169	69		21-178	1.58	1.183
13C-1,2,3,4,7,8-HxCDF	2000	1042.712	52		26-152	0.51	0.971
13C-1,2,3,6,7,8-HxCDF	2000	1091.914	55		26-123	0.52	0.974
13C-1,2,3,7,8,9-HxCDF	2000	1253.840	63		29-147	0.52	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1154.827	58		28-136	0.52	0.987
13C-1,2,3,4,6,7,8-HpCDF	2000	1111.512	56		28-143	0.45	1.042
13C-1,2,3,4,7,8,9-HpCDF	2000	1206.004	60		26-138	0.45	1.080
37Cl-2,3,7,8-TCDD	800	574.340	72		35-197	NA	1.023

Client:	ALS Environmental - Everett	**Service Request:**	E1800806
Project:	EV18080100	**Date Collected:**	08/17/18 08:05
Sample Matrix:	Soil	**Date Received:**	09/04/18 11:10
Sample Name:	EV18080100-01	**Units:**	ng/Kg
Lab Code:	E1800806-001	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 1613B
Prep Method: Method Soxhlet

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.214	0.753	1	1	
1,2,3,7,8-PeCDD	**0.271**	0.0961	3.76	1	1	0.271
1,2,3,4,7,8-HxCDD	ND	0.180	3.76	1	0.1	
1,2,3,6,7,8-HxCDD	ND	0.189	3.76	1	0.1	
1,2,3,7,8,9-HxCDD	ND	0.180	3.76	1	0.1	
1,2,3,4,6,7,8-HpCDD	**2.61**	0.0454	3.76	1	0.01	0.0261
OCDD	**31.8**	0.152	7.53	1	0.0003	0.00954
2,3,7,8-TCDF	**0.499**	0.122	0.753	1	0.1	0.0499
1,2,3,7,8-PeCDF	**0.264**	0.152	3.76	1	0.03	0.00792
2,3,4,7,8-PeCDF	**0.811**	0.151	3.76	1	0.3	0.243
1,2,3,4,7,8-HxCDF	**0.243**	0.0446	3.76	1	0.1	0.0243
1,2,3,6,7,8-HxCDF	**0.281**	0.0395	3.76	1	0.1	0.0281
1,2,3,7,8,9-HxCDF	**0.150**	0.0434	3.76	1	0.1	0.0150
2,3,4,6,7,8-HxCDF	**0.380**	0.0401	3.76	1	0.1	0.0380
1,2,3,4,6,7,8-HpCDF	**0.492**	0.0640	3.76	1	0.01	0.00492
1,2,3,4,7,8,9-HpCDF	ND	0.0791	3.76	1	0.01	
OCDF	**0.867**	0.158	7.53	1	0.0003	0.000260
		Total TEQ				0.718

2005 WHO TEFs, ND = 0

Client:	ALS Environmental - Everett	**Service Request:**	E1800806
Project:	EV18080100	**Date Collected:**	08/17/18 08:05
Sample Matrix:	Soil	**Date Received:**	09/04/18 11:10
Sample Name:	EV18080100-01	**Units:**	Percent
Lab Code:	E1800806-001	**Basis:**	As Received

Total Solids

Analysis Method:	ALS SOP	**Date Analyzed:**	09/10/18 11:59
	6.759g		NA
			E-Balance-01

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Solids	66.3		-	-			1

Client:	ALS Environmental - Everett	**Service Request:**	E1800806
Project:	EV18080100	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ng/Kg
Lab Code:	EQ1800356-01	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	09/12/18 06:29
Prep Method:	Method Soxhlet	**Date Extracted:**	9/5/18
Sample Amount:	10.438g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P614520	**Blank File Name:**	P614520
ICAL Date:	03/29/18	**Cal Ver. File Name:**	P614516

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.189	0.479			1
1,2,3,7,8-PeCDD	ND	U	0.140	2.40			1
1,2,3,4,7,8-HxCDD	0.0921**JK**		0.0484	2.40	1.54	1.000	1
1,2,3,6,7,8-HxCDD	0.111**J**		0.0526	2.40	1.29	1.000	1
1,2,3,7,8,9-HxCDD	ND	U	0.0463	2.40			1
1,2,3,4,6,7,8-HpCDD	0.0745**JK**		0.0252	2.40	0.68	1.000	1
OCDD	0.627**J**		0.124	4.79	0.86	1.000	1
2,3,7,8-TCDF	ND	U	0.103	0.479			1
1,2,3,7,8-PeCDF	ND	U	0.0795	2.40			1
2,3,4,7,8-PeCDF	ND	U	0.0810	2.40			1
1,2,3,4,7,8-HxCDF	0.0743**JK**		0.0243	2.40	1.93	1.000	1
1,2,3,6,7,8-HxCDF	0.0646**JK**		0.0239	2.40	0.81	1.000	1
1,2,3,7,8,9-HxCDF	0.0632**JK**		0.0275	2.40	2.07	1.000	1
2,3,4,6,7,8-HxCDF	0.0680**J**		0.0237	2.40	1.35	1.000	1
1,2,3,4,6,7,8-HpCDF	0.128**JK**		0.0466	2.40	0.77	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U	0.0548	2.40			1
OCDF	0.347**JK**		0.133	4.79	0.70	1.005	1

Client:	ALS Environmental - Everett	**Service Request:**	E1800806
Project:	EV18080100	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ng/Kg
Lab Code:	EQ1800356-01	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	09/12/18 06:29
Prep Method:	Method Soxhlet	**Date Extracted:**	9/5/18
Sample Amount:	10.438g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P614520	**Blank File Name:**	P614520
ICAL Date:	03/29/18	**Cal Ver. File Name:**	P614516

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	ND	U	0.189	0.479			1
Total Penta-Dioxins	ND	U	0.140	2.40			1
Total Hexa-Dioxins	0.111**J**		0.0490	2.40	1.29		1
Total Hepta-Dioxins	ND	U	0.0252	2.40			1
Total Tetra-Furans	ND	U	0.103	0.479			1
Total Penta-Furans	ND	U	0.0803	2.40			1
Total Hexa-Furans	0.0680**J**		0.0248	2.40	1.35		1
Total Hepta-Furans	ND	U	0.0503	2.40			1

Client:	ALS Environmental - Everett	**Service Request:**	E1800806
Project:	EV18080100	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	Percent
Lab Code:	EQ1800356-01	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	09/12/18 06:29
Prep Method:	Method Soxhlet	**Date Extracted:**	9/5/18
Sample Amount:	10.438g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P614520	**Blank File Name:**	P614520
ICAL Date:	03/29/18	**Cal Ver. File Name:**	P614516

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	318.459	16	**Y**	25-164	0.80	1.018
13C-1,2,3,7,8-PeCDD	2000	512.934	26		25-181	1.58	1.164
13C-1,2,3,4,7,8-HxCDD	2000	596.338	30	**Y**	32-141	1.25	0.992
13C-1,2,3,6,7,8-HxCDD	2000	524.930	26	**Y**	28-130	1.28	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	586.797	29		23-140	1.07	1.066
13C-OCDD	4000	780.364	20		17-157	0.90	1.143
13C-2,3,7,8-TCDF	2000	382.702	19	**Y**	24-169	0.80	0.993
13C-1,2,3,7,8-PeCDF	2000	552.064	28		24-185	1.59	1.126
13C-2,3,4,7,8-PeCDF	2000	517.914	26		21-178	1.59	1.155
13C-1,2,3,4,7,8-HxCDF	2000	614.774	31		26-152	0.53	0.973
13C-1,2,3,6,7,8-HxCDF	2000	550.894	28		26-123	0.53	0.976
13C-1,2,3,7,8,9-HxCDF	2000	607.209	30		29-147	0.53	1.008
13C-2,3,4,6,7,8-HxCDF	2000	603.329	30		28-136	0.53	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	448.579	22	**Y**	28-143	0.45	1.041
13C-1,2,3,4,7,8,9-HpCDF	2000	545.036	27		26-138	0.46	1.079
37Cl-2,3,7,8-TCDD	800	178.913	22	**Y**	35-197	NA	1.018

Accuracy & Precision

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Client:	ALS Environmental - Everett	**Service Request:**	E1800806
Project:	EV18080100	**Date Analyzed:**	09/12/18
Sample Matrix:	Soil	**Date Extracted:**	09/05/18

Duplicate Lab Control Sample Summary
Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Units:**	ng/Kg
Prep Method:	Method Soxhlet	**Basis:**	Dry
		Analysis Lot:	606581

	Lab Control Sample EQ1800356-02			Duplicate Lab Control Sample EQ1800356-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
1,2,3,4,6,7,8-HpCDD	84.1	99.4	85	83.6	98.2	85	70-140	<1	50
1,2,3,4,7,8-HxCDD	99.0	99.4	100	97.4	98.2	99	70-164	2	50
1,2,3,6,7,8-HxCDD	105	99.4	105	103	98.2	105	76-134	2	50
1,2,3,7,8,9-HxCDD	96.0	99.4	97	101	98.2	103	64-162	6	50
1,2,3,7,8-PeCDD	105	99.4	106	105	98.2	107	70-142	<1	50
2,3,7,8-TCDD	27.0	19.9	136	27.8	19.6	141	67-158	3	50
OCDD	196	199	99	199	196	101	78-144	1	50
1,2,3,4,6,7,8-HpCDF	106	99.4	107	103	98.2	104	82-122	3	50
1,2,3,4,7,8,9-HpCDF	103	99.4	104	104	98.2	105	78-138	<1	50
1,2,3,4,7,8-HxCDF	104	99.4	104	101	98.2	103	72-134	2	50
1,2,3,6,7,8-HxCDF	103	99.4	104	101	98.2	103	84-130	2	50
1,2,3,7,8,9-HxCDF	101	99.4	101	98.8	98.2	101	78-130	2	50
1,2,3,7,8-PeCDF	98.9	99.4	99	100	98.2	102	80-134	1	50
2,3,4,6,7,8-HxCDF	104	99.4	104	102	98.2	104	70-156	2	50
2,3,4,7,8-PeCDF	109	99.4	109	109	98.2	111	68-160	<1	50
2,3,7,8-TCDF	21.8	19.9	110	21.4	19.6	109	75-158	2	50
OCDF	254	199	128	260	196	133	63-170	2	50

Client:	ALS Environmental - Everett	**Service Request:**	E1800806
Project:	EV18080100	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	ng/Kg
Lab Code:	EQ1800356-02	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	09/12/18 13:02
Prep Method:	Method Soxhlet	**Date Extracted:**	9/5/18
Sample Amount:	10.061g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P614528	**Blank File Name:**	P614520
ICAL Date:	03/29/18	**Cal Ver. File Name:**	P614516

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	27.0		0.0887	0.497	0.80	1.001	1
1,2,3,7,8-PeCDD	105		0.0797	2.48	1.59	1.000	1
1,2,3,4,7,8-HxCDD	99.0		0.0215	2.48	1.27	1.000	1
1,2,3,6,7,8-HxCDD	105		0.0229	2.48	1.28	1.000	1
1,2,3,7,8,9-HxCDD	96.0		0.0203	2.48	1.29	1.007	1
1,2,3,4,6,7,8-HpCDD	84.1		0.0244	2.48	1.05	1.000	1
OCDD	196		0.118	4.97	0.89	1.000	1
2,3,7,8-TCDF	21.8		0.0405	0.497	0.77	1.001	1
1,2,3,7,8-PeCDF	98.9		0.0676	2.48	1.58	1.001	1
2,3,4,7,8-PeCDF	109		0.0727	2.48	1.56	1.000	1
1,2,3,4,7,8-HxCDF	104		0.0211	2.48	1.24	1.000	1
1,2,3,6,7,8-HxCDF	103		0.0213	2.48	1.24	1.000	1
1,2,3,7,8,9-HxCDF	101		0.0250	2.48	1.24	1.000	1
2,3,4,6,7,8-HxCDF	104		0.0226	2.48	1.24	1.000	1
1,2,3,4,6,7,8-HpCDF	106		0.0892	2.48	1.05	1.000	1
1,2,3,4,7,8,9-HpCDF	103		0.107	2.48	1.05	1.000	1
OCDF	254		0.118	4.97	0.91	1.005	1

Client:	ALS Environmental - Everett	**Service Request:**	E1800806
Project:	EV18080100	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	ng/Kg
Lab Code:	EQ1800356-02	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	09/12/18 13:02
Prep Method:	Method Soxhlet	**Date Extracted:**	9/5/18
Sample Amount:	10.061g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P614528	**Blank File Name:**	P614520
ICAL Date:	03/29/18	**Cal Ver. File Name:**	P614516

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	27.0		0.0887	0.497	0.80		1
Total Penta-Dioxins	105		0.0797	2.48	1.59		1
Total Hexa-Dioxins	300		0.0215	2.48	1.27		1
Total Hepta-Dioxins	84.1		0.0244	2.48	1.05		1
Total Tetra-Furans	23.2		0.0405	0.497	0.78		1
Total Penta-Furans	212		0.0701	2.48	1.55		1
Total Hexa-Furans	412		0.0224	2.48	1.23		1
Total Hepta-Furans	209		0.0972	2.48	1.05		1

Client:	ALS Environmental - Everett	**Service Request:**	E1800806
Project:	EV18080100	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	Percent
Lab Code:	EQ1800356-02	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	09/12/18 13:02
Prep Method:	Method Soxhlet	**Date Extracted:**	9/5/18
Sample Amount:	10.061g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P614528	**Blank File Name:**	P614520
ICAL Date:	03/29/18	**Cal Ver. File Name:**	P614516

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	822.717	41		25-164	0.81	1.018
13C-1,2,3,7,8-PeCDD	2000	1150.049	58		25-181	1.57	1.164
13C-1,2,3,4,7,8-HxCDD	2000	1262.816	63		32-141	1.26	0.992
13C-1,2,3,6,7,8-HxCDD	2000	1105.996	55		28-130	1.26	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	1222.032	61		23-140	1.08	1.066
13C-OCDD	4000	1569.768	39		17-157	0.92	1.143
13C-2,3,7,8-TCDF	2000	1062.097	53		24-169	0.79	0.993
13C-1,2,3,7,8-PeCDF	2000	1292.605	65		24-185	1.59	1.126
13C-2,3,4,7,8-PeCDF	2000	1160.395	58		21-178	1.59	1.155
13C-1,2,3,4,7,8-HxCDF	2000	1407.959	70		26-152	0.53	0.973
13C-1,2,3,6,7,8-HxCDF	2000	1245.900	62		26-123	0.53	0.976
13C-1,2,3,7,8,9-HxCDF	2000	1378.658	69		29-147	0.53	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1269.783	63		28-136	0.53	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	1019.217	51		28-143	0.45	1.041
13C-1,2,3,4,7,8,9-HpCDF	2000	1219.998	61		26-138	0.46	1.079
37Cl-2,3,7,8-TCDD	800	487.389	61		35-197	NA	1.018

Client:	ALS Environmental - Everett	**Service Request:**	E1800806
Project:	EV18080100	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	ng/Kg
Lab Code:	EQ1800356-03	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	09/12/18 13:51
Prep Method:	Method Soxhlet	**Date Extracted:**	9/5/18
Sample Amount:	10.185g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P614529	**Blank File Name:**	P614520
ICAL Date:	03/29/18	**Cal Ver. File Name:**	P614516

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	27.8		0.105	0.491	0.79	1.001	1
1,2,3,7,8-PeCDD	105		0.0677	2.45	1.60	1.000	1
1,2,3,4,7,8-HxCDD	97.4		0.0277	2.45	1.26	1.000	1
1,2,3,6,7,8-HxCDD	103		0.0289	2.45	1.26	1.000	1
1,2,3,7,8,9-HxCDD	101		0.0260	2.45	1.26	1.007	1
1,2,3,4,6,7,8-HpCDD	83.6		0.0396	2.45	1.06	1.000	1
OCDD	199		0.0793	4.91	0.90	1.000	1
2,3,7,8-TCDF	21.4		0.0444	0.491	0.79	1.001	1
1,2,3,7,8-PeCDF	100		0.0659	2.45	1.55	1.001	1
2,3,4,7,8-PeCDF	109		0.0667	2.45	1.57	1.000	1
1,2,3,4,7,8-HxCDF	101		0.0171	2.45	1.24	1.000	1
1,2,3,6,7,8-HxCDF	101		0.0173	2.45	1.24	1.000	1
1,2,3,7,8,9-HxCDF	98.8		0.0174	2.45	1.26	1.000	1
2,3,4,6,7,8-HxCDF	102		0.0170	2.45	1.24	1.000	1
1,2,3,4,6,7,8-HpCDF	103		0.0690	2.45	1.06	1.000	1
1,2,3,4,7,8,9-HpCDF	104		0.0761	2.45	1.05	1.000	1
OCDF	260		0.118	4.91	0.91	1.005	1

Client:	ALS Environmental - Everett	**Service Request:**	E1800806
Project:	EV18080100	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	ng/Kg
Lab Code:	EQ1800356-03	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	09/12/18 13:51
Prep Method:	Method Soxhlet	**Date Extracted:**	9/5/18
Sample Amount:	10.185g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P614529	**Blank File Name:**	P614520
ICAL Date:	03/29/18	**Cal Ver. File Name:**	P614516

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	27.8		0.105	0.491	0.79		1
Total Penta-Dioxins	105		0.0677	2.45	1.60		1
Total Hexa-Dioxins	302		0.0274	2.45	1.26		1
Total Hepta-Dioxins	83.6		0.0396	2.45	1.06		1
Total Tetra-Furans	21.4		0.0444	0.491	0.79		1
Total Penta-Furans	213		0.0663	2.45	1.66		1
Total Hexa-Furans	404		0.0172	2.45	1.22		1
Total Hepta-Furans	207		0.0722	2.45	1.06		1

Client:	ALS Environmental - Everett	**Service Request:**	E1800806
Project:	EV18080100	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	Percent
Lab Code:	EQ1800356-03	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	09/12/18 13:51
Prep Method:	Method Soxhlet	**Date Extracted:**	9/5/18
Sample Amount:	10.185g	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P614529	**Blank File Name:**	P614520
ICAL Date:	03/29/18	**Cal Ver. File Name:**	P614516

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	708.586	35		25-164	0.80	1.018
13C-1,2,3,7,8-PeCDD	2000	1024.603	51		25-181	1.56	1.164
13C-1,2,3,4,7,8-HxCDD	2000	1152.654	58		32-141	1.27	0.992
13C-1,2,3,6,7,8-HxCDD	2000	1025.057	51		28-130	1.26	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	1103.581	55		23-140	1.06	1.066
13C-OCDD	4000	1393.418	35		17-157	0.91	1.143
13C-2,3,7,8-TCDF	2000	891.464	45		24-169	0.80	0.993
13C-1,2,3,7,8-PeCDF	2000	1141.033	57		24-185	1.59	1.126
13C-2,3,4,7,8-PeCDF	2000	1062.013	53		21-178	1.59	1.155
13C-1,2,3,4,7,8-HxCDF	2000	1251.500	63		26-152	0.53	0.973
13C-1,2,3,6,7,8-HxCDF	2000	1096.450	55		26-123	0.53	0.976
13C-1,2,3,7,8,9-HxCDF	2000	1390.786	70		29-147	0.53	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1201.136	60		28-136	0.54	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	951.475	48		28-143	0.46	1.041
13C-1,2,3,4,7,8,9-HpCDF	2000	1208.364	60		26-138	0.46	1.079
37Cl-2,3,7,8-TCDD	800	413.877	52		35-197	NA	1.018

APPENDIX E – ENVIRONMENTAL TASK ORDER AND MASTER SERVICES AGREEMENT

Environmental Services Task Order

This Environmental Service Task Order ("Order") is made on **8/1/2018**, between Umpqua Bank ("Umpqua") and **Terracon Consultants, Inc** * ("Consultant"). By their execution of this Order, Umpqua Bank retains, and Consultant agrees to provide services as requested and according to the terms and conditions of the executed Environmental Services Agreement.

RIMS Project Number:	**18-002488-03**
Property/Project Name:	Buse Timber & Sales
Loan Purpose:	Refinance
Borrower:	Diana Buse Timber & Sales
Property Address:	3812 28th Pl NE Everett, WA98205
Property Type:	Industrial- Saw Mill/Lumberyard
Property Description:	The subject consists of 60.54 acres of industrial zoned land located at 3812 28th Place NE in Everett. (Note that a portion of the property that was agriculturally zoned has been sold off). Improvements include seven buildings constructed between 1961 and 1980. Gross building area is estimated at 54,973 SF. No significant improvements have been added to the property recently. Will need an "as is" fee simple value in a "summary-style" format. The report should include insurable replacement cost of the buildings (even if they contribute no value) and the environmental check sheet. The assignment may include some H&BU issues.
Access/Contact Info:	Diana Martin 425-258-5844
Due Date:	9/7/2018
Agreed Fee:	$14,985.00, inclusive of all costs necessary to complete the report. Any costs not included in the fee must be approved in advance by Michael S Pereira.
Delivery & Invoice Instructions:	Please upload a Final Report and Invoice in PDF format for review to RIMSCentral. Hard copies are not required unless specifically requested.
Address Report & Questions to:	Michael Pereira, VP Environmental Risk Officer Umpqua Bank 509-842-9178 michaelpereira@umpquabank.com

1233 Northwood Center Ct

Coeur D Alene, ID83814

Loan Officer Information:

Leslie Somes

Umpqua Bank

LeslieSomes@UmpquaBank.com
425-673-8579

Consultant Information:

Matt Wheaton
Terracon Consultants, Inc *
425-771-3304
21905 64th Avenue W, Suite 100
Mountlake Terrace, WA98043

Scope of Services:

Scope of Work to Follow: Phase II ESA. Reliance by Umpqua Bank.

Changes to Scope:
Umpqua Bank and the Consultant may make changes, additions, or deletions from this Task Order by mutual written agreement only (email is acceptable).

By accepting this award electronically, you agree to the terms of this engagement, including terns set forth in documents incorporated herein by reference. Please include a copy of the Task Order in the addenda of the report.

AMENDING AGREEMENT #1

THIS AMENDING AGREEMENT dated 08/06/2018

BETWEEN:

Umpqua Bank

OF THE FIRST PART

- AND -

Matt Wheaton / Terracon Consultants, Inc *

OF THE SECOND PART

Background

A. Umpqua Bank and Matt Wheaton (the Parties) entered into the contract (the "Contract") dated 08/01/2018, for Environmental services.

B. The Parties desire to amend the Contract on the terms and conditions set forth in the Amending Agreement (the "Agreement").

C. This Agreement is amendment #1 to the Contract.

IN CONSIDERATION OF the Parties agreeing to amend their obligations in the existing Contract, and other valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties agree to keep, perform, and fulfill the promises, conditions and agreements below:

Amendments

The Contract is amended as follows:

Award Fee (as amended): $14,985.00

Due Date (as amended): 09/14/2018

Scope Comments: Drillers are booked out to 8/17, moved to accommodate schedule.

No Other Change

Except as otherwise expressly provided in this Agreement, all of the terms and conditions of the Contract remain unchanged and in full force and effect.

Miscellaneous Terms

Capitalized terms not otherwise defined in this Agreement will have the meanings ascribed to them in the Contract. Headings are inserted for the convenience of the parties only and are not to be considered when interpreting this Agreement. Words in the singular mena and include the plural and vice versa. Words in the masculine include the feminine and vice versa. No regard for gender is inteded by the language in this Agreement.

Governing Law

Subject to the terms of the Contract, it is the intention of the Parties that this Agreement, and all suits and special proceedings under this Agreement, be construed in accordance with and governed, to the exclusion of the law of any other forum, by the laws of the state of , without

regard to the jurisdiction in which any action or special proceeding may be instituted.

Please include a signed copy of this letter as an addendum to the completed report, *in addition to the original contract and any other amendments.*

Sincerely,

Michael S Pereira

VP Environmental Risk Officer
Umpqua Bank
Environmental Department

Accepted By:

Terracon Consultants, Inc *

Matt Wheaton

8/6/18
Date

AMENDING AGREEMENT #2

THIS AMENDING AGREEMENT dated 09/13/2018

BETWEEN:

Umpqua Bank

OF THE FIRST PART

- AND -

Matt Wheaton / Terracon Consultants, Inc *

OF THE SECOND PART

Background

A. Umpqua Bank and Matt Wheaton (the Parties) entered into the contract (the "Contract") dated 08/01/2018, for Environmental services.

B. The Parties desire to amend the Contract on the terms and conditions set forth in the Amending Agreement (the "Agreement").

C. This Agreement is amendment #2 to the Contract.

IN CONSIDERATION OF the Parties agreeing to amend their obligations in the existing Contract, and other valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties agree to keep, perform, and fulfill the promises, conditions and agreements below:

Amendments

The Contract is amended as follows:

Award Fee (as amended): $14,985.00

Due Date (as amended): 09/17/2018

Scope Comments: Lab delay, will be completed by close of business on Monday.

No Other Change

Except as otherwise expressly provided in this Agreement, all of the terms and conditions of the Contract remain unchanged and in full force and effect.

Miscellaneous Terms

Capitalized terms not otherwise defined in this Agreement will have the meanings ascribed to them in the Contract. Headings are inserted for the convenience of the parties only and are not to be considered when interpreting this Agreement. Words in the singular mena and include the plural and vice versa. Words in the masculine include the feminine and vice versa. No regard for gender is inteded by the language in this Agreement.

Governing Law

Subject to the terms of the Contract, it is the intention of the Parties that this Agreement, and all suits and special proceedings under this Agreement, be construed in accordance with and governed, to the exclusion of the law of any other forum, by the laws of the state of , without

regard to the jurisdiction in which any action or special proceeding may be instituted.

Please include a signed copy of this letter as an addendum to the completed report, *in addition to the original contract and any other amendments.*

Sincerely,

Michael S Pereira

VP Environmental Risk Officer
Umpqua Bank
Environmental Department

Accepted By:

Terracon Consultants, Inc *

Matt Wheaton

9/13/18
Date

UMPQUA
B·A·N·K

ENVIRONMENTAL SERVICES AGREEMENT

This Environmental Services Agreement ("Agreement"), is made effective as of June 10, 2015, between Terracon Consultants, Inc., whose address is 18001 W. 106th Street, Suite 300, Olathe, KS 66061 ("Consultant") and Umpqua Bank ("Umpqua"), an Oregon state chartered bank, whose address is 1 SW Columbia, Suite 1200, Portland OR 97258 (each a "Party" and collectively, the "Parties").

Whereas, Umpqua may require professional environmental services and Consultant is engaged in the business of providing professional environmental services from time to time, and Umpqua will retain control over the subject of the work;

Now, therefore, the parties agree as follows:

1. **Scope of Services**. Umpqua may request services from Consultant regarding a particular property ("Property") in the form of an electronic request for proposal (RFP). Requests may be made electronically and proposals can be submitted electronically. Proposals shall clearly specify the subject Property and shall contain a detailed scope of work, timeline to complete and pricing. In the case of a Phase I Environmental Site Assessment, Consultant's proposal shall comply with U.S. EPA Standards and Practices for All Appropriate Inquiries and the most recent ASTM Standard (currently E1527-13), Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process.

Upon electronic approval of proposal by Umpqua, services will be awarded directly to Consultant using an electronic award system or other means. Services to be provided may include, but need not be limited to, the following:

Regulatory Records Review
Environmental Transaction Screen
Site Inspection
Property Condition Assessment
Seismic Studies
Geotechnical Investigation
Asbestos and Lead-based Paint Survey
Phase I Environmental Site Assessment
Phase II Environmental Assessment/Subsurface Investigation
Peer Review/Technical Support
Remediation Cost Estimating/Analysis
Site Remediation/Site Closure

In performing a Phase I Environmental Site Assessment, Consultant shall comply with the most current ASTM Standard (currently E1527-13/AAI Phase I Environmental Site Assessment), and any future ASTM Phase I Standard yet to be released. The services shall include, without limitation, the following: (i) review, within AAI compliant search parameters, of available federal environmental databases and applicable state and local databases, geocoded as available upon area locator map; (ii) visual and physical on-site inspection, as allowed, and observation of the Property for above ground or underground storage tanks, reasonably ascertainable indicators of CERCLA defined environmental contaminants and hazardous materials, generally recognized environmental contaminants and visible pollutants, and railroad right-of-ways; (iii) review of available city directories, Sanborn maps or other available historical information back to at least 1940 or first use, whichever is earlier, local emergency release records, and environmental permits; (iv) visual interior observations, as allowed, for reasonably ascertainable indicators of contamination from airborne emissions, vapor intrusion, asbestos-containing materials, lead

based paint, PCB-containing transformers, radon, underground fuel storage tanks, business operation procedures, regulated materials handling and storage practices, and waste stream disposal; (v) completion as allowed of an environmental screening questionnaire by Key Site Manager; (vi) visual observation of adjoining and adjacent properties for reasonably ascertainable potential environmental hazards and contaminants; (vii) photographic documentation of on-site conditions and adjoining properties; (viii) interviews as allowed with Property owner, past Property owners, occupants and persons knowledgeable about the Property; (ix) review of available title information for potential gaps in past Property use or ownership and search for environmental liens; and (x) geologic and hydrogeologic review to evaluate potential contaminant migration pathways and exposure routes as applicable. Consultant shall not disturb the soil or groundwater, dig holes or wells, or otherwise perform physical tests of or take samples from the Property, without first obtaining Umpqua's written instruction to do so. If Consultant is denied access to the Property for any reason, or is otherwise instructed to leave or vacate the Property, or any portion thereof, Consultant shall comply with such instructions, without argument or other opposition, and shall thereafter promptly notify Umpqua in writing that it was denied access to the Property.

2. **Change Orders.** All services or work, other than as agreed upon in the form of a proposal accepted electronically by Umpqua, but in connection with a specific proposal, shall be done only through a mutually agreed upon electronically or by email ("Change Order"). Change Orders shall contain a detailed scope of work, timeline to complete, and pricing.

3. **Entire Agreement.** Consultant shall provide services as outlined in this Agreement, which constitutes the entire agreement between Umpqua and Consultant, superseding all prior and contemporaneous negotiations, agreements, representations and understandings, either written or oral, of the parties with respect to this Agreement. With respect to each particular Property, this Agreement shall govern the performance of the subject written proposal as originally accepted by Umpqua, and as such proposal may be changed through one or more Change Orders. For clarity, no proposal or Change Order may add, delete, or change any terms of this Agreement.

4. **Changes to this Agreement.** Umpqua and Consultant may make additions, deletions, or changes to this Agreement by mutual written agreement only.

5. **Termination.** This Agreement shall be effective as of the date specified herein and shall continue in effect thereafter, unless terminated as provided herein. Umpqua may terminate this Agreement for convenience or for the default of Consultant upon 30 days written notice to Consultant, and following such notice, Consultant shall: (i) discontinue work as promptly as practicable, (ii) attempt to minimize charges, and (iii) submit to Umpqua a written report of findings up to the date of termination. Consultant may terminate this Agreement upon 30 days written notice to Umpqua, and following such notice, Consultant shall complete any outstanding projects and will be paid for all properly completed work in accordance with this Agreement (provided that Umpqua shall retain the right to terminate this Agreement even after Consultant terminates it, in which case the immediately preceding sentence shall control). Umpqua may terminate any work being done under any particular proposal, in which case Umpqua will pay for the work done thereunder prior to such termination and Consultant will give Umpqua all of the materials and work in process relating to such work.

6. **Umpqua's Responsibilities.** Umpqua will: (1) provide the information reasonably available to Umpqua pertinent to the project, including previous reports and any other pertinent data in Umpqua's possession and (2) arrange rights of access or permission to enter the Property as required for Consultant to perform its services under this Agreement. If access is denied to all or any portion of the Property, Consultant shall notify Umpqua in writing immediately, complete all other portions of the services and provide a reasonable recommendation to Umpqua as to the likelihood of elevated risk of contamination. Umpqua will then make a determination whether to proceed or continue to pursue

Property access. If Umpqua obtains access, Consultant will perform site reconnaissance and complete the assignment as intended in the original scope.

7. **Reliance on Third Parties.** Consultant may rely without confirmation upon information provided by others and federal, state, and local agencies, pertinent to the Property to the extent such reliance is reasonable.

8. **Payment.** Umpqua will pay undisputed invoices within 30 days of Umpqua's receipt thereof.

9. **Insurance and Limitation of Liability.** Consultant shall, during the performance of this Agreement, at its cost, keep in force adequate insurance coverage to protect Umpqua from any losses with respect to Consultant's performance under this Agreement. Such coverage shall include (at a minimum) the following insurance: (1) Worker's Compensation Insurance as required by law, (2) Employer's Liability Insurance with minimum limits of $1,000,000; (3) Comprehensive General Liability Insurance with minimum limits of $1,000,000 per occurrence, $5,000,000 aggregate; (4) Comprehensive Automobile Liability Insurance, including operation of owned, non-owned, and hired automobiles with minimum limits of $1,000,000 per claim; (5) Professional Liability, Errors and Omissions Insurance with minimum limits of $2,000,000 per occurrence; and (6) Contractor Pollution Liability Insurance with minimum limits of $2,000,000 per occurrence.

Consultant will furnish Umpqua, upon request, insurance certificate(s) reflecting Consultant's compliance with the requirements of this section.

All such insurance policies shall be issued by properly licensed insurance companies with a current A.M. Best rating of "A-VII" or better. Consultant shall list Umpqua as an additional insured. Such insurance will be primary and noncontributory to insurance or self-insurance maintained by Umpqua. Consultant, or its insurance company, shall give thirty (30) days prior written notice to Umpqua of cancellation, non-renewal, or material change in coverage, scope or amount of any insurance policy.

10. **Standard of Care / Warranty.** Consultant shall perform its services in accordance with generally accepted national, state and local engineering and technical practices and professional standards prevailing in the locality of the Property, current at the time the services are performed.

11. **Confidentiality.** Any information and documentation Umpqua provides to Consultant is deemed to be Umpqua's confidential information ("Umpqua Confidential Information") unless Umpqua states in writing that it is not Umpqua Confidential Information. Such information does not lose its status as Umpqua Confidential Information merely because it is known by a limited number of persons or entities outside of Umpqua or because it was not originated by Umpqua. With respect to Umpqua Confidential Information, Consultant shall:

(a) Protect and keep such Confidential Information secret and secure from disclosure and unauthorized use with the same degree of precautions and safeguards it uses to protect and keep its own Confidential Information of a similar nature secret and secure, but in no case with less than reasonable care;

(b) Comply with all laws, rules and regulations regarding the sharing of Confidential Information, including all applicable privacy laws;

(c) Disclose such Confidential Information only to its employees, Subcontractors and/or agents who have both: (i) a need to know such information in order to perform under this Agreement, and (ii) a written contractual, fiduciary or other legal duty, at least as restrictive as this Agreement, to maintain the confidentiality of the information they receive. Contractor shall not disclose Confidential Information to any third party without Umpqua's prior written authorization; and

(d) Not use or disclose, or permit any of its employees, Subcontractors and/or agents to use or disclose, any such Confidential Information for any reason other than performance under this Agreement, and in no event will Contractor disclose or use such Confidential Information in any manner that is or has the potential to be adverse or detrimental to the interests of Umpqua;

Required Disclosure. Contractor may disclose Confidential Information as may be required by law, statute, rule or regulation, including any subpoena or other similar form of process. Prior to such disclosure, Consultant shall provide Umpqua with prompt written notice (so long as such notice is not prohibited by law), so that Umpqua may object to the request and/or seek appropriate protective relief. Notwithstanding anything to the contrary, Umpqua may disclose any information, including Consultant's Confidential Information, in response to a request from any federal or state bank examiner, or other regulatory official with authority over Umpqua or its affiliates.

Return or Destruction. Upon termination of this Agreement, or if earlier requested by Umpqua in writing, Contractor shall, within ten (10) business days, at Umpqua's election, destroy or return to Umpqua all Confidential Information, including originals and all duplicates, whether standing alone or as part of any other document or other compilation of information, or in any other form, including hardcopy (paper, micro film, photo, etc.) or softcopy (electronic, optical, or magnetic media such as computer or disk storage, tape recording, e-mail, voicemail, etc.); provided, however, that Contractor may keep a copy if necessary for compliance with legal or regulatory obligations, subject to the continuing confidentiality obligations set forth in this Agreement. Upon request, an officer of Contractor shall promptly provide Umpqua with written certification of such destruction or return.

Intrusions/Disclosures. If Consultant learns of any actual or suspected theft of, accidental disclosure of, loss of, or inability to account for any Confidential Information by Consultant or any of its Subcontractors (collectively "Disclosure") and/or any unauthorized intrusions into Consultant's or any of its Subcontractor's facilities or secure systems used to perform the Services (collectively "Intrusion"), Consultant must, at its own expense, immediately (i) notify Umpqua's information security officer, (ii) specify the corrective action to be taken, (iii) take corrective action to prevent further Disclosure and/or Intrusion. Consultant must, as soon as is reasonably practicable, make a report to Umpqua including details of the Disclosure (including Customer(s)' identities and the nature of the information disclosed) and/or Intrusion and the corrective action Consultant has taken to prevent further Disclosure and/or Intrusion. Consultant shall cooperate and assist Umpqua at no additional cost to minimize any potential adverse impact upon Umpqua. Additionally, Consultant must cooperate fully with all government regulatory agencies and law enforcement agencies having jurisdiction and authority for investigating a Disclosure and any known or suspected criminal activity.

Ownership. Confidential Information shall remain the property of Umpqua.

Marketing, Publicity. Except upon the prior written consent of a Umpqua communications or public relations director, which may be granted or withheld in Umpqua's sole discretion, Consultant shall not: (a) publicly disclose any information regarding the existence or terms of this Agreement, the existence or any aspects of the business relationship between Umpqua and Consultant, whether in a news release, press conference, or otherwise, (b) disclose any of the foregoing information to any person or entity for any purpose other than Consultant's performance under this Agreement, or (c) use any of the Umpqua

trade names, trademarks, trade dress, service marks, logos, branding or other Umpqua Intellectual Property for any purposes (including customer lists, websites, advertisements, releases to professional or trade publications, sales presentations, performance of services for other customers, etc.).

12. **Ownership and Use of the Results of the Services.** All of the results of the services performed by Consultant hereunder, including any such plans, testing, layouts, schematics, data, reports, studies, cost estimates, and other materials created or prepared hereunder, alone or with others, whether created on or off Umpqua's premises, whether or not created during regular work hours, and whether interim or final (collectively, "Work Product") shall be deemed "work made for hire" as defined in 17 U.S.C. §101 & §201(b), and shall be the exclusive property of Umpqua. Umpqua shall be deemed the owner of the Work Product and may, without notice to or permission from Consultant, provide copies of the Work Product as necessary in the course of normal and customary property due diligence, and assign its interest in the Work Product as appropriate to the final property disposition.

13. **Compliance with Laws.** Consultant shall comply with all laws, statutes, rules, regulations and ordinances that are applicable to the services provided.

14. **Independent Contractor.** Consultant is an independent contractor in the performance of the services to be provided under this Agreement and, except as otherwise provided in this Agreement, shall not be or hold itself out, as an agent or employee of the Umpqua. Consultant shall have control of and responsibility for its employees and its subcontractors engaged in the performance of this Agreement.

15. **Indemnity.** Consultant and Umpqua ("Indemnifying Party") agree to defend, indemnify and hold the other Party, its affiliates, and its and their directors, officers, employees, and agents (collectively, "Indemnified Party") harmless from and against any and all claims, liabilities, damages and costs, including without limitation, reasonable attorney's fees, arising out of or in any related, directly or indirectly, to the Indemnifying Party's breach of or failure to perform its duties and/or obligations under this Agreement. In this and all other respects, Consultant shall be fully responsible for the acts and omissions of its subcontractors (i.e., all acts and omissions of Consultant's subcontractors shall be imputed to Consultant).

16. **Severability.** If any part of this Agreement is adjudged as illegal, invalid or unenforceable, it shall be deemed modified in the manner that best advances the spirit of this Agreement.

17. **Attorney's Fees.** If any suit, dispute or action arises from or in connection with this Agreement is commenced, the prevailing party shall be entitled to recover all reasonable attorney fees, costs and expenses incurred, including, but not limited to, any at trial, on appeal, or in a bankruptcy proceeding.

18. **Force Majeure.** Any loss or damage or delays in, or failure of performance of either Party shall not constitute default or give rise to any claims for damages if and to the extent that such loss, damage, delay or failure is caused by occurrences beyond the reasonable control of the Party affected, and which, by the exercise of reasonable diligence, such Party is unable to prevent.

19. **Governing Law & Venue.** This Agreement is made under and shall be governed by and construed and enforced under the laws of the state of Oregon, without giving effect to Oregon's conflicts of laws principles. Any action, suit, or proceeding relating directly or indirectly to this Agreement shall be brought exclusively in the state or federal courts located in Multnomah county, Oregon, and the parties irrevocably submit to the exclusive jurisdiction of that court for any such action, suit or

proceeding, and hereby waive any right to contest such exclusive jurisdiction or change such venue on any grounds.

20. Successors & Assigns. This Agreement shall be binding on the Parties and their successors. Except as provided herein, neither Party may not assign this Agreement, in whole or in part, except upon the other Party's prior written consent.

21. Taxes. Consultant shall pay all applicable sales, use, gross receipts, net income or any labor or employment related taxes or other taxes levied by any taxing authorities on Consultant whose jurisdictions apply to Consultant. Consultant shall invoice Umpqua for sales and use taxes of the type required to be collected from purchasers under applicable law for the services and Consultant shall remit such taxes to the proper taxing authority. If Consultant fails to invoice, collect, remit, or otherwise pay the amount of any taxes required to be collected or paid by Umpqua, Consultant shall be responsible for and shall pay any interest, assessments, fines and penalties which may be assessed against Umpqua or Consultant for Consultant's failure to collect and timely remit or otherwise pay such taxes.

22. Records. Consultant will retain all information obtained or created in the course of performance under this Agreement in accordance with applicable law. Such records will be available for examination and audit by any governmental authority having jurisdiction over Umpqua's business or by Umpqua's internal or external auditors. Consultant will promptly notify Umpqua of any such requests by any governmental authority, if Consultant is permitted to make such a disclosure to Umpqua under applicable law. At Umpqua's request, Consultant shall provide documentation satisfactory to Umpqua of Consultant's internal controls and procedures that are required to ensure compliance with this Agreement and all applicable law. Consultant will reasonably cooperate with Umpqua's periodic risk assessments, if any, including providing physical security, information security, business continuity plan and financial stability information to Umpqua upon request.

23. Performance Threats. Consultant will promptly notify Umpqua in writing in the event of: (a) financial difficulty of Consultant or any of its Subcontractors that may materially impact Consultant's performance hereunder; (b) significant staffing reductions or changes in key staff that may affect Consultant's performance hereunder; (c) a decision by Consultant to outsource, relocate, sell or acquire significant operations or support associated with the services or any critical component of the environment used to provide services hereunder; (d) cessation of business or material adverse change in any business of any key subcontractor used by Consultant in its performance hereunder; (e) any unfavorable change to any credit rating assigned to Consultant by any major credit rating agency; (f) an announced intention or the actual filing for bankruptcy or insolvency law by Consultant or any key subcontractor used by Consultant in its performance hereunder; (g) a labor strike against Consultant or any key subcontractor used by Consultant in its performance hereunder; or the (h) closing of any operational site of Consultant or of any key subcontractor used by Consultant in its performance hereunder.

24. Miscellaneous. No provision of this Agreement, nor any breach thereof, may be waived, deleted, or modified, nor may any provisions be added, in any manner except pursuant to a writing signed by the Party against whom it is to be enforced. Absent such a signed waiver, no failure or delay in enforcing any right or remedy (including, but not limited to, any course of dealing or performance) shall preclude any exercise or further exercise of that or any other right or remedy. The provisions of this Agreement shall survive termination of this Agreement to as their terms may naturally dictate. The rule of interpreting ambiguities against the drafter shall not apply. Umpqua affiliates (i.e., entities directly or indirectly in control of, controlled by, or under common control with, Umpqua) may procure services from Consultant hereunder, in which case such affiliate shall also have all the rights and obligations of Umpqua hereunder with respect to the proposal accepted by such affiliate (i.e., this Agreement shall

govern with respect to the proposal as if the affiliate were Umpqua hereunder). Consultant represents and warrants that it has not and shall not in the future bestow any preferential benefits or treatment upon any Umpqua employee as an inducement to entering into this Agreement or otherwise in relation to this Agreement or in relation to any future proposal to be submitted with respect hereto.

25. Supplemental Terms and Conditions attached hereto and incorporated for reference.

In witness whereof, each of the Parties hereto has executed this Agreement effective as of the date written above.

Umpqua Bank

By: _____
Name: Michael S. Pereira
Title: Env. Risk Officer

Consultant: Terracon Consultants, Inc.

By: _____
Name: Eric D. Kunz
Title: Regional Manager / Sr. Principal

Umpqua Bank, ("Umpqua")
Terracon Consultants, Inc., ("Consultant")

Section 25
Supplemental Terms and Conditions

LIMITATION OF LIABILITY. Notwithstanding anything to the contrary in this Agreement, except for a Party's confidentiality obligations, and willful misconduct or gross negligence of a Party (liabiity for each of which is not limited), the aggregate liability of either Party for any breach or breaches of its obligations under this Agreement or for the negligent act or omisson of such Party or such Party's employees, subcontractors and agents shall be the greater of $500,000 or the Consultant's fee for the specific project proposal in dispute. EXCEPT FOR A PARTY'S CONFIDENTIALITY OBLIGATIONS, AND WILLFUL MISCONDUCT OR GROSS NEGLIGENCE OF A PARTY, IN NO EVENT SHALL EITHER PARTY BE LIABLE TO THE OTHER FOR INDIRECT, INCIDENTAL, CONSEQUENTIAL, SPECIAL OR PUNITIVE DAMAGES OF ANY KIND, EVEN IF ADVISED OF THE POTENTIAL FOR ACCRUAL OF SUCH DAMAGES.

Warranty. Except for the standard of care previously stated, Consultant makes no warranties or guarantees, express or implied, relating to Consultant's services and Consultant disclaims any implied warranties or warranties imposed by law, including warranties of merchantability and fitness for a particular purpose.

Safety. Consultant will be responsible for supervision and site safety measures for its own employees, but shall not be responsible for the supervision or health and safety precautions for any third parties, including Umpqua's contractors, subcontractors, or other parties present at the site.

APPENDIX F – ACCESS AGREEMENT

Terracon

Reference Number: P81187331

ACCESS AGREEMENT

DEFINITIONS

The property to which access is granted is: Property ("Property").

The legal owner(s) of the Property or person/entity with legal authority to grant access to the Property is: Diana Martin ("Grantor").

The services to be conducted on the Property are generally described as follows: Service ("Services").

The entity granted access for the purposes of performing the Services is Terracon Consultants, Inc., which shall include its employees, agents, and subcontractors ("Grantee").

The Services are performed for the benefit of Umpqua Bank ("Client"), pursuant to the Agreement for Services between Terracon Consultants, Inc. and Client, date and reference number 08/17/2018 P81187331.

AGREEMENTS

By its signature below, Grantor represents it has authority to, and does, grant access to the Property to Grantee for the purpose of performing the Services. Grantor agrees that:

- Grantee may drill exploration borings on the Property, using drill rigs, trucks and other equipment, recover and collect soil, water, and other samples, and perform other actions related to the exploration of surface or subsurface conditions on the Property, as necessary to perform the Services.
- Grantee may use large truck or track-mounted equipment in the performance of the Services, which is normal and customary in the performance of these kinds of Services, and that this equipment may leave depressions, wheel tracks, ruts or other marks in the ground surface.
- Grantor will not interfere with any of the activities of Grantee or undertake any actions regarding the use of Property that would endanger the health, safety, or welfare of the Grantee employees, agents, or subcontractors, or damage their equipment, materials, or property.

By its signature below, Grantee agrees:

- That upon completion of Services and activities authorized by this Access Agreement, Grantee will remove all material and equipment utilized by Grantee from the Property, with the exception of ground markers that may be placed on the premises to designate sampling areas,
- Grantee will remove boring spoils that accumulate around the bore holes, or, where allowable, spread the spoils across the area, if acceptable to Grantor.
- Grantee will make reasonable efforts to restore the property and leave it in a condition suitable for its previous use. Landscaping restoration, including seeding or sodding, will not be performed.

The Services and field activities authorized under this Access Agreement may begin after signature of Grantor. Access is granted until Services are completed, which should not exceed 30 days following commencement of Services, except for period of access necessary for monitoring equipment, if applicable, after which time all rights of access given by Grantor shall cease.

SIGNATURES

Grantee:	**Terracon Consultants, Inc.**		Grantor:	**Diana Martin**	
By:	Kyle S. Bennett	Date: **8/7/2018**	By:	Diana Martin	Date: 8/7/18
Name/Title:	**Kyle S. Bennett / Environmental Technician II**		Name/Title:	**Site Access/Contact**	
Address:	**21905 64th Ave W, Ste 100**		Address:	**3812 28th Place Northeast**	
	Mountlake Terrace, WA 98043-2251				
Phone:	**(425) 771-3304**	Fax: **(425) 771-3549**	Phone:	**(253) 258-5844**	Fax:
Email:	**Kyle.Bennett@terracon.com**		Email:	**dianamartin@busetimber.com**	