

Stantec Consulting Services, Inc.
11130 NE 33rd Place Suite 200
Bellevue, WA 98004

To:	Ms. Krystal Rodriguez	From:	Greg McCormick
Company:	WDOE Central Regional Office	<input checked="" type="checkbox"/>	For Your Information
		<input type="checkbox"/>	For Your Approval
Address:	15 West Yakima Avenue, Suite 200 Yakima, Washington 98902-3452	<input checked="" type="checkbox"/>	For Your Review
		<input type="checkbox"/>	As Requested
Phone:	(509) 575-2490		
Date:	September 23, 2015		
File:	Garage Fuel System Replacement Chief Joseph Dam		
Delivery:	Regular Mail		

Reference: UST Closure Report – Chief Joseph Dam, Bridgeport, WA

Attachment:

Copies	Doc Date	Description
1	9/23/2015	Underground Storage Tank Closure Report Chief Joseph Dam - Bridgeport, Washington

Please find the enclosed Underground Storage Tank Closure Report for the Maintenance/Garage Facility at the Chief Joseph Dam. This report summarizes the permanent closure by removal of one 4,000-gallon gasoline UST, one 2,500-gallon diesel fuel UST, a dual fuel dispenser, and associated product lines from the facility on September 1, 2015. Please call if you have any questions. Thank you,

Stantec Consulting Services, Inc.

Greg McCormick
Senior Geologist
Phone: 425-869-7367
Cell: 425-922-6392
Greg.McCormick@stantec.com

Underground Storage Tank Closure Report

USACE Garage Fuel System
Replacement
Chief Joseph Dam
Bridgeport, Washington
Facility Site ID: 22348824
UST Site No.: 6690



Prepared for:
United States Corps of Engineers
Seattle District

Prepared by:
Stantec Consulting Services Inc.
11130 NE 33rd Place, Suite 200
Bellevue, Washington 98004

September 23, 2015

Sign-off Sheet

This document entitled Underground Storage Tank Closure Report was prepared by Stantec Consulting Services Inc. ("Stantec") for the account of Saybr Contractors, Inc. (the "Client"). Any reliance on this document by any third party is strictly prohibited. The material in it reflects Stantec's professional judgment in light of the scope, schedule and other limitations stated in the document and in the contract between Stantec and the Client. The opinions in the document are based on conditions and information existing at the time the document was published and do not take into account any subsequent changes. In preparing the document, Stantec did not verify information supplied to it by others. Any use which a third party makes of this document is the responsibility of such third party. Such third party agrees that Stantec shall not be responsible for costs or damages of any kind, if any, suffered by it or any other third party as a result of decisions made or actions taken based on this document.


Prepared by



(signature)

Greg McCormick, L.G., Senior Geologist

Reviewed by



(signature)

Marc Sauze, P.E., Principal Engineer

Table of Contents

ABBREVIATIONS	III
1.0 INTRODUCTION	1.1
1.1 PURPOSE AND SCOPE OF WORK	1.1
1.2 REGULATORY STATUS	1.2
2.0 FACILITY DESCRIPTION	2.3
2.1 SITE LOCATION	2.3
2.2 SITE DESCRIPTION	2.3
2.3 SURROUNDING LAND USE	2.3
2.4 REGIONAL SETTING AND GEOLOGY.....	2.3
2.5 REGIONAL HYDROGEOLOGY.....	2.4
3.0 FIELD ACTIVITIES	3.5
3.1 UST REMOVAL ACTIVITIES	3.5
3.2 FIELD SCREENING	3.7
3.3 SOIL SAMPLING ACTIVITIES.....	3.7
3.4 SUBSURFACE CONDITIONS.....	3.8
3.4.1 Soil.....	3.8
3.4.2 Groundwater.....	3.8
3.5 SOIL ANALYTICAL METHODS	3.8
3.6 SOIL ANALYTICAL RESULTS.....	3.9
4.0 SOIL DISPOSAL AND SITE RESTORATION	4.10
4.1 SOIL DISPOSAL	4.10
4.2 SITE RESTORATION	4.10
5.0 SUMMARY AND CONCLUSIONS	5.11
6.0 REFERENCES	6.13

LIST OF TABLES

Table 1	UST Site Assessment - Soil Analytical Results
---------	---

LIST OF FIGURES

Figure 1	Site Location Map
Figure 2	Soil Sample Locations and Lab Results

UNDERGROUND STORAGE TANK CLOSURE REPORT

LIST OF APPENDICES

- APPENDIX A DEPARTMENT OF ECOLOGY UST NOTICES AND CHECKLISTS
- APPENDIX B FIELD SAMPLING AND LABORATORY TESTING FOR UST SITE ASSESSMENT
- APPENDIX C UST AND WASTE DISPOSAL DOCUMENTATION
- APPENDIX D LABORATORY ANALYTICAL REPORT AND CHAIN-OF-CUSTODY DOCUMENTATION

UNDERGROUND STORAGE TANK CLOSURE REPORT

Abbreviations

AST	Aboveground Storage Tank
bgs	Below ground surface
BTEX	Benzene, toluene, ethyl benzene, and total xylenes
CUL	Cleanup Level
DOT	Department of Transportation
Ecology	Washington State Department of Ecology
HASP	Health and Safety Plan
ICC	International Code Council
ID	Identification
LUST	Leaking Underground Storage Tank
MarVac	Marine Vacuum Service
MTCA	Model Toxics Control Act
OWS	Oil/Water Separator
PCS	Petroleum Contaminated Soil
PID	Photoionization Detector
Sabyr	Sabyr Contractors, Inc.
Stantec	Stantec Consulting Services Inc.
TPH-G	Total petroleum hydrocarbons as gasoline
TPH-D	Total petroleum hydrocarbons as diesel
TPH-O	Total petroleum hydrocarbons as heavy oil
USACE	United States Army Corps of Engineers
UST	Underground Storage Tank

UNDERGROUND STORAGE TANK CLOSURE REPORT

INTRODUCTION

September 23, 2015

1.0 INTRODUCTION

Stantec Consulting Services Inc. (Stantec) was retained by Sabyr Contractors, Inc. (Sabyr) of Tacoma, Washington to provide documentation of the underground storage tank (UST) system removal at the United States Army Corps of Engineers (USACE) Warehouse/Garage facility in Bridgeport, Washington (the "Site"). The Site is located on Pearl Hill Road NE at the Chief Joseph Dam on the Columbia River. The 4,000-gallon gasoline UST and 2,500-gallon diesel fuel UST and fuel dispenser are being replaced by a new 1,500-gallon partitioned aboveground storage tank (AST) and two new dispensers as part of the fueling system upgrade at the Site.

The UST decommissioning and assessment work was conducted on September 1, 2015. The decommissioning of the 4,000-gallon gasoline UST and the 2,500-gallon diesel fuel UST was supervised by Mr. Lee Dalton of Sabyr. Mr. Dalton is an International Code Council (ICC) certified UST Decommissioning Supervisor #1136590-U2.

Site assessment activities were performed by Mr. Greg McCormick, L.G. of Stantec. Mr. McCormick is an ICC-certified Washington State Site Assessor (#1052439-U7). UST site assessment and limited soil remedial excavation activities were conducted in accordance with the Washington State Department of Ecology (Ecology) document: "Guidance for Site Checks and Site Assessments for Underground Storage Tanks" [Ecology, February 1991 (revised April 2003)] as required by Washington Administrative Code 173-360-610.

1.1 PURPOSE AND SCOPE OF WORK

Stantec personnel observed the removal of one 4,000-gallon steel UST, one 2,500-gallon diesel fuel steel UST, one dual fuel dispenser, and associated product piping at the Site. Stantec noted the condition of the USTs and collected post-excavation soil samples to assess subsurface conditions adjacent and beneath the former UST at the time of closure.

Stantec's scope of work consisted of the following tasks:

- Preparation of a *Site-specific Health and Safety Plan (HASP)*;
- Preparation of the *Field Sampling and Laboratory Testing Plan for UST Site Assessment* sampling and analysis plan;
- Supervision and documentation of the UST and product line decommissioning activities;
- Inspection of the condition of the USTs and product piping upon removal;
- Collection of the confirmation soil samples from the UST excavations;

UNDERGROUND STORAGE TANK CLOSURE REPORT

INTRODUCTION

September 23, 2015

- Logging of subsurface conditions, field screening soil samples for organic vapors using a photoionization detector (PID), and submitting selected soil samples for laboratory analysis. Samples collected from the gasoline UST excavation were submitted for analysis of total petroleum hydrocarbons quantified as gasoline (TPH-G), and benzene, toluene, ethyl benzene, and total xylenes (BTEX). Samples collected from the diesel fuel UST excavation were submitted for analysis of TPH quantified as diesel fuel (TPH-D) and TPH quantified as heavy oil (TPH-O). Samples collected from the base of the dual fuel dispenser were submitted for TPH-G, TPH-D, TPH-O, and BTEX;
- Field screening and collection of soil samples from the soil stockpile;
- Removal and disposal of a limited volume of petroleum-contaminated soil (PCS) from the base of the dispenser island; and,
- Preparation of this UST Closure Report documenting UST removal activities.

1.2 REGULATORY STATUS

Stantec reviewed Ecology's electronic databases regarding the regulatory status of the USTs at the Site. The Site is listed in Ecology's UST Site/Tank Data Summary databases as UST Number 6690 and Facility Site Identification (ID) Number 22348824. The database references UST Tags A4310 and A5630. The 4,000-gallon UST containing unleaded gasoline is designated as "Tank No. 4". The current status of Tank No. 4 is "Temporarily Closed" since December 10, 2013. The 2,500-gallon UST containing diesel fuel is designated "Tank No. 3". The current status of Tank No. 3 is "Operational".

Installation of both USTs was completed on July 24, 1991 and both were upgraded on March 11, 1998. The permit for both USTs is current through June 30, 2015. Database information indicates that both USTs are constructed of double-walled steel with interstitial monitoring. Each UST is equipped with a sacrificial anode, automatic tank gauging, a spill bucket, and automatic shutoff to prevent overfilling. Product piping is double-walled, corrosion-resistant fiberglass. Observations made in the field during the UST Site Assessment confirm the piping is 4-inch outer diameter Dualoy 3000/L piping manufactured by Ameron Industries. The system is tightness tested annually and was certified tight during its last test according to USACE personnel present at the Site on the day of UST closure.

The required 30-Day Notice was mailed to Ecology on July 14, 2015. The Notice referenced both tag numbers at the Chief Joseph Dam Project OFC facility located on Pearl Hill Road NE in Bridgeport, Washington. The UST Owner Operator is listed as "U.S. Army Corps of Engineers." The Owner/Operator representative listed is Mr. Marshall A. Grip, Environmental Compliance Officer with the USACE. The form indicated an intended UST closure date after August 20, 2015. Mr. Grip signed the Ecology *UST Closure and Site Assessment Notice* as the USACE representative but was not on-site during the closure activities on September 1, 2015.

UNDERGROUND STORAGE TANK CLOSURE REPORT

FACILITY DESCRIPTION
September 23, 2015

2.0 FACILITY DESCRIPTION

2.1 SITE LOCATION

The Site is the USACE Warehouse/Garage facility at the Chief Joseph Dam outside Bridgeport, Washington. The Site is located on the south bank of the Columbia River within 0.20 mile of the dam (**Figure 1**).

2.2 SITE DESCRIPTION

The 4,000-gallon gasoline UST and the 2,500-gallon diesel UST are both located on the north side of the L-shaped Warehouse/Garage building. The fueling area is located in the shipping and receiving area near a canopy and access door to the vehicle service area. The gasoline UST is located at the northwest corner of the canopy and the diesel fuel UST is located at the northeast corner of the canopy. The dual fuel dispenser is located under the north end of the canopy between the two USTs. The USTs are covered by an approximately 8-inch thick concrete pad with asphalt pavement surrounding the pad. A 1,000-gallon oil/water separator (OWS) is located approximately 15 feet east of the diesel fuel UST. Vent lines for the USTs are located on the exterior wall of the building on either side of the office door (**Figure 2**).

According to USACE information, the gasoline and diesel fuel USTs are both double-walled, steel STI-P3 fuel tanks. The dispenser is a Tokheim Dual Suction Dispenser. The fueling system is equipped with a Veeder-Root TLS-250i monitoring system and the OWS is equipped with a Pollulert/Warrick monitoring system. Product lines connecting the USTs to the dispenser are 4-inch OD, double-walled, fiberglass Dualoy 3000/L pipes manufactured by Ameron Industries. The tank pit was backfilled with sand.

2.3 SURROUNDING LAND USE

The Site is located in a rural area outside of the city limits of Bridgeport, Washington. The facility is located on the north side of Pearl Hill Road. The site is bound on the north by the Columbia River with the Chief Joseph Dam to the east. The USACE maintenance office building is located to the west. Access to the USACE Warehouse/Garage building is restricted by a chain-link cyclone fence and manned security access gate.

2.4 REGIONAL SETTING AND GEOLOGY

The Site lies on the south bank of the Columbia River approximately one mile east-southeast of the town of Bridgeport, Washington.

The Geologic Map of the Banks Lake 1:100,000 Quadrangle, Washington, indicates that shallow soils at the Site are classified as undivided glacial drift deposits or glacial till. This material

UNDERGROUND STORAGE TANK CLOSURE REPORT

FACILITY DESCRIPTION

September 23, 2015

includes glacial outwash deposits and ice-contact stratified materials deposited by the Okanogan lobe of the Cordilleran ice sheet during the Ice Age. The deposits form moraines, till plains, meltwater channels, and terraces. These glacial deposits are underlain by metamorphic tonalite gneiss bedrock.

2.5 REGIONAL HYDROGEOLOGY

The Site is located at approximately 1,000-feet above mean sea level along the south bank of the Columbia River. Groundwater was not encountered during any of the excavation or soil sampling activities conducted during the UST Site Assessment. The static groundwater level lies between 40- and 80-feet below ground surface (bgs) as stated on available well logs that were reviewed from Ecology's Well Log database for water supply wells located within a mile radius of the Site.

UNDERGROUND STORAGE TANK CLOSURE REPORT

FIELD ACTIVITIES
September 23, 2015

3.0 FIELD ACTIVITIES

3.1 UST REMOVAL ACTIVITIES

Saybr was contracted by the USACE to oversee decommissioning of the existing fueling system (i.e. two USTs, duel fuel dispenser, and product lines) and installation of the new partitioned AST in the same location. Prior to commencement of closure activities, a 30-day Notice of UST closure was submitted to Ecology on July 14, 2015. The USACE provided site plans of the Warehouse/Garage facility showing the location of the building, fueling system, and vehicle service bays. Prior to tank closure activities, the USTs were emptied of residual fuel by the USACE and underground utilities were located. Copies of Ecology's 30-Day Notice, UST Closure and Site Assessment Notice, and UST Site Check/Site Assessment Checklist are included in **Appendix A**.

Stantec prepared a HASP for the Site. The HASP identified potential physical and chemical hazards associated with the proposed field activities and established personal protection standards and mandatory safety practices. The HASP also included information on suspected chemical compounds to be encountered, a list of monitoring equipment, the required protective clothing and equipment, a map and directions to the nearest hospital, and a list of emergency telephone numbers. The HASP was available at all times during the field activities. Saybr and Stantec personnel working at the Site were required to review, sign, and comply with the provisions set forth in the HASP during all on-site activities.

Stantec also prepared a *Field Sampling and Laboratory Testing Plan for UST Site Assessment* (the "Plan") for UST Site Assessment activities. The Plan described field sampling methods and quality control procedures used during the UST Site Assessment. The Plan identified the laboratory and laboratory methods used during contaminant testing, field screening methods, quality assurance/quality control procedures, and waste management information. Certificates for Mr. Dalton's and Mr. McCormick's UST certifications, and analytical laboratory are included as Attachments to the Plan. A copy of the Plan is included as **Appendix B**.

On August 24, 2015, Saybr supervised Marine Vacuum Service (MarVac) of Seattle, Washington as they triple rinsed and pumped out the rinsate water from the interior of the USTs and OWS. Approximately 2,500 gallons of rinsate water and 50 gallons of sludge were removed from the USTs and transported to MarVac's permitted hazardous waste treatment and disposal facility in Seattle. MarVac also transported the USTs off site for disposal as scrap metal. Pump and rinse certificates, liquid waste, and UST disposal documentation are provided in **Appendix C**.

On September 1, 2015, the USTs were rendered inert with carbon dioxide gas and tested with a portable multi-gas detector to confirm the organic vapor levels in the UST was adequate for removal. A copy of the Marine Chemist Certificate of safe excavation and transportation is included in **Appendix C**. Following inerting and testing of the USTs, the soil overburden was removed to a depth of approximately 3 feet bgs. Visual inspection indicated that the pump and piping inside the spill bucket was in good condition.



UNDERGROUND STORAGE TANK CLOSURE REPORT

FIELD ACTIVITIES
September 23, 2015

Saybr personnel excavated the 2,500-gallon diesel fuel UST using an excavator. Soil was removed from the north side and the ends of the UST. There was no visual evidence of discoloration of the sand surrounding the UST or petroleum odor. The overburden material and surrounding soil was periodically screened using a photo-ionization detector (PID). Screening results did not indicate the presence of hydrocarbon vapors. Field screening results are discussed in the following section. The UST was removed using the metal eyes on top of the UST and loaded directly onto a flat-bed truck. The UST was inspected and measurements taken to confirm the size and capacity of the UST. The UST measured 6 feet in diameter by 12 feet long confirming a capacity of 2,500 gallons. The exterior of the UST appeared in good condition with no significant corrosion, weld damage, or holes. After the UST was removed from the excavation, a total of five soil samples were collected from the base of the diesel UST excavation and sidewalls.

Saybr excavated the 4,000-gallon gasoline UST using the same procedures as the diesel UST. Soil was removed from north side and the ends of the UST. There was no visual evidence of discoloration of sand surrounding the UST or petroleum odor and the overburden material and surrounding soil was periodically screened using the PID. Screening results did not indicate the presence of hydrocarbon vapors. The UST was removed and loaded directly onto the flat-bed truck. The UST measured 7 feet in diameter by 14 feet long confirming a capacity of 4,000 gallons. The exterior of the UST appeared in good condition with no significant corrosion, weld damage, or holes. After the UST was removed from the excavation, a total of five soil samples were collected from the base of the gasoline UST excavation and sidewalls.

Following the removal of both USTs, the fuel dispenser island was removed. Sand immediately below the product piping at the base of the dispenser was slightly darker than the surrounding sand and had a petroleum odor. A sample of the sand was collected from a depth of 1 foot bgs (Dispenser - 1'). Sand in an approximately 4 foot x 3 foot area at the base of the dispenser was excavated to a depth of 3 feet bgs and placed onto plastic beside the gasoline UST stockpile. A sample of the sand was collected from a depth of 3 feet bgs (Dispenser -3'). Sand at the 3 feet bgs depth was not discolored and had no petroleum odor.

Approximately 25 feet of 4-inch fiberglass product piping was removed from the area between the former USTs and the dispenser island. The piping was inspected upon removal and appeared to be in good condition with no evidence of fuel leakage or exterior damage.

Soil sampling results are presented in **Table 1**. The locations of the soil samples relative to site features are shown in **Figure 2**.

The USTs were loaded onto a flat-bed truck, secured, and transported to MarVac's facility in Seattle, Washington for disposal as scrap metal. The certificate of UST disposal is included in **Appendix C**.

UNDERGROUND STORAGE TANK CLOSURE REPORT

FIELD ACTIVITIES
September 23, 2015

3.2 FIELD SCREENING

Field screening consisted of visual observations of potential hydrocarbon impacts and headspace analysis for volatile organic vapors. Overburden and surrounding soil removed from the UST excavations were screened for organic vapors with a MiniRae, Inc. Organic Vapor Meter PID. PID screening was employed to provide information on possible releases in both UST areas. Diesel fuel is not highly volatile and is less easily detected using a PID than diesel fuel. For this reason, excavation in the diesel fuel area was guided primarily by visual and olfactory indications of fuel releases.

During screening, a sample of the soil matrix was placed in a re-sealable plastic bag and allowed to equilibrate for approximately 10 minutes. The probe of the PID was used to pierce the plastic and extended into the headspace above the soil surface. The highest vapor reading obtained during the next 60 seconds was then recorded in the field notes. Prior to use, the PID was calibrated to a known concentration of isobutylene, in accordance with the manufacturer's specifications.

No elevated PID readings, hydrocarbon odors, and/or staining were encountered in the UST excavation. Diesel odors were detected in the absorbent material located at the base of the spill bucket beneath the turbine pump. This material was characterized by its pelletized, non-soil appearance and dark color.

3.3 SOIL SAMPLING ACTIVITIES

Following the removal of the USTs, Stantec personnel collected grab samples from three sidewalls and base of the excavations and beneath the product lines in accordance with Ecology guidelines. The subsurface soil material sampled consisted of tan, poorly-graded, medium sand. All soil samples from the UST excavation were collected from the backhoe bucket due to safety concerns. Locations of the soil samples are shown in **Figure 2**.

Gasoline UST

Soil samples in the gasoline UST excavation were collected from the north and south sidewalls and the west end of the UST at depths of approximately 10 feet bgs. The sample from the east end of the UST was collected from below the product line at a depth of 3 feet bgs. The sample from the base of the UST was collected from a depth of approximately 12 feet bgs. Stantec also collected three composite samples from the gasoline UST soil stockpile designated Gasoline Stockpile (GSP) #1, GSP #2, and GSP #3.

Diesel Fuel UST

Soil samples in the diesel fuel UST excavation were collected from the north and south sidewalls and east end of the UST at depths of approximately 8 feet bgs. The sample from the west end of the UST was collected from below the product line at a depth of 3 feet bgs. The sample from the base of the UST was collected from a depth of approximately 12 feet bgs. Stantec also

UNDERGROUND STORAGE TANK CLOSURE REPORT

FIELD ACTIVITIES
September 23, 2015

collected three composite samples from the diesel UST soil stockpile designated Diesel Stockpile (DSP) #1, DSP #2, and DSP #3.

Dispenser Island

Sand immediately below the product piping at the base of the dual fuel dispenser was slightly darker than the surrounding sand and had a petroleum odor. A sample of the sand was collected from a depth of 1 foot bgs (Dispenser-1'). Sand in an approximately 4 foot x 3 foot area at the base of the dispenser was excavated to a depth of 3 feet bgs and placed onto plastic beside the gasoline UST stockpile. Another sample of the sand was collected from a depth of 3 feet bgs (Dispenser-3'). Sand at the 3 feet bgs depth was not discolored and had no petroleum odor.

Soil samples submitted for laboratory analysis were collected in accordance with United States Environmental Protection Agency Method 5035A. The samples were placed directly into pre-weighed, unpreserved 40-milliliter vials (supplied by the analytical laboratory). Additional soil was placed directly into clean 4-ounce glass jars. Care was taken to obtain representative soil samples and to place the soils directly and quickly into the sample container to minimize loss of volatile constituents. Each jar was completely filled to minimize headspace and sealed with a Teflon™ lined screw cap. Each sample was then labeled (i.e., soil sample name with depth type of analysis, date, and time of sampling), and placed on ice in a cooler for transport to the laboratory.

3.4 SUBSURFACE CONDITIONS

3.4.1 Soil

During the UST removal activities, Stantec encountered approximately 2 to 3 inches of gravel base material beneath the concrete slab. The gravel was underlain by tan-colored poorly-graded sand to a depth of 13 feet bgs. Sand was the backfill material used throughout the fueling system area including both UST excavations, the dispenser area, and surrounding all product lines.

3.4.2 Groundwater

Groundwater was not encountered during the UST closure activities.

3.5 SOIL ANALYTICAL METHODS

The soil samples collected from the fueling area were delivered under standard chain-of-custody protocols to Fremont Analytical of Seattle, Washington. A total of 10 soil samples were selected for laboratory analysis: four from each UST excavation and two from the fuel dispenser area. Samples collected from the gasoline UST excavation were submitted for analysis of TPH-G and BTEX. Samples collected from the diesel fuel UST excavation were submitted for analysis of

UNDERGROUND STORAGE TANK CLOSURE REPORT

FIELD ACTIVITIES
September 23, 2015

TPH-D and TPH-O. Samples collected from the base of the dispenser were submitted for TPH-G, TPH-D, TPH-O, and BTEX. All samples were submitted under standard turn-around-time.

3.6 SOIL ANALYTICAL RESULTS

None of the soil samples collected from the sidewalls, ends or bases of the USTs had detectable concentrations of gasoline, diesel or oil-range TPH. The sample collected from the 1 foot bgs depth beneath the dispenser had a diesel-range concentration of 29,300 mg/kg but no detectable concentration in the oil-range. The diesel-range concentration exceeded the Model Toxics Control Act (MTCA) Method A Cleanup Level (CUL) of 2,000 mg/kg. The samples collected from the soil stockpiles were not submitted for laboratory analysis since none of the excavation samples had detectable concentrations of TPH or BTEX.

Analytical results from the UST closure activities are summarized in **Table 1**. Soil sampling locations and laboratory results are presented on **Figure 2**.

Complete laboratory results and chain-of-custody documentation are included in **Appendix D**.

UNDERGROUND STORAGE TANK CLOSURE REPORT

SOIL DISPOSAL AND SITE RESTORATION
September 23, 2015

4.0 SOIL DISPOSAL AND SITE RESTORATION

4.1 SOIL DISPOSAL

Diesel-impacted soil excavated from beneath the former fuel dispenser was stockpiled on plastic until it could be transferred to two 55-gallon, Department of Transportation (DOT)-approved drums. The drums were transported off-site and picked up for disposal by MarVac on September 22, 2015. A copy of the disposal manifest for the drums is included in **Appendix C**.

4.2 SITE RESTORATION

Following collection of all soil samples and confirmation that TPH and BTEX concentrations were below the MTCA Method A CULs, the UST excavation was backfilled with the clean stockpile material and brought to within 6 inches of surface grade. The concrete and asphalt pavement debris and bollards from the fueling area were transported off site for disposal as construction waste. Gravel was used as a base material under the concrete slab in the former UST area and the driveway beneath the canopy. Installation of the new AST and dual fuel dispenser was completed the week of September 14, 2015. Restoration of the asphalt pavement surrounding the concrete slab is scheduled for the week of September 21, 2015.

UNDERGROUND STORAGE TANK CLOSURE REPORT

SUMMARY AND CONCLUSIONS

September 23, 2015

5.0 SUMMARY AND CONCLUSIONS

Stantec oversaw UST Site Assessment activities at the USACE Maintenance/Garage facility on September 1, 2015. One 4,000-gallon gasoline UST, one 2,500-gallon diesel fuel UST, one dual fuel dispenser, and underground product piping were removed from the fueling area on the north side of the vehicle service bays. The previous fueling system was replaced by a new 1,500-gallon partitioned AST in the same location. Based on the results of the UST Site Assessment, the following is concluded:

- Upon visual inspection, both steel USTs appeared in good condition with no significant exterior corrosion, holes, weld damage, or product line failures observed;
- Confirmation soil samples collected from the sidewalls, ends, and base of the former USTs had no detectable concentrations of gasoline-, diesel-, or oil-range petroleum hydrocarbons;
- There was visual and olfactory evidence of a localized diesel fuel release surrounding product piping below the former fuel dispenser. The impacted sand material appeared to be confined to the immediate area of the piping and was limited in horizontal and vertical extent. Visibly impacted soil was excavated and placed into 55-gallon, DOT approved drums for off-site disposal. Post-excavation soil sampling confirmed that the soil impacts were limited to the upper two feet of the soil column and that residual soil did not have detectable concentrations of diesel-range TPH;
- Groundwater was not encountered during UST removal activities;
- Approximately 25 linear feet of 4-inch product piping was removed following UST and fuel dispenser removal. The product piping was inspected upon removal and observed to be in good condition with no indications of fuel releases or damage. Soil sampling results from beneath the product lines between the USTs and dispenser indicated no detectable concentrations of TPH or BTEX;
- Two 55-gallon drums of diesel-impacted sand material from beneath the former dual fuel dispenser were transported off site for disposal at a licensed solid waste disposal facility; and,
- The UST excavation was backfilled with clean sand from the stockpiles and compacted to surface grade. The area over the former USTs was re-surfaced with a concrete slab. The area surrounding the concrete slab was resurfaced with asphalt.

Based on the results of this investigation, Stantec concludes that there had been a minor diesel fuel release from product piping at the base of the dual fuel dispenser. The release impacted only the soil immediately below the dispenser based upon visual and olfactory investigation. Soil

UNDERGROUND STORAGE TANK CLOSURE REPORT

SUMMARY AND CONCLUSIONS

September 23, 2015

discoloration was limited to the upper few inches of the soil column. Soil was excavated to a depth of 3 feet bgs and disposed of off site. Confirmation sampling at the 3' bgs depth had no detectable diesel fuel impact.

No further investigation of the soil conditions in the vicinity of the removed USTs, fuel dispenser, or product piping is currently warranted.

UNDERGROUND STORAGE TANK CLOSURE REPORT

REFERENCES

September 23, 2015

6.0 REFERENCES

Gulick, Charles W., Korosec, Michael A., Geologic Map of the Banks Lake 1:100,000 Quadrangle, Washington. Washington Division of Geology and Earth Resources, Open File Report 90-6, February 1990.

Underground Storage Tank (UST), Leaking Underground Storage Tank (LUST), and UST Site/Tank Summary databases available from: <https://fortress.wa.gov/ecy/tcpwebreporting/reports.aspx> [Accessed July 14, 2015].

Washington State Department of Ecology. February 1991. (Revised April, 2003). *Guidance for Site Checks and Site Assessments for Underground Storage Tanks*. Department of Ecology Underground Storage Tank Program. Publication No. 90-52. February 1991 (Revised April 2003).

Washington State Department of Ecology. *Model Toxics Control Act Statute and Regulation*, Publication No. 94-06. Revised November 2007.

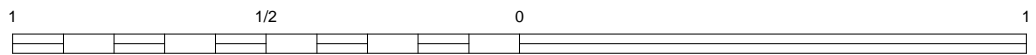
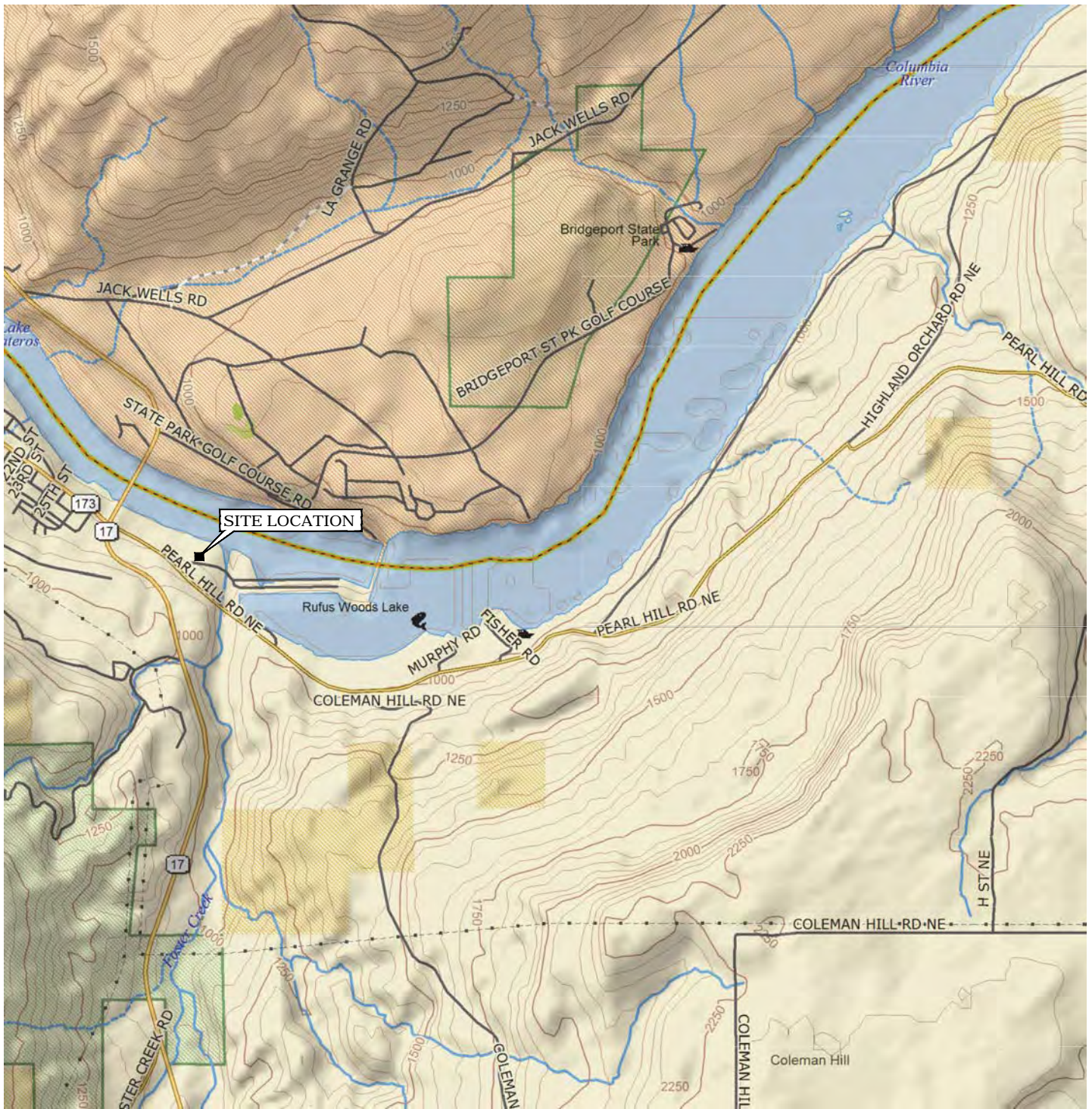
Table 1
UST Site Assessment - Soil Analytical Results
 Chief Joseph Dam - Garage UST Removal
 Bridgeport, Washington
 All concentrations are in milligrams per kilogram (mg/kg)

Sample Type	Sample Identification	Date	Depth (feet bgs)	Benzene	Toluene	Ethylbenzene	Total Xylenes	TPH-Gas Range	TPH-Diesel Range	TPH-Oil Range
Gasoline UST Sampling										
Grab Samples	East End - Product Line	9/1/2015	3	<0.0306	<0.0306	<0.0458	<0.0306	<7.64	--	--
	North Sidewall	9/1/2015	10	<0.0284	<0.0284	<0.0425	<0.0284	<7.09	--	--
	West End	9/1/2015	10	<0.0382	<0.0382	<0.0572	<0.0382	<9.54	--	--
	Base	9/1/2015	12	<0.0219	<0.0219	<0.0328	<0.0219	<5.47	--	--
Diesel Fuel UST Sampling										
Grab Samples	East End	9/1/2015	8	--	--	--	--	--	<18.8	<47.0
	West End - Product Line	9/1/2015	3	--	--	--	--	--	<19.9	<49.7
	North Sidewall	9/1/2015	8	--	--	--	--	--	<22.4	<55.9
	Base	9/1/2015	10	--	--	--	--	--	<19.8	<49.5
Dispenser Sampling										
Grab Samples	Dispenser (1')	9/1/2015	1	<0.0216	0.0704	0.658	5.54	<5.41	29,300	<43.7
	Dispenser (3')	9/1/2015	3	<0.0199	<0.0199	<0.0299	<0.0398	<4.99	<19.3	<48.2
MTCA Method A Screening Levels for Unrestricted Land Uses				0.03	7	6	9	30/100^a	2,000	2,000

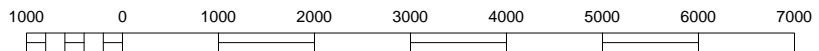
Notes:

- mg/kg = milligrams per kilogram
- bgs = Below ground surface
- BTEX = Benzene, toluene, ethylbenzene, and total xylenes by EPA Method 8260
- TPH-Gas = Total petroleum hydrocarbons in the gasoline range, by Ecology Method NWTPH-Gx
- TPH-Diesel = Total petroleum hydrocarbons in the diesel range, by Ecology Method NWTPH-Dx/Dx Extended
- TPH-Oil = Total petroleum hydrocarbons in the oil range, by Ecology Method NWTPH-Dx/Dx Extended
- < = result is below practical quantitation limits
- MTCA = Model Toxics Control Act
- ^a = Gasoline mixtures without benzene and where the total of ethylbenzene, toluene, and xylene are less than 1% of the gasoline mixture have a cleanup level of 100 mg/kg; all other mixtures are 30 mg/kg
- BOLD** = Results exceed MTCA Method A Soil Screening Levels

FIGURES



SCALE IN MILE



SCALE IN FEET

REFERENCE: SEATTLE ACADEMY OF ARTS AND SCIENCES,
USGS SEATTLE SOUTH (WA) QUADRANGLE;
SEATTLE, WASHINGTON; 1998

No warranty is made by Stantec as to the accuracy, reliability, or completeness of these data. Original data were compiled from various sources. This information may not meet National Map Accuracy Standards. This product was developed electronically, and may be updated without notification. Any reproduction may result in a loss of scale and/or information.



FOR:
CHIEF JOSEPH DAM
MAINTENANCE/GARAGE FACILITY
PEARL HILL ROAD
BRIDGEPORT, WASHINGTON

SITE LOCATION MAP

FIGURE:

1

11130 NE 33RD PLACE, SUITE 200
BELLEVUE, WASHINGTON 98004
PHONE: (425) 869-9448 FAX: (425) 869-1190

JOB NUMBER:
185750393

DRAWN BY:
BLG/ARA

CHECKED BY:
GMC

APPROVED BY:
MS

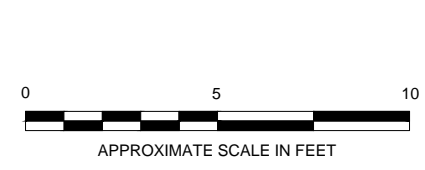
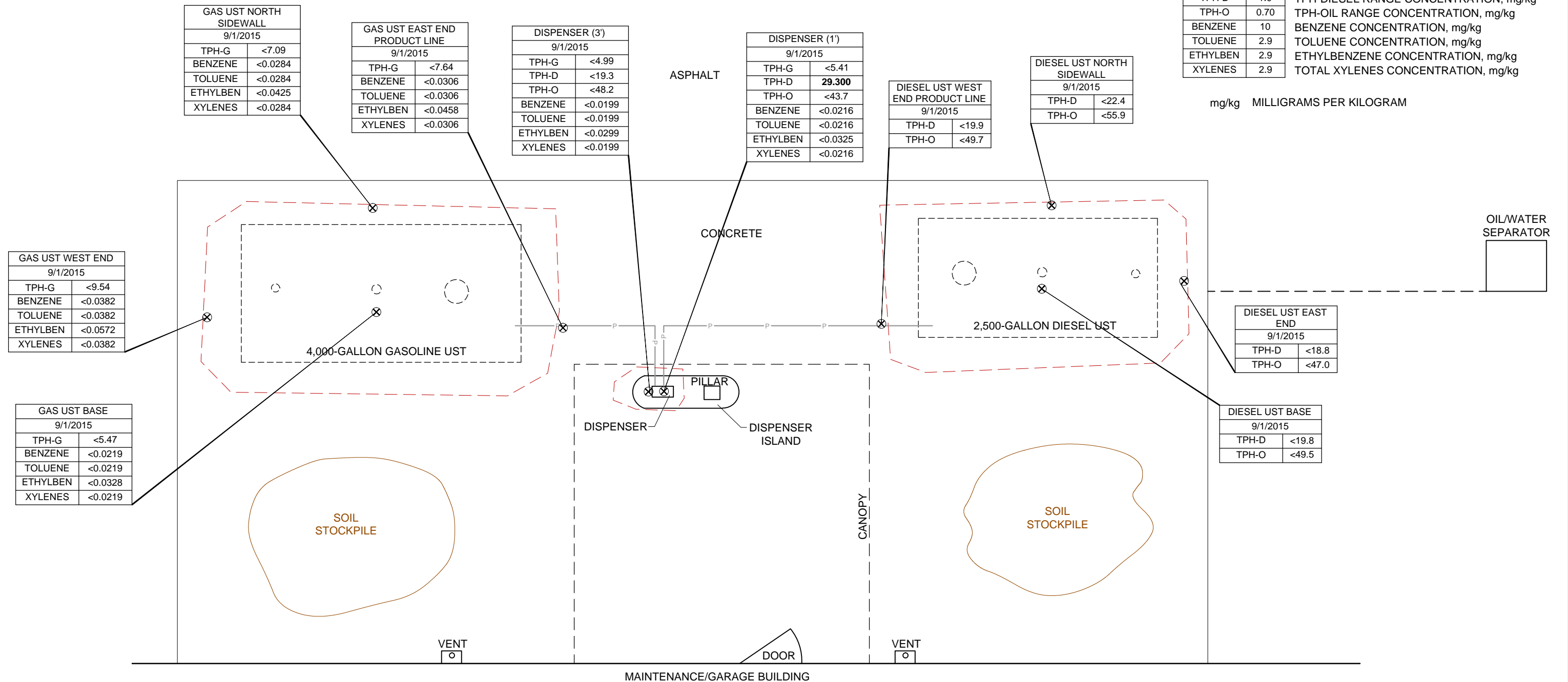
DATE:
9/8/15

LEGEND

- ⊗ SOIL SAMPLE LOCATION
- P — PRODUCT LINE
- - - - - APPROXIMATE LIMIT OF EXCAVATION/SOIL REMOVAL

DISP (1')	SAMPLE ID/(DEPTH IN FEET)
9/1/2015	SAMPLE DATE
TPH-G 0.005	TPH-GASOLINE RANGE CONCENTRATION, mg/kg
TPH-D 1.0	TPH-DIESEL RANGE CONCENTRATION, mg/kg
TPH-O 0.70	TPH-OIL RANGE CONCENTRATION, mg/kg
BENZENE 10	BENZENE CONCENTRATION, mg/kg
TOLUENE 2.9	TOLUENE CONCENTRATION, mg/kg
ETHYLBEN 2.9	ETHYLBENZENE CONCENTRATION, mg/kg
XYLENES 2.9	TOTAL XYLENES CONCENTRATION, mg/kg

mg/kg MILLIGRAMS PER KILOGRAM



<p>11130 NE 33RD PLACE, SUITE 200 BELLEVUE, WASHINGTON 98004 PHONE: (425) 869-9448 FAX: (425) 869-1190</p>	FOR:	CHIEF JOSEPH DAM MAINTENANCE/GARAGE FACILITY PEARL HILL ROAD BRIDGEPORT, WASHINGTON		FIGURE:	2
	JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	
	185750393	ARA	GMC	MS	9/8/15

No warranty is made by Stantec as to the accuracy, reliability, or completeness of these data. Original data were compiled from various sources. This information may not meet National Map Accuracy Standards. This product was developed electronically, and may be updated without notification. Any reproduction may result in a loss of scale and/or information.



APPENDIX A
DEPARTMENT OF ECOLOGY UST NOTICES AND CHECKLIST

Instructions

Please Read Carefully

AFTER COMPLETING THIS FORM, RETURN TO:

DEPARTMENT OF ECOLOGY
TOXICS CLEANUP PROGRAM
P.O. BOX 47655
OLYMPIA, WA 98504-7655

GENERAL

Under WAC 173-360-200 and 173-360-385, owners and operators are required to notify Ecology 30 days prior to beginning underground storage tank (UST) installation or decommissioning projects. Please use a separate form for each activity. Once this form is received and processed by Ecology, it is date stamped and returned to the owner listed on the form. Installation and decommissioning projects may begin 30 days after the date stamped on the form. If a project cannot meet the deadlines described below, you must submit an additional 30-Day Notice. The 30-day wait period may be waived on these additional 30-Day Notices by contacting the inspector in your region.

SITE AND OWNER INFORMATION

Fill in the site and owner information and be sure to provide telephone numbers and email addresses so that any problems can be resolved quickly. Include the facility compliance tag or UBI number for tank closures.

TANK INFORMATION

List tanks to be installed or closed, substance stored (e.g. gas, diesel, etc), tank size and date the project is expected to begin. **The contact person listed on this form must confirm the exact date an installation and/or decommissioning project will begin at least three business days before proceeding.** Please report tank ID number(s) for tanks to be closed and assign new Tank ID number(s) to tanks being installed. If you are installing new tanks, do not assign a Tank ID number that has previously been used at the facility. Use the Comments box to include additional information, such as when product was removed so that no more than one inch of residue remains in the system.

TANK INSTALLATIONS

List the installation company. The date stamped on the form indicates the beginning of a 90-day period in which an installation project must begin. Once, processed, this form also allows you to receive a one-time drop of product, for UST system testing purposes only. The fuel drop is not required to occur within this 90-day period.

To dispense product and receive additional deliveries, you must complete the Business License registration and obtain your facility compliance tag from Ecology. The registration information must be submitted to the Department of Revenue within 30 days of installation to receive a Business License with the appropriate tank endorsement(s). **If, at any time, your tank(s) store greater than one inch of product, you must begin using an acceptable release detection method to monitor for leaks every month.**

PERMANENT TANK CLOSURES

List the closure and site assessor companies. Upon receiving a completed 30-day closure form, Ecology will stamp the date received on the form and return a copy to the owner. Decommissioning projects must be completed 90 days after the stamped date. **No work may begin within the first 30 days unless a waiver has been obtained from Ecology.**

Contact your local fire marshal and planning department prior to tank closure to find out if any additional permits are required by county or other local jurisdictions. Compliance with the State Environmental Policy Act (SEPA) Rules, Chapter 197-11 WAC, may be required.

A site assessment is required at the time of closure. Contamination found or suspected at the site must be reported to the appropriate Ecology regional office within 24 hours. If the contamination is confirmed, a site characterization report must be submitted to the regional office within 90 days; if contamination is not confirmed, a site assessment report must be submitted to the above address within 30 days.

The following are examples of tanks that are exempt from notification requirements.

- ❖ Farm or residential tanks, 1,100 gallons or less, used to store motor fuel for personal or farm use only. The fuel must be used for farm purposes and cannot be for resale.
- ❖ Tanks used for storing heating oil that is used solely for the purpose of heating the premises.
- ❖ Tanks with a capacity of 110 gallons or less.
- ❖ Equipment or machinery tanks such as hydraulic lifts or electrical equipment tanks.
- ❖ Emergency overflow tanks, catch basins, or sumps.

If you need this document in a format for the visually impaired, call Toxics Cleanup Program at (360) 407-7170. Persons with hearing loss can call 711 for Washington Relay Service. Persons with speech disability, call (877) 833-6341.

ECY 020-95 (Rev. Feb. 2012)



PERMANENT CLOSURE NOTICE FOR UNDERGROUND STORAGE TANKS

UST ID #: 6690
County: Douglas

This notice certifies that permanent closure activities were performed and conducted in accordance with Chapter 173-360 WAC. Instructions are found on the back page.

I. UST FACILITY			II. OWNER/OPERATOR INFORMATION			
Facility Compliance Tag #: <u>A4310, A5630</u>			Owner/Operator Name: <u>U.S. Army Corps of Engineers</u>			
UST ID #: <u>Tank No. 3 and Tank No. 4</u>			Business Name: <u>Northwest Area Office</u>			
Site Name: <u>Chief Joseph Dam - Garage Facility</u>			Address: <u>P.O. Box 610</u>			
Site Address: <u>Pearl Hill Road</u>			City: <u>DuPont</u>		State: <u>WA</u> Zip: <u>98327</u>	
City: <u>Bridgeport, WA 98813</u>			Phone: <u>(509) 686-2252</u>			
Phone: <u>(425) 686-2252</u>			Email: <u>Marshall.A.Grip@usace.army.mil</u>			
III. CERTIFIED UST DECOMMISSIONER						
Company Name: <u>Saybr Contractors, Inc.</u>			Service Provider Name: <u>Lee Dalton</u>			
Address: <u>3852 S. 66th Street</u>			Certification Type: <u>Decommissioner</u>			
City: <u>Tacoma</u>		State: <u>WA</u> Zip:		Cert. No.: <u>1136590-V2</u>		Exp. Date:
Provider Phone: <u>(253) 537-2144</u>			Provider Email: <u>ldalton@saybr.com</u>			
Provider Signature:			Date: <u>9/1/15</u>			
IV. TANK INFORMATION						
TANK ID	TANK CAPACITY	LAST SUBSTANCE STORED	CLOSURE METHOD			CLOSURE DATE
			removal	closed-in-place	change-in-service	
<u>Tank No. 3</u>	<u>2,500</u>	<u>Diesel</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>9/1/15</u>
<u>Tank No. 4</u>	<u>4,000</u>	<u>Gasoline</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>9/1/15</u>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
V. REQUIRED SIGNATURE						
<i>Signature acknowledges compliance with Permanent Closure requirements WAC 173-360-385.</i>						
<u>9/16/2015</u>	<u>GRIP.MARSHALL.ALLEN.11</u> <u>59868091</u>		Digitally signed by GRIP.MARSHALL.ALLEN.1159868091 DN: c=US, o=U.S. Government, ou=DoD, ou=FKI, ou=USA, cn=GRIP.MARSHALL.ALLEN.1159868091 Date: 2015.09.16 07:54:31 -0700			<u>Marshall A. Grip</u>
Date	Signature of Tank Owner/Operator or Authorized Representative			Print or Type Name		



SITE CHECK/SITE ASSESSMENT CHECKLIST FOR UNDERGROUND STORAGE TANKS

UST ID #: 6690
County: Douglas

This checklist certifies that site check or site assessment activities were performed in accordance with Chapter 173-360 WAC. Instructions are found on the last page.

I. UST FACILITY		II. OWNER/OPERATOR INFORMATION	
Facility Compliance Tag #: A4310, A5630		Owner/Operator Name: U.S. Army Corps of Engineers	
UST ID #: UST No. 3 and UST No. 4		Business Name: Northwest Area Office	
Site Name: Chief Joseph Dam-Maintenance/Garage Facility		Address: P.O. Box 610	
Site Address: Pearl Hill Road		City: DuPont	State: WA Zip: 98327
City: Bridgeport, Washington 98813-1120		Phone: (509) 686-2252 - Marshall Grip	
Phone: (509) 686-2252		Email: Marshall.A.Grip@usace.army.mil	
III. CERTIFIED SITE ASSESSOR			
Service Provider Name: Greg McCormick		Company Name: Stantec Consulting Services, Inc.	
Cell: (425) 922-6392	Email: greg.mccormick@stantec.com	Address: 11130 NE 33 rd Place, Suite 200	
Certification #: 1052439-U7	Exp. Date: 10/10/16	City: Bellevue	State: WA Zip: 98004
IV. TANK INFORMATION			
TANK ID	TANK CAPACITY	LAST SUBSTANCE STORED	DATE SITE CHECK OR ASSESSMENT CONDUCTED
Tank No. 3	2,500	Diesel Fuel	9/1/2015
Tank No. 4	4,000	Gasoline	9/1/2015
V. REASON FOR CONDUCTING SITE CHECK/SITE ASSESSMENT (check one)			
<input checked="" type="checkbox"/> Release investigation following permanent UST system closure (i.e. tank removal or closure-in-place). <input type="checkbox"/> Release investigation following a failed tank and/or line tightness test. <input type="checkbox"/> Release investigation following discovery of contaminated soil and/or groundwater. <input type="checkbox"/> Release investigation directed by Ecology to determine if the UST system is the source of offsite impacts. <input type="checkbox"/> UST system is undergoing a "change-in-service", which is changing from storing a regulated substance (e.g. gasoline) to storing a non-regulated substance (e.g. water). <input type="checkbox"/> Directed by Ecology for UST system permanently closed or abandoned before 12/22/1988. <input type="checkbox"/> Other (describe):			

VI. CHECKLIST

**The site assessor must check each of the following items and include it in the report.
Sections referenced below can be found in the Ecology publication
*Guidance for Site Checks and Site Assessments for Underground Storage Tanks.***

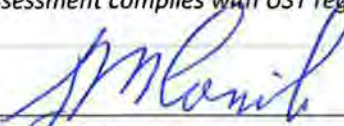
	YES	NO
1. The location of the UST site is shown on a vicinity map.	X	<input type="checkbox"/>
2. A brief summary of information obtained during the site inspection is provided (Section 3.2)	X	<input type="checkbox"/>
3. A summary of UST system data is provided (Section 3.1)	X	<input type="checkbox"/>
4. The soils characteristics at the UST site are described. (Section 5.2)	X	<input type="checkbox"/>
5. Is there any apparent groundwater in the tank excavation?	<input type="checkbox"/>	X
6. A brief description of the surrounding land use is provided. (Section 3.1)	X	<input type="checkbox"/>
7. The name and address of the laboratory used to perform analyses is provided. The methods used to collect and analyze the samples, including the number and types of samples collected, are also documented in the report. The data from the laboratory is appended to the report.	X	<input type="checkbox"/>
8. The following items are provided in one or more sketches:		
• Location and ID number for all field samples collected	X	<input type="checkbox"/>
• If applicable, groundwater samples are distinguished from soil samples	X	<input type="checkbox"/>
• Location of samples collected from stockpiled excavated soil	X	<input type="checkbox"/>
• Tank and piping locations and limits of excavation pit	X	<input type="checkbox"/>
• Adjacent structures and streets	X	<input type="checkbox"/>
• Approximate locations of any on-site and nearby utilities	X	<input type="checkbox"/>
9. If sampling procedures are different from those specified in the guidance, has justification for using these alternative sampling procedures been provided? (Section 3.4)	X	<input type="checkbox"/>
10. A table is provided showing laboratory results for each sample collected including; sample ID number, constituents analyzed for and corresponding concentration, analytical method, and detection limit for that method. Any sample exceeding MTCA Method A cleanup standards are highlighted or bolded.	X	<input type="checkbox"/>
11. Any factors that may have compromised the quality of the data or validity of the results are described.	X	<input type="checkbox"/>
12. The results of this site check/site assessment indicate that a confirmed release of a regulated substance has occurred. The requirements for reporting confirmed releases can be found in WAC 173-360-372.	X	<input type="checkbox"/>

VII. REQUIRED SIGNATURES

Signature acknowledges the Site Check or Site Assessment complies with UST regulations WAC 173-360-360 through -395.

Greg McCormick

Print or Type Name



Signature of Certified Site Assessor

9/3/2015

Date

SITE CHECK/SITE ASSESSMENT CHECKLIST

FOR UNDERGROUND STORAGE TANKS

INSTRUCTIONS

This checklist must accompany the results of a Site Check Report, which is performed if a release of petroleum or other regulated substance is suspected. It is also required to accompany a Site Assessment Report, which is required following the permanent closure or “change-in-service” of an underground storage tank system. This form is required to be filled out whether or not contamination is found. This checklist is to be completed by the Site Assessor and submitted **within thirty days of completing** these activities to the following address:

Dept. of Ecology
UST Section
PO Box 47655
Olympia, WA 98504-7655

- I./II. UST Facility and Owner/Operator Information:** Fill out these sections completely. If you do not know your UST ID number, include the facility compliance tag number.
- III. Service Provider Information:** It is the responsibility of the ICC-certified Site Assessor to ensure that sampling and documentation procedures are completed in accordance with Ecology’s *Guidance for Site Checks and Site Assessment for Underground Storage Tanks*.
- IV. Tank Information:** Use the same Tank identification numbers listed on the facility’s Business License which is based on the most recent UST Addendum on file with Ecology. List the last substance stored in each tank, the tank sizes and the date the site check or site assessment was completed.
- V. Required Signature:** The Site Assessor signature certifies these procedures were followed.

All confirmed releases must be reported to Ecology by the owner within 24 hours and by service providers within 72 hours of discovery. A Site Characterization Report must be submitted to Ecology within 90 days after confirming a release.

Further questions? Please contact your regional office below and ask for a tank inspector to assist you.

Regional Office

Central (509) 575-2490

Eastern (509) 329-3400

HQ (360) 407-7170

Northwest (425) 649-7000

Southwest (360) 407-6300

Counties Served

Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan, Yakima

Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, Whitman

Federal facilities in Western Washington

Island, King, Kitsap, San Juan, Skagit, Snohomish, Whatcom

Clallam, Clark, Cowlitz, Grays Harbor, Jefferson, Lewis, Mason, Pacific, Pierce, Skamania, Thurston, Wahkiakum

or find a complete list of UST inspectors at:
www.ecy.wa.gov/programs/tcp/ust-lust/people.html

PERMANENT CLOSURE NOTICE

FOR UNDERGROUND STORAGE TANKS

INSTRUCTIONS

This form must be completed and submitted **within thirty days of completing** permanent closure activities to the following address:

Dept. of Ecology
UST Section
PO Box 47655
Olympia, WA 98504-7655

- I./II. UST Facility and Owner/Operator:** Fill out these sections completely. If you do not know your UST ID number, include the facility compliance tag number. If all tanks at the site are permanently closed, the facility compliance tag must be returned with this notice.
- III. UST Decommissioner:** It is the responsibility of the ICC-certified Decommissioner to follow proper tank closure procedures in accordance with WAC 173-360-375. The Decommissioner signature certifies these procedures were followed.
- IV. Tank Information:** Use the same Tank IDs that are listed on the facility's Business License. List the last substance stored in each tank, the tank sizes, the method by which the tank is being closed, and the date closure activities were conducted. All closure methods require a site assessment be conducted in accordance with Ecology's *Guidance for Site Checks and Site Assessments for Underground Storage Tanks*.
- V. Required Signature:** The owner and/or operator's signature is required. Also, the owner and/or operator is responsible for reporting confirmed releases to Ecology within 24 hours.

All confirmed releases must be reported to Ecology by the owner immediately and by service providers within 72 hours of the discovery of the condition. If the owner or operator is not immediately available, the report should be made directly to Ecology.

Be sure to contact your local fire marshal and other local jurisdictions. They may have other codes and regulations that apply to a permanent tank closure.

Further questions? Please contact your regional office below and ask for a tank inspector to assist you.

Regional Office	Counties Served
Central (509) 575-2490	Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan, Yakima
Eastern (509) 329-3400	Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, Whitman
HQ (360) 407-7170	Federal facilities in Western Washington
Northwest (425) 649-7000	Island, King, Kitsap, San Juan, Skagit, Snohomish, Whatcom
Southwest (360) 407-6300	Clallam, Clark, Cowlitz, Grays Harbor, Jefferson, Lewis, Mason, Pacific, Pierce, Skamania, Thurston, Wahkiakum

or find a complete list of UST inspectors at:
www.ecy.wa.gov/programs/tcp/ust-lust/people.html



APPENDIX B
FIELD SAMPLING AND LABORATORY TESTING FOR UST SITE ASSESSMENT



Stantec Consulting Services, Inc.
11130 NE 33rd Place, Suite 200
Bellevue, WA 98004
(425) 869-9448

August 6, 2015

Saybr Contractors, Inc.
Attn: Mr. Eric Martin
3852 South 66th Street
Tacoma, Washington 98409

RE: Field Sampling and Laboratory Testing Plan for UST Site Assessment

Garage UST Removal & UST Installation – Chief Joseph Dam
Bridgeport, Washington
Contract No. W912DW-13-D-1003

Dear Mr. Martin:

Stantec Consulting Services, Inc. (Stantec) is pleased to present Saybr Contractors (Saybr) with this Field Sampling and Laboratory Testing Plan describing soil sampling and analysis for the UST Site Assessment at the above-referenced Warehouse/Garage Fueling Facility (the "Site").

We understand that these services are being requested as part of a fueling system upgrade at the Site and that Saybr will be acting as the general contractor and UST Decommissioner. The planned fueling upgrade includes removal of one 4,000-gallon gasoline UST and one 2,500-gallon diesel UST. The USTs are located side-by-side and covered by an 8-inch thick concrete pad. A dual suction dispenser and product piping will also be removed as part of the upgrade; however, the oil/water separator will be left in place. Stantec will conduct the UST Site Assessment and soil sampling. The existing system will be replaced by a split 1,000-gallon diesel UST and 500-gallon gasoline UST with a dual fuel dispensing unit.

SITE DESCRIPTION

The Site is the Main Warehouse/Garage Facility at the Chief Joseph Dam in Bridgeport, Washington. The existing UST system is located on the north side of the warehouse building. The associated monitoring equipment is located inside the garage. The UST area is accessible to vehicles and excavation equipment and the USTs are covered by a concrete pad. Removal of the USTs will require cutting, demolishing, and disposal of concrete debris. The surface completion following UST removal will be hot-mix asphalt.

SCOPE OF WORK

Stantec's scope of services are consistent with the descriptions provided in the Department of the Army's STATEMENT OF WORK – Garage UST Removal & AST Installation Chief Joseph Dam Bridgeport, Washington dated May 20, 2015.

Stantec's scope of work for the fueling facility upgrade includes the following tasks:

- Pre-Field Activities;
- UST Site Assessment;
- Soil Sampling and Analysis;
- Quality Assurance/Quality Control;
- Waste Management; and,
- Reporting.

Details of each of these tasks are discussed below.

Task 1 – Pre-field Activities

Stantec will comply with all aspects of the site-specific *Health and Safety Plan* for the Site as required by the Occupational Health and Safety Administration (OSHA) Standard "Hazardous Waste Operations and Emergency Response" guidelines (29 CFR 1910.120). The document will be reviewed and signed by Stantec personnel at the beginning of each work day. All Stantec personnel assigned to the project have OSHA 40-hour training.

Task 2 – UST Site Assessment

The scope of work includes oversight of UST and AST removal and completion of a UST Site Assessment with collection of soil samples documenting soil conditions at the time of UST removal. All UST Site Assessment work will be conducted by a Washington State and International Code Council (ICC) Certified UST Site Assessor in accordance with Washington Department of Ecology's *Guidance for Site Checks and Site Assessments for Underground Storage Tanks* (Ecology Publication #90-52). Qualifications of Stantec's UST Site Assessor are included as an Attachment.

The field inspection will include the following items detailed in the RFP:

- Oversight of UST removal noting evidence of corrosion holes, pitting, weld damage, and other deterioration that could have resulted in loss of fuel product. Stantec personnel will document the condition of the surrounding soil for visual evidence of impacts and will screen the soil using a photoionization detector (PID). All observations and field screening results will be recorded in the field notes.
- Oversight of the removal and capping of product piping between the UST and fuel dispenser. Scrap pipes will be disposed of along with the USTs. Soil samples will be collected at accessible points along pipe runs or the connection point of UST to document the integrity of the product pipes and connections according to UST decommissioning guidelines.
- Stantec's UST Site Assessor will complete an inspection of the USTs and note the general condition of the tanks, product lines, fuel dispenser, and surrounding soil. Conditions will be

documented with photographs. The Site Assessor will complete the required UST Closure Notice and UST Site Assessment Checklist during removal activities for inclusion in the UST Site Assessment Report.

Task 3 – Soil Sampling and Analysis

Stantec anticipates collection of a total of 10 soil samples from the common UST excavation, product piping, fuel dispenser, and soil stockpile. Soil samples will be field screened for hydrocarbon vapors using a PID. Soils encountered during UST removal will be logged using the Unified Soil Classification System by a Washington Licensed Geologist and UST Site Assessor.

A minimum of five soil samples will be collected from the UST excavation itself and will be submitted for laboratory analysis based on either of the following: significant changes in lithology; location and depth of impacted soil; and, where field screening indicates the possible presence of petroleum hydrocarbons. Soil samples will be submitted for gasoline-range petroleum hydrocarbon and benzene, toluene, ethylbenzene and total xylenes (BTEX) using Ecology Method NWTPH-Gx/BTEX and diesel- and oil-range petroleum hydrocarbons using Ecology Method NWTPH-Dx. Additional analyses may be requested after the initial analysis to further characterize the nature and extent of any identified fuel releases.

Soil samples will be collected in accordance with the Environmental Protection Agency (EPA) Method 5035A, then labeled and placed on ice in an insulated container for delivery to TestAmerica's Tacoma, Washington analytical laboratory. Sample collection using the 5035A protocol will allow retention of volatile fuel components in case additional analyses are required. TestAmerica's laboratory accreditation certificate for Washington State is included as an Attachment.

TestAmerica's local address is:

TestAmerica Seattle
5755 8th Street East
Tacoma, Washington 98424
(253) 922-2310

Task 4 – Quality Assurance/Quality Control

Quality assurance/quality control (QA/QC) procedures will be conducted in conformance with industry standards for UST site assessment projects. QA/QC procedures include data quality objectives and quality assurance goals, quality assurance procedures for sample collection, laboratory analytical protocols and calibration methods, data validation procedures, and corrective actions in the event that data quality issues arise. The quality of the data collected during this investigation will be evaluated on an on-going basis to determine if the data quality objectives are being met. The analytical data will be evaluated in terms of precision, accuracy, representativeness, completeness, and comparability using the results of the quality control sampling.

The following quality control samples may be collected during the investigation:

- Temperature blank;
- Trip blank; and,
- Field duplicate.

In addition, the laboratory will run method blanks and laboratory control samples during sample analysis.

Task 5 – Waste Management

Limited volumes of petroleum-contaminated soil (PCS) generated during the UST Site Assessment will be placed in a Department of Transportation (DOT) approved 55-gallon drum and stored onsite pending characterization and disposal. Larger volumes of PCS will be stockpiled on plastic until off-site disposal can be coordinated. If PCS is identified during the UST removal, Saybr will provide unit costs for disposal of the PCS and coordinate disposal upon authorization from USACE personnel. Stantec's costs include sampling of this material for disposal profiling but do not include disposal costs.


Task 6 – Reporting

Upon completion of the site assessment and receipt of final laboratory reports, Stantec will prepare a UST Site Assessment letter report in accordance to the guidelines in Ecology Publication #90-52. The UST Site Assessment report will include:

- Description of all UST removal activities including location and conditions of tanks at the time of removal. The reports will include the condition of surrounding soil, evidence of fuel releases, and volume of any excavated PCS;
- Scaled site plans showing the locations of tank and piping, limits of excavation, and locations of soil samples;
- Complete laboratory results and chain-of-custody (COC) documentation;
- UST disposal documentation;
- Disposal manifest for any PCS removed from the UST area;
- Photographs of the UST removal activities; and,
- Brief description of site restoration and fueling system replacement.

Stantec is pleased to be of assistance on this project. Please do not hesitate to contact the undersigned if there are any questions or additional information required.

Sincerely,
Stantec Consulting Services, Inc.



Greg McCormick, LG
Senior Geologist



Marc Sauze, PE
Project Manager

Attachments.

UST Site Assessor Qualifications
Analytical Laboratory Accreditation Certificate



Washington Site Assessment



Candidate ID: ICC32003405
Name: GREGORY MCCORMICK Date: 10/10/2014
Address: 22121 NE 10th Place

Sammamish WA 98074

EXAMINATION RESULT: **PASS**

Congratulations! You have passed the above named examination. Your wallet card will be forwarded to you by ICC within six weeks from the last day of the month in which you tested. This certificate is current for two years.

You may request a wall certificate from ICC as well. This certificate will be provided at no cost to you, if you request it within 90 days of your exam. Only one wall certificate per exam passed will be provided to you at no charge. For more information on requesting a wall certificate, go to www.iccsafe.org/inspector.

It is extremely important that you notify Pearson VUE and ICC of any changes in name and/or address to avoid the possibility of your wallet card and/or certificate not being received. Please contact Pearson VUE at 800-275-8301 and ICC at certexam@iccsafe.org with changes to your name and address (name changes may require additional documentation). There may be an additional fee if a certification is re-issued due to a misspelled name or incorrect address.

*The authenticity of this score report can be validated by using Pearson VUE's Online Score Report Authentication found at:
www.PearsonVUE.com/authenticate
Digital embossing eliminates the possibility of unauthorized embossing of counterfeit score reports.*

Registration Number: 273520837

Validation Number: 627664212

INTERNATIONAL CODE COUNCIL

GREGORY A MCCORMICK

The International Code Council attests that the individual named on this certificate has satisfactorily demonstrated knowledge as required by the International Code Council by successfully completing the prescribed written examination based on codes and standards then in effect, and is hereby issued this certification as:

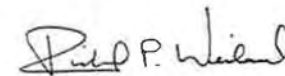
Washington State Site Assessment

Given this day of November 26, 2008

Certificate No. 1052439-U7



Adolf Zubia
President, Board of Directors



Richard P. Weiland
Chief Executive Officer



**INTERNATIONAL
CODE COUNCIL**

INTERNATIONAL CODE COUNCIL

GREGORY A MCCORMICK

The International Code Council attests that the individual named on this certificate has satisfactorily demonstrated knowledge as required by the International Code Council by successfully completing the prescribed written examination based on codes and standards then in effect, and is hereby issued this certification as:

WASHINGTON STATE SITE ASSESSMENT

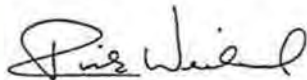
given this day of September 12, 2006



Wally Bailey

President, ICC Board of Directors

1052439-U7
Certificate Number



Rick Weiland
ICC Chief Executive Officer



Membership

My Information

My CEUs & Certifications

My Transactions & Status

Member Directory

Logout

My CEUs & Certifications | Gregory McCormick

Certification: CEU Activities for Renewal [Report CEU Activity](#)

CEU Activity Option	CEU Provider	CEU Activity Name	Activity Date	Activity Quantity	CEUs Reported
Certification: Summary Submit Renewal Application					
Certification Program	Status	Expiration Date	Certification Number		
Washington State Site Assessment	Certified	10/10/2016	1052439		



About ICC

- [About](#)
- [Contact Us](#)
- [Sitemap](#)
- [Government Relations](#)
- [Code of Ethics](#)
- [Membership](#)
- [Partnerships and Networks](#)
- [Legal](#)
- [Privacy Policy](#)
- [Acceptable Use Policy](#)

Quick Links

- [edpACCESS](#)
- [Events Calendar](#)
- [Global Services](#)
- [Scholarships](#)
- [Solar Ratings](#)
- [ICC Evaluation Service](#)
- [My ICC](#)
- [Career Center](#)
- [ICC Campus Office](#)
- [Consumer Safety](#)
- [MS-Drum](#)

Connect with Us

- [News RSS \(Events\)](#)



*It is hereby certified that Gregory Allen McCormick
has satisfactorily complied with and completed the statutory requirements set
forth in title 18 revised code of Washington to engage in practice as a*

Geologist

*And is hereby authorized, empowered and granted the right to engage in that
practice within the State of Washington subject to the state laws.*

And is licensed as a qualified

Hydrogeologist

*Given under the hand and seal of the director this
twelfth day of April, 2002.*



No. 674

Fred Stephens
DIRECTOR

Geologist Licensing Board
Ally H. Randall
CHAIR

STATE OF WASHINGTON

DEPARTMENT OF LICENSING – BUSINESS AND PROFESSIONS DIVISION

THIS CERTIFIES THAT THE PERSON NAMED HEREON IS AUTHORIZED, AS PROVIDED BY LAW, AS A



**GEOLOGIST
HYDROGEOLOGIST**

**GREGORY ALLEN MCCORMICK
22121 NE 10TH PL
SAMMAMISH WA 98074**

Cert/Lic No.

674

Issued Date

04/12/2002

Expiration Date

02/06/2015

Pat Kobler
Pat Kobler, Director

STATE OF WASHINGTON
GEOLOGIST
HYDROGEOLOGIST

GREGORY ALLEN MCCORMICK
22121 NE 10TH PL
SAMMAMISH WA 98074

674

CERT/LIC NO.

02/06/2016

EXP. DATE


Pat Kohler, Director



API WorkSafe

Safety Key

Name	Gregory McCormick
Company	Stantec Consulting Services, Inc.
Completed	23-Apr-15
Expires	20-May-16



JKO

JOINT KNOWLEDGE ONLINE



Gregory McCormick

has successfully completed

Level 1 Antiterrorism Awareness Training - (2 hrs)

09/29/2014



J.D. Camacho, GS-15
Chief, Joint Knowledge Online Division
Deputy Director Joint Training, JS J7

The State of
Department



Washington
of Ecology

**TestAmerica Seattle-Tacoma
Tacoma, WA**

has complied with provisions set forth in Chapter 173-50 WAC and is hereby recognized by the Department of Ecology as an ACCREDITED LABORATORY for the analytical parameters listed on the accompanying Scope of Accreditation. This certificate is effective February 18, 2015 and shall expire February 17, 2016.

Witnessed under my hand on February 25, 2015

Alan D. Rue
Lab Accreditation Unit Supervisor

Laboratory ID
C553

WASHINGTON STATE DEPARTMENT OF ECOLOGY

ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM

SCOPE OF ACCREDITATION

TestAmerica Seattle-Tacoma

Tacoma, WA

is accredited for the analytes listed below using the methods indicated. Full accreditation is granted unless stated otherwise in a note. Accreditation for U.S. Environmental Protection Agency (EPA) "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (SW-846) is for the latest version of the method. SM refers to EPA approved editions of "Standard Methods for the Examination of Water and Wastewater." ASTM is the American Society for Testing and Materials. Other references are described in notes.

Matrix/Analyte	Method	Notes
Drinking Water		
1,2-Dibromo-3-chloropropane (DBCP)	EPA 504.1_1.1_1995	7
1,2-Dibromoethane (EDB, Ethylene dibromide)	EPA 504.1_1.1_1995	7
Non-Potable Water		
Specific Conductance	EPA 120.1_1982	7
n-Hexane Extractable Material (O&G)	EPA 1664A_1_1999	7
Turbidity	EPA 180.1_2_1993	7
Bromide	EPA 300.0_2.1_1993	7
Chloride	EPA 300.0_2.1_1993	7
Fluoride	EPA 300.0_2.1_1993	7
Nitrate	EPA 300.0_2.1_1993	7
Nitrate + Nitrite	EPA 300.0_2.1_1993	7
Nitrite	EPA 300.0_2.1_1993	7
Sulfate	EPA 300.0_2.1_1993	7
Cyanide, Total	EPA 335.4_1_1993	7
Ammonia	EPA 350.1_2_1993	7
Nitrate	EPA 353.2_2_1993	7
Nitrate + Nitrite	EPA 353.2_2_1993	7
Nitrite	EPA 353.2_2_1993	7
Orthophosphate	EPA 365.1_2_1993	7
Phosphorus, Total	EPA 365.1_2_1993	7
Turbidity	SM 2130 B-01	7

Washington State Department of Ecology

Effective Date: 3/24/2015

Scope of Accreditation Report for TestAmerica Seattle-Tacoma

C553-15a

Laboratory Accreditation Unit

Page 1 of 18

Scope Expires: 2/17/2016

TestAmerica Seattle-Tacoma

Matrix/Analyte	Method	Notes
Alkalinity	SM 2320 B-97	7
Hardness	SM 2340 B-97	7
Hardness, Total (as CaCO ₃)	SM 2340 C-97	7
Specific Conductance	SM 2510 B-97	7
Salinity	SM 2520 B-93	7
Solids, Total	SM 2540 B-97	7
Solids, Total Dissolved	SM 2540 C-97	7
Solids, Total Suspended	SM 2540 D-97	7
Solids, Settleable	SM 2540 F-97	7
Chromium, Hexavalent	SM 3500-Cr B-09	7
Cyanide, Total	SM 4500-CN ⁻ E-99	7
Cyanides, Amenable to Chlorination	SM 4500-CN ⁻ G-99	7
Cyanide, Weak Acid Dissociable	SM 4500-CN ⁻ I-97	7
pH	SM 4500-H+ B-00	7
Ammonia	SM 4500-NH ₃ G-97	7
Biochemical Oxygen Demand (BOD)	SM 5210 B-01	7
Chemical Oxygen Demand (COD)	SM 5220 C-97	7
Chemical Oxygen Demand (COD)	SM 5220 D-97	7
Total Organic Carbon	SM 5310 B-00	7
Aluminum	EPA 200.7_4.4_1994	7
Antimony	EPA 200.7_4.4_1994	7
Arsenic	EPA 200.7_4.4_1994	7
Barium	EPA 200.7_4.4_1994	7
Beryllium	EPA 200.7_4.4_1994	7
Boron	EPA 200.7_4.4_1994	7
Cadmium	EPA 200.7_4.4_1994	7
Calcium	EPA 200.7_4.4_1994	7
Chromium	EPA 200.7_4.4_1994	7
Cobalt	EPA 200.7_4.4_1994	7
Copper	EPA 200.7_4.4_1994	7
Hardness	EPA 200.7_4.4_1994	7
Iron	EPA 200.7_4.4_1994	7
Lead	EPA 200.7_4.4_1994	7
Magnesium	EPA 200.7_4.4_1994	7
Manganese	EPA 200.7_4.4_1994	7
Molybdenum	EPA 200.7_4.4_1994	7

Washington State Department of Ecology

Effective Date: 3/24/2015

Scope of Accreditation Report for TestAmerica Seattle-Tacoma

C553-15a

Laboratory Accreditation Unit

Page 2 of 18

Scope Expires: 2/17/2016

TestAmerica Seattle-Tacoma

Matrix/Analyte	Method	Notes
Nickel	EPA 200.7_4.4_1994	7
Potassium	EPA 200.7_4.4_1994	7
Selenium	EPA 200.7_4.4_1994	7
Silica as SiO2	EPA 200.7_4.4_1994	7
Silicon	EPA 200.7_4.4_1994	7
Silver	EPA 200.7_4.4_1994	7
Sodium	EPA 200.7_4.4_1994	7
Strontium	EPA 200.7_4.4_1994	7
Thallium	EPA 200.7_4.4_1994	7
Tin	EPA 200.7_4.4_1994	7
Titanium	EPA 200.7_4.4_1994	7
Vanadium	EPA 200.7_4.4_1994	7
Zinc	EPA 200.7_4.4_1994	7
Antimony	EPA 200.8_5.4_1994	7
Arsenic	EPA 200.8_5.4_1994	7
Barium	EPA 200.8_5.4_1994	7
Beryllium	EPA 200.8_5.4_1994	7
Cadmium	EPA 200.8_5.4_1994	7
Chromium	EPA 200.8_5.4_1994	7
Cobalt	EPA 200.8_5.4_1994	7
Copper	EPA 200.8_5.4_1994	7
Lead	EPA 200.8_5.4_1994	7
Manganese	EPA 200.8_5.4_1994	7
Molybdenum	EPA 200.8_5.4_1994	7
Nickel	EPA 200.8_5.4_1994	7
Selenium	EPA 200.8_5.4_1994	7
Silver	EPA 200.8_5.4_1994	7
Strontium	EPA 200.8_5.4_1994	7
Thallium	EPA 200.8_5.4_1994	7
Titanium	EPA 200.8_5.4_1994	7
Total Uranium	EPA 200.8_5.4_1994	7
Vanadium	EPA 200.8_5.4_1994	7
Zinc	EPA 200.8_5.4_1994	7
Mercury	EPA 245.1_3_1994	7
4,4'-DDD	EPA 608	7
4,4'-DDE	EPA 608	7

TestAmerica Seattle-Tacoma

Matrix/Analyte	Method	Notes
4,4'-DDT	EPA 608	7
Aldrin	EPA 608	7
alpha-BHC (alpha-Hexachlorocyclohexane)	EPA 608	7
alpha-Chlordane	EPA 608	7
Aroclor-1016 (PCB-1016)	EPA 608	6,7
Aroclor-1221 (PCB-1221)	EPA 608	6,7
Aroclor-1232 (PCB-1232)	EPA 608	6,7
Aroclor-1242 (PCB-1242)	EPA 608	6,7
Aroclor-1248 (PCB-1248)	EPA 608	6,7
Aroclor-1254 (PCB-1254)	EPA 608	6,7
Aroclor-1260 (PCB-1260)	EPA 608	6,7
Aroclor-1262 (PCB-1262)	EPA 608	6,7
Aroclor-1268 (PCB-1268)	EPA 608	6,7
beta-BHC (beta-Hexachlorocyclohexane)	EPA 608	7
Chlordane (tech.)	EPA 608	7
delta-BHC	EPA 608	7
Dieldrin	EPA 608	7
Endosulfan I	EPA 608	7
Endosulfan II	EPA 608	7
Endosulfan sulfate	EPA 608	7
Endrin	EPA 608	7
Endrin aldehyde	EPA 608	7
Endrin ketone	EPA 608	7
gamma-BHC (Lindane, gamma-Hexachlorocyclohexane)	EPA 608	7
gamma-Chlordane	EPA 608	7
Heptachlor	EPA 608	7
Heptachlor epoxide	EPA 608	7
Methoxychlor	EPA 608	7
Toxaphene (Chlorinated camphene)	EPA 608	7
1,1,1,2-Tetrachloroethane	EPA 624	7
1,1,1-Trichloroethane	EPA 624	7
1,1,2,2-Tetrachloroethane	EPA 624	7
1,1,2-Trichloroethane	EPA 624	7
1,1-Dichloroethane	EPA 624	7
1,1-Dichloroethylene	EPA 624	7
1,1-Dichloropropene	EPA 624	7

Washington State Department of Ecology

Effective Date: 3/24/2015

Scope of Accreditation Report for TestAmerica Seattle-Tacoma

C553-15a

Laboratory Accreditation Unit

Page 4 of 18

Scope Expires: 2/17/2018

TestAmerica Seattle-Tacoma

Matrix/Analyte	Method	Notes
1,2,3-Trichlorobenzene	EPA 624	7
1,2,3-Trichloropropane	EPA 624	7
1,2,4-Trichlorobenzene	EPA 624	7
1,2,4-Trimethylbenzene	EPA 624	7
1,2-Dibromo-3-chloropropane (DBCP)	EPA 624	7
1,2-Dibromoethane (EDB, Ethylene dibromide)	EPA 624	7
1,2-Dichlorobenzene	EPA 624	7
1,2-Dichloroethane (Ethylene dichloride)	EPA 624	7
1,2-Dichloropropane	EPA 624	7
1,3,5-Trimethylbenzene	EPA 624	7
1,3-Dichlorobenzene	EPA 624	7
1,3-Dichloropropane	EPA 624	7
1,4-Dichlorobenzene	EPA 624	7
2,2-Dichloropropane	EPA 624	7
2-Butanone (Methyl ethyl ketone, MEK)	EPA 624	7
2-Chloroethyl vinyl ether	EPA 624	7
2-Chlorotoluene	EPA 624	7
2-Hexanone	EPA 624	7
4-Chlorotoluene	EPA 624	7
4-Isopropyltoluene (p-Cymene)	EPA 624	7
4-Methyl-2-pentanone (MIBK)	EPA 624	7
Acetone	EPA 624	7
Acetonitrile	EPA 624	7
Acrolein (Propenal)	EPA 624	7
Acrylonitrile	EPA 624	7
Benzene	EPA 624	7
Bromobenzene	EPA 624	7
Bromochloromethane	EPA 624	7
Bromodichloromethane	EPA 624	7
Bromoform	EPA 624	7
Carbon disulfide	EPA 624	7
Carbon tetrachloride	EPA 624	7
Chlorobenzene	EPA 624	7
Chlorodibromomethane	EPA 624	7
Chloroethane (Ethyl chloride)	EPA 624	7
Chloroform	EPA 624	7

Washington State Department of Ecology

Effective Date: 3/24/2015

Scope of Accreditation Report for TestAmerica Seattle-Tacoma

C553-15a

Laboratory Accreditation Unit

Page 5 of 18

Scope Expires: 2/17/2016

TestAmerica Seattle-Tacoma

Matrix/Analyte	Method	Notes
cis-1,2-Dichloroethylene	EPA 624	7
cis-1,3-Dichloropropene	EPA 624	7
Dibromomethane	EPA 624	7
Dichlorodifluoromethane (Freon-12)	EPA 624	7
Di-isopropylether (DIPE)	EPA 624	7
Ethylbenzene	EPA 624	7
Hexachlorobutadiene	EPA 624	7
Iodomethane (Methyl iodide)	EPA 624	7
Isobutyl alcohol (2-Methyl-1-propanol)	EPA 624	7
Isopropylbenzene	EPA 624	7
m+p-xylene	EPA 624	7
Methyl bromide (Bromomethane)	EPA 624	7
Methyl chloride (Chloromethane)	EPA 624	7
Methyl tert-butyl ether (MTBE)	EPA 624	7
Methylene chloride (Dichloromethane)	EPA 624	7
Naphthalene	EPA 624	7
n-Butyl alcohol (1-Butanol, n-Butanol)	EPA 624	7
n-Butylbenzene	EPA 624	7
n-Propylbenzene	EPA 624	7
o-Xylene	EPA 624	7
sec-Butylbenzene	EPA 624	7
Styrene	EPA 624	7
tert-Butylbenzene	EPA 624	7
Tetrachloroethylene (Perchloroethylene)	EPA 624	7
Tetrahydrofuran (THF)	EPA 624	7
Toluene	EPA 624	7
trans-1,2-Dichloroethylene	EPA 624	7
trans-1,3-Dichloropropylene	EPA 624	7
trans-1,4-Dichloro-2-butene	EPA 624	7
Trichloroethene (Trichloroethylene)	EPA 624	7
Trichlorofluoromethane (Freon 11)	EPA 624	7
Vinyl acetate	EPA 624	7
Vinyl chloride	EPA 624	7
Xylene (total)	EPA 624	7
1,2,4-Trichlorobenzene	EPA 625	7
1,2-Dichlorobenzene	EPA 625	7

TestAmerica Seattle-Tacoma

Matrix/Analyte	Method	Notes
1,3-Dichlorobenzene	EPA 625	7
1,4-Dichlorobenzene	EPA 625	7
1-Methylnaphthalene	EPA 625	7
2,2'-Oxybis(1-chloropropane)	EPA 625	7
2,3,4,6-Tetrachlorophenol	EPA 625	7
2,3,5,6-Tetrachlorophenol	EPA 625	7
2,3,5-Trichlorophenol	EPA 625	7
2,3,6-Trichlorophenol (4C)	EPA 625	7
2,4,5-Trichlorophenol	EPA 625	7
2,4,6-Trichlorophenol	EPA 625	7
2,4-Dichlorophenol	EPA 625	7
2,4-Dimethylphenol	EPA 625	7
2,4-Dinitrophenol	EPA 625	7
2,4-Dinitrotoluene (2,4-DNT)	EPA 625	7
2,6-Dinitrotoluene (2,6-DNT)	EPA 625	7
2-Chloronaphthalene	EPA 625	7
2-Chlorophenol	EPA 625	7
2-Methylnaphthalene	EPA 625	7
2-Methylphenol (o-Cresol)	EPA 625	7
2-Nitroaniline	EPA 625	7
2-Nitrophenol	EPA 625	7
3,3'-Dichlorobenzidine	EPA 625	7
3-Nitroaniline	EPA 625	7
4,6-Dinitro-2-methylphenol	EPA 625	7
4-Bromophenyl phenyl ether (BDE-3)	EPA 625	7
4-Chloro-3-methylphenol	EPA 625	7
4-Chloroaniline	EPA 625	7
4-Chlorophenyl phenylether	EPA 625	7
4-Nitrophenol	EPA 625	7
Acenaphthene	EPA 625	7
Acenaphthylene	EPA 625	7
Aniline	EPA 625	7
Anthracene	EPA 625	7
Benzo(a)anthracene	EPA 625	7
Benzo(a)pyrene	EPA 625	7
Benzo(g,h,i)perylene	EPA 625	7

Washington State Department of Ecology

Effective Date: 3/24/2015

Scope of Accreditation Report for TestAmerica Seattle-Tacoma

C553-15a

Laboratory Accreditation Unit

Page 7 of 18

Scope Expires: 2/17/2016

TestAmerica Seattle-Tacoma

Matrix/Analyte	Method	Notes
Benzo(k)fluoranthene	EPA 625	7
Benzo[b]fluoranthene	EPA 625	7
Benzoic acid	EPA 625	7
Benzyl alcohol	EPA 625	7
bis(2-Chloroethoxy)methane	EPA 625	7
bis(2-Chloroethyl) ether	EPA 625	7
bis(2-Ethylhexyl) phthalate (DEHP)	EPA 625	7
Butyl benzyl phthalate	EPA 625	7
Carbazole	EPA 625	7
Chrysene	EPA 625	7
Dibenz(a,h) anthracene	EPA 625	7
Dibenzofuran	EPA 625	7
Diethyl phthalate	EPA 625	7
Dimethyl phthalate	EPA 625	7
Di-n-butyl phthalate	EPA 625	7
Di-n-octyl phthalate	EPA 625	7
Fluoranthene	EPA 625	7
Fluorene	EPA 625	7
Hexachlorobenzene	EPA 625	7
Hexachlorobutadiene	EPA 625	7
Hexachlorocyclopentadiene	EPA 625	7
Hexachloroethane	EPA 625	7
Indeno(1,2,3-cd) pyrene	EPA 625	7
Isophorone	EPA 625	7
Naphthalene	EPA 625	7
Nitrobenzene	EPA 625	7
n-Nitrosodimethylamine	EPA 625	7
N-Nitroso-di-n-propylamine	EPA 625	7
n-Nitrosodiphenylamine	EPA 625	7
Pentachlorophenol	EPA 625	7
Phenanthrene	EPA 625	7
Phenol	EPA 625	7
Pyrene	EPA 625	7
Dibutyltin	Krone 1988	3
Monobutyltin	Krone 1988	3
Tetrabutyltin	Krone 1988	3

TestAmerica Seattle-Tacoma

Matrix/Analyte	Method	Notes
Tributyltin	Krone 1988	3
Solid and Chemical Materials		
Bromide	EPA 300.0_2.1_1993	7
Chloride	EPA 300.0_2.1_1993	7
Fluoride	EPA 300.0_2.1_1993	7
Nitrate	EPA 300.0_2.1_1993	7
Nitrate + Nitrite	EPA 300.0_2.1_1993	7
Nitrite	EPA 300.0_2.1_1993	7
Sulfate	EPA 300.0_2.1_1993	7
Cyanide, Total	EPA 9012 B-04	7
Cyanides, Amenable to Chlorination	EPA 9012 B-04	7
pH	EPA 9045C_3_1995	7
Bromide	EPA 9056A_(11/00)	7
Chloride	EPA 9056A_(11/00)	7
Fluoride	EPA 9056A_(11/00)	7
Nitrate	EPA 9056A_(11/00)	7
Nitrite	EPA 9056A_(11/00)	7
Sulfate	EPA 9056A_(11/00)	7
Total Organic Carbon	EPA 9060A_1_2004	7
Aluminum	EPA 6010C_(2/07)	7
Antimony	EPA 6010C_(2/07)	7
Arsenic	EPA 6010C_(2/07)	7
Barium	EPA 6010C_(2/07)	7
Beryllium	EPA 6010C_(2/07)	7
Boron	EPA 6010C_(2/07)	7
Cadmium	EPA 6010C_(2/07)	7
Calcium	EPA 6010C_(2/07)	7
Chromium	EPA 6010C_(2/07)	7
Chromium, Hexavalent	EPA 6010C_(2/07)	7,9
Cobalt	EPA 6010C_(2/07)	7
Copper	EPA 6010C_(2/07)	7
Iron	EPA 6010C_(2/07)	7
Lead	EPA 6010C_(2/07)	7
Magnesium	EPA 6010C_(2/07)	7
Manganese	EPA 6010C_(2/07)	7

TestAmerica Seattle-Tacoma

Matrix/Analyte	Method	Notes
Molybdenum	EPA 6010C_(2/07)	7
Nickel	EPA 6010C_(2/07)	7
Potassium	EPA 6010C_(2/07)	7
Selenium	EPA 6010C_(2/07)	7
Silica	EPA 6010C_(2/07)	7
Silicon	EPA 6010C_(2/07)	7
Silver	EPA 6010C_(2/07)	7
Sodium	EPA 6010C_(2/07)	7
Strontium	EPA 6010C_(2/07)	7
Thallium	EPA 6010C_(2/07)	7
Tin	EPA 6010C_(2/07)	7
Titanium	EPA 6010C_(2/07)	7
Vanadium	EPA 6010C_(2/07)	7
Zinc	EPA 6010C_(2/07)	7
Antimony	EPA 6020A_(2/07)	7
Arsenic	EPA 6020A_(2/07)	7
Barium	EPA 6020A_(2/07)	7
Beryllium	EPA 6020A_(2/07)	7
Cadmium	EPA 6020A_(2/07)	7
Chromium	EPA 6020A_(2/07)	7
Cobalt	EPA 6020A_(2/07)	7
Copper	EPA 6020A_(2/07)	7
Lead	EPA 6020A_(2/07)	7
Manganese	EPA 6020A_(2/07)	7
Mercury	EPA 6020A_(2/07)	7
Molybdenum	EPA 6020A_(2/07)	7
Nickel	EPA 6020A_(2/07)	7
Selenium	EPA 6020A_(2/07)	7
Silver	EPA 6020A_(2/07)	7
Strontium	EPA 6020A_(2/07)	7
Thallium	EPA 6020A_(2/07)	7
Titanium	EPA 6020A_(2/07)	7
Uranium	EPA 6020A_(2/07)	7
Vanadium	EPA 6020A_(2/07)	7
Zinc	EPA 6020A_(2/07)	7
Mercury, Liquid Waste	EPA 7470A_1_1994	7

TestAmerica Seattle-Tacoma

Matrix/Analyte	Method	Notes
Mercury, Solid Waste	EPA 7471A_1_1994	7
1,2-Dibromo-3-chloropropane (DBCP)	EPA 8011-94	1,7
1,2-Dibromoethane (EDB, Ethylene dibromide)	EPA 8011-94	1,7
Diesel range organics (DRO)	EPA 8015B_2_1996	7
Gasoline range organics (GRO)	EPA 8015B_2_1996	7
Motor Oil	EPA 8015B_2_1996	7
Ethylbenzene	EPA 8021B_2_(12/96)	7
4,4'-DDD	EPA 8081B_(2/07)	7
4,4'-DDE	EPA 8081B_(2/07)	7
4,4'-DDT	EPA 8081B_(2/07)	7
Aldrin	EPA 8081B_(2/07)	7
alpha-BHC (alpha-Hexachlorocyclohexane)	EPA 8081B_(2/07)	7
alpha-Chlordane	EPA 8081B_(2/07)	7
beta-BHC (beta-Hexachlorocyclohexane)	EPA 8081B_(2/07)	7
Chlordane (tech.)	EPA 8081B_(2/07)	7
delta-BHC	EPA 8081B_(2/07)	7
Dieldrin	EPA 8081B_(2/07)	7
Endosulfan I	EPA 8081B_(2/07)	7
Endosulfan II	EPA 8081B_(2/07)	7
Endosulfan sulfate	EPA 8081B_(2/07)	7
Endrin	EPA 8081B_(2/07)	7
Endrin aldehyde	EPA 8081B_(2/07)	7
Endrin ketone	EPA 8081B_(2/07)	7
gamma-BHC (Lindane, gamma-Hexachlorocyclohexane)	EPA 8081B_(2/07)	7
gamma-Chlordane	EPA 8081B_(2/07)	7
Heptachlor	EPA 8081B_(2/07)	7
Heptachlor epoxide	EPA 8081B_(2/07)	7
Hexachlorobenzene	EPA 8081B_(2/07)	7
Hexachlorobutadiene	EPA 8081B_(2/07)	7
Methoxychlor	EPA 8081B_(2/07)	7
Toxaphene (Chlorinated camphene)	EPA 8081B_(2/07)	7
Aroclor-1016 (PCB-1016)	EPA 8082A_(2/07)	4,6,7
Aroclor-1221 (PCB-1221)	EPA 8082A_(2/07)	4,6,7
Aroclor-1232 (PCB-1232)	EPA 8082A_(2/07)	4,6,7
Aroclor-1242 (PCB-1242)	EPA 8082A_(2/07)	4,6,7
Aroclor-1248 (PCB-1248)	EPA 8082A_(2/07)	4,6,7

Washington State Department of Ecology

Laboratory Accreditation Unit

Effective Date: 3/24/2015

Page 11 of 18

Scope of Accreditation Report for TestAmerica Seattle-Tacoma

Scope Expires: 2/17/2016

C553-15a

TestAmerica Seattle-Tacoma

Matrix/Analyte	Method	Notes
Aroclor-1254 (PCB-1254)	EPA 8082A_(2/07)	4,6,7
Aroclor-1260 (PCB-1260)	EPA 8082A_(2/07)	4,6,7
Aroclor-1262 (PCB-1262)	EPA 8082A_(2/07)	4,6,7
Aroclor-1268 (PCB-1268)	EPA 8082A_(2/07)	4,6,7
2,4,5-T	EPA 8151A_(1/98)	7
2,4-D	EPA 8151A_(1/98)	7
2,4-DB	EPA 8151A_(1/98)	7
4-Nitrophenol	EPA 8151A_(1/98)	7
Dalapon	EPA 8151A_(1/98)	7
Dicamba	EPA 8151A_(1/98)	7
Dichloroprop (Dichlorprop)	EPA 8151A_(1/98)	7
Dinoseb (2-sec-butyl-4,6-dinitrophenol, DNBP)	EPA 8151A_(1/98)	7
MCPA	EPA 8151A_(1/98)	7
MCPP	EPA 8151A_(1/98)	7
Pentachlorophenol	EPA 8151A_(1/98)	7
Silvex (2,4,5-TP)	EPA 8151A_(1/98)	7
C8-C10 Aliphatic EPH	WDOE EPH_(1997)	2,7
C8-C10 Aromatic EPH	WDOE EPH_(1997)	2,7
>C10-C12 Aliphatic EPH	WDOE EPH_(1997)	2,7
>C10-C12 Aromatic EPH	WDOE EPH_(1997)	2,7
>C12-C16 Aliphatic EPH	WDOE EPH_(1997)	2,7
>C12-C16 Aromatic EPH	WDOE EPH_(1997)	2,7
>C16-C21 Aliphatic EPH	WDOE EPH_(1997)	2,7
>C16-C21 Aromatic EPH	WDOE EPH_(1997)	2,7
>C21-C34 Aliphatic EPH	WDOE EPH_(1997)	2,7
>C21-C34 Aromatic EPH	WDOE EPH_(1997)	2,7
Diesel range organics (DRO)	WDOE NWTPH-Dx_(1997)	2,7
Gasoline range organics (GRO)	WDOE NWTPH-Gx_(1997)	2,7,10
C8-C10 Aromatic VPH	WDOE VPH_(1997)	2,7
C5-C6 Aliphatic VPH	WDOE VPH_(1997)	2,7
>C10-C12 Aliphatic VPH	WDOE VPH_(1997)	2,7
>C10-C12 Aromatic VPH	WDOE VPH_(1997)	2,7
>C12-C13 Aromatic VPH	WDOE VPH_(1997)	2,7
>C6-C8 Aliphatic VPH	WDOE VPH_(1997)	2,7

TestAmerica Seattle-Tacoma

Matrix/Analyte	Method	Notes
Benzene	WDOE VPH_(1997)	2,7
C8-C10 Aliphatic VPH	WDOE VPH_(1997)	2,7
Ethylbenzene	WDOE VPH_(1997)	2,7
m+p-xylene	WDOE VPH_(1997)	2,7
Methyl tert-butyl ether (MTBE)	WDOE VPH_(1997)	2,7
n-Hexane	WDOE VPH_(1997)	2,7
o-Xylene	WDOE VPH_(1997)	2,7
Toluene	WDOE VPH_(1997)	2,7
Xylene (total)	WDOE VPH_(1997)	2,7
1,1,1,2-Tetrachloroethane	EPA 8260C_(8/06)	7
1,1,1-Trichloroethane	EPA 8260C_(8/06)	7
1,1,2,2-Tetrachloroethane	EPA 8260C_(8/06)	7
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	EPA 8260C_(8/06)	7
1,1,2-Trichloroethane	EPA 8260C_(8/06)	7
1,1-Dichloroethane	EPA 8260C_(8/06)	7
1,1-Dichloroethylene	EPA 8260C_(8/06)	7
1,1-Dichloropropene	EPA 8260C_(8/06)	7
1,2,3-Trichlorobenzene	EPA 8260C_(8/06)	7
1,2,3-Trichloropropane	EPA 8260C_(8/06)	7
1,2,4-Trichlorobenzene	EPA 8260C_(8/06)	7
1,2,4-Trimethylbenzene	EPA 8260C_(8/06)	7
1,2-Dibromo-3-chloropropane (DBCP)	EPA 8260C_(8/06)	7
1,2-Dibromoethane (EDB, Ethylene dibromide)	EPA 8260C_(8/06)	7
1,2-Dichlorobenzene	EPA 8260C_(8/06)	7
1,2-Dichloroethane (Ethylene dichloride)	EPA 8260C_(8/06)	7
1,2-Dichloropropane	EPA 8260C_(8/06)	7
1,3,5-Trimethylbenzene	EPA 8260C_(8/06)	7
1,3-Dichlorobenzene	EPA 8260C_(8/06)	7
1,3-Dichloropropane	EPA 8260C_(8/06)	7
1,4-Dichlorobenzene	EPA 8260C_(8/06)	7
2,2-Dichloropropane	EPA 8260C_(8/06)	7
2-Butanone (Methyl ethyl ketone, MEK)	EPA 8260C_(8/06)	7
2-Chloroethyl vinyl ether	EPA 8260C_(8/06)	7
2-Chlorotoluene	EPA 8260C_(8/06)	7
2-Hexanone	EPA 8260C_(8/06)	7
4-Chlorotoluene	EPA 8260C_(8/06)	7

TestAmerica Seattle-Tacoma

Matrix/Analyte	Method	Notes
4-Isopropyltoluene (p-Cymene)	EPA 8260C_(8/06)	7
4-Methyl-2-pentanone (MIBK)	EPA 8260C_(8/06)	7
Acetone	EPA 8260C_(8/06)	7
Acetonitrile	EPA 8260C_(8/06)	7
Acrolein (Propenal)	EPA 8260C_(8/06)	7
Acrylonitrile	EPA 8260C_(8/06)	7
Benzene	EPA 8260C_(8/06)	7
Bromobenzene	EPA 8260C_(8/06)	7
Bromochloromethane	EPA 8260C_(8/06)	7
Bromodichloromethane	EPA 8260C_(8/06)	7
Bromoform	EPA 8260C_(8/06)	7
Carbon disulfide	EPA 8260C_(8/06)	7
Carbon tetrachloride	EPA 8260C_(8/06)	7
Chlorobenzene	EPA 8260C_(8/06)	7
Chlorodibromomethane	EPA 8260C_(8/06)	7
Chloroethane (Ethyl chloride)	EPA 8260C_(8/06)	7
Chloroform	EPA 8260C_(8/06)	7
cis-1,2-Dichloroethylene	EPA 8260C_(8/06)	7
cis-1,3-Dichloropropene	EPA 8260C_(8/06)	7
cis-1,4-Dichloro-2-butene	EPA 8260C_(8/06)	7
Dibromomethane	EPA 8260C_(8/06)	7
Dichlorodifluoromethane (Freon-12)	EPA 8260C_(8/06)	7
Di-isopropylether (DIPE)	EPA 8260C_(8/06)	7
Ethylbenzene	EPA 8260C_(8/06)	7
Ethyl-t-butylether (ETBE)	EPA 8260C_(8/06)	7
Hexachlorobutadiene	EPA 8260C_(8/06)	7
Hexachloroethane	EPA 8260C_(8/06)	7
Iodomethane (Methyl iodide)	EPA 8260C_(8/06)	7
Isobutyl alcohol (2-Methyl-1-propanol)	EPA 8260C_(8/06)	7
Isopropylbenzene	EPA 8260C_(8/06)	7
m+p-xylene	EPA 8260C_(8/06)	7
Methacrylonitrile	EPA 8260C_(8/06)	7
Methyl acetate	EPA 8260C_(8/06)	7
Methyl bromide (Bromomethane)	EPA 8260C_(8/06)	7
Methyl chloride (Chloromethane)	EPA 8260C_(8/06)	7
Methyl tert-butyl ether (MTBE)	EPA 8260C_(8/06)	7

TestAmerica Seattle-Tacoma

Matrix/Analyte	Method	Notes
Methylcyclohexane	EPA 8260C_(8/06)	7
Methylene chloride (Dichloromethane)	EPA 8260C_(8/06)	7
Naphthalene	EPA 8260C_(8/06)	7
n-Butyl alcohol (1-Butanol, n-Butanol)	EPA 8260C_(8/06)	7
n-Butylbenzene	EPA 8260C_(8/06)	7
n-Propylbenzene	EPA 8260C_(8/06)	7
o-Xylene	EPA 8260C_(8/06)	7
sec-Butylbenzene	EPA 8260C_(8/06)	7
Styrene	EPA 8260C_(8/06)	7
tert-amylmethylether (TAME)	EPA 8260C_(8/06)	7
tert-Butylbenzene	EPA 8260C_(8/06)	7
Tetrachloroethylene (Perchloroethylene)	EPA 8260C_(8/06)	7
Tetrahydrofuran (THF)	EPA 8260C_(8/06)	7
Toluene	EPA 8260C_(8/06)	7
trans-1,2-Dichloroethylene	EPA 8260C_(8/06)	7
trans-1,3-Dichloropropylene	EPA 8260C_(8/06)	7
trans-1,4-Dichloro-2-butene	EPA 8260C_(8/06)	7
Trichloroethene (Trichloroethylene)	EPA 8260C_(8/06)	7
Trichlorofluoromethane (Freon 11)	EPA 8260C_(8/06)	7
Vinyl acetate	EPA 8260C_(8/06)	7
Vinyl chloride	EPA 8260C_(8/06)	7
1,2,4,5-Tetrachlorobenzene	EPA 8270D_(2/07)	5,7
1,2-Dichlorobenzene	EPA 8270D_(2/07)	5,7
1,2-Diphenylhydrazine	EPA 8270D_(2/07)	5,7
1,3-Dichlorobenzene	EPA 8270D_(2/07)	5,7
1,4-Dichlorobenzene	EPA 8270D_(2/07)	5,7
1-Methylnaphthalene	EPA 8270D_(2/07)	5,7
2,3,4,6-Tetrachlorophenol	EPA 8270D_(2/07)	5,7
2,3,5,6-Tetrachlorophenol	EPA 8270D_(2/07)	5,7
2,3-Dichloroaniline	EPA 8270D_(2/07)	5,7
2,4,5-Trichlorophenol	EPA 8270D_(2/07)	5,7
2,4,6-Trichlorophenol	EPA 8270D_(2/07)	5,7
2,4-Dichlorophenol	EPA 8270D_(2/07)	5,7
2,4-Dimethylphenol	EPA 8270D_(2/07)	5,7
2,4-Dinitrophenol	EPA 8270D_(2/07)	5,7
2,4-Dinitrotoluene (2,4-DNT)	EPA 8270D_(2/07)	5,7

TestAmerica Seattle-Tacoma

Matrix/Analyte	Method	Notes
2,6-Dinitrotoluene (2,6-DNT)	EPA 8270D_(2/07)	5,7
2-Chloronaphthalene	EPA 8270D_(2/07)	5,7
2-Chlorophenol	EPA 8270D_(2/07)	5,7
2-Methylnaphthalene	EPA 8270D_(2/07)	5,7
2-Methylphenol (o-Cresol)	EPA 8270D_(2/07)	5,7
2-Nitroaniline	EPA 8270D_(2/07)	5,7
2-Nitrophenol	EPA 8270D_(2/07)	5,7
3,3'-Dichlorobenzidine	EPA 8270D_(2/07)	5,7
3-Nitroaniline	EPA 8270D_(2/07)	5,7
4,6-Dinitro-2-methylphenol	EPA 8270D_(2/07)	5,7
4-Bromophenyl phenyl ether (BDE-3)	EPA 8270D_(2/07)	5,7
4-Chloro-3-methylphenol	EPA 8270D_(2/07)	5,7
4-Chloroaniline	EPA 8270D_(2/07)	5,7
4-Chlorophenyl phenylether	EPA 8270D_(2/07)	5,7
4-Nitroaniline	EPA 8270D_(2/07)	5,7
4-Nitrophenol	EPA 8270D_(2/07)	5,7
Acenaphthene	EPA 8270D_(2/07)	5,7
Acenaphthylene	EPA 8270D_(2/07)	5,7
Acetophenone	EPA 8270D_(2/07)	5,7
Aniline	EPA 8270D_(2/07)	5,7
Anthracene	EPA 8270D_(2/07)	5,7
Benzidine	EPA 8270D_(2/07)	5,7
Benzo(a)anthracene	EPA 8270D_(2/07)	5,7
Benzo(a)pyrene	EPA 8270D_(2/07)	5,7
Benzo(g,h,i)perylene	EPA 8270D_(2/07)	5,7
Benzo(k)fluoranthene	EPA 8270D_(2/07)	5,7
Benzo[b]fluoranthene	EPA 8270D_(2/07)	5,7
Benzoic acid	EPA 8270D_(2/07)	5,7
Benzyl alcohol	EPA 8270D_(2/07)	5,7
bis(2-Chloroethoxy)methane	EPA 8270D_(2/07)	5,7
bis(2-Chloroethyl) ether	EPA 8270D_(2/07)	5,7
Butyl benzyl phthalate	EPA 8270D_(2/07)	5,7
Carbazole	EPA 8270D_(2/07)	5,7
Chrysene	EPA 8270D_(2/07)	5,7
Di(2-ethylhexyl)phthalate	EPA 8270D_(2/07)	5,7
Dibenz(a,h) anthracene	EPA 8270D_(2/07)	5,7

TestAmerica Seattle-Tacoma

Matrix/Analyte	Method	Notes
Dibenzofuran	EPA 8270D_(2/07)	5,7
Diethyl phthalate	EPA 8270D_(2/07)	5,7
Dimethyl phthalate	EPA 8270D_(2/07)	5,7
Di-n-butyl phthalate	EPA 8270D_(2/07)	5,7
Di-n-octyl phthalate	EPA 8270D_(2/07)	5,7
Fluoranthene	EPA 8270D_(2/07)	5,7
Fluorene	EPA 8270D_(2/07)	5,7
Hexachlorobenzene	EPA 8270D_(2/07)	5,7
Hexachlorobutadiene	EPA 8270D_(2/07)	5,7
Hexachlorocyclopentadiene	EPA 8270D_(2/07)	5,7
Hexachloroethane	EPA 8270D_(2/07)	5,7
Indeno(1,2,3-cd) pyrene	EPA 8270D_(2/07)	5,7
Isophorone	EPA 8270D_(2/07)	5,7
m+p Cresol	EPA 8270D_(2/07)	5,7
Naphthalene	EPA 8270D_(2/07)	5,7
Nitrobenzene	EPA 8270D_(2/07)	5,7
n-Nitrosodimethylamine	EPA 8270D_(2/07)	5,7
N-Nitroso-di-n-propylamine	EPA 8270D_(2/07)	5,7
n-Nitrosodiphenylamine	EPA 8270D_(2/07)	5,7
Pentachlorophenol	EPA 8270D_(2/07)	5,7
Phenanthrene	EPA 8270D_(2/07)	5,7
Phenol	EPA 8270D_(2/07)	5,7
Pyrene	EPA 8270D_(2/07)	5,7
Pyridine	EPA 8270D_(2/07)	5,7
1-Methylnaphthalene	EPA 8270D_(2/07) SIM	7
2-Methylnaphthalene	EPA 8270D_(2/07) SIM	7
Acenaphthene	EPA 8270D_(2/07) SIM	7
Acenaphthylene	EPA 8270D_(2/07) SIM	7
Anthracene	EPA 8270D_(2/07) SIM	7
Benzo(a)anthracene	EPA 8270D_(2/07) SIM	7
Benzo(a)pyrene	EPA 8270D_(2/07) SIM	7
Benzo(g,h,i)perylene	EPA 8270D_(2/07) SIM	7
Benzo(k)fluoranthene	EPA 8270D_(2/07) SIM	7
Benzo[b]fluoranthene	EPA 8270D_(2/07) SIM	7
Chrysene	EPA 8270D_(2/07) SIM	7
Dibenz(a,h) anthracene	EPA 8270D_(2/07) SIM	7

TestAmerica Seattle-Tacoma

Matrix/Analyte	Method	Notes
Fluoranthene	EPA 8270D_(2/07) SIM	7
Fluorene	EPA 8270D_(2/07) SIM	7
Indeno(1,2,3-cd) pyrene	EPA 8270D_(2/07) SIM	7
Naphthalene	EPA 8270D_(2/07) SIM	7
Pentachlorophenol	EPA 8270D_(2/07) SIM	7
Phenanthrene	EPA 8270D_(2/07) SIM	7
Pyrene	EPA 8270D_(2/07) SIM	7
Dibutyltin	Krone 1988	3
Monobutyltin	Krone 1988	3
Tetrabutyltin	Krone 1988	3
Tributyltin	Krone 1988	3
Particle Size Distribution	ASTM D 422	7,8
Ignitability	EPA 1020A_1_1992	7
Corrosivity	EPA 9045C_3_1995	7
Particle Size Distribution	PLUMB 1981	7
Particle Size Distribution	PSEP 1986 Wet Sieve	

Accredited Parameter Note Detail

(1) Limited to water only. (2) Washington Department of Ecology Analytical Methods for Petroleum Hydrocarbons, Publication Number ECY 97-602, June 1997. (3) Procedure is an Ion Trap method for determination of tetra-, tri-, di-, and monobutyltin in sediments and pore water. (4) Includes oil matrix. (5) For sediments, modifications are: 30-minute sonication at elevated temperature with a heated ultrasonic bath; use of 40-mL Surlyn coated vials; and extraction of 10 grams of sample with an initial solvent volume of 20 mL instead of extraction of 30 grams of sample with an initial solvent volume of 60 mL. (6) When acid cleanup is not necessary, lab runs according to EPA 8082A protocol. (7) Accreditation based in part on recognition of Oregon NELAP accreditation. (8) Includes hydrometer and modified methods. (9) Prep is done by EPA 7195. (10) Includes determination by GCMS.



03/24/2015

Authentication Signature
 Alan D. Rue, Lab Accreditation Unit Supervisor

Date



APPENDIX C
UST AND WASTE DISPOSAL DOCUMENTATION

Marine Vacuum Service, Inc.

GENERAL CONTRACTOR

CONTRACTORS LICENSE # MARINVS097JA

2158076 - 2040
B.T.

P.O. Box 24263 Seattle, Washington 98124

Telephone (206) 762-0240

FAX (206) 763-8084

1-800-540-7491

AST/UST STORAGE TANK PUMP & RINSE CERTIFICATE

Tank Size: 4,000 gallons

Last Contents Gasoline

Tank Location: Chief Joseph Dam

Marine Vacuum Service, Inc. certifies that the above mentioned tank(s) have been triple rinsed in accordance with the industry standard as outlined in 40 CFR PART 280.70, WAC 173-360-380(I), API 1604, API 2015 and that all residual product and rinsate has been disposed of in accordance with Federal, State and Local regulations. Tanks listed above are **NOT GAS FREE** or **NOT SAFE FOR HOT WORK**

Tank Owner: Marshall

Contractor: Saybr

M.V.S. Representative: Charly Ham

Date: 08.24.2015

Notes:

Marine Vacuum Service, Inc.

GENERAL CONTRACTOR

CONTRACTORS LICENSE # MARINVS097JA

P.O. Box 24263 Seattle, Washington 98124

Telephone (206) 762-0240

FAX (206) 763-8084

1-800-540-7491

AST/UST STORAGE TANK PUMP & RINSE CERTIFICATE

Tank Size: 2,500 gallons

Last Contents Diesel

Tank Location: Chief Joseph Dams

Marine Vacuum Service, Inc. certifies that the above mentioned tank(s) have been triple rinsed in accordance with the industry standard as outlined in 40 CFR PART 280.70, WAC 173-360-380(I), API 1604, API 2015 and that all residual product and rinsate has been disposed of in accordance with Federal, State and Local regulations. Tanks listed above are **NOT GAS FREE** or **NOT SAFE FOR HOT WORK**

Tank Owner: Marshall

Contractor: Saybr

M.V.S. Representative: Charly Ham

Date: 08.24.2015

Notes:

DBE # D4M1302341

EPA # WAD980974521

A MINORITY BUSINESS ENTERPRISE ID # D4M1302341

2158076-~~1000~~ 2050

SOUND TESTING, INC. B.T.
P.O. BOX 16204 SEATTLE, WA 98116
(206) 932-0206 FAX (206) 937-3848
WWW.SOUNDTESTINGINC.COM

MARINE CHEMIST CERTIFICATE

SERIAL N° 46545

Survey Requested by SAYBR Vessel Owner or Agent USACE Date 1 SEP 15
Vessel CHIEF ~~SHIP~~ JOSEPH DAM Type of Vessel UST Specific Location of Vessel SHOP REFUELING STATION
Last Three (3) Loadings DIESEL & UNL (GASOLINE) X 3 Tests Performed U/SUM, O₂ Time Survey Completed 1147

2500 GAL DIESEL UST } SAFE FOR EXCAVATION
4000 GAL GAS UST } SAFE FOR TRANSPORTATION
PLEASE NOTE:
① KEEP OPENINGS PLUGGED
② BOTH TANKS ARE INVERTED WITH CO₂ AND SECURED.
[GAS = 4.7% O₂ 60%
DIESEL = 3.4% O₂ 60%]

In the event of changes adversely affecting conditions in the above spaces, or if in any doubt, immediately stop all work and contact the undersigned Marine Chemist.

Qualifications: Manipulation of valves or devices tending to alter conditions in pipe lines or tanks noted above, unless specifically approved in this certificate, will require re-inspection and a new Certificate for spaces so affected. All piping, heating coils, pumps and floating roof gaskets attached to or contained within spaces listed above shall be considered "NOT SAFE" unless otherwise specifically designated.

STANDARD SAFETY DESIGNATIONS

(These detail the minimum conditions for Safe Entry and Hot Work.) The Marine Chemist may request additional measures if workplace conditions so dictate.

ATMOSPHERE SAFE FOR WORKERS means that in a space (a) the oxygen content is between 19.5% and 22% by volume, and (b) combustible gas is less than 10% of the Lower Explosive Limit, and (c) airborne toxic materials are within permissible concentrations as listed in OSHA's Subpart Z or in ACGIH's current list of Threshold Limit Values.

SAFE FOR HOT WORK means that (a) oxygen within the space is less than 22% by volume; and (b) the combustible gas is less than 10% of the Lower Explosive Limit; and (c) cargo residues within the space will not combust during hot work; and (d) pipes that can deliver hazardous materials to the workspace have been separated, blanked, or locked out, and nearby hazardous spaces have been evaluated and noted on the certificate.

NOT SAFE FOR HOT WORK: In the compartment or space so designated, hot work is not permitted.

"The undersigned acknowledges receipt of this Certificate and understands conditions and limitations under which it was issued."

This Certificate is based on conditions existing at the time the inspection herein set forth was completed and is issued subject to compliance with all qualifications and instructions.

Signed [Signature] Name SAYBR Date 1 Sep 15 Signed Clay R Tuttle #698 Marine Chemist Certificate No. [Signature]

POSTING

CRAIG 206-313-6933 [Signature]

Marine Vacuum Service, Inc.

GENERAL CONTRACTOR

CONTRACTORS LICENSE # MARINVS097JA

P.O. Box 24263 Seattle, Washington 98124

Telephone (206) 762-0240

FAX (206) 763-8084

1-800-540-7491

**STORAGE TANK
CERTIFICATE OF DESTRUCTION**

DATE: 9/10/2015

TANK OWNER: USACE

TANK LOCATION: CHIEF JOSEPH DAM

TANK DESCRIPTION: 4,000 GALLON UST

LAST CONTENTS HELD IN TANKS: GASOLINE

Marine Vacuum Service, Inc certifies that the tank mentioned above was pumped of all liquid materials and washed clean with a high-pressure washer and soap solution. The tank and contents therein have been disposed of according to all Local, State and Federal Regulations.

Thank you,

Marine Vacuum Service, Inc.

DBE # D4M000234I

SDVO

EPA # WAD98097452I

A MINORITY BUSINESS ENTERPRISE ID # M4M00234I

Marine Vacuum Service, Inc.

GENERAL CONTRACTOR

CONTRACTORS LICENSE # MARINVS097JA

P.O. Box 24263 Seattle, Washington 98124

Telephone (206) 762-0240

FAX (206) 763-8084

1-800-540-7491

**STORAGE TANK
CERTIFICATE OF DESTRUCTION**

DATE: 9/10/2015

TANK OWNER: USACE

TANK LOCATION: CHIEF JOSEPH DAM

TANK DESCRIPTION: 2500 GALLON UST

LAST CONTENTS HELD IN TANKS: DIESEL

Marine Vacuum Service, Inc certifies that the tank mentioned above was pumped of all liquid materials and washed clean with a high-pressure washer and soap solution. The tank and contents therein have been disposed of according to all Local, State and Federal Regulations.

Thank you,

Marine Vacuum Service, Inc.

DBE # D4M0002341

SDVO

EPA # WAD980974521

A MINORITY BUSINESS ENTERPRISE ID # M4M002341

STRAIGHT BILL OF LADING
ORIGINAL — NOT NEGOTIABLE

Shipper No. 025335

Carrier No. _____

MARINE VACUUM SERVICE, INC

Date _____

Page _____ of _____

(Name of carrier)

(SCAC)

On Collect on Delivery shipments, the letters "COD" must appear before consignee's name or as otherwise provided in Item 430, Sec 1

TO:
Consignee **MARINE VACUUM SERVICE INC**
Street **1516 S. GRAHAM ST**
City **SEATTLE** State **WA** Zip Code **98108**

FROM:
Shipper **Saybr Contractors, IN**
Street **Chief Joseph Dam**
City _____ State _____ Zip Code _____
24 hr. Emergency Contact Tel. No. **800-540-7491**

Route		Vehicle Number				
No. of Units & Container Type	HM	BASIC DESCRIPTION UN or NA Number, Proper Shipping Name, Hazard Class, Packing Group	TOTAL QUANTITY (Weight, Volume, Gallons, etc.)	WEIGHT (Subject to Correction)	RATE	CHARGES (For Carrier Use Only)
		2 Empty Tanks	2			
		2,500 gals.				
		4,000 gals				

PLACARDS TENDERED: YES NO

Note — (1) Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property, as follows: "The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding _____ per _____."
 (2) Where the applicable tariff provisions specify a limitation of the carrier's liability absent a release or a value declaration by the shipper and the shipper does not release the carrier's liability or declare a value, the carrier's liability shall be limited to the extent provided by such provisions. See NMFC Item 172.
 (3) Commodities requiring special or additional care or attention in handling or stowing must be so marked and packaged as to ensure safe transportation. See Section 2(e) of item 360, Bills of Lading, Freight Bills and Statements of Charges and Section 1(a) of the Contract Terms and Conditions for a list of such articles.

I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Signature _____

REMIT C.O.D. TO: ADDRESS _____
COD Amt: \$ _____
 Subject to Section 7 of the conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:
 The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.
 (Signature of Consignor) _____

C.O.D. FEE: PREPAID COLLECT \$ _____
TOTAL CHARGES \$ _____
FREIGHT CHARGES _____
 FREIGHT PREPAID Check box if charges are to be collected

RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout the contract as meaning any person or corporation in possession of this property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of, said property over all or any portion of said route to des-

lination and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification on the date of shipment.

Shipper hereby certifies that he is familiar with all the lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

SHIPPER **Saybr Contractors**
 PER **Bruce Towey 206-423-0158**
 CARRIER **MARINE VACUUM SERVICE, INC.**
 PER **7 Jan Chy**
 DATE **09.01.2015**

Marine Vacuum Service, Inc.

GENERAL CONTRACTOR

CONTRACTORS LICENSE # MARINVS097JA

P.O. Box 24263 Seattle, Washington 98124

Telephone (206) 762-0240

FAX (206) 763-8084

1-800-540-7491

PRODUCT DISPOSAL CERTIFICATE

DATE: 9/10/2015

CUSTOMER: SAYBR CONTRACTORS, INC.

LOCATION: CHIEF JOSEPH DAM

PRODUCT DISPOSAL : 2,500 GALLONS – WASTE WATER

DATE RECEIVED: 8/25/2015

Marine Vacuum Service, Inc. certifies that the above mentioned product has been treated and disposed of in accordance with the industry standard and under authority of King County METRO Permit Number 7676-03 in accordance with Federal, State and Local regulations.

Marine Vacuum Service, Inc.

DBE # D4M0002341

SDVO

EPA # WAD980974521

A MINORITY BUSINESS ENTERPRISE ID # M4M002341

Marine Vacuum Service, Inc.

GENERAL CONTRACTOR

CONTRACTORS LICENSE # MARINVS097JA

P.O. Box 24263 Seattle, Washington 98124

Telephone (206) 762-0240

FAX (206) 763-8084

1-800-540-7491

PRODUCT DISPOSAL CERTIFICATE

DATE: 9/10/2015

CUSTOMER: SAYBR CONTRACTORS, INC.

LOCATION: CHIEF JOSEPH DAM

PRODUCT DISPOSAL : 50 GALLONS – SLUDGE

DATE RECEIVED: 8/25/2015

Marine Vacuum Service, Inc. certifies that the above mentioned product has been treated and disposed of in accordance with the industry standard and under authority of King County METRO Permit Number 7676-03 in accordance with Federal, State and Local regulations.

Marine Vacuum Service, Inc.

DBE # D4M0002341

SDVO

EPA # WAD980974521

A MINORITY BUSINESS ENTERPRISE ID # M4M002341



Marine Vacuum Job Order Form

Tuesday, September 22, 2015

10:29:52 AM

Prepared By: TERA

Order Date: 9/22/2015

Job#: 19979

PONumber:

Start Date: 9/22/2015

Est Complete Date:

Customer: SAYBR CONTRACTORS, INC

VesselName:

Contact: Eric Martin

Vessel Location:

Address: 3852 S 66TH ST

StartTime:

City: TACOMA

Zip:

Phone: 206.730.8197

Job Description

PICK UP DRUMS

Special Requirements

ENG

2 DRUMS

** pick up 2 drums West Side Fall - 110 gallons.*

Tailgate Safety

Scope Review: Y / N Safety Analysis: Y / N Special PPE: Y / N

Notes:

Truck Type Number: Hrs: Wash Pump: Hrs: Rental Equip Hrs: Hrs:

Soap: lbs Chlor-D-Tect: Degreaser: gls Bleach: gls

Product Type: Bilge Water Waste Water Waste Gas Waste Oil Blk Oil Sewage Mud/Muck Tank Sludge

Other:

Personnel: *Eric*

Reg/OT: *1-5*

[...1...|...2...|...3...|...4...|...5...|...6...|...7...|...8...|...9...|...10...|...11...|...12...|...1...|...2...|...3...|...4...|...5...|...6...|...7...|...8...|...9...|...10...|...11...|...12...]

Personnel:

Reg/OT:

[...1...|...2...|...3...|...4...|...5...|...6...|...7...|...8...|...9...|...10...|...11...|...12...|...1...|...2...|...3...|...4...|...5...|...6...|...7...|...8...|...9...|...10...|...11...|...12...]

Personnel:

Reg/OT:

[...1...|...2...|...3...|...4...|...5...|...6...|...7...|...8...|...9...|...10...|...11...|...12...|...1...|...2...|...3...|...4...|...5...|...6...|...7...|...8...|...9...|...10...|...11...|...12...]

Personnel:

Reg/OT:

[...1...|...2...|...3...|...4...|...5...|...6...|...7...|...8...|...9...|...10...|...11...|...12...|...1...|...2...|...3...|...4...|...5...|...6...|...7...|...8...|...9...|...10...|...11...|...12...]

DATE *9-22-15*

APPENDIX D
LABORATORY ANALYTICAL REPORT AND CHAIN-OF-CUSTODY
DOCUMENTATION



3600 Fremont Ave. N.

Seattle, WA 98103

T: (206) 352-3790

F: (206) 352-7178

info@fremontanalytical.com

Stantec Consulting Corporation

Greg McCormick

11130 NE 33rd Pl, Suite 200

Bellevue, WA 98004

RE: Chief Joseph Dam

Lab ID: 1509028

September 03, 2015

Attention Greg McCormick:

Fremont Analytical, Inc. received 10 sample(s) on 9/2/2015 for the analyses presented in the following report.

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Gasoline by NWTPH-Gx

Sample Moisture (Percent Moisture)

Volatile Organic Compounds by EPA Method 8260

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

A handwritten signature in black ink, appearing to read "Mike Ridgeway", with a long horizontal flourish extending to the right.

Mike Ridgeway
President



Date: 09/03/2015

CLIENT: Stantec Consulting Corporation
Project: Chief Joseph Dam
Lab Order: 1509028

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1509028-001	Diesel UST-East End	09/01/2015 10:30 AM	09/02/2015 8:02 AM
1509028-002	Diesel UST-West Product	09/01/2015 10:30 AM	09/02/2015 8:02 AM
1509028-003	Diesel UST-North Sidewall	09/01/2015 10:30 AM	09/02/2015 8:02 AM
1509028-004	Diesel UST-Base	09/01/2015 10:30 AM	09/02/2015 8:02 AM
1509028-005	Gas UST-East Product	09/01/2015 11:30 AM	09/02/2015 8:02 AM
1509028-006	Gas UST-North Sidewall	09/01/2015 11:30 AM	09/02/2015 8:02 AM
1509028-007	Gas UST-West End	09/01/2015 11:30 AM	09/02/2015 8:02 AM
1509028-008	Gas UST-Base	09/01/2015 11:30 AM	09/02/2015 8:02 AM
1509028-009	Dispenser (1')	09/01/2015 12:30 PM	09/02/2015 8:02 AM
1509028-010	Dispenser (3')	09/01/2015 12:30 PM	09/02/2015 8:02 AM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

CLIENT: Stantec Consulting Corporation

Project: Chief Joseph Dam

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

- * - Flagged value is not within established control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below LOQ
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



Analytical Report

WO#: 1509028

Date Reported: 9/3/2015

CLIENT: Stantec Consulting Corporation

Project: Chief Joseph Dam

Lab ID: 1509028-001

Collection Date: 9/1/2015 10:30:00 AM

Client Sample ID: Diesel UST-East End

Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.</u>				Batch ID: 11751		Analyst: AK
Diesel (Fuel Oil)	ND	18.8		mg/Kg-dry	1	9/2/2015 7:30:00 PM
Heavy Oil	ND	47.0		mg/Kg-dry	1	9/2/2015 7:30:00 PM
Surr: 2-Fluorobiphenyl	95.6	50-150		%REC	1	9/2/2015 7:30:00 PM
Surr: o-Terphenyl	93.6	50-150		%REC	1	9/2/2015 7:30:00 PM

Sample Moisture (Percent Moisture)

Batch ID: R24660 Analyst: CG

Percent Moisture	4.58	0.500		wt%	1	9/2/2015 9:49:28 AM
------------------	------	-------	--	-----	---	---------------------

Lab ID: 1509028-002

Collection Date: 9/1/2015 10:30:00 AM

Client Sample ID: Diesel UST-West Product

Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.</u>				Batch ID: 11751		Analyst: AK
Diesel (Fuel Oil)	ND	19.9		mg/Kg-dry	1	9/2/2015 8:02:00 PM
Heavy Oil	ND	49.7		mg/Kg-dry	1	9/2/2015 8:02:00 PM
Surr: 2-Fluorobiphenyl	102	50-150		%REC	1	9/2/2015 8:02:00 PM
Surr: o-Terphenyl	99.9	50-150		%REC	1	9/2/2015 8:02:00 PM

Sample Moisture (Percent Moisture)

Batch ID: R24660 Analyst: CG

Percent Moisture	5.16	0.500		wt%	1	9/2/2015 9:49:28 AM
------------------	------	-------	--	-----	---	---------------------



Analytical Report

WO#: 1509028

Date Reported: 9/3/2015

CLIENT: Stantec Consulting Corporation

Project: Chief Joseph Dam

Lab ID: 1509028-003

Collection Date: 9/1/2015 10:30:00 AM

Client Sample ID: Diesel UST-North Sidewall

Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.</u>					Batch ID: 11751	Analyst: AK
Diesel (Fuel Oil)	ND	22.4		mg/Kg-dry	1	9/2/2015 8:33:00 PM
Heavy Oil	ND	55.9		mg/Kg-dry	1	9/2/2015 8:33:00 PM
Surr: 2-Fluorobiphenyl	97.9	50-150		%REC	1	9/2/2015 8:33:00 PM
Surr: o-Terphenyl	95.2	50-150		%REC	1	9/2/2015 8:33:00 PM

Sample Moisture (Percent Moisture)

Batch ID: R24660 Analyst: CG

Percent Moisture	11.7	0.500		wt%	1	9/2/2015 9:49:28 AM
------------------	------	-------	--	-----	---	---------------------

Lab ID: 1509028-004

Collection Date: 9/1/2015 10:30:00 AM

Client Sample ID: Diesel UST-Base

Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.</u>					Batch ID: 11751	Analyst: AK
Diesel (Fuel Oil)	ND	19.8		mg/Kg-dry	1	9/2/2015 9:04:00 PM
Heavy Oil	ND	49.5		mg/Kg-dry	1	9/2/2015 9:04:00 PM
Surr: 2-Fluorobiphenyl	102	50-150		%REC	1	9/2/2015 9:04:00 PM
Surr: o-Terphenyl	100	50-150		%REC	1	9/2/2015 9:04:00 PM

Sample Moisture (Percent Moisture)

Batch ID: R24660 Analyst: CG

Percent Moisture	5.97	0.500		wt%	1	9/2/2015 9:49:28 AM
------------------	------	-------	--	-----	---	---------------------



Analytical Report

WO#: 1509028

Date Reported: 9/3/2015

CLIENT: Stantec Consulting Corporation

Project: Chief Joseph Dam

Lab ID: 1509028-005

Collection Date: 9/1/2015 11:30:00 AM

Client Sample ID: Gas UST-East Product

Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
----------	--------	----	------	-------	----	---------------

Gasoline by NWTPH-Gx

Batch ID: 11760

Analyst: BC

Gasoline	ND	7.64		mg/Kg-dry	1	9/3/2015 12:06:00 AM
Surr: 4-Bromofluorobenzene	102	65-135		%REC	1	9/3/2015 12:06:00 AM
Surr: Toluene-d8	95.2	65-135		%REC	1	9/3/2015 12:06:00 AM

Volatile Organic Compounds by EPA Method 8260

Batch ID: 11760

Analyst: BC

Benzene	ND	0.0306		mg/Kg-dry	1	9/3/2015 12:06:00 AM
Toluene	ND	0.0306		mg/Kg-dry	1	9/3/2015 12:06:00 AM
Ethylbenzene	ND	0.0458		mg/Kg-dry	1	9/3/2015 12:06:00 AM
m,p-Xylene	ND	0.0306		mg/Kg-dry	1	9/3/2015 12:06:00 AM
o-Xylene	ND	0.0306		mg/Kg-dry	1	9/3/2015 12:06:00 AM
Surr: Dibromofluoromethane	94.4	56.5-129		%REC	1	9/3/2015 12:06:00 AM
Surr: Toluene-d8	95.1	64.3-131		%REC	1	9/3/2015 12:06:00 AM
Surr: 1-Bromo-4-fluorobenzene	100	63.1-141		%REC	1	9/3/2015 12:06:00 AM

Sample Moisture (Percent Moisture)

Batch ID: R24660

Analyst: CG

Percent Moisture	3.69	0.500		wt%	1	9/2/2015 9:49:28 AM
------------------	------	-------	--	-----	---	---------------------



Analytical Report

WO#: 1509028

Date Reported: 9/3/2015

CLIENT: Stantec Consulting Corporation

Project: Chief Joseph Dam

Lab ID: 1509028-006

Collection Date: 9/1/2015 11:30:00 AM

Client Sample ID: Gas UST-North Sidewall

Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
----------	--------	----	------	-------	----	---------------

Gasoline by NWTPH-Gx

Batch ID: 11760

Analyst: BC

Gasoline	ND	7.09		mg/Kg-dry	1	9/3/2015 1:02:00 AM
Surr: 4-Bromofluorobenzene	103	65-135		%REC	1	9/3/2015 1:02:00 AM
Surr: Toluene-d8	100	65-135		%REC	1	9/3/2015 1:02:00 AM

Volatile Organic Compounds by EPA Method 8260

Batch ID: 11760

Analyst: BC

Benzene	ND	0.0284		mg/Kg-dry	1	9/3/2015 1:02:00 AM
Toluene	ND	0.0284		mg/Kg-dry	1	9/3/2015 1:02:00 AM
Ethylbenzene	ND	0.0425		mg/Kg-dry	1	9/3/2015 1:02:00 AM
m,p-Xylene	ND	0.0284		mg/Kg-dry	1	9/3/2015 1:02:00 AM
o-Xylene	ND	0.0284		mg/Kg-dry	1	9/3/2015 1:02:00 AM
Surr: Dibromofluoromethane	93.7	56.5-129		%REC	1	9/3/2015 1:02:00 AM
Surr: Toluene-d8	100	64.3-131		%REC	1	9/3/2015 1:02:00 AM
Surr: 1-Bromo-4-fluorobenzene	102	63.1-141		%REC	1	9/3/2015 1:02:00 AM

Sample Moisture (Percent Moisture)

Batch ID: R24660

Analyst: CG

Percent Moisture	5.87	0.500		wt%	1	9/2/2015 9:49:28 AM
------------------	------	-------	--	-----	---	---------------------



Analytical Report

WO#: 1509028

Date Reported: 9/3/2015

CLIENT: Stantec Consulting Corporation

Project: Chief Joseph Dam

Lab ID: 1509028-007

Collection Date: 9/1/2015 11:30:00 AM

Client Sample ID: Gas UST-West End

Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
----------	--------	----	------	-------	----	---------------

Gasoline by NWTPH-Gx

Batch ID: 11760

Analyst: BC

Gasoline	ND	9.54		mg/Kg-dry	1	9/3/2015 1:31:00 AM
Surr: 4-Bromofluorobenzene	100	65-135		%REC	1	9/3/2015 1:31:00 AM
Surr: Toluene-d8	101	65-135		%REC	1	9/3/2015 1:31:00 AM

Volatile Organic Compounds by EPA Method 8260

Batch ID: 11760

Analyst: BC

Benzene	ND	0.0382		mg/Kg-dry	1	9/3/2015 1:31:00 AM
Toluene	ND	0.0382		mg/Kg-dry	1	9/3/2015 1:31:00 AM
Ethylbenzene	ND	0.0572		mg/Kg-dry	1	9/3/2015 1:31:00 AM
m,p-Xylene	ND	0.0382		mg/Kg-dry	1	9/3/2015 1:31:00 AM
o-Xylene	ND	0.0382		mg/Kg-dry	1	9/3/2015 1:31:00 AM
Surr: Dibromofluoromethane	93.6	56.5-129		%REC	1	9/3/2015 1:31:00 AM
Surr: Toluene-d8	99.9	64.3-131		%REC	1	9/3/2015 1:31:00 AM
Surr: 1-Bromo-4-fluorobenzene	99.3	63.1-141		%REC	1	9/3/2015 1:31:00 AM

Sample Moisture (Percent Moisture)

Batch ID: R24660

Analyst: CG

Percent Moisture	8.09	0.500		wt%	1	9/2/2015 9:49:28 AM
------------------	------	-------	--	-----	---	---------------------



Analytical Report

WO#: 1509028

Date Reported: 9/3/2015

CLIENT: Stantec Consulting Corporation

Project: Chief Joseph Dam

Lab ID: 1509028-008

Collection Date: 9/1/2015 11:30:00 AM

Client Sample ID: Gas UST-Base

Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
----------	--------	----	------	-------	----	---------------

Gasoline by NWTPH-Gx

Batch ID: 11760

Analyst: BC

Gasoline	ND	5.47		mg/Kg-dry	1	9/3/2015 1:59:00 AM
Surr: 4-Bromofluorobenzene	102	65-135		%REC	1	9/3/2015 1:59:00 AM
Surr: Toluene-d8	99.9	65-135		%REC	1	9/3/2015 1:59:00 AM

Volatile Organic Compounds by EPA Method 8260

Batch ID: 11760

Analyst: BC

Benzene	ND	0.0219		mg/Kg-dry	1	9/3/2015 1:59:00 AM
Toluene	ND	0.0219		mg/Kg-dry	1	9/3/2015 1:59:00 AM
Ethylbenzene	ND	0.0328		mg/Kg-dry	1	9/3/2015 1:59:00 AM
m,p-Xylene	ND	0.0219		mg/Kg-dry	1	9/3/2015 1:59:00 AM
o-Xylene	ND	0.0219		mg/Kg-dry	1	9/3/2015 1:59:00 AM
Surr: Dibromofluoromethane	93.9	56.5-129		%REC	1	9/3/2015 1:59:00 AM
Surr: Toluene-d8	101	64.3-131		%REC	1	9/3/2015 1:59:00 AM
Surr: 1-Bromo-4-fluorobenzene	101	63.1-141		%REC	1	9/3/2015 1:59:00 AM

Sample Moisture (Percent Moisture)

Batch ID: R24660

Analyst: CG

Percent Moisture	4.45	0.500		wt%	1	9/2/2015 9:49:28 AM
------------------	------	-------	--	-----	---	---------------------



Analytical Report

WO#: 1509028

Date Reported: 9/3/2015

CLIENT: Stantec Consulting Corporation

Project: Chief Joseph Dam

Lab ID: 1509028-009

Collection Date: 9/1/2015 12:30:00 PM

Client Sample ID: Dispenser (1')

Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
----------	--------	----	------	-------	----	---------------

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Batch ID: 11751

Analyst: AK

Diesel (Fuel Oil)	29,300	350	D	mg/Kg-dry	20	9/3/2015 11:01:00 AM
Heavy Oil	ND	43.7		mg/Kg-dry	1	9/2/2015 9:36:00 PM
Surr: 2-Fluorobiphenyl	88.3	50-150		%REC	1	9/2/2015 9:36:00 PM
Surr: o-Terphenyl	84.8	50-150		%REC	1	9/2/2015 9:36:00 PM

NOTES:

Run on GC20

Gasoline by NWTPH-Gx

Batch ID: 11760

Analyst: BC

Gasoline	ND	5.41		mg/Kg-dry	1	9/3/2015 8:09:00 AM
Surr: 4-Bromofluorobenzene	102	65-135		%REC	1	9/3/2015 8:09:00 AM
Surr: Toluene-d8	106	65-135		%REC	1	9/3/2015 8:09:00 AM

Volatile Organic Compounds by EPA Method 8260

Batch ID: 11760

Analyst: BC

Benzene	ND	0.0216		mg/Kg-dry	1	9/3/2015 8:09:00 AM
Toluene	0.0704	0.0216		mg/Kg-dry	1	9/3/2015 8:09:00 AM
Ethylbenzene	0.658	0.0325		mg/Kg-dry	1	9/3/2015 8:09:00 AM
m,p-Xylene	3.75	0.0216		mg/Kg-dry	1	9/3/2015 8:09:00 AM
o-Xylene	1.79	0.0216		mg/Kg-dry	1	9/3/2015 8:09:00 AM
Surr: Dibromofluoromethane	94.8	56.5-129		%REC	1	9/3/2015 8:09:00 AM
Surr: Toluene-d8	101	64.3-131		%REC	1	9/3/2015 8:09:00 AM
Surr: 1-Bromo-4-fluorobenzene	97.1	63.1-141		%REC	1	9/3/2015 8:09:00 AM

Sample Moisture (Percent Moisture)

Batch ID: R24660

Analyst: CG

Percent Moisture	3.03	0.500		wt%	1	9/2/2015 9:49:28 AM
------------------	------	-------	--	-----	---	---------------------



Analytical Report

WO#: 1509028

Date Reported: 9/3/2015

CLIENT: Stantec Consulting Corporation

Project: Chief Joseph Dam

Lab ID: 1509028-010

Collection Date: 9/1/2015 12:30:00 PM

Client Sample ID: Dispenser (3')

Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.</u>				Batch ID: 11751		Analyst: AK
Diesel (Fuel Oil)	ND	19.3		mg/Kg-dry	1	9/2/2015 10:07:00 PM
Heavy Oil	ND	48.2		mg/Kg-dry	1	9/2/2015 10:07:00 PM
Surr: 2-Fluorobiphenyl	104	50-150		%REC	1	9/2/2015 10:07:00 PM
Surr: o-Terphenyl	105	50-150		%REC	1	9/2/2015 10:07:00 PM
<u>Gasoline by NWTPH-Gx</u>				Batch ID: 11760		Analyst: BC
Gasoline	ND	4.99		mg/Kg-dry	1	9/3/2015 2:27:00 AM
Surr: 4-Bromofluorobenzene	99.7	65-135		%REC	1	9/3/2015 2:27:00 AM
Surr: Toluene-d8	100	65-135		%REC	1	9/3/2015 2:27:00 AM
<u>Volatile Organic Compounds by EPA Method 8260</u>				Batch ID: 11760		Analyst: BC
Benzene	ND	0.0199		mg/Kg-dry	1	9/3/2015 2:27:00 AM
Toluene	ND	0.0199		mg/Kg-dry	1	9/3/2015 2:27:00 AM
Ethylbenzene	ND	0.0299		mg/Kg-dry	1	9/3/2015 2:27:00 AM
m,p-Xylene	ND	0.0199		mg/Kg-dry	1	9/3/2015 2:27:00 AM
o-Xylene	ND	0.0199		mg/Kg-dry	1	9/3/2015 2:27:00 AM
Surr: Dibromofluoromethane	92.7	56.5-129		%REC	1	9/3/2015 2:27:00 AM
Surr: Toluene-d8	99.8	64.3-131		%REC	1	9/3/2015 2:27:00 AM
Surr: 1-Bromo-4-fluorobenzene	98.5	63.1-141		%REC	1	9/3/2015 2:27:00 AM
<u>Sample Moisture (Percent Moisture)</u>				Batch ID: R24660		Analyst: CG
Percent Moisture	6.02	0.500		wt%	1	9/2/2015 9:49:28 AM



Date: 9/3/2015

Work Order: 1509028
CLIENT: Stantec Consulting Corporation
Project: Chief Joseph Dam

QC SUMMARY REPORT
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Sample ID MB-11751	SampType: MBLK	Units: mg/Kg				Prep Date: 9/2/2015	RunNo: 24673				
Client ID: MBLKS	Batch ID: 11751					Analysis Date: 9/2/2015	SeqNo: 465056				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	ND	20.0									
Heavy Oil	ND	50.0									
Surr: 2-Fluorobiphenyl	17.2		20.00		86.1	50	150				
Surr: o-Terphenyl	16.9		20.00		84.7	50	150				

Sample ID LCS-11751	SampType: LCS	Units: mg/Kg				Prep Date: 9/2/2015	RunNo: 24673				
Client ID: LCSS	Batch ID: 11751					Analysis Date: 9/2/2015	SeqNo: 465055				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	443	20.0	500.0	0	88.7	65	135				
Surr: 2-Fluorobiphenyl	19.5		20.00		97.6	50	150				
Surr: o-Terphenyl	19.4		20.00		97.2	50	150				

Sample ID 1509029-001ADUP	SampType: DUP	Units: mg/Kg-dry				Prep Date: 9/2/2015	RunNo: 24673				
Client ID: BATCH	Batch ID: 11751					Analysis Date: 9/3/2015	SeqNo: 465408				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	ND	21.8						0		30	
Heavy Oil	ND	54.5						0		30	
Surr: 2-Fluorobiphenyl	19.1		21.79		87.6	50	150		0		
Surr: o-Terphenyl	18.6		21.79		85.5	50	150		0		

Work Order: 1509028
CLIENT: Stantec Consulting Corporation
Project: Chief Joseph Dam

QC SUMMARY REPORT
Gasoline by NWTPH-Gx

Sample ID LCS-11760	SampType: LCS	Units: mg/Kg				Prep Date: 9/2/2015	RunNo: 24683				
Client ID: LCSS	Batch ID: 11760					Analysis Date: 9/2/2015	SeqNo: 465208				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	25.6	5.00	25.00	0	103	65	135				
Surr: Toluene-d8	1.22		1.250		97.4	65	135				
Surr: 4-Bromofluorobenzene	1.23		1.250		98.0	65	135				

Sample ID MB-11760	SampType: MBLK	Units: mg/Kg				Prep Date: 9/2/2015	RunNo: 24683				
Client ID: MBLKS	Batch ID: 11760					Analysis Date: 9/2/2015	SeqNo: 465209				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	ND	5.00									
Surr: Toluene-d8	1.25		1.250		99.7	65	135				
Surr: 4-Bromofluorobenzene	1.25		1.250		99.6	65	135				

Sample ID 1509028-005BDUP	SampType: DUP	Units: mg/Kg-dry				Prep Date: 9/2/2015	RunNo: 24683				
Client ID: Gas UST-East Product	Batch ID: 11760					Analysis Date: 9/3/2015	SeqNo: 465191				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	ND	7.64						0		30	
Surr: Toluene-d8	1.92		1.910		100	65	135		0		
Surr: 4-Bromofluorobenzene	1.91		1.910		99.9	65	135		0		

Sample ID 1509039-002BDUP	SampType: DUP	Units: mg/Kg-dry				Prep Date: 9/2/2015	RunNo: 24683				
Client ID: BATCH	Batch ID: 11760					Analysis Date: 9/3/2015	SeqNo: 465202				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	ND	11.7						0		30	
Surr: Toluene-d8	2.93		2.921		100	65	135		0		
Surr: 4-Bromofluorobenzene	2.95		2.921		101	65	135		0		



Work Order: 1509028
CLIENT: Stantec Consulting Corporation
Project: Chief Joseph Dam

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID LCS-11760	SampType: LCS	Units: mg/Kg				Prep Date: 9/2/2015	RunNo: 24680				
Client ID: LCSS	Batch ID: 11760					Analysis Date: 9/2/2015	SeqNo: 465069				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.992	0.0200	1.000	0	99.2	64.3	133				
Toluene	0.974	0.0200	1.000	0	97.4	67.3	138				
Ethylbenzene	0.989	0.0300	1.000	0	98.9	74	129				
m,p-Xylene	1.95	0.0200	2.000	0	97.7	79.8	128				
o-Xylene	0.981	0.0200	1.000	0	98.1	72.7	124				
Surr: Dibromofluoromethane	1.32		1.250		106	56.5	129				
Surr: Toluene-d8	1.23		1.250		98.7	64.3	131				
Surr: 1-Bromo-4-fluorobenzene	1.27		1.250		102	63.1	141				

Sample ID MB-11760	SampType: MBLK	Units: mg/Kg				Prep Date: 9/2/2015	RunNo: 24680				
Client ID: MBLKS	Batch ID: 11760					Analysis Date: 9/2/2015	SeqNo: 465070				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.0200									
Toluene	ND	0.0200									
Ethylbenzene	ND	0.0300									
m,p-Xylene	ND	0.0200									
o-Xylene	ND	0.0200									
Surr: Dibromofluoromethane	1.17		1.250		93.6	56.5	129				
Surr: Toluene-d8	1.23		1.250		98.0	64.3	131				
Surr: 1-Bromo-4-fluorobenzene	1.23		1.250		98.4	63.1	141				

Sample ID 1509028-005BDUP	SampType: DUP	Units: mg/Kg-dry				Prep Date: 9/2/2015	RunNo: 24680				
Client ID: Gas UST-East Product	Batch ID: 11760					Analysis Date: 9/3/2015	SeqNo: 465065				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.0306						0		30	
Toluene	ND	0.0306						0		30	
Ethylbenzene	ND	0.0458						0		30	
m,p-Xylene	ND	0.0306						0		30	



Work Order: 1509028
CLIENT: Stantec Consulting Corporation
Project: Chief Joseph Dam

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID 1509028-005BDUP	SampType: DUP	Units: mg/Kg-dry				Prep Date: 9/2/2015	RunNo: 24680				
Client ID: Gas UST-East Product	Batch ID: 11760					Analysis Date: 9/3/2015	SeqNo: 465065				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
o-Xylene	ND	0.0306						0		30	
Surr: Dibromofluoromethane	1.79		1.910		93.9	56.5	129		0		
Surr: Toluene-d8	1.89		1.910		98.9	64.3	131		0		
Surr: 1-Bromo-4-fluorobenzene	1.89		1.910		99.1	63.1	141		0		

Sample ID 1509039-002BDUP	SampType: DUP	Units: mg/Kg-dry				Prep Date: 9/2/2015	RunNo: 24680				
Client ID: BATCH	Batch ID: 11760					Analysis Date: 9/3/2015	SeqNo: 465067				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.0467						0		30	
Toluene	ND	0.0467						0		30	
Ethylbenzene	ND	0.0701						0		30	
m,p-Xylene	ND	0.0467						0		30	
o-Xylene	ND	0.0467						0		30	
Surr: Dibromofluoromethane	2.70		2.921		92.4	56.5	129		0		
Surr: Toluene-d8	2.88		2.921		98.5	64.3	131		0		
Surr: 1-Bromo-4-fluorobenzene	2.92		2.921		99.8	63.1	141		0		

Sample ID 1509039-001BMS	SampType: MS	Units: mg/Kg-dry				Prep Date: 9/2/2015	RunNo: 24680				
Client ID: BATCH	Batch ID: 11760					Analysis Date: 9/3/2015	SeqNo: 465066				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	1.12	0.0215	1.073	0	104	63.5	133				
Toluene	1.08	0.0215	1.073	0	101	63.4	132				
Ethylbenzene	1.08	0.0322	1.073	0	101	54.5	134				
m,p-Xylene	2.14	0.0215	2.145	0	100	53.1	132				
o-Xylene	1.09	0.0215	1.073	0	102	53.3	139				
Surr: Dibromofluoromethane	1.38		1.341		103	56.5	129				
Surr: Toluene-d8	1.32		1.341		98.1	64.3	131				
Surr: 1-Bromo-4-fluorobenzene	1.39		1.341		104	63.1	141				



Date: 9/3/2015

Work Order: 1509028
CLIENT: Stantec Consulting Corporation
Project: Chief Joseph Dam

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID	1509039-001BMS	SampType:	MS	Units:	mg/Kg-dry	Prep Date:	9/2/2015	RunNo:	24680				
Client ID:	BATCH	Batch ID:	11760			Analysis Date:	9/3/2015	SeqNo:	465066				
Analyte		Result		RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual



Date: 9/3/2015

Work Order: 1509028
CLIENT: Stantec Consulting Corporation
Project: Chief Joseph Dam

QC SUMMARY REPORT
Sample Moisture (Percent Moisture)

Sample ID 1509027-001ADUP	SampType: DUP	Units: wt%			Prep Date: 9/2/2015	RunNo: 24660					
Client ID: BATCH	Batch ID: R24660				Analysis Date: 9/2/2015	SeqNo: 464655					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	6.27	0.500						7.374	16.1	20	

Sample ID 1509029-001ADUP	SampType: DUP	Units: wt%			Prep Date: 9/2/2015	RunNo: 24660					
Client ID: BATCH	Batch ID: R24660				Analysis Date: 9/2/2015	SeqNo: 464669					
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	9.71	0.500						10.70	9.62	20	



Sample Log-In Check List

Client Name: STANTEC	Work Order Number: 1509028
Logged by: Clare Griggs	Date Received: 9/2/2015 8:02:00 AM

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
2. How was the sample delivered? Client

Log In

3. Coolers are present? Yes No NA
4. Shipping container/cooler in good condition? Yes No
5. Custody Seals present on shipping container/cooler?
(Refer to comments for Custody Seals not intact) Yes No Not Required
6. Was an attempt made to cool the samples? Yes No NA
7. Were all items received at a temperature of >0°C to 10.0°C * Yes No NA
8. Sample(s) in proper container(s)? Yes No
9. Sufficient sample volume for indicated test(s)? Yes No
10. Are samples properly preserved? Yes No
11. Was preservative added to bottles? Yes No NA
12. Is there headspace in the VOA vials? Yes No NA
13. Did all samples containers arrive in good condition(unbroken)? Yes No
14. Does paperwork match bottle labels? Yes No
15. Are matrices correctly identified on Chain of Custody? Yes No
16. Is it clear what analyses were requested? Yes No
17. Were all holding times able to be met? Yes No

Special Handling (if applicable)

18. Was client notified of all discrepancies with this order? Yes No NA

Person Notified:	<input type="text"/>	Date:	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

19. Additional remarks:

Item Information

Item #	Temp °C
Cooler	2.5
Sample	6.7

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C



Fremont

Laboratory Project No (Internet):

Chain of Custody Record

3500 Fremont Ave N, Seattle, WA 98103

Tel: 206-352-3790 Fax: 206-352-2178

Date: 9/2/15

Client: Stanger Consulting
Address: 1150 NE 33rd
City, State, Zip: Bellevue, WA
Telephone: (206) 22-6313

Project Name: Chief Joseph Dam
Project No: 185750393
Location: Bridgeport, Washington
Report To (PM): Greg McCormick
PM Email: greg.mccormick@stanger.com

*Matrix Codes: A = Ali, AQ = Aquatic, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, TU = Urine, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	Analytes											Comments			
				VOC (EPA 8160 / C01)	SVOC	PCB	Gasoline Range Organics (GRO)	Metals/Non-Metals (MNM)	Dioxin/Furan (DF)	PAHs (EPA 8270 / 8275)	PCBs (EPA 8082 / 808)	Metals** (EPA 8220 / 808)	Total (T) / Dissolved (D)	Ames (A)***		ED01 (B01)		
1 Diesel VST - East End	9/1/15	10:30	S															
2 Diesel VST - West End	9/1/15	10:30	S															
3 Diesel VST - North End	9/1/15	10:30	S															
4 Diesel VST - Base	9/1/15	10:30	S															
5 Gas VST - East End Product	9/1/15	11:30	S															
6 Gas VST - West End Shell	9/1/15	11:30	S															
7 Gas VST - West End	9/1/15	11:30	S															
8 Gas VST - Base	9/1/15	11:30	S															
9 Dispenser (1')	9/1/15	12:30	S	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
10 Dispenser (3')	9/1/15	12:30	S	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

**Matrix Analytes (Circle): MTCAS HCBs Priority Pollutants YAL Individual Ag Ar As B Ba Br Ca Cd Cr Co Cu Fe Hg K Mg Mn Mo Ni Pb Se Sn Sr Ti U V Zn

***Actions (Circle): Nitrate Nitrite Chloride Sulfate Borate O-phosphate Fluoride Nitrate-Nitrite

Sample Deposit: Return to Client Deposit by Lab (Alien may be assumed - samples are retained for 90 days)

Revised: 9/2/15 Date/Time: 8:02 AM Received: [Signature] Date/Time: 9/2/15 0802

TAT → Same Day* Next Day* 2 Day 3 Day STD

*Please coordinate with the lab in advance