

## PERMANENT CLOSURE NOTICE

FOR UNDERGROUND STORAGE TANKS

UST ID #:	
County:	

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.

	UST FACILITY		11	. OWNER/OPER	ATOR INFORMAT	ION
Facility Compliance Tag	#: REMOVE	ED BY ECY	Owner/Ope	erator Name: 🧜	PAUL JI	+ u TY
UST ID #: 92 3	387155				T STOP.	
Site Name: FORMER	Ly SIMPSO	NSTEXACO			T FIRST S	
Site Address: 201	1 WEST F	IRSTSTREAM	City:	2 ELUN	1 State: WA	Zip:98922
City: CLE Z					0-016	
Phone: (559)	370-010	62	Email:	= ~		
		III. CERTIFIED US	T DECOMMISS	SIONER		
Company Name: NE	Company Name: NES, Inc Service Provider Name: Kevin Wilkerson					
Address: PC	DB 1583		Certificatio	n Type: ICC		
City: Su	mner State:	WA. Zip: 98390	Cert. No.: 8	874113	Exp. Date: 06	6-10-2017
Provider Phone: 253-241-6213 Provider Email: nesinc@hotmail.com						
Provider Signature:		The second of th	Date: /.	2-16-15	•	
		IV. TANK	INFORMATION			
TANK ID	TANK CAPACITY	IV. TANK  LAST SUBSTANCE  STORED	INFORMATION removal	CLOSURE METHO closed-in-place	D change-in-service	CLOSURE DATE
TANK ID	TANK CAPACITY 4000	LAST SUBSTANCE		CLOSURE METHO		CLOSURE DATE
	4000	LAST SUBSTANCE STORED  DISSEL		CLOSURE METHO	change-in-service	
"D-1"	4,000	LAST SUBSTANCE STORED  DISSEL  DISSEL		CLOSURE METHO closed-in-place	change-in-service	9-9-15
"D-1" "D-2"	4,000	LAST SUBSTANCE STORED  DISSEL		CLOSURE METHO closed-in-place	change-in-service	9-9-15
"D-1" "D-2"	4,000	LAST SUBSTANCE STORED  DISSEL  DISSEL	removal	CLOSURE METHO closed-in-place	change-in-service	9-9-15 9-9-15 9-9-15
"D-1" "D-2"	4,000 4,000 4,000 4,000	LAST SUBSTANCE STORED  DISSEL  DISSEL	removal	CLOSURE METHO closed-in-place	change-in-service	9-9-15 9-9-15 9-9-15
"D-1" "D-2" "G-1" "G-2" "G-3" SURPRISE TANK	4,000 6,000 4,000 4,000 4,000	LAST SUBSTANCE STORED  DIRSEL  DIRSEL  GASOLINE  GASOLINE  GASLINE  V. REQUI	removal    M     M     M     M     M     M     M     M     RED SIGNATUR	CLOSURE METHO closed-in-place	change-in-service	9-9-15 9-9-15 9-9-15 9-10-15 9-10-15
"D-1" "D-2" "G-1" "G-2" "G-3" SURPRISE TANK	4,000 6,000 4,000 4,000 4,000	LAST SUBSTANCE STORED  DIESEL  DIESEL  GASOLINE  GASOLINE  GASOLINE  GASLINE  GASLINE	removal    M     M     M     M     M     M     M     M     RED SIGNATUR	CLOSURE METHO closed-in-place	change-in-service	9-9-15 9-9-15 9-9-15 9-10-15 9-10-15
"D-1" "D-2" "G-1" "G-2" "G-3" SURPRISE TANK	4,000 6,000 4,000 4,000 4,000	LAST SUBSTANCE STORED  DIRSEL  DIRSEL  GASOLINE  GASOLINE  GASLINE  V. REQUI	removal    M     M     M     M     M     M     M     M     RED SIGNATUR	CLOSURE METHO closed-in-place	change-in-service	9-9-15 9-9-15 9-9-15 9-10-15 9-10-15



## **UNDERGROUND STORAGE TANK** Site Check/Site Assessment Checklist

FOR OFFICE USE ONLY
Site #:
Facility Site ID #:

#### INSTRUCTIONS

SITE INFORMATION

When a release has not been confirmed and reported, this Site Check/Site Assessment Checklist must be completed and signed by a person certified by ICC or a Washington registered professional engineer who is competent, by means of examination, experience, or education, to perform site assessments. The results of the site check or site assessment must be included with this checklist. This form must be submitted to Ecology at the address shown below within 30 days after completion of the site check/site assessment.

SITE INFORMATION: Include the Ecology site ID number if the tanks are registered with Ecology. This number may be found on the tank owner's invoice or tank permit.

TANK INFORMATION: Please list all tanks for which the site check or site assessment is being conducted. Use the owner's tank ID numbers if available, and indicate tank capacity and substance stored.

REASON FOR CONDUCTING SITE CHECK/SITE ASSESSMENT: Please check the appropriate item.

CHECKLIST: Please initial each item in the appropriate box.

SITE ASSESSOR INFORMATION: This information must be signed by the registered site assessor who is responsible for conducting the site check/site assessment.

**Underground Storage Tank Section** Department of Ecology PO Box 47655 Olympia WA 98504-7655

EX TN 92387155

Site ID Number (Available from Ecology if the t	anks are registered):F	ID 92387155
Site/Business Name: CLEELUM SHOP	TSTOP#7, FORMERL	Y SIMPSONS TEXACO
	FIRST STREET	Telephone: (59 370 0/62
CLE ELUM Street	WA	98922
City	State	Zip Code
TANKINFORMATION 6 TANKS		
Tank ID No.	Tank Capacity	Substance Stored
D-1" D-2" G-2" 6-3"	4000 GALLONS	D = DIESTL G = GASOLING
1 G-14	6,000	GASOLINE
SURPRISE TANK	1,000	OLD GASOLINE
Check one:  Investigate suspected release due to complete the complete suspected release due to complete the complete suspected release due to complete suspected release	on-site environmental contamination off-site environmental contamination om for more than 12 months.	
ST system permanently closed with t	,	
Abandoned tank containing product.	~	
Required by Ecology or delegated age	ncy for UST system closed before	12/22/88.
Other (describe):		

CHECKLIST		
Each item of the following checklist shall be initialed by the person registered with the Department of Ecology whose signature appears below.	YES	NO
1. The location of the UST site is shown on a vicinity map.	esu	×
2. A brief summary of information obtained during the site inspection is provided. (see Section 3.2 in site assessment guidance)	yw	e .
3. A summary of UST system data is provided. (see Section 3.1.)	SW	
4. The soils characteristics at the UST site are described. (see Section 5.2)	sw	10
5. Is there any apparent groundwater in the tank excavation?	gw	
6. A brief description of the surrounding land use is provided. (see Section 3.1)	gn	
7. Information has been provided indicating the number and types of samples collected, methods used to collect and analyze the samples, and the name and address of the laboratory used to perform the analyses.	BN	li.
8. A sketch or sketches showing the following items is provided:		/
- location and ID number for all field samples collected	yw	
- groundwater samples distinguished from soil samples (if applicable)	In	/
- samples collected from stockpiled excavated soil	an	
- tank and piping locations and limits of excavation pit	sw	/
- adjacent structures and streets	IN	
- approximate locations of any on-site and nearby utilities	24	
9. If sampling procedures different from those specified in the guidance were used, has justification for using these alternative sampling procedures been provided? (see Section 3.4)	N	A
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.	efw/	
11. Any factors that may have compromised the quality of the data or validity of the results are described.	12h	
<ol><li>The results of this site check/site assessment indicate that a confirmed release of a regulated substance has occurred.</li></ol>	SW	

SITE ASSESSOR INFORMATION	,	
GEORGE R.	WEBSTZE P.E.	(SELF)
Person registered with Ecology Business Address: 16355Dz		Firm Affiliated with one: (296 542 - 22 / 8
SHORSLINE	Street	98133-5826-44
City	State	Zip Code
I hereby certify that I have been in responsi submitting false information are subject to p	ble charge of performing the site check/site penalties under Chapter 173,360 WAC.	assessment described above. Persons
12-11-15	Longk	, Wedster
Date	Signature of Person Registe	ered with Ecology
	to the transfer of Tanking Ol	2 5 15392
It you need this publication in an alt persons with a speech or l	ernate format, please contact Toxics Cle nearing impairment call 711 for relay ser	vice or 800-833-6388 for TOXAL

Cle Elum is a city in Kittitas Co., Washington about an hour and half east of Seattle on I-90.



Map of portion of downtown Cle Elum, Washington showing the location of the subject site, Short Stop #7 Gasoline Station and Subway Sandwich Shop, on the southeast corner of the intersection of Billings Ave. and West First Street. The Timber Lodge Inn is located across Billings Ave. on the west and a Chevron Station is located to the east.



## DECOMMISSIONING OF UNDERGROUND STORAGE TANKS, UST SITE ASSESSMENTS, AND REMEDIAL CLEANUP ACTIONS AT THE SHORT STOP #7 GASOLINE STATION

## 207 West First Street Cle Elum, Washington 98922

December 2015



Short Stop #7 Gasoline Station in Cle Elum, Washington

#### **Information**

This is an "Interim Report" relating to the Decommissioning of Underground Storage Tanks (USTs), UST Site Assessments and Remedial Cleanup Actions, performed by both Northwest Environmental Solutions, Inc. (NES) and George Webster, P.E., during September and October of 2015, at the Short Stop #7, Gasoline Station, located at 207 West First Street in Cle Elum, Washington, 98922. The Washington State Department of Ecology documents file on this site identifies it as "Simpsons Texaco", Facility Site ID No. 92387155, but has it erroneously located in "Klickitat" County, rather than Kittitas County.

This Report is an "Interim Report", as cleanup actions were forced to be terminated before completion, because of the "discovery" of an undocumented leaking Gasoline UST adjacent to the cleanup operations area. This "discovery" UST was properly "Decommissioned", but had released gasoline causing extensive soil contamination, which would have required an additional time frame to chase the extensive contamination, thereby not allowing the achievement of meeting the original scheduled time-frame of backfilling and placement of asphalt surfacing before the scheduled asphalt plant closure. If the asphalt pavement of the work area could not completed before the asphalt plant closure in October, the Gasoline Station and associated sandwich shop would not be able to reopen until sometime next year! It is now projected that the contamination remaining within the location of the "discovery" UST may be addressed early next year.

#### **Executive Summary**

NES contracted project work efforts included the Decommissioning (Pumping, Cleaning, Inertion, Removal and Recycling) of five steel Underground Storage Tanks (USTs), that had been installed in the early 1960's, (exact date unknown), but, had been upgraded in the field, by "interior lining by epoxy coating", to meet the upgraded Department of Ecology UST Standards. Four of the tanks (two Diesel and two Gasoline) were 4,000 gallons in size, while the fifth UST was a 6,000 gallon Gasoline tank. NES had also contracted to: 1) install the two new tanks; 2) plumb the piping "to-and-from" the dispensers; 3) place the required back-fill and perform compaction of the USTs area; and 5) pour the "concrete pad" cover on the "Tank Pit". This would prepare the site for asphalt resurfacing.

Work started September 8<sup>th</sup>, as the R. E. Powell Dist. firm removed the product from each of the five tanks, and Marine Vacuum Inc. (MarVac) of Seattle, triple rinsed the five tanks and disposed of the waste water. Mr. Kevin Wilkerson of NES added dry ice (carbon dioxide) to each tank in order to inert them, while testing the level of oxygen remaining with the tanks. When tests showed oxygen levels far less that the ten percent oxygen level (which is the Lower Explosion Level), the soil around a tank was excavated, and one by one, the tanks were removed from the Tank Nest, labeled with required notifications and trucked to a disposal yard.

George Webster, P.E. and Riley Evans (equipment Operator) and a Laborer would provide the services of Site Assessment and Remedial Cleanup Actions, (collection and obtaining lab analysis of UST pit and adjacent soils) for the removal of petroleum hydrocarbons in excess of the Washington State Model Toxics Control Act (MTCA) Method A Cleanup Levels for Unrestricted Land Uses, together with, the stockpiling, sampling for testing, and exporting the contaminated soils to the Wenatchee, Waste Management Landfill site; together with the importation, placement, and compaction of clean back-fill rock and soil, to bring the waste soil excavations areas back to the desired grade necessary for the installation of the two new 10,000 gallon USTs.

Libby Environmental Inc. of Olympia provided an on-site Mobile Analytical Laboratory and the Analyst, Mr. Paul Burke, performed the testing of soil samples.

The property owner, Mr. Paul Jhuty, while over-viewing the project efforts, retained responsible for obtaining the necessary trucking to export the contaminated soils, broken asphalt debris, concrete

debris, metal piping and other debris, together with the importing of all required backfill and the final asphalt surfacing.

On-site Operational overview of the remedial actions was provided for "Chevron" by representatives of Leidos Environmental.

NES prepared the "bed" for the two new USTs and "inserted", by the use of a crane, the two six-foot diameter, forty-seven foot long, 10,000 gallon USTs into the clean, and "prepared" northern portion of the large excavated pit. NES provided tie-down "dead-men" adjacent to the USTs, (for "anti-floating protection"), installed the required piping to and from the Pump Island dispensers, performed Tightness Testing, backfilled the tank pit nest, and poured a concrete slab above the USTs.

The surface area of these operations was resurfaced with asphalt and necessary traffic striping added by the owner, Mr. Paul Jhuty.

#### **Preliminary Studies**

It was first considered in March of 2015, that a new large-tank would be installed during April, at the Short Stop #7 Station without performing the removal of the five existing tanks. That 24,000 gallon tank was eleven feet in diameter and 34 feet in length, and was to be installed on the West side of the Pump Island. The existing five USTs are located on the East side of the Island. I investigated the soils at the Station and dug a small test pit to the West of the fueling island where the new tank was to be installed. Below is a photo of that test pit.



Below four inches of asphalt was found a twenty-nine inches thick layer of brick debris, (including whole bricks). Beneath that, was a four foot thick layer of coal debris with some larger chunks of coal, and then a foot thick layer of ash and burned wood debris above rounded river rock at the groundwater table at eight feet depth. No real soil was found. Samples of the "soils" and the groundwater were submitted to the Friedman & Bruya Laboratory in Seattle and tested for petroleum hydrocarbons.

Following are "excerpts" from the Friedman & Bruya laboratory reports.

FRIEDMAN & BRUYA, INC.

Date of Report: 04/04/15 Date Received: 03/25/15

Project: Cle Elum, F&BI 503483 Date Extracted: 03/26/15 Date Analyzed: 03/26/15

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE

USING METHOD NWTPH-Gx Results Reported as ug/L (ppb)

 Sample ID
 Gasoline Range
 (% Recovery)
 Laboratory ID

 H2O
 <100</td>
 98
 503483-01

 Method Blank
 <100</td>
 88

FRIEDMAN & BRUYA, INC.

Date of Report: 04/04/15 Date Received: 03/25/15 Date Analyzed: 03/26/15

Project: Cle Elum, F&BI 503483

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES

FOR GASOLINE, DIESEL AND HEAVY OIL BY NWTPH-HCID

Results Reported as Not Detected (ND) or Detected (D)

THE DATA PROVIDED BELOW WAS PERFORMED PER THE GUIDELINES ESTABLISHED BY THE WASHINGTON DEPARTMENT OF ECOLOGY AND WERE NOT DESIGNED TO PROVIDE INFORMATION WITH REGARDS TO THE

ACTUAL IDENTIFICATION OF ANY MATERIAL PRESENT

Sample ID	Gasoline	Diesel	Heavy Oil	(% Recovery)	Laboratory ID
Under-2 Ft	ND	ND	ND	110	503483-02
2.5 ft	ND	D	D	110	503483-03
3-6 ft	ND	D	D	110	503483-04
6 ft	ND	ND	ND	107	503483-05
8 ft	ND	ND	ND	105	503483-06
Method Blank	ND	ND	ND	113	05-627

ND - Material not detected at or above 20 mg/kg gas, 50 mg/kg diesel and 250 mg/kg heavy oil.

Results show that --- No gasoline range hydrocarbons were detected in either the Water or "Soils" samples, but very low levels of Diesel and Heavy Oil range hydrocarbons were "Detected", (but suspected not to be Diesel, or Heavy Oil, as they did not match the Standard). The above "Detected" samples were then further examined for quantification of Diesel and Heavy Oil. Below are excerpts of that report.

FRIEDMAN & BRUYA, INC.

Date of Report: 04/08/15 Date Received: 03/25/15

Project: Cle Elum, F&BI 503483

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

Sample ID	Diesel Range	Motor Oil Range	(% Recovery)	Laboratory ID
	(C10-C25)	(C25-C36)	(Limit 53-144)	
2.5 ft	190 x	<250	117	503483-03
3-6 ft	110 x	<250	113	503483-04
Method Blank	<50	<250	114	

 ${\sf x}$  - The sample chromatographic pattern does not resemble the fuel Standard used for quantitation.

These above sample results indicate that the levels of "suspected Diesel and Heavy Oil" are far less than the 2,000 ppm. MTCA Cleanup Standards, and therefore were not an environmental concern.

Based on the information found in the above "test pit" study, and because of the high groundwater table, it was determined that the large 24,000 gallon UST having a diameter of eleven feet would require placement of the UST in excess of six feet below the groundwater table. Plans were changed by the owner, Mr. Paul Jhuty, and Mr. Kevin Wilkerson, as it was decided that the large tank should be replaced by the use of two 10,000 gallon, six foot diameter USTs, that could be installed at a depth near or above, the level of the groundwater table. Mr. Jhuty then ordered two new USTs, and decided to "decommissioned by removal" the five existing USTs on the East side of the fueling island", and install the two new tanks in the old tank pit nest area. The project start date was changed to September 8<sup>th</sup>, the day after Labor Day. Therefore, a "second investigation of two test pits" was performed adjacent to the concrete cover of the existing five USTs "Tank Pit Nest". The photo below was taken from a later activity near the existing "Tank Pit Nest" area, and used here to depict the locations of those two "Test Pits". The locations of those two test pits may be seen, (before asphalt repairs were made), on the right side of the photo where brownish backfilled soil is visible.



The first test pit was at the northeast corner of the concrete slab covering the Tank Pit Nest.



It may be seen in the first test pit photo that the upper soil was backfill and not the brick debris found in the previous test pit investigation. However, the coal debris was found in the deeper level down to the round river rock at the eight foot deep groundwater table, as found in the previous test pit investigation.

The second test pit was adjacent to the east side of the Tank Pit Nest near a Groundwater Monitoring Well. This test pit had the upper layer of the brick debris, followed by the coal debris layer down to the river rock at the eight foot water table.

Both test pits evidenced a "petroleum sheen" and had a hydrocarbon odor within the coal debris layer.



Soil samples were taken from both Pits and submitted to the F&BI Lab for analyses.

Following are excerpts from the Lab Tests Reports.

#### FRIEDMAN & BRUYA, INC.

This case narrative encompasses samples received on April 20, 2015 by Friedman & Bruya, Inc. from the Webster Shortstop Cle Elum, WA, and F&BI 504344 project.

Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Webster ID	sample taken at "x" feet of depth
504344 -01	A1	3
504344 -02	A2	4
504344 -03	A3	5
504344 -04	<b>A</b> 4	6
504344 -05	A5	7
504344 -06	B1	4
504344 -07	B2	5
504344 -08	В3	6
504344 -09	B3 DUP	6
504344 -10	B4	7

#### FRIEDMAN & BRUYA, INC.

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES

FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

Sample ID	Gasoline Range	(% Recovery)	Laboratory ID
A1	<2	110	504344-01
A2	2.8	92	504344-02
A3	5,600	ip	504344-03 1/20
A4	230	129	504344-04 1/5
A5	120	ip	504344-05
B1	<2	112	504344-06
B2	<2	111	504344-07
В3	5,300	ip	504344-08 1/20
B3 DUP	1,400	ip	504344-09 1/10
B4	3,900	ip	504344-10 1/20
Method Blank	<2	91	05-0813

ip - Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

#### FRIEDMAN & BRUYA, INC.

DIESEL and MOTOR OIL RANGE PETROLEUM HYDROCARBONS

Results Reported as mg/kg (ppm)

Sample ID	Diesel Range	Motor Oil Range	(% Recovery)	Laboratory ID
•	(C10-C25)	(C25-C36)	(Limit 56-16	55
A1	`<50	340	111	504344-01
A2	<50	<250	99	504344-02
A3	1,400 x	<250	113	504344-03
A4	440 x	<250	110	504344-04
A5	320 x	<250	108	504344-05
B1	130 x	<250	108	504344-06
B2	<50	<250	96	504344-07
В3	2,200 x	460	116	504344-08
B3 DUP	2,100 x	730	109	504344-09
B4	3,400 x	510	114	504344-10
Method Blank	<50	<250	101	05-824

 ${\sf x}$  - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

Based on the above lab test results showing high levels of both Gasoline and Diesel in the soils around the "Tank Nest Pit", it was deemed necessary to properly "Decommission" the four Groundwater Monitoring Wells (GMWs) prior to the Decommissioning and Site Assessment efforts, as they would be destroyed in the impacted excavation area during the decommissioning effort of the five USTs.

As a Professional Environmental Engineer having decommissioned wells before, I made application to the Washington State Department of Ecology for permission to Decommission the four GMWs, paid the required fees, and Decommissioned the four monitoring wells. Following are segments of the required Decommissioned Groundwater Monitoring Wells REPORT to the Department of Ecology.

=====

George R. Webster, P.E.
Environmental Engineering Consultant
16355 Densmore Avenue North
Shoreline, WA 98133
(206) 542-2218

To: Decommissioned Wells Report WA Dept. of Ecology - Hq 300 Desmond Drive Lacey, WA 98503-1274

Decommissioned Wells Report WA Dept. of Ecology – Central Region 1250 West Alder Street Union Gap, WA 98903-0009

Dear Sirs;

This report is the required notification to the Washington State Department of Ecology (ECY) of the activity of Decommissioning of four Groundwater Monitoring Wells at the Short Stop #7 Gasoline Station located at 207 West Front Street, in Cle Elum, Washington. A "notification of intent" with payment, was made to ECY in Olympia by George Webster, P.E., and ECY approval notification received-back in May 2015.

and



# NOTICE OF INTENT TO DECOMMISSION A WELL

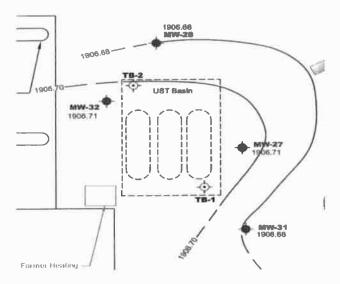
Notification Number

A 307004

This form MUST BE RECEIVED by Ecology 72 HOURS BEFORE you decommission a well.

Submit one form and required see (check or money order ONLY) for each job site. Mail this form to the Department of Ecology, P.O. Box 47611, Olympia, WA 98504-7611 NOTE: PLEASE PRINT ALL ANSWERS. PROCESSING YOUR NOTICE OF INTENT MAY BE DELAYED IF NOT COMPLETE AND ACCURATE.

Below are both a location drawing and a number of data sheets taken from an Leidos Engineering, LLC., (Leidos) Annual Groundwater Monitoring Report, (on behalf of Chevron Environmental Management Company), that was previously submitted to both Chevron and the WA ECY. These following items relate directly to the four GW Monitoring wells (shown) that were decommissioned.



"Site drawing showing location of subject GW MW's"

The location of the four decommissioned GW MW's are shown on the above drawing as, "MW-27", "MW-28", "MW-31" and "MW-32", on the site of the Short Stop Gasoline Station #7. West First Street is located along the top of the drawing. "North" is in the "up" direction.

Decommissioning of these four GW MW's was made by the actions of: opening the bolted lid of the MW skirt to reach the well casing; removing the padlocked monitoring well cap; filling the well casing with screened 3/8<sup>th</sup> inch diameter Bentonite Clay "pebbles", to within six inches of the top of the well casing; "activating" the clay with potable water; and placing hand-mixed concete in upper six inches of the well casing.

A search of the ECY database by Leidos, related to these four MW's, found only two Well Logs. Those were "Well Log for MW#31" and "Well Log for MW#32. These two MW's were drilled by Cascade Drilling Inc. and completed by Geologist Mr. H. Small of WGR Southwest Inc. on November 15, 2000. Please note the comments in the "Soil Description" in the upper level sections of these Well Logs, and the "Depth to Water" at eight feet.

On the following page is shown the Cascade Drilling Inc. "Well Log" for MW#31.

WGR	Geologist: H. Smell	Date Bu	gen: I	1/15/00	Sering N	ta: M	W-31
	Driffer: Cascade Driffing, Inc.	Date file	d I	1/15/00	Casing 6	Boutlett	
Southwest, Inc.	Drill Rig Hollow-Stem mager	Total D	epth:	15 Pest	(Depth to	Water:	1 Per
Omerican Commission	Soil Description		1	Sampled Joseph		92	Completion
QIP and	nen to gray, dump to make, sendy, fine to sp gravel. Stight hydrocarbun-like edor of.		- 10-				
Completion Notes:		M 20	7 Wes	1 131 S	il Instali Irest hington	lation	
		Pr	qisat No		217.BQL	Page:	

Following is a copy of a Gettler-Ryan Inc. "Well Monitoring/Sampling" "Field Data Sheet" from a May 2014 monitoring survey at MW-31.

	<u> </u>	WELL MONITO	DRING/SAMPLIATA SHEET	ING	1 (6)
Client/Facility#:	Chevron #211576		Job Number:	386775	
Site Address:	207 West 1st Street	rt	Event Dele:	5/15/14	(inclusive)
City:	Cie Elum, WA		Sampler:	GM	
Well ID	MW-31		Data Monitored:	5/15/14	
Well Diameter	2 in	Volum	34Fv 0.02	F= 0.04 27+0.17 37	- A 3A
Total Depth	13.91 R		*(VF) 47=0.00		6.60
Disposable Baller Statishass Store Baller Stack Pump Stack Pump Grundfon Perfeitill C Pump QED Stadder Pump Other:	1245	Disposotio Bater Pressure Baller Motel Filters Paristable Pump QED Bladder Pump Other:		Depth to Product Depth to Water Hydrocarbon Thichnes. Viaual Confirmation/Des Sitimmer / Absorbant Sic Antl Removed from Gitin Antl Removed from Wat Water Removed. Preduct Transferred to:	cription: ck (circle ene)
Start Time (ourse)	a: 1225/ 5/15/14		TAN	Odor YN MOE	DEM - 15
Sample Time/Dub		Sections D		gel. DTW @ Sampling	9.04
Sample Time/Dub Approx. Flow Rate	gpm.	ne: V			
Approx. Flow Rate	The second secon	Conductivity (Indicators   Id)	_	D.O. ORP (mg/L)	

Following is a photo of this MW location after completion of this Decommissioning effort. The signals shown by my hands indicate that this was the fifth photo taken, and that the diameter of the GW MW was "two inches". Also in the background, may be seen two locations of soil exploration test pits adjacent to the "UST nest" holding the five UST's.





Below is the second of the two Well Logs that could be found in the ECY database related to these four MW's. This MW was also drilled by Cascade Drilling Inc. and completed by Geologist Mr. H. Small of WGR Southwest Inc. on November 15, 2000. Also, please NOTE the "soil description" comments on this MW#32 Well Log form.

W	/GIR	Goologist: H. Small		_	_		5/00	Boring		_	W-32
Southwest, Inc.		Driller: Cascade Drilling, Inc. Drill Rig: Hollow-Stem auger				1/15/00 15 Feet		Caring Blevation:  Depth to Water:		8 Fee	
Graphic Log	Classification	Soil Description			Depth	Sampled Internal	Blaw Counts		Sample Number	PID	Completion
	GP Brow	n to gray, damp to molat, aandy, fine to gravel. Slight hydrocarbon-like odor.  n to gray, wet, sandy, fine to coarse l, Slight hydrocarbon-like odor noted.			5-						
Completion Notes:			20	nite 7 W	est.	st	Stre	instali et igton	latio	n	
			Pro	ject h	ło.;		287	.EQL	Pag	ρ:	1

Below is the copy of a Gettler-Ryan Inc. "Well Monitoring/Sampling" "Field Data Sheet" from a May 2014 monitoring survey at MW-32.

ž

~//~	GETTLER-RYAN	INC.

#### WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Site Address: City:	Chevron #2 207 West 1s Cle Elum, W	t Street		Job Number: Event Date: Sampler:	386778 5/15/14 GM	(Inclusive)
Purge Equipment: Disposable Baler Steinless Steel Baler Steek Pump Bucilen Pump		XVF A. C	Votam Facto Chiere II	r (VF) 4°= 0.6 in is less then 0.5 13 case values	12 P= 0.04 2"= 0.17 ST 18 6"= 1.02 6"= 1.50 12" 0 8. Estimated Purge Volume:	(2400 hrs) (2400 hrs) (1400 hrs) (1
Grandios Periatella Pump D Bledder Pump Other			ED Bledder Pump Ther		Skimmer / Absorbant Soc Ant Removed from Skim Ant Removed from West Water Removed: Product Transferred to:	mori
Start Time (purge Sample Time/Dei Approx. Flow Rei Did well de-water Time	10 A /	5/15/14 gpm.	Weather Color: Water Color: Sediment De Vo	ecription: tume:	Odor: V N gal. DTW @ Sampling	: 9.17
(2400 hr.) 0955 0956	(pal)	6.55 6.55 1.41	0.78 0.74 0.16	13. 7 17.5 17.7	(mg/L) (saV)	
SAMPLE ID MW-SZ	(#) CONTAINER  Lex vos vist 2x † Ster ambers	REFRIG. YES YES	LABORATOR PRESERV. TYPE HCL HCL		N ANALY NWTPH-GwBTEX+MTBE(8021) NWTPH-Dx wage	

This photo shows the location of the former GW MW#32 (nearest to the Pump Island). Hand signals indicate that the well casing was two-inches in diameter and the other hand indicates that this was the final picture of this work effort! (It may be seen that this work effort was done while the busy station was in full operation!)



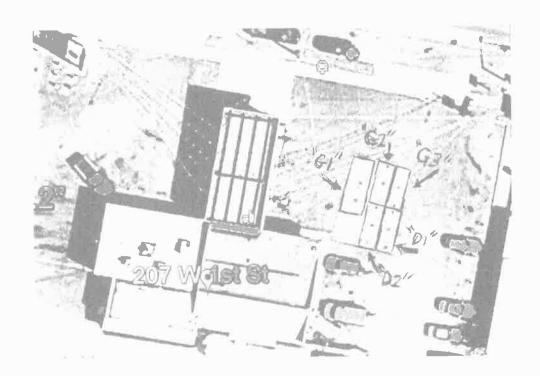
This Monitoring Well decommissioning work effort was necessary to be able to "Decommission" the existing five UST's, and then install two new UST's in approximately the same location as the existing USTs Tank Nest.

Should there be any questions related to this Groundwater Monitoring Wells Decommissioning Report please contact me directly at (206) 542-2218.

Sincerely; George R. Webster, P.E. July 2015

### Decommissioning of the Five USTs at the Short Stop #7 Gasoline Station

Decommissioning efforts were performed by Mr. Kevin Wilkerson of Northwest Environmental Solutions Inc. Preparations were done starting on Tuesday, September  $8^{th}$ , and Decommissioning actions were done on September  $9^{th}$  and  $10^{th}$ . The weather was excellent.



A Concrete Slab is shown (surrounded by dark asphalt) covering the "Tank Pit Nest" Of the five USTs, which are labeled: "D1", "D2", "G!", "G2", and "G3".

The locations of the five USTs are shown by the outlines drawn on the tank pit concrete slab. Two 4,000 gallon Diesel USTs (identified by me as "D1" and "D2"), having a six foot diameter, are shown on the bottom right end of the Pit Nest. The larger 6,000 gallon Gasoline UST ("G1"), having an eight foot diameter, is shown on the left side of the Pit Nest, while two 4,000 gallon Gasoline USTs ("G2" and "G3"), also having a six foot diameter, are shown on the top right end of the Pit Nest. These five USTs were placed very close to each other, like "puzzle pieces", within the Tank Pit Nest, and were difficult to remove as tank ends were either overlapped, or very close to an adjacent tank.

On the morning of Tuesday, September 8<sup>th</sup>, the Station Owner, Mr. Paul Jhuty, had the fuel supplier, R. E. Powell Dist., remove the remaining fuel from each of the five USTs.

Mr. Wilkerson retained Marine Vacuum Inc. of Seattle (MarVac) to perform on September 8<sup>th</sup> the required "triple rinse" of the five USTs after the fuel products had been removed.





#### "MarVac" performing Pump and Triple Rinse of the five USTs.

The above Photos are showing MarVac performing the Pump and Rinse operations.

The upper photo shows the USTs Pit Nest from the West side of the concrete slab with the MarVac truck on the East side of the Pit Nest Slab. The adjacent site of the Chevron Station building may be seen in the background. The two 4,000 gallon Diesel USTs are on the right side of the slab, and the two 4,000 gallon Gasoline USTs are on the left side of the slab, near the rear of the truck, while the 6,000 gallon Gasoline UST is located in the left foreground, where the two aluminum fill-tubes are laying. Turbines and pipes are layingdown on the concrete slab to the right.

The lower photo is looking to the North. Two operators and the MarVac Truck, together with the red-warning-cones may be seen in the background blocking-off one of the station entrances along West First Street, which is the main street of Cle Elum.

After Mar-Vac had certified the five USTs to be "Clean", Mr. Wilkerson of NES, proceeded to "Inert" the five USTs by placing "Dry Ice" (solid Carbon Dioxide) pellets into each of the USTs. The Dry Ice sublimes into carbon dioxide gas, which being heavier than both gasoline vapor and air, forces those vapors upward and out from the USTs, thereby making the tanks inert from explosion when the contents within a tank is at a level of less than ten-percent Oxygen.

The vapors inside the tanks are checked by using a Four-Gas meter to determine the Oxygen level and the explosion potential.

The Oxygen level inside each tank must be kept below the ten-percent level until the decommissioned tank reaches the tank disposal site. Specific information must be labeled on the end of the tank before it being transported from the site.

#### **USTS Decommissioning**



Removal of the five USTs began on Wednesday, September 9<sup>th</sup>. Concrete breaking and excavating of clean backfill soils above the USTs began. (Note numerous old piping runs from former tank installation operations.) Mr. Wilkerson and Mr. Webster discussed the removal of the two 4,000 gallon Diesel USTs. The large 6,000 gallon Gasoline tank ("G1") is located within the pit right background. (Note the clean backfill soil pile and Webster's blue gloves used for obtaining soil samples during the Decommissioning effort.)





Webster had to warn the excavator Operator about mixing contamination with clean soils.



Mr. Wilkerson cleans dirt from the top of the Diesel UST (identified by me as "D2"). UST "D1" is beneath the soil on the right side of this photo. As the NES excavator (a 140) was found to be undersized for this UST removal operation, and the NES Operator Martin, was having problems in removing the first UST from the pit, a more experienced Operator, Mr. Riley Evans, was chosen. Because the tanks were placed so tightly in the Tank Pit, it was required that UST "D1" be removed first by excavating the far eastern side of the Tank Pit and "rolling it out" into the "expanded" Tank Pit.

Getting ready to remove the big 6,000 gallon Gasoline UST, (defined by me as "G1"), which is "tightly bound-in" by the smaller Gasoline Tanks ("G2" and "G-1") on the right side. The excavator Operator had to remove as much covering soil as possible and attempt to remove this large tank. He then had to reposition the excavator to the east side of the pit, and by "rocking" the end of the tank "up and down", was able to get the UST released.





"Up comes" the big Gasoline UST ("G1). This third decommissioned UST was a 6,000 gallon tank, (eight feet in diameter and 17 feet in length). Because of the "dry summer" the groundwater table level was now found to be at nine-feet below grade. The excavator Operator, Mr. Evans used all his skill to "Break" the groundwater suction, and pull this UST from the ground.

Note: One of the two "Tank Pit" leak test monitoring wells that had been earlier Decommissioned, (during the Decommissioning of the four Groundwater Monitoring Wells), may be identified by the vertical white plastic pipe seen in the left background.



The "new" replacement excavator Operator and helper connect lifting "slings" to both ends of the UST. The bottom of the large "G1" UST had a thin layer of contaminated bluish-black mud on the bottom of the tank which was also a good "groundwater table level indicator line".



Each of the two 4,000 gallon Diesel USTs ("D1" and "D2"), were removed from the USTs Pit Nest, cleaned of loose soils, inspected for any leakage areas, and loaded onto a large flat-bed trailer, to be moved from the site to the salvage yard on Wednesday, September 9<sup>th</sup>. This photo shows the second UST being loaded late in the day. The third UST removed from the pit, the large 6,000 gallon Gasoline UST ("G-1") had to wait until the morning of the next day to be removed from the site.



There goes the "cleaned" and "labeled" big "G1" UST early the next morning!

On Thursday, September  $10^{th}$ , a larger 210 excavator, which had been ordered for Webster to use in the site assessment and contamination clean-up operations, arrived on-site. This excavator replaced the 140 excavator, and was used to decommission the remaining two USTs, ("G-2" and "G-3").



Mr. Wilkerson checks out the Oxygen content in "G2", the first of the remaining two Gasoline USTs ("G2" and "G3"). These two 4.000 gallon Gasoline tanks were six feet in diameter.



The final UST, ("G3"), is cleaned before being trucked from the site. The person on the right side, (in "red") is the Washington State Department of Ecology UST Decommissioning Site Inspector.

## **Site Assessment and Remedial Cleanup Actions**



This is a photo of the Tank Pit Nest excavation on the morning of Friday, September 11<sup>th</sup>. The bottom of the depression has filled with groundwater in the area of the Pit where the large "G1" UST was removed. It was found that the groundwater table depth, which in April was found to be at the depth of eight feet, was now at a depth of nine feet below the surface. (The summer of 2015 had been very dry.) A slight petroleum hydrocarbon "sheen" is visibly seen on the water surface. Also please note the "open cave" in the center top of the west wall. That was an abandoned former piping-run trench which had been filled with pea-gravel. The last operating pipe-run trench may be seen on the left side of the dirt wall, where a number of metal pipes, wrapped in black tape, exist. Additional abandoned pipe runs are seen on both to far right side, and to left side, of the existing pit.

Site Assessment and Remedial Cleanup Action "sampling" actually began on 9/9/2015, during the Decommissioning efforts of the five USTs. Contaminated soil was found to be all the way up-to the level of the tops of all five USTs. As the excavator removed soil from over and around the USTs, soil contamination was visible. "Select" Grab soil samples had been taken from contaminated soil within the excavator bucket as each the five USTs were being removed from the Tank Nest. These soil samples were then placed on ice until the Libby On-site Lab arrived "on-site" on Monday, 9/14/2015.

Webster had been given a special requirement from the Yakima ECY Groundwater Program person. That was, "at the first possible opportunity, to obtain a "Sample" of the Groundwater from the project site and have it analyzed for heavy metals".



Early on the morning of September 11<sup>th</sup>, Webster "fished" with a monitoring well "Bailer" into the "pond" where the USTs had been removed and groundwater had accumulated overnight. A "composited" groundwater sample was collected in a brown bottle (w/HCl) and delivered, that day, to the F&BI Lab in Seattle for analysis of R8 Dissolved Metals.

Below is a copy of the F&BI Lab test results.

FRIEDMAN & BRUYA, INC. -- ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8 Date Received: 09/11/15 Project: Short Stop 7 Cle Elum, F&BI 509198

Date Extracted: 09/17/15 Lab ID: 509198-01
Date Analyzed: 09/17/15 Data File: 509198-01.024
Matrix: Water Instrument: ICPMS1 Units: ug/L (ppb)

Operator: SP

Lead

Mercury

Selenium

estimate.

Internal Stand	ard: % Recovery:	Lower Limit
Upper Limit:		
Germanium	87	60
125	00	60
Indium	88	60
125	01	60
Holmium	91	60
125 Analyte:	Concentration ug/L (p	nh)
Arsenic	4.46	pb)
Barium	76.1	
Cadmium	70.1 <1	
Chromium	<1	
Chilomiani	~1	

Silver <1 jl
----jl - The laboratory control sample(s) percent
recovery and/or RPD were out of control limits. The
reported concentration should be considered an

1.30

<1

<1



Webster investigated the soils remaining in the Tank Pit Nest after the removal of the five USTs. (Note the number of small pipes protruding from the east bank of the pit wall.)

Based on PID readings, "Clean soil piles" were made in the areas near the pit. (After lab results were available, CLEAN piles were then "sorted", and moved with a "Bobcat", and piled in an area that was thought to be "out-of-the-way", on the north end of the Pump Island under the Canopy.)

Black six-mil visqueen sheet plastic was laid adjacent to the Alley on the south side of the Station, (as truck "Load-out" was to be made within the Alley), and Waste Soils with odors and high in PID response, were piled on the visqueen into a growing "WASTE PILE". Broken concrete slab pieces (as seen in top right of the photo) were collected with the "Bobcat" and piled adjacent to the alley.

## **Obtaining Petroleum Contaminated Soil Disposal Authorization**

Disposal Authorization had been first requested in June from both Republic Services in Seattle and Waste Management in Wenatchee by submittal of the lab analyses from the testing on soil samples from the two May "Test Pits" in the Tank Pit Nest area. (They later were notified that the job would be delayed until September.) In September, both disposal companies advised me that additional sampling was required on the samples, as high Benzene levels in the "test pit" sample results (above 10 ppm.) would cause the waste soil to be classified as a "HAZ WASTE". Of course those May, Test Pit "Lab Samples" had been disposed of, and could not be use for retesting. I advised the Disposal Agents that I would have the newly existing "Contaminated Soil Waste Pile" samples analyzed for Total Metals, BTEX, and TCLP Benzene, to meet their requirements. They both agreed.

A composite sample of the existing Short Stop #7 Waste Pile were taken and transported to the Seattle lab of Friedman & Bruya for the Total Metals, BTEX and TCLP Benzene testing results required for "Disposal Approval Documentation" at both the Wenatchee Waste Management, and the Seattle Republic Services disposal sites. Following are the F&BI Lab test results.

FRIEDMAN & BRUYA, INC. ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8 Client ID: PWPS 1 Client: George Webster

Date Received: 09/11/15 Project: Short Stop 7 Cle Elum, F&BI 509197

Date Extracted: 09/14/15 Lab ID: 509197-01 Date Analyzed: 09/14/15 Data File: 509197-01.053

Matrix: Soil Instrument: ICPMS1

Units: mg/kg (ppm) Dry Weight Operator: SP

 Internal Standard:
 % Recovery: Lower Limit: Upper Limit:

 Germanium
 113
 60
 125

 Indium
 100
 60
 125

 Holmium
 105
 60
 125

Concentration

Analyte: mg/kg (ppm)

Arsenic 4.06 48.6 Barium Cadmium <1 13.1 Chromium Lead 19.2 Mercury <1 Selenium <1 Silver <1

FRIEDMAN & BRUYA, INC. ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C Client Sample ID: PWPS 1 Client: George Webster

Date Received: 09/11/15 Project: Short Stop 7 Cle Elum, F&BI 509197

Date Extracted: 09/11/15 Lab ID: 509197-01 Date Analyzed: 09/12/15 Data File: 091140.D

Matrix: Soil Instrument: GCMS4

Units: mg/kg (ppm) Dry Weight Operator: JS

 Compounds:
 mg/kg (ppm)

 Benzene
 0.050

 Toluene
 0.19

 Ethylbenzene
 0.064

 m,p-Xylene
 0.54

 o-Xylene
 0.21

TCLP Analysis

For Volatile Compounds By EPA Method 8260C Client Sample ID: PWPS 1 Client: George Webster

Date Received: 09/11/15 Project: Short Stop 7 Cle Elum, F&BI 509197

Date Extracted: 09/14/15 Lab ID: 509197-01 Date Analyzed: 09/14/15 Data File: 091415.D

Matrix: TCLP Extract Instrument: GCMS4

Units: ug/L (ppb) Operator: JS Compounds: ug/L (ppb) Benzene 5.8

---

Based on these above Lab test results, the Short Stop #7 "Waste Soil" is classified as NOT being a HAZ WASTE as the Benzene level is low, and the Benzene TCLP level is less than 10 ppb. Therefore the "Waste Soil" was accepted for disposal by BOTH Waste Management and Republic. An agreement for "Waste Disposal" was finally negotiated by the Owner, Mr. Paul Jhuty, with Waste Management (WM) of Wenatchee, which thereafter issued two "Non-Hazardous WAM Approval" documents. These documents are shown on the following pages.



# Non-Hazardous WAM Approval

Requested Managament Facility: Greater Hezartchee Regional Landfill)

- The waste profile number must appear on the shipping papers.

W	stir Aggregani Expiration Cabic <u>08</u>	/s 3/2N/4		
Profile Mumber: 11633580				
Approved Decisions (B) Approved (C) Not Approved		Profile Renewal:	D No.	
Warragement Method: <u>Olicant, Landfolli</u>			,	
Generator Harris Story, Story #1 Gaspling Starting				
Management Facility Precavators, Special Handling Procedures of Livination :				
Secondary Court Stock				
- Shall not coutain thee liquids:	company band.			

The Important "Items" on this Document are the "Profile Number – 110335WA", which is required to be given by the Truck Driver to the WM Scale person, on each delivery of Contaminated Soils. This Document was signed on 09/15/2015 by Kristin Castner, the WM Waste Approval Manager.



Quote number 1534 Date: 8/7/2015

George Webster George R. Webster 207 W. Front Street Cle Elum, WA, 98922

Exhibit A - Confidential

Regarding: Short Stop Non-Haz PCS Cle Elum

Dear George.

Thank you for considering Waste Management (WM) for your industrial and Hazardous Waste needs. We appreciate your business and look forward to providing you with the best waste services in the industry. The attached quotation is based on our discussions regarding your service needs as summarized below.

#### Scoop of Service

· WM will provide Disposal only.

This quotation is made subject to: (1) the terms and conditions of Waste Management's standard industrial Waste Service Agreement, which shall be executed by the parties in connection with performing the services described above, (2) the proper submittal of an acceptable Generator Waste Profile Sheet(s), which must be submitted to and approved by an authorized Waste Management facility, including any analytical data requested by Waste Management regarding the waste stream.

Weste Management is a recognized leader in the waste disposal business with the ability to manage the quoted services at or through our permitted and licensed facilities. To accept this proposal and initiate project start, please sign the acknowledgement block below and return this document to my attention.

I look forward to assisting you with your environmental needs. If you have any questions or need further assistance, you may reach me at the contact information field below.

Sincerely.

Fred Downs

Fired Downs
Senior Industrial Account Manager
509 309 8850 - Howns 1 泉wm con

Above is the WM letter from Fred Downs, Sr. Industrial Account Manager, also received on 9/15/15, providing acceptance of the 8/7/2015 (original submitted) request for Disposal.

The Libby Environmental "On-site" Laboratory arrived the evening of Sunday, September 13<sup>th</sup>, and was ready to run samples, early the morning of Monday September 14<sup>th</sup>. The "saved" samples from the USTs Decommissioning activities were submitted to the Libby Lab Analyst, Mr. Paul Burke.

Below are the on-site Libby Environmental Lab "Test Results" of those soil samples taken during the five USTs Decommissioning efforts on Wed. 9/9/15 & Thurs. 9/10/2015, together with "Clean Pile" and "Waste Pile" samples taken on Friday 9/11/15.

The sample "code" used is: Tank ID – like D1 and G3. CPS-1 = Clean Pile Sample #1. CPS-1Du = Clean Pile Sample 1 Duplicate!, and Waste PS-1 = Waste Pile Sample #1.

#### Volatile Aromatic Compounds by EPA Method 8260C & Gasoline by NWTPH-Gx in Soil

Date Sampled	* 9/10/15	9/10/15	9/9/15	9/9/15	9/11/15	9/11/15	9/11/15	9/9/15	9/10/15	9/11/15
Date Analyzed	9/14/15	9/14/15	9/14/15	9/14/15	9/14/15	9/14/15	9/14/15	9/14/15	9/14/15	9/14/15
Sample	G2-2	G3-1	D1	D2	CPS-1	CPS-1Du	Waste PS	-1 G1	G2-1	Lg-CPS1
•	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Benzene	51	25	0.39	0.061	nd	nd	13	8.3	4.3	0.23
Toluene	13	30	0.64	0.68	nd	nd	4.0	6.1	25	0.52
Ethylbenzene	186	64	4.7	0.27	nd	nd	42	19	30	2.8
Total Xylenes	934	252	31	3.5	nd	nd	317	71 E	96 E	70
Gasoline	9030	12000	1590	79	nd	nd	3300	5960 E	7670 E	92

"E" Reported result is an estimate because it exceeds the calibration range

ANALYSES PERFORMED BY: Paul Burke and Kodey Eley

Dates shown on Libby report were incorrect – true dates are shown on C-O-C. -- George Webster

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

Sample Date	e Analyzed	Surrogate	Diesel	Oil
	Re	ecovery (%)	(mg/kg) (	mg/kg)
Method Blank	9/14/15	100	nd	nd
G1	9/14/15	int	222	nd
G2-1	9/14/15	int	428	nd
G2-2	9/14/15	int	2790	nd
G3-1	9/14/15	int	272	nd
D1	9/14/15	104	nd	nd
D2	9/14/15	int	517	nd
Small CPS-1	9/14/15	117	nd	nd
Large CPS-1	9/14/15	107	nd	nd
Large CPS-1	Dup	119	nd	nd
Waste P S-1	9/14/15	int	1110	nd

"nd" Indicates not detected at the listed detection limits. "int" Indicates that interference prevents determination.

ANALYSES PERFORMED BY: Paul Burke

Webster's Note: The above "test results" do show some very high Gasoline and BTEX readings, together with a Diesel result far in "excess" of cleanup Standards. However, those samples were taken in "worst case areas" directly adjacent to the USTs. Additional soil contamination outside the Tank Pit Nest, when removed and added to the Waste Pile would dilute those concentrations to average lower levels within the Waste Pile. As inspection of all of the five USTs, after removal, had shown them to be "sound" and not a source of a release, this soil contamination to the levels up to the tops of each of the tanks is ("in my personal opinion") suspected to have been produced over the years, by spills and overflows occurring during fuel delivery operations.







Sampling the Contaminated Waste Pile adjacent to the Alley.

On Monday, 9/14/15, a 290 Excavator arrived to replace the 210 Excavator which was having problems running because of computer errors. All small Waste Piles were collected and piled into a larger "Waste Pile" adjacent to the Alley and samples were taken. All "Clean Piles" had been composited into larger "New Clean Piles" under the Pump Island canopy, but samples had not been taken. Early Tuesday morning, 9/15/15 samples of the "New Clean Piles" were taken. Both of these sample sets were given to the Libby Lab early on Tuesday and testing results were completed on Tuesday before quitting time.

The Libby Lab Test Results from the sampling of the "Waste Piles", taken on Monday, and the "New Clean Piles", taken on Tuesday are shown below.

Analyses of Gasoline (NWTPH-Gx) & BTEX (EPA Method 8021B) in Soil

Date Sampled 9/14/2015

Sample	Date Analyzed	Benzene	Toluene E	thylbenzene	Xylenes	Gasoline	Surrogate Recovery
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(%)
Method Bl	ank 9/15/15	nd	nd	nd	nd	nd	133
Waste Pile	#1 9/15/15	16 E	19 E	17 E	84 E	1980 E	111
Waste Pile	#2 9/15/15	43 E	41 E	13 E	129 E	2330 E	117
Waste Pile	#3 9/15/15	11	11	19 E	111 E	3020 E	104
Waste Pile	#3 Dup 9/15/15	11	12	22 E	113 E	3110 E	108

<sup>&</sup>quot;E" Indicates value is an estimate because it exceeds the calibration range.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Trifluorotoluene): 65% TO 135%

ANALYSES PERFORMED BY: Paul Burke

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

Date Sampled 9/14/15	Surrogate	Diesel	Oil
Date Analyzed	Recovery (%)	(mg/kg)	(mg/kg)
Method Blank 9/15/15	110	nd	nd
Waste Pile #1 9/15/15	115	nd	nd
Waste Pile #2 9/15/15	103	nd	nd
Waste Pile #3 9/15/15	int	206	nd
Waste Pile #3 Dup 9/15/15	132	205	nd
Practical Quantitation Limit 50	100		

<sup>&</sup>quot;nd" Indicates not detected at the listed detection limits.

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

ANALYSES PERFORMED BY: Paul Burke

Hydrocarbon Identification by NWTPH-HCID for Soil

Cle Elum, Washington

Libby Project # L150915-30 Client Project # WEB-15-5

Sample Date 9/15/2015 Gasoline Diesel Surrogate Number Date Analyzed Recovery (%) (mg/kg) (mg/kg) (mg/kg) Method Blank 9/15/15 110 nd nd nd New Clean Pile #1 9/15/15 116 nd nd nd New Clean Pile #2 9/15/15 79 nd nd nd New Clean Pile #3 9/15/15 74 nd nd nd New Clean Pile #3 Dup 9/15/15 78 nd nd nd

Practical Quantitation Limit 20 50 100

"nd" Indicates not detected at listed detection limits.

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

ANALYSES PERFORMED BY: Paul Burke

Results show: All three samples test results of the "WASTE PILE" show very high levels of Gasoline and BTEX, (as PID results indicated), but very low levels of Diesel, and no evidence of Oil. The "New Clean Pile" samples test results show, no petroleum hydrocarbon content were detected!

<sup>&</sup>quot;nd" Indicates not detected at the listed detection limits.

<sup>&</sup>quot;int" Indicates that interference prevents determination.



As most "Clean Soil" piles were moved to new locations North of the Pump Island beneath the canopy, the ten-foot wide strip of asphalt area between the East side of the Pump Island concrete pad and the excavation pit was then removed. Note the dark red brick debris "soil" layer on the surface. The clean layer was excavated down to contaminated soil as shown by PID readings. This clean soil was removed from this area and stockpiled under and near the canopy.

The Operator then moved into the Pit and excavated contaminated material from the west sidewall of the Pit and extended the pit depth, along the west wall toward the North.





These photos are showing the Northwest end of the Pit, near and beyond where the location of the large "G1" Gasoline tank was located. Note that in the lower picture, the top of the contamination is four feet above the groundwater table, which may indicate that the groundwater table level has widely varied over the years.



PID readings ranged up to 1,000 in the "dry" contaminated soils in the northwest end of the Pit.



An exploration bucket scoop from the soils beneath the surface of the Groundwater along the West Wall produced this bucket load of extremely contaminated mud and medium and large river rock. PID readings from within this bucket exceeded 1,000.

The "checking PID levels" method of determining contamination was used to find out if progress was being made in the removal of the contamination. Little plastic bags were used to remove a "check sample" directly from the excavator bucket. This was taken to the PID location, and a "reading" was taken from the inside of the "bag". The methodology reduced the number of Lab tests required to determine progress in waste removal.

The Operator then explored easterly along the northern edge of the pit.



Additional removal of the clean top layer of soil around the pit area was made. Each excavator bucket load of soil was evaluated by sight, nose and/or PID to "sort" the soil.



Some large thick slabs of concrete were unearthed and placed in the far northeast corner of the site.





In exploring the pit North wall twenty feet east of the previous samples, it was found that heavy sidewall contamination continued to exist more than four feet above the groundwater table. The Leidos Inspector, Mr. Brown, is shown coming over to inspect the contents of the excavator bucket.

After the exploration along the northern side of the pit, the operator moved into the bottom of the pit and attempted to clean the West wall down to the water table. Samples beneath the water table were also taken. "Check samples" tested with the PID, determined which "Samples" were to be taken to the Libby lab as they were collected. Following are the test results of samples taken on Wednesday, 9/16/15.

Analyses of Gasoline (NWTPH-Gx) & BTEX (EPA Method 8021B) in Soil

Sample	Date	Benzene	Toluene	Ethylbenzene	Xylenes	Gasoline	Surrogate
Number	Analyzed	(mg/kg)			(mg/kg)	(mg/kg)	Recovery (%)
Method Blank	9/16/15	nd	nd	nd	nd	nd	89
NW Test Pit 10'	9/16/15	0.38	2.0	4.3	5.8	404	83
Pit Bottom 1' uw	9/16/15	2.2	0.60	0.80	2.3	178	78
Pit Bottom 4' uw		4.2	3.7	5.5	29	650	125
Pit Bot 4' uw Du		15	13	27	88	1930	int
E Cen Pot Hole	9/16/15	2.0	1.4	5 <b>.5</b>	12	2270	87
P W Edge Ctr 8'	9/16/15	0.57	0.37	0.35	2.5	90	91
P W Edge Ctr 9'	9/16/15	0.078	3 < 0.2	< 0.1	0.86	126	88

<sup>&</sup>quot;nd" Indicates not detected at the listed detection limits.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Trifluorotoluene): 65% TO 135%

uw stands for UnderWater

P W Edge Ctr = Pit Westwall Center

The above test results for Gasoline and BTEX, indicate that the excavation of the contamination along the western wall of the pit has been generally successful in removing the highly contaminated soil. But, additional removal is required above the water table. A "test pit sample" from the Eastern Center portion of the existing small pit was also highly contaminated. The "Check Sample" method of "plastic baggy" screening with the PID is thought to be working well.

Analyses of Diesel (N	WTPH-Dx) in S	oil Surrogate	Diesel						
	ate Analyzed	Recovery (%)	(mg/kg)						
Method Blank	9/16/15	101	nd						
NW Test Pit 10'	9/16/15	89	nd						
East Central Pot Hole	9/16/15	96	nd						
Pit Bottom 1'	9/16/15	82	nd						
Pit Bottom 4'	9/16/15	99	nd						
Pit Bottom 4' Dup	9/16/15	97	nd						
Pond West Edge Ctr	8' 9/16/15	76	nd						
Pond West Edge Ctr	9' 9/16/15	112	nd						
Practical Quantitation Limit 25									

<sup>&</sup>quot;nd" Indicates not detected at the listed detection limits.

These test results indicate that Diesel contamination appears not to be found along the western-most portion of the Pit.

Sampling Methodology Discussion --- When it was seen that very high levels of contamination were being found below the water table, and as the planned "GOAL" of this clean-up effort was to be able to request and obtain a "No Further Action" determination in the future, it was decided that the underwater contamination was required to be chased, and removed, so that groundwater would not have "a source" of petroleum hydrocarbon contamination, and thereby, future groundwater monitoring test results would be much lower.

<sup>&</sup>quot;int" Indicates that interference prevents determination.

<sup>&</sup>quot;int" Indicates that interference prevents determination.

On Thursday 9/17, based on the above Lab test results, additional "cleanup action" was performed along the bank of the "almost clean over-excavated" West Wall, and sampling was extended under the surface of the groundwater, and into the NW corner of the Pit where a "stripe of blue color" was observed. The main effort of the day was directed toward the excavation of the heavily contaminated material beneath the water table along the southern and center sections of the west side of the pit. This effort produced a large addition of highly contaminated material to the Waste Pile along the Alley. At the close of business on Thursday, I was given the results of the Lab test results on the four samples that had been submitted that day. Two samples had been submitted from the cleaning of the contamination beneath the water table along the south half of the West Wall. PID readings from "grab baggies" had checked the excavations all the way down to sixteen feet, (seven feet below the surface of the water), where "clean" samples were taken. Lab Test Results of these two samples, (Bot 16ft and Dup), confirmed that the pit bottom was "clean". However, the test results from two samples that were taken just above the water table in the far northwestern corner of the Pit, where bright "blue color" was found, and the NWW Pit Corner just above the water table were astoundingly HIGH!

Analyses of Gasoline (NWTPH-Gx) & BTEX (EPA Method 8021B) in Soil											
	Analyzed	Benzene	Toluene	Ethylbenzene	Xylenes	Gasoline	Surro		Surrogate		
•	•	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg) I	Recov(%)	(mg/kg)	Recov(%)		
Method Blank	9/17/15	nd	nd	nd	nd	nd	92	nd	91		
Pit BotNWCrn9'	9/17/15	134 E	75 E	281 E	1030 E	20200 E	int	nd	int		
Pit BotNW9'Dup	9/17/15	103	60	220 E	833 E	16100	121	nd	int		
Pit NWCnBot16'	9/17/15	0.028	nd	nd	0.21	7.5 J	94	nd	78		
Pit NWCnBotDup	9/17/15	0.028	nd	nd	0.26	12	99	nd	93		
NWW Pit Crnr 9'	9/17/15	D D	D	D	D	D	int				
NWW Pit Crnr 9'	9/17/15							13,600			
NWW Pit C9 Dup	9/17/15							11,700 E	E int		

<sup>&</sup>quot;D" Indicates analyte was detected but impacted by high levels of diesel.

"int" Indicates that interference prevents determination.

ANALYSES PERFORMED BY: Paul Burke

The Sample # "Pit NW Crnr Bot 16" was an important sample taken to show that the cleaning of the bottom of the pit "pond" from the SW corner of the Pit toward the NW corner of the Pit was complete. This sample result showed that the contamination had been removed and a "clean" Pit bottom existed at the level of sixteen feet. However, the test results of the remaining two samples showed that the far NW and NWW corner had Gasoline levels of over 20,000 ppm., and Diesel levels of up to 13,600 ppm. That quickly changed the conclusion that was formed just yesterday about "Diesel not being along the Western Wall", and posed the question of: How did those very high levels of Diesel and Gasoline contamination get twenty feet away from the tanks without having been found in the interim space? This question was never answered during the performance of this project investigation.

<sup>&</sup>quot;E" Indicates value is an estimate because it exceeds the calibration range.

<sup>&</sup>quot;J" Indicates analyte was positively identified but is below the PQL.

<sup>&</sup>quot;nd" Indicates not detected at the listed detection limits. "int" Indicates that interference prevents determination.

On Friday, September 18<sup>th</sup>, the major activity was directed toward the excavation of the "hot" NW corner of the Pit where the extremely high levels of both Gasoline and Diesel soil contamination had been found.

Also, contamination under the groundwater table in the remaining portion of the area along the Northern end of the West Wall was "chased". Underwater contamination was chased and monitored by PID down to the 18 foot level (nine feet below the water surface) before the "clean" level was found, (just like the 16 foot level along the southern end and center of the west wall).

The contaminated waste pile was being piled very high along the alley-way and the broken asphalt and concrete piles were moved down the alley-way onto the rear of Mr. Jhuty's adjacent Chevron Station property.

The Station Owner, Mr. Paul Jhuty, arranged with a number of local independents and Ellensburg trucking firms to provide trucks, early on Monday (September 21<sup>st</sup>) morning, to "Load-out" the contaminated soils to the Waste Management disposal site in Wenatchee. Preparations of the "Waste Pile" to facilitate the loading of the trucks in the alley-way were made and the fencing relocated.

In April, a verbal request to the Kittitas County Construction Debris Landfill (KCCDL) had been made for approval to dispose of the waste asphalt that would be generated at this site. Tentative verbal approval had been given. Now, the broken asphalt pile was ready for disposal and when contacted on Friday morning, the KCCDL officials requested that laboratory test results be provided that document that the broken asphalt did not contain any gasoline or diesel contamination.

Four samples of materials from the broken asphalt pile were collected and testing quickly run by the Libby on-site Lab for Gasoline and Diesel content. Those test results are shown below.

Hydrocarbon	Ident	ificatio	on by	NW	ГРН-Н	CID for	Soil

Sample	Da	te Analyzed	Gasoline	Diesel	Surrogate
•			(mg/kg)	(mg/kg)	Recovery (%)
Method Blank		9/18/15	nd	nd	97
Asphalt&Debris#	<i>‡</i> 1	9/18/15	nd	nd	100
Asphalt&Debris#	‡2	9/18/15	nd	nd	121
Asphalt&Debris#	‡3	9/18/15	nd	nd	101
Asphalt&Debris#	ŧ4	9/18/15	nd	nd	94

<sup>&</sup>quot;nd" Indicates not detected at listed detection limits.

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

ANALYSES PERFORMED BY: Paul Burke

These "Test Results" were sent (via email) to the KCCDL office and the approval for disposal of asphalt debris at the KCCDL site was received the same day.

<sup>&</sup>quot;D" Indicates detected above the listed detection limit.

<sup>&</sup>quot;int" Indicates that interference prevents determination.

On Friday, September 18<sup>th</sup>, selective sampling of the eastern "bank" portion of the present Pit was done to define existing contamination levels. One sample that had been taken late on Thursday evening and saved "on ice" overnight, was also included in the samples given to the on-site Libby Lab. Following are the test results on those samples.

Analyses of Gasoline (NWTPH-Gx) & BTEX (EPA Method 8021B) in Soil – and Soil & Analyses of Diesel (NWTPH-Dx) Sample Date Collected Analyzed Benzene Toluene Ethylbenzene Xylenes Gasoline Surrogate Diesel Surrogate

			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg	) (mg/kg)	Recov(%)	(mg/kg)	Recov(%)
Method Blank	9/18/15		nd	nd	nd	nd	nd	84	ng	97
Ctr Pit 9'	9/17/15	9/18/15	7.9	2.9	11 E	47 E	1060	131	161	134
Ctr Pit 9' Dup		9/18/15	12 E	3.8	11 E	75 E	1540	97	144	123
N Ctr 9'	9/18/15	9/18/15	7.7	6.0	39	143	5680	int		
N Ctr 11'	9/18/15	9/18/15	1.3	0.62	nd	24	1870	112		
NEPondCrnr8'	9/18/15	9/18/15	3.1	<5	<0.25	43	4200	95		
NEPondCrnr11'	9/18/15	9/18/15	0.088	0.13	0.093	0.46	62	84		

E" Indicates value is an estimate because it exceeds the calibration range.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Trifluorotoluene): 65% TO 135%

ANALYSES PERFORMED BY: Paul Burke

<sup>&</sup>quot;nd" Indicates not detected at the listed detection limits.

<sup>&</sup>quot;int" Indicates that interference prevents determination.

Additional "Test Pitting" along the northern property line to the far NE corner of the site was made.



Use of the handheld PID checked soil samples from a "test pit" in the far NE corner of the site, and found no indication of contamination above the groundwater table. This indicated that the on-site soil contamination (above the groundwater table) did not exist here, however, a "blue colored" layer of river rock did exist below the groundwater table. The tall man in the warning vest is Mr. Stuart Brown, the Leidos Site Inspector.

Delivery of the first of three ordered 55-gallon drums of "ORC" arrived Friday, 9/18/15, at 5:30 pm. One drum was taken to the far East side of the site, adjacent to the Chevron Station concrete wall. (See the above picture.) The "ORC" drum was opened, and three 25 pound bags of Calcium Peroxide "power" were opened and emptied into the excavator bucket. The powered ORC was "sprinkled" over the surface of the groundwater "pond", atop the water on the west side of the Pit by the excavator Operator. A number of times the excavator bucket returned and three more bags were opened into the bucket. Both the Operator and "I" (opening the bags of ORC and placing the powder into the excavator bucket) wore gloves and half-face respirators (with particulate and carbon filters) for necessary respiratory protection. 250 pounds of Calcium Peroxide were "spread over the surface" of the groundwater "pond" within the western bottom of the "Pit", and then the water surface "mixed" by use of the excavator bucket until 6:40 pm.

Over the weekend, September 19<sup>th</sup> and 20<sup>th</sup>, the excavator Operator, Riley Evans, traveled around the Cle Elum area and looked at a number of commercial "Rock Pits" to find the source of the needed larger backfill rock that would be used for backfilling beneath the water table, and creating the stable base for the installation of the new USTs. Many quarries and rock pits in the area were investigated, until both the correct rock type, and quantity, was found. Mr. Dave Lumsden was selected to provide his rock and trucking from his nearby quarry.

Per Mr. Jhuty's instructions, four large "belly dump" trucks arrived at 5:00 am. in the morning and were "loaded-out" from within the alley. Each of the truckers was given a copy of the Waste Management "Non-Hazardous WAM Approval" Document with the "Profile Number - 110335WA" to provide that informaion to the Weight Scale Operator when delivering the contaminated waste to the Wenachee Waste Management Disposal site. Each truck could transport approximately 30 tons of petroleum contaminated soils per load. (Note: It should be said that "loadout" of contaminated soils occurred almost daily, and "loadout" of broken concrete, scrap metals, and asphalt were "as needed".)

These truckers were given instructions to deliver the petroleum contaminated waste to the Wenachee Waste Management Disposal site and return daily, (if posssible), for additional loads.

The Washington State truck license numbers of these four trucks were recorded and the drivers were requested to provide a copy of the "WM" scale receipt when they returned to the Short Stop #7 site for the next load.

```
Truck #1 was Lic. # 9237XB and was "loaded-out" at 5:15 am.
Truck #2 was Lic. # 1340YK and was "loaded-out" at 5:25 am.
Truck #3 was Lic. # 7923PW and was "loaded-out" at 5:30 am.
Truck #4 was Lic. # B75104G and was "loaded-out" at 5:37 am.
```

Samples of the contaminated soils were collected from the excavator bucket as the trucks were being loaded. The test results of those "load-out" Waste samples are shown in the table below. (In that table, the "T" number relates to the Truck.) Recording Truck license numbers was discontinued.

As the Libby Environmental "on-site" mobile Lab was scheduled to return late on Tuesday night (9/22/15), the samples were placed on ice in a large cooler, until the Lab's return, and be run on Wednesday morning.

Below are the Lab results on the Contaminated Soil Samples that were sent to the Waste Management disposal site in Wenatchee.

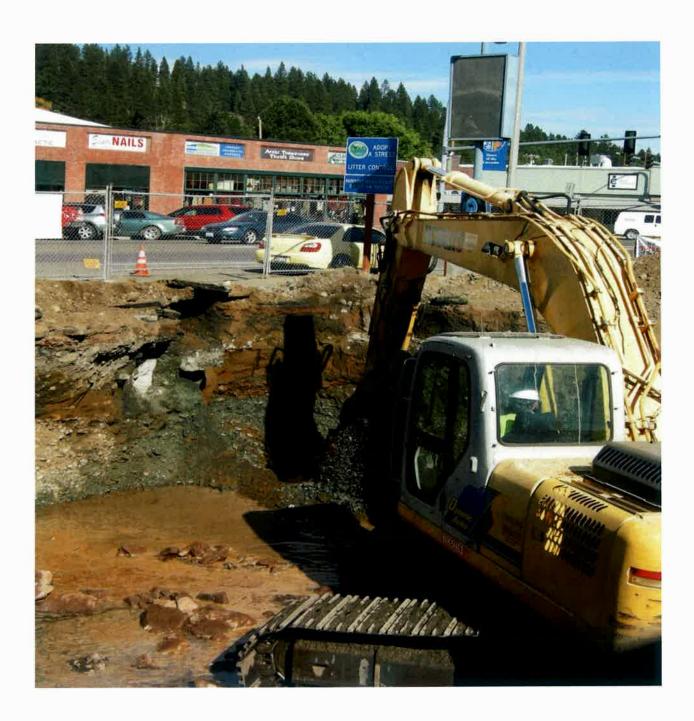
Analyses of Gasoline (NWTPH-Gx) & BTEX (EPA Method 8021B) in Soil Date Collected Analyzed Benzene Toluene Ethylbenzene Xylenes Gasoline Surrogate Sample (mg/kg) (mg/kg) (mg/kg) (mg/kg) Recovery (%) nd 98 Method Blank 9/23/15 nd nd nd Load Out T1&2 9/21/15 9/23/15 85 E 2090 E int 8.7 13 14 Load Out T3 44 E 1030 121 9/21/15 9/23/15 4.8 4.1 < 0.5 94 E 2090 E 113 Load Out T4 9/21/15 9/23/15 12 22 E 10 7.6 60 E 1190 127 Load Out T4Dup 9/21/15 9/23/15 13

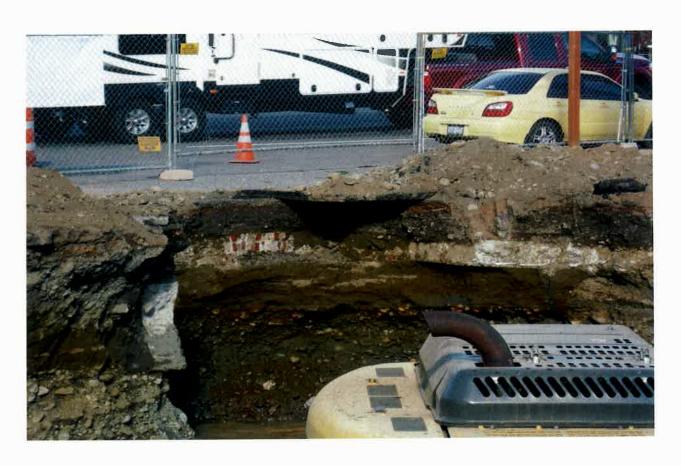
Analyses of Diesel (NWTPH-Dx) in Soil										
Sample	Date Analyzed	Surrogate	Diesel							
	9/23/15	Recovery (%	) (mg/kg)							
Load Out T1 & 2	9/23/15	100	67							
Load Out T3	9/23/15	int	91							
Load Out T4	9/23/15	int	106							
Load Out T4 Dup	9/23/15	111	112							

7.1

Mr. Lumsden's truck arrived with the large "back-fill" rocks that had been ordered. He was able to back through the pump island between the pumps to the western edge of the Pit, raise the truck bed and dump the stone into the pit without hitting the pump island canopy with the truck bed, (when it was raised). Many loads of stone were delivered on Monday. The excavator Operator moved the stone into the "cleaned" western side of the Pit, and spread the stone to levels just below the water table in the bottom of the pit.

Excavation exploration continued in a clockwise method around the "Pit". A pocket of heavily contaminated soil had been found along the northern wall of the Pit. This area was excavated in layers. Interesting layers were found in this area. Clean brick debris, a thick brickwork layer, and thick concrete slabs, together with the clean brown sandy soil, and a lower layer of gray rocky soil were found as may be seen in the following photos. Clean soil was set aside in order to reach the contaminated material.





Excavation ended about three feet from the West First Street sidewalk (which was closed and protected with fencing). Parking spaces directly in line with the excavation hole were also blocked off with red warning cones.



On Tuesday, September 22<sup>nd</sup>, seven truckloads of Waste Soil were transported to WM in Wenatchee.

Early in the morning, while excavating on the southeast side of the pit, the excavator Operator discovered an additional UST located in the south-central portion of the property. I called this UST the "Surprise Tank"! ECY was immediately notified and NES was requested to come back and properly "Decommission" the tank. The "small" steel "Surprise Tank" measured to be 45 inches in diameter and 144 inches in length, ("1,000" gallons approximately size). The top of this tank had three "small" holes on the top, (two 2-inch diameter and one  $1\frac{1}{2}$ -inch diameter). The tank was checked for contents with a UST eleven-foot long dip stick having one-inch markings. The tank was found to contain exactly nine-inches of Gasoline. ECY was immediately notified of this Surprise Tank discovery and NES was requested to return and properly "Decommission" the tank.

This photo was taken from the excavator on the top edge of the East side of the pit. The laborer, Aaron Warner, is collecting a sample of the Gasoline from the tank. The "Bailer" was transported to the top of the pit by walking up the ramp, and then emptied into a pint sized brown glass sample bottle, and then, done again and again. Three pint sized composited "samples" of the tank Gasoline were obtained by use of the groundwater "Bailer", placed on ice, and Webster "ran" those three samples to the Friedman & Bruya Laboratory in Seattle for analyses. The upper half of the photo shows a pond water reflection of "two white steel posts and the red & yellow edge of the Canopy" above the soil pit edge on the western side of the pit, and the reflection of the shadow of the excavator.



Test results of the Gasoline taken from the Surprise Tank are shown below. Testing for "Organic Lead" was the analytical component chosen. The age of the Gasoline was estimated by Webster, based on the tank size and details, to be prior to the 1960's, and that the tank had to have existed at the site before the five recently Decommissioned USTs were installed in the early 1960s.

FRIEDMAN & BRUYA, INC. ENVIRONMENTAL CHEMISTS

Analysis For Total Organic Lead and Manganese By EPA Method 200.8

Client ID: Bottle 1 Client: George Webster

Date Received: 09/22/15 Project: Short Stop 7\*, Cle Elum, F&BI 509380

Date Extracted: 10/06/15 Lab ID: 509380-01 Date Analyzed: 10/06/15 Data File: 509380-01.065

Matrix: Soil/Product Instrument: ICPMS1 Units: mg/kg (ppm) Operator: SP

Concentration Analyte: mg/kg (ppm)
Organic Lead 982
Organic Manganese <1

Webster concludes from the above test results that the Gasoline found in the "Surprise Tank" contained 982 ppm. of "Organic Lead", which therefore indicates it was "old" (greater than fifty years) "Leaded Gasoline".

Following are the Lab test results from samples taken on September 22<sup>nd</sup>, from directly beneath the Surprise Tank, and other samples taken from within the southern end of the existing Pit.

Analyses of Gasoline (NWTPH-Gx) & BTEX (EPA Method 8021B) in Soil

Sample Da	te Collected	Analyzed	Benzene	Toluene E	Ethylbenzen			
·			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg) F	lecovery (%)
Method Blank		9/23/15	nd	nd	nd	nd	nd	98
Surp TK North	9/22/15	9/23/15	5.5	7.0	<2.5	156	6360	102
Surp TK Ctr	9/22/15	9/23/15	0.80	1.7	1.3	18	1330	104
Surp TK South	9/22/15	9/23/15	0.61	1.3	2.0	22 E	3080 E	113
"D" S End Pit1	0' 9/22/15	9/23/15	15	14	20 E	59 E	4340 E	104
"E" SE Crnr 12	9/22/15	9/23/15	0.63	0.39	0.92	3.3 E	141	91
"E" SE Cr12' D	up 9/22/15	9/23/15	0.81	0.44	1.2	3.9 E	171 E	int
"F" SE Cr Pit13	9/22/15	9/23/15	4.7 E	1.1	2.6 E	7.6	252	131
"G" SE Cr Pit14	1' 9/22/15	9/23/15	0.58	0.51	0.63	3.2	124	99

<sup>&</sup>quot;int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Trifluorotoluene): 65% TO 135%

Analyses of Diesel (NW			
Sample	Date Analyzed	Surrogate	Diesel
	9/23/15	Recovery (%)	(mg/kg)
Method Blank		99	nd
Surprize TK North	9/23/15	int	nd
Surprize TK Ctr	9/23/15	108	nd
Surprize TK South	9/23/15	int	nd
222			
"D" S End Pit 10'	9/23/15	109	nd
"E" SE Crnr 12'	9/23/15	105	nd
"E" SE Crnr 12' Dup	9/23/15	91	nd
"G" SE Crnr Pit 14'	9/23/15	111	nd
"F" SE Crnr PIT 13'	9/23/15	114	nd
"F" SE Crnr PIT 13' Dup	9/23/15	119	nd

<sup>&</sup>quot;nd" Indicates not detected at the listed detection limits.

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

(NOTE: The missing Samples "A", "B", and "C" identifications were renamed "Surprise TK" when submitted to the Libby Lab so as emphasis the important sample location.)

The SE Pit Corner "designation" was the southern-most portion of the existing Pit. Sample "D" is closest to the location of the new Surprise Tank, and further East than samples "G" and "F" in the SE Corner of the existing Pit.

It may be seen from the test results that the highest levels of Gasoline contamination in the soil beneath the "Surprise Tank" existed at the North end of the "Surprise Tank".

E (in lab results) Indicates value is an estimate because it exceeds the calibration range.

<sup>&</sup>quot;nd" Indicates not detected at the listed detection limits.

<sup>&</sup>quot;int" Indicates that interference prevents determination.

On Wednesday, September 23<sup>rd</sup>, eight truckloads of Waste Soil were transported to WM in Wenatchee, and Mr. Kevin Wilkerson of NES properly Decommissioned the "Surprise Tank". The Gasoline within the tank (approximately 140 gallons) was pumped into a 200 gallon storage tank, the Surprise Tank "inerted" with dry ice, and was removed from the pit with the excavator and trucked to an off-site storage yard.





Inspection of the Surprise Tank showed that the sides of the tank had rusted-though along the sides of the tank ten-inches above the bottom. Anything that had been inside the tank above the rusted-out level had most likely been released. PID readings of the soil beneath the tank were very high and a "ripe" Gasoline odor was present. The bottom of the Surprise Tank was less than seven feet below the 2015 ground surface





Mr. Wilkerson directs the excavator Operator to remove the "Surprise Tank" for transportation.



The replacement Leidos Inspector, Susan Hoffman, observed the excavator Operator investigating the area where the Surprise Tank had been removed. Strong "ripe" vapors were being released during this exploration procedure and two PIDs, setting on a table more than fifty-feet away, were beeping and displaying readings in excess of 20 ppm. This "ripe" odor continued for an extended period and the Leidos Inspector, Susan, retired to the Leidos truck, as she said that Leidos policy requirements dictated that she could not remain in areas in excess of 1 ppm., without full respiratory protection.

Early on Wednesday, September  $23^{\rm rd}$ , the Libby on-site Lab arrived back to the Short Stop #7 Station site, and was given the accumulated samples for analysis.

Exploration and sampling continued to obtain additional information in order to better make decisions. Additional cleaning of the pit bottom (below the water surface) and sampling was done in the existing Pit. Sampling to the East of the Surprise Tank was done, and the contaminated soil in the Surprise Tank "pit" area was excavated to better determine the depth and extent of contamination, and a southeast Sidewall sample taken in the Surprise Tank Pit at the nine-foot level.

Excavation of contaminated soils to below the water surface was done at the Surprise Tank Pit.

Strange items were found while excavating near the Surprise Tank Pit. A huge concrete block with a square top surface was found in the Eastern sidewall and slid into the bottom of the small Pit. It had no direct relationship to the Surprise Tank. It was removed and properly disposed of, at a landfill.





Photo of large existing Pit and adjacent "smaller" Surprise Tank Pit. (NOTE: It should be said here – that this early morning Thursday 9-24-15 photo is a good reference source of where the extent of both above ground and underwater soil contamination had been chased and removed on this site. This will be expanded upon and explained later in this report.)

Thursday, September 24<sup>th</sup>, eleven truckloads of Waste Soil were transported to WM in Wenatchee.

Discussions of the possible impact of this "Surprise Tank" discovery on the previously scheduled project completion date of the clean-up ensued. Eight days into the effort, the "timing" of the site clean-up had been progressing on the original schedule with completion projected for early next week. The discovery of this Surprise Tank was quickly seen by Webster as a very large problem! After the completion of the site clean-up, were planned the required the efforts of: 1) preparation of the pad for the two new USTs; 2) installation of the two new USTs; 3) installation of required piping; 4) backfilling and compaction; and finally, 5) asphalting of the whole disturbed surface area of the site.

The established project completion date was controlled by the scheduled Asphalt Plant closure at the end of October. If all the scheduled efforts of USTs installation were not completed, and the site was not able to have the replacement of the asphalt surface, both the Gasoline station and Subway sandwich shop would not be able to operate, until the asphalt plant reopened in the Spring. Based on all available information, (including the field PID testing), and having expended two days on efforts at the "Surprise Tank", Webster estimated that additional time required to "chase" the contaminated soil in the area of the Surprise Tank, together with the possibility of additional discoveries, could take at least an additional week. I advised the Owner, Mr. Paul Jhuty of my thoughts. Mr. Jhuty directed me to cease chasing the Surprise Tank contamination, finish the cleanup of the Pit, and prepare the Pit for the installation of the two new USTs, so that he could it pave the site prior to the asphalt plant closing.

Below are the test results of the samples taken on Wednesday, from cleanup efforts and underwater explorations.

The most important sample (Sur-T Pit 9ft) was the sample taken from the Surprise Tank Pit Sidewall sample taken at the level just above the surface of the groundwater on the southeast side of the small pit. This sample confirmed that very high levels of contamination from the Surprise Tank extended to the water table and extended southeasterly from the small pit. The extent of high level of contamination was estimated to be extensive.

Analyses of Gasoli	ne (NWTPH:	-Gx) & BTE>	( (EPA Met	hod 8021	.B) in Soil				
	e Collected		Benzene	Toluene	Ethylbenzene	Xylenes	Gasoline	Surrogate	
·			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	Recovery (%)	
Method Blank		9/24/15	nd	nd	nd	nd	nd	94	
E Ctr New Tk	9/23/15	9/24/15	0.25	0.24	1.3	3.4 E	209 E	116	
Ctr Pit Bot 17'	9/23/15	9/24/15	1.2 E	0.74	0.32	2.4	58	108	
S Bot (Sand) 14'	9/23/15	9/24/15	4.4 E	3.2 E	4.6 E	18 E	534 E	132	
Near S Side 14'	9/23/15	9/24/15	4,7 E	3.1 E	3.6 E	17 E	475 E	int	
ENE Bot 14'	9/23/15	9/24/15	1.7 E	0.84	1.3 E	5.5 E	159	int	
ENE Bot 14' Dup	9/23/15	9/24/15	1.6 E	1.3 E	1.1 E	6.9 E	169	int	
	-,,	-,,							
Sur-T Pit 9'	9/23/15	9/24/15	8.8	8.1	25 E	97 E	4630 E	int	
UEII Indicates value		-,, -	a it avcas	te the cal	ibration range				

"E" Indicates value is an estimate because it exceeds the calibration range.

Friday, September 25<sup>th</sup>, five truckloads of Waste Soil were sent to WM in Wenatchee. Friday's efforts were dedicated to "cleaning-up" of the areas that had been worked on prior to the discovery of the Surprise Tank. PID sampling of baggies of soils from the excavator bucket, and PID readings directly in the bucket were utilized.

Below water surface Samples were taken of the "bottoms": 1) at the North end "Hole" area at 15 feet (with a Dup sample); 2) the East Northeast Bottom at 14 feet; and 3) the East-East Center at 16 feet. All look to be very good reductions of the underwater contamination levels.

Analyses of Gasoline (NWTPH-Gx) & BTEX (EPA Method 8021B) in Soil

Sample Date Collected Analyzed Benzene Toluene Ethylbenzene Xylenes Gasoline Surrogate

(mg/kg) (mg/kg) (mg/kg) (mg/kg) (mg/kg) Recovery (%)

	(	mg/kg)	(mg/kg)	(IIIg/Kg)	(IIIg/Kg)	(1119/149)	RECOVERY
Method Blank	9/25/15	nd	nd	nd	nd	nd	86
Hole in Con15'	9/25/15	0.081	0.23	nd	0.20	13	87
Hole in C15' Dup	9/25/15	0.025	0.71	nd	0.27	28	75
ENE Bot 14'	9/25/15	0.048	0.24	nd	0.34	22	89
EE Ctr Bot 16'	9/25/15	0.028	0.27	nd	0.19	nd	67

"nd" Indicates not detected at the listed detection limits. "int" Indicates that interference prevents determination. ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Trifluorotoluene): 65% TO 135%

Many loads of "backfill" rocks were delivered through the pump island and dumped into the edge of the Pit by Lumsden Excavating. Small piles of clean soil were transferred to a new LARGE clean soil pile on the Northeast edge of the site, until the Waste Pile could be totally trucked to the disposal site, and the whole Pit "pond" was filled to "near the water surface level" with the large quarry stones that had been delivered to the pond. These rocks madeup the stable "base" necessary for the installation of the two new USTs.

<sup>&</sup>quot;nd" Indicates not detected at the listed detection limits. "int" Indicates that interference prevents determination. ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Trifluorotoluene): 65% TO 135%

Monday, September 28<sup>th</sup> was final "clean-up time". "Load-out", of the "scrap metal pile" was accomplished by giving away the metal to a "scrapper". Using the "Bobcat", all small "clean soil" piles were combined into a large pile on the Northeast corner of the site. Areas on asphalt where "dirty fall-out" existed were scraped clean. After a late lunch, the excavator Operator, Riley Evans, and the Laborer, Aaron Warner, fueled and greased the excavator. Suspect "dirty" soil piles were sampled and held on the far East edge of the site, to await lab testing. (NOTE: those "dirty" soil piles are labeled "Waste Piles #1, #2, and #3)

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

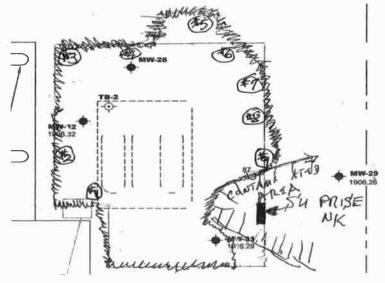
Sample Number Method Blank	Da Collected	te Analyzed 9/30/15	Benzene (mg/kg) nd		Ethylbenzene (mg/kg) nd	•	Gasoline (mg/kg) nd	Surrogate Recovery (%) 88
N CleanPile#1	9/28/15	9/30/15	nd	nd	nd	nd	nd	83
N CleanPile#2	9/28/15	9/30/15	nd	nd	nd	nd	nd	88
N CleanPile#3	9/28/15	9/30/15	nd	nd	nd	nd	nd	89
EastContam#:	1 9/28/15	9/30/15	0.040	nd	0.067	0.28	474 E	85
Waste Pile #1			0.20	0.18	0.16	2.4	427 E	91
Waste Pile #2	9/28/15	9/30/15	0.14	0.11	0.13	1.2	154	91
Waste Pile #3	9/28/15	9/30/15	0.087	0.078	0.32	2.5	177	88

<sup>&</sup>quot;E" Indicates value is an estimate because it exceeds the calibration range.

ANALYSES PERFORMED BY: Paul Burke

In the afternoon, I decided that it was time to take the "Final" sampling of the sidewalls of the existing pit. I had previously "trained" the Laborer, Aaron Warner, on proper sampling technique, but, I again showed him my methodology, of using a shovel to dig into the soil of the wall about six inches so as to then be able to take a sample of the "loosened undisturbed soil" within a "half-turned inside-out", plastic baggy, on his gloved hand. I indicated on a hand-drawing, where I wanted nine specific samples taken, together with verbal "comments" given to him by me. He could obtain the necessary samples in a clockwise order. Most edges of the pit would able to be reached by carefully walking on the rocks that had not yet been "crunched" below the water table, but reaching some areas would require great dexterity. Aaron took the shovel and a small pail, (containing clean gloves and labeled sampling baggies), and went into the Pit to collect the nine Sidewall samples.

Below is a "hand-drawing" map showing the sampling locations of the nine Sidewall samples.



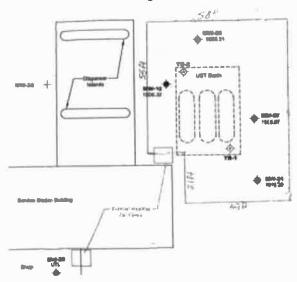
SurpriseTank name blurred -gw

<sup>&</sup>quot;nd" Indicates not detected at the listed detection limits.

The location of the first sample, ("Sidewall 1"), was at a location below the corner of the concrete sidewalk at the NE corner of the building. Aaron easily reached the location and struck the shovel blade into the pit sidewall, and hit metal. He had discovered another UST! I instructed Aaron to collect the sidewall soil sample and complete the sidewall sampling while I inspected the new discovery. (However, while I was checking the newly discovered UST, I did observe and verbally instruct Aaron on the collection of each of the remaining Sidewall Samples.)

I quickly remembered seeing a drawing that the Leidos Inspector, Mr. Stuart Brown, had been using. He had made some notes of site measurement estimations and calculations of quantities of potential soil excavations. I had asked him if I could look at his drawing and calculations, and he said, "Sure"! That drawing had shown two small boxes connected by "arrows" and the statement relating to them of "Former Heating Oil Tanks". I had thought that the drawing depicted the "former" locations of two Heating Oil Tanks, --- that had been removed! WOW, was I thinking wrong! There "IT" was, exactly where the drawing showed "it" was located.

Inserted below is a segment of the Leidos drawing that Mr. Stuart had shown me.



Inspection of the tank showed that it had been properly "Decommissioned-in-Place", by filling the tank with pea-gravel concrete up to the top of the fill-tube. I telephoned Kevin Wilkerson to advise him of finding another UST!

Kevin sent an email notification of finding another UST to the ECY UST Decommissioning Inspector, Ms. Kristal Rodriguez.

### From:

Nes Inc (nesinc@hotmail.com) Sent:Mon 9/28/2015 1:09 PM

To:

Krystal DOE (krod461@ecy.wa.gov);
GEORGE WEBSTER (gandalf-white@msn.com);

Found another tank in CE I'm not on site George says its slurry filled sw corner of hole he thinks heating oil (?) unknown Leave or pull please advise

Sent from my iPhone

Her email answer was -

To:

Nes Inc <nesinc@hotmail.com>;

GEORGE WEBSTER <gandalf-white@msn.com>;

Tue 9/29/2015 8:53 AM

Kevin.

No matter the former use of the tank, Ecology recommends any unused tanks be removed. Since the site already has an open pit, this would be especially advised unless removal of the tank compromises a building or other structure.

Please give me an summary of what contaminants and levels you are finding in the soil. Also, let me know when the tank installation may be scheduled. Krystal

My telephonic reply to Kevin, which he then sent to Krystal was:

Webster states, as a PE, the tank removal will compromise the building footing and (the Tank) will not be removed. Sent from my iPhone

Aaron successfully completed the sidewall sampling effort without falling into the pond for a swim, and the nine "Sidewall" samples were properly "Bottled" from the baggies, and placed on ice awaiting the arrival of the Libby Lab.

Below are the lab test results of the nine Sidewall samples which had been taken late Monday, but were analyzed on Wednesday.

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

Sample	Date		Benzene	Toluene	Ethylbenzene	Xylenes	Gasoline	Surrogate
Number	Collected A	Analyzed	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	Recovery (%)
Method Blank		9/30/15	nd	nd	nd	nd	nd	88
Side Wall #1	4ft 9/28/15	9/30/15	nd	nd	nd	nd	nd	80
Side Wall #2	6ft 9/28/15	9/30/15	nd	nd	nd	nd	nd	79
SideWall#2Du	p 9/28/15	9/30/15	nd	nd	nd	nd	nd	7 <b>7</b>
Side Wall #3	7ft 9/28/15	9/30/15	nd	nd	nd	nd	nd	81
Side Wall #4	7ft 9/28/15	9/30/15	nd	nd	nd	nd	21	88
RUST SWall#5	5ft 9/28/15	9/30/15	nd	nd	nd	nd	nd	88
Side Wall #6	6ft 9/28/15	9/30/15	nd	nd	nd	nd	nd	92
Side Wall #7	7ft 9/28/15	9/30/15	nd	nd	nd	nd	nd	84
Side Wall #8	8ft 9/28/15	9/30/15	nd	nd	nd	nd	nd	92
Side Wall #9	6ft 9/28/15	9/30/15	nd	nd	nd	nd	nd	80

"nd" Indicates not detected at the listed detection limits. ANALYSES PERFORMED BY: Paul Burke

Review of the above test results shows that all of the Pit Sidewall samples were "clean"!

Only the Sidewall sample #5, found a small level of Gasoline, all other samples were non-detect!

On Tuesday, September 29<sup>th</sup> morning, "Load-out" of the 'Waste Pile" by five truckloads was done. The Leidos Inspector, Susan Hoffman, who had missed the late Monday "Sidewall sample collection effort", requested three confirmation samples from the far eastern Pit sidewall. I advised her that Aaron had already taken a sample (SW#9) exactly where she thought that she could see contamination, but, I ask Aaron to return to that area and take three samples (high, middle and low) on the East Pit sidewall, where she had directed.



Picture of the Laborer, Aaron Warner, returning with the requested three Sidewall samples.

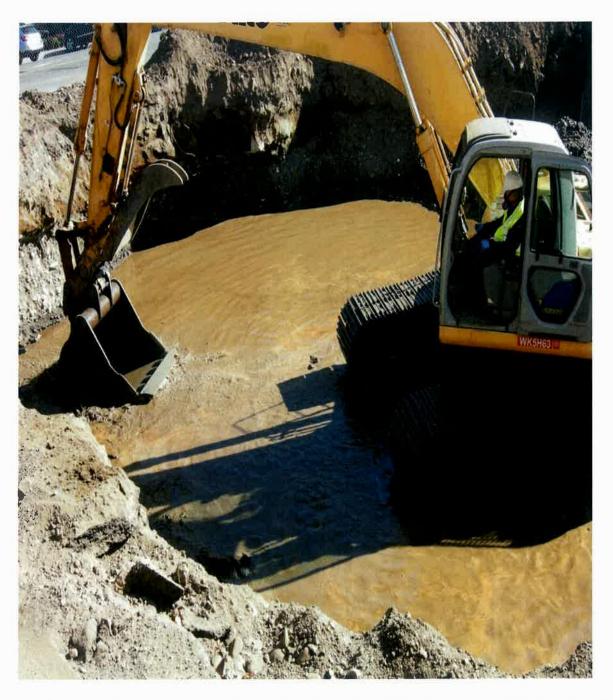
Analyses of Gasoline (NWTPH-Gx) & BTEX (EPA Method 8260C) in Soil

Sample	Date		Toluene I	Ethylbenzene	Xylenes	Gasoline	Surrogate
Number	Collected Analyzed		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	Recovery (%)
Method Blank	9/30/15		nd	nd	nd	nd	88
E CtrWall(2)	4ft 9/29/15 9/30/15	nd	nd	nd	nd	nd	89
	6ft 9/29/15 9/30/15	nd	nd	nd	nd	nd	87
	8ft 9/29/15 9/30/15	nd	nd	nd	nd	nd	84

<sup>&</sup>quot;nd" Indicates not detected at the listed detection limits. ANALYSES PERFORMED BY: Paul Burke

Webster made precise measurements of the remaining "Surprise Tank contaminated area" in relationship to the fully cleaned "Revised Cleanup Area" Pit. Permanent fixtures were used to define angles so that the future work area could be easily re-established on the resurfaced area of the parking area. These measurements ensure that the future removal of the remaining contamination within the "Surprise Tank contaminated area" can be "chased" and removed in future actions.

The excavator Operator worked on preparing the rock base for the installation of the two new USTs.



Excavator "walking on water" in preparing the "rock pad" for the two new USTs, by using the 60,000 pound excavator tracks and bucket to compact the rocks in-place.



A few more finishing touches are required in preparing the new Tank Pit to receive the two new tanks. Groundwater was presently at the depth nine-feet. The rock surface must be compacted at a depth of 12 inches below the existing Groundwater Table in order to place the required twelve-inch thick peagravel "pad" that the two new USTs will rest upon. This will allow the six-foot diameter tanks, when placed on the pea-gravel bedding, to have the desired three-foot "bury depth" needed for the plumbing, backfill, and concrete slab cover.



425 pounds of ORC from the two remaining barrels of ORC were spread upon the water surface by the excavator Operator after the completion of the rock bedding compaction effort. The Laborer loading the ORC into the bucket is wearing gloves and a half-face respirator, while the Owner, Mr. Jhuty, is taking a picture of the operation.



Ready for final "load-out" of contaminated soils on the next morning.

Wednesday, September 30<sup>th</sup>. One final soil sample was taken on September 30, from a site surface area near the alley, where colorization was seen. That sample was the last sample submitted to the Libby Lab.

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

Sample	Date	Benze	ne Toluene	Ethylbenzene	e Xylenes	Gasoline	Surrogate
Number	Collected Ana	ilyzed (mg/k	g) (mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	Recovery (%)
Method Blank	9/3	30/15 nd	nd	nd	nd	nd	88
Blue Spot	9/30/15 9/3	30/15 nd	nd	0.11	0.20	193	86

"nd" Indicates not detected at the listed detection limits. ANALYSES PERFORMED BY: Paul Burke

The "Blue Spot" sample did show evidence of Gasoline contamination, and that small area was excavated out and added to the Waste Pile. That "Blue Spot" most likely resulted from some "fallout" of waste soil, while it was being moved to the Waste Pile.

Throughout the day, a total of twelve truckloads of Waste Soil, were loaded, taken from the site, and delivered to the Waste Management disposal site in Wenatchee. This emptied the Waste Soil Pile.

Wednesday afternoon, September 30<sup>th</sup>, Webster had awaited the lab test results to confirm that the above-groundwater contamination had been successfully removed from the "Revised Cleanup Area".

Those nine Pit Sidewall samples of the area now termed the "Revised Cleanup Area" are shown below:

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

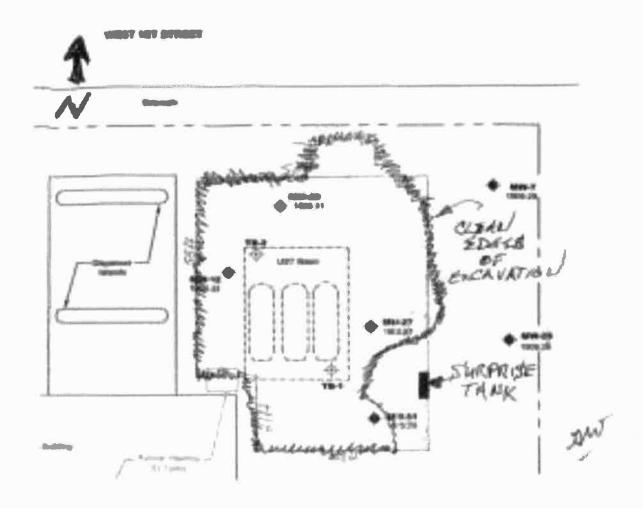
Sample	Date		Benzene	Toluene	Ethylbenzene	Xylenes	Gasoline	Surrogate
Number	Collected A	nalyzed	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	Recovery (%)
Method Blank		9/30/15	nd	nd	nd	nd	nd	88
Side Wall #1	4ft 9/28/15	9/30/15	nd	nd	nd	nd	nd	80
Side Wall #2	6ft 9/28/15	9/30/15	nd	nd	nd	nd	nd	79
SideWall#2Du	9/28/15	9/30/15	nd	nd	nd	nd	nd	77
Side Wall #3	7ft 9/28/15	9/30/15	nd	nd	nd	nd	nd	81
Side Wall #4	7ft 9/28/15	9/30/15	nď	nd	nd	nd	21	88
RUST SWall#5	5ft 9/28/15	9/30/15	i nd	nd	nd	nd	nd	88
Side Wall #6	6ft 9/28/15	9/30/15	nd	nd	nd	nd	nd	92
Side Wall #7	7ft 9/28/15	9/30/15	nd	nd	nd	nd	nd	84
Side Wall #8				nd	nd	nd	nd	92
Side Wall #9	6ft 9/28/15	9/30/15	nd	nd	nd	nd	nd	80

"nd" Indicates not detected at the listed detection limits. ANALYSES PERFORMED BY: Paul Burke

Those nine "Sidewall" soil sample test results, shown above, confirm the successful removal of all the petroleum contamination soils above the groundwater table, within the "Revised Cleanup Area" excavation pit.

Contaminated soil does remain in the soils above the groundwater table in the un-cleaned area adjacent to and around the Surprise Tank, even after the removal of many tons of aged gasoline contaminated soils.

At the conclusion of this "Interim Report" cleanup effort, this work has successfully removed all petroleum contaminated soils above the groundwater table within the large excavation Pit area where the 'known' five USTs had been located, (which has been termed "the Revised Cleanup Area" and shown in the drawing below"), at the Short Stop #7 Gasoline Station in Cle Elum, Washington.



The "Revised Cleanup Area" pit edge is shown by the "wavy" line.

# Preparing for Installation of new Piping and the New USTs

The Owner Mr. Jhuty had retained a local Certified Electrician to properly disconnect the electrical connections at each of the four fuel Dispensers on the Island. Mr. Wilkerson and his laborer later removed each of the four fuel Dispensers on the Pump Island and relocated them to the adjacent storage building. After Webster had left the site, as these four Dispensers did not have enclosed sumps, Mr. Wilkerson inspected the soil beneath each Dispenser location and took soil samples (as Decommissioning efforts require). Those soil samples were sent to the Spectra Labs in Tacoma for analyses.

SPECTRA Labor	(253) 272-	4H50 * Fin (233) 5	72.9838 * www.spectre-lab.cum
10/08/2015  Northwest Environmental Solutions, Inc PO Box 1583 Summer, WA 98390 Attn: Kevin Wilkerson		P.O.#: Project: Client ID: Sample Matrix: Date Sampled: Date Received: Spectra Project: Spectra Project:	CC 07509B Short Stop -Cle Elum 1NW-Disp Soil 10/06/2015 10/06/2015 2015100132
Analyte Gasoline	<u>Remit</u> 1440	Units mg/Kg	Method NWTPH-O
Benzene	<0.025	mg/Kg	SW846 8260C
Ethylbenzene	0.124	mg/Kg	SW846 8260C
Methyl-tert-Butyl Ether	<0.025	mg/Kg	8W846 8260C
Toluene	0.155	mg/Kg	SW846 8260C
Total Xylenes	5.84	mg/Kg	SW846 8260C
SPECTRA LABORATORIES			
Steve Hibbs, Laboratory Manager			Page 1 of 4
SPECTRA Labora  SPECTRA Labora  221 Bross Way • Tausens, WA 98421 •			
SPECTRA Labora			572/5038 * www.spectes-lab.cc CC 075098 Short Step -Cle Short 2NE-Disp Soil 10/06/2015 10/06/2015 2015100132
SPECTRA Labor:  E221 Show Way • Teacons, WA 98421 •  DOM: 2015  Cordiverst Environmental Solutions, Inc.  O Bost 1983  Images, WA 98140		P.O.O: Punjost: Client ID: Sample Matrix: Date Received: Spectra Project	CC 075098 Short Step -Cle Short 2NE-Disp Sell 10/06/2015 10/06/2015 2015100132
SPECTRA Labora  SPECTRA Labora  2221 Enon Way - Tazzen, WA 98421 -  2008/2015  cordinated Environmental Solutions, Inc.  D Bos. 1583  mnor, WA 98390  mr. Koven Williamon	(253) 372-4	P.O.O: Propert: Client ID: Sample Matrix: Date Received: Spectra Project Spectra Project	CC 07509B Short Step - Cle Short 2NB-Disp Soil 10/06/2015 10/06/2015 20151 000 32
SPECTRA Labora  SPECTRA Labora  Taxima WA 98421 *  De86/2015  certific est Environmental Solutions, Inc  O Bus 1363  major, WA 96390  m: Keven Williamon  Analyte	(253), 3772-4	P.O.O: Ponjest: Client ID: Sample Matrix: Date Received: Spectra Project: Spectra Number	572-9038 * www.spectes-lab.co CC 075008 Short Stap -Cle Short 2NE-Disp Soil 10/04/2015 10/05/2015 2015100132 7: 2 Ranh
SPECTRA Labora  2221 Enon Way - Taxona, WA 98421 -  Dental 2015  continuent Environmental Solutions, Inc.  O Bass 1363  man: Kaven Willowson  Analyte, Diesed	Remail 9230	P.O./r: Popper: Chint ID: Sample Matrix: Date Sampleric: Species Project: Species Number	572-9038 • www.apocks-lab.cc CC 075098 Short Sarp -Cle Short 2NE-Disp Soil 10/06/2015 10/06/2015 2015100132 : 2 Rash  Mathod NWTPH-D
SPECTRA Labora  E221 Brow Way - Tazona, WA 98421 -  Or08/2015  Corthwest Environmental Solutions, Inco O Bass 1363  matter, WA 98390  See: Kaven Willesmon  Analyte Diesel Oil	Remails 9230 <2500	P.O.#: Popost: Client ID: Sample Matrix: Date Received: Spectra Project: Spectra Number  Units ung/Kg.	572-9038 • www.apocks-lab-ox  CC 075098 Short Shap -Cle Shore 2NE-Disp Soil 10/06/2015 2015100132 7: 2 Rash  Mathod NWTPH-D NWTPH-D
SPECTRA Labora  E221 Enns Way - Tauren. WA 98421 -  Describe out Environmental Solutions, Inc.  O Buss 1363  mener, WA 96140  me Kaven Williamon  Analyte  Diesell  Oil  Gasoline	Result 9230 <2500 <10	P.O.O: Proport: Client ID: Semple Matrix: Date Semplet: Date Received: Spectra Project: Spe	CC 075098 Short Step -Cle Shor
SPECTRA Labora  SPECTRA Labora  1221 Enns Way - Tazzen. WA 98421 -  Over 1983  Interviewest Environmental Solutions, Inco O Bost 1983  Immer, WA 98190 Immer, WA 98190 Immer, WA 98190 Immer Kaven Williamon  Analyte Dissell Oil Gesoline Bennance	Results 9230 <2500 <10 <0.625	P.O.O: Propert: Chant ID: Sample Matrix: Date Sampled: Spectra Project: Spectra Project: Spectra Number Units ung/Kg ung/Kg ung/Kg	CC 075098 Short Step -Cle Short Step -Cle Short Step -Cle Short 2015-1006/2015-1006/2015-2015100932-2 Resh
SPECTRA Labora  SPECTRA Labora  Tazzen Way • Tazzen WA 98421 •  Orda/2015  Cordive est Environmental Solutions, Inco  Disco 1983  Immer, WA 98190  Im: Kaven Willemon  Analyte  Discol  Oil  Gapoline  Rementa  Ethylbenzene	Research 9230 <2500 <10 <0.025 0.128	P.O.F: Posjett: Posjett: Chiant ID: Sample Matrix: Date Received: Spectra Project: Spectra Number  - Units tag/Kg tag/Kg tag/Kg eng/Kg mg/Kg	CC 07509B Short Step -Cle Short 2NE-Disp Soil 10/06/2015 10/06/2015 2015100132 7: 2 Resh Mathod NWTPH-D NWTPH-D NWTPH-G SW846 8260C

<sup>&</sup>quot;Surrogete diluted out of sumple.

### 10/08/2015

Northwest Environmental Solutions, Inc.

PO Box 1583 Summer, WA 98390 Atta: Kavin Willesmon

P.O.R: CC 07509B
Project: Short Step -Cle Elum
Client ID: 35W-Disp
Scrupte Marcis: Soil

Date Rempted: 19/96/2015 Date Received: 10/06/2015 Spectra Project: 2015100132

Speake Number: 3

(Cardo

Analyte	Remit	Unite	Method
Genetica	301	mg/Kg	NWTPH-G
Bemone	<0.025	mg/Kg	SW846 8260C
Bibyibannene	0.091	meKe	SWE46 6250C
Methyl-text-Butyl Ether	<0.025	mgKg	SW846 8260C
Tolunte	0.200	meKs	SW846 8260C
Total Xylenes	3.26	me/Ka	EW846 \$260C

### 10/08/2015

Northwest Envisonmental Solutions, Inc.

PO Box 1583 Summer, WA 98390 Attn: Kovin Willoteron.

P.O.M: OC 07509B
Project: Short Stop -Cle Elum
Client ID: 48E-Diag
Sample Matrix: Soil
Date Sampled: 10/06/2015
Date Received: 10/06/2015
Spectra Project: 48E-Diag
Spectra Pr

Rends

Apalyte	Romalt	Units	Method
Dienel	8020	mg/Kg	MWTPH-D
Oil	<2500	mg/Kg	NWTPH-D
Oncotine	<10	mg/Kg	NWTPH-O
Remedia	<0.025	mg/Kg	8W846 8260C
Ethylbenzene	0.045	mgKg	SW846 8260C
Mathyd-text-Butyl Ether	<0.025	mg/Kg	8W846 \$260C
Toluene	<0.025	mg/Kg	SW846 \$260C
Total Xylence	1.81	mg/Kg	SW846 8260C

<sup>\*</sup>Surrogate diluted out of sample.

# **CHAIN of CUSTODY**

ō

PAGE

SPECTRA Laboratories 2015100132

ADDRESS		ADDESS: BOB 1583 Sumper WA 98390	ADDECC	Don't thirty MES
KUSH L	SIANDARD	• Fax (253) 572-9838 • www.spectra-lab.com		2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850
		1222		

		Ā	DDR	ESS:	PO	B 15	83 8	ADDRESS: POB 1583 Sumner, WA. 98390	ner,	WA.	98	390	- 8				, i		Į.					R	CHANGE	
e	E		-	Ť	HYDROCARBONS	CAR	BON	<u>ග</u>		ORGANICS	ANIC	S		Z	ETALS	တ					PO	OTHER	<b>84</b>			
			AEKS			_								4		(					SC					
PHONE: 253-241-6213 FAX:	FAX: 360-872-0699		IIA I VI				(н						8 ASC			ECILA					и (					
e-MAIL: nesinc@hotmail.com	Prefer FAX or e-MAIL		DE CO		9-н		या) M3	(90-		/OA IME		83	ALS RC	<b>s)</b> STV.	T2 BCI	4 <b>8</b> ) ST	St			IN	ECIEN					
PURCHASE ORDER #		<		_	TWW			I) M3H	254 AC	_	d/H¥d	908 PC	T WET			ATEM	06/01/	208 XC	YNOR H	HO4 H	4 <b>\$</b> ) SC	-	-			
SAMPLE ID SAMPLED	SAMPLED	MATRIX	NUM	BTEX		TTWN TTWN	_	1 <del>19</del> 91	-		_	NS808	ATOT	-		нсгь	06 Hd		_	BOD		LEAD				
1 1NW-Disp	12:25	Soil	=		×								-									×				
2 2NE-Disp	13:10	Ŧ			×	×																	TI S			
33SW-Disp	14:00	t			×			- 41											.dy			×			$\Box$	
4 4SE-Disp	14"11	п			×	×																			-8	
O						Th.				12	13												11			
9			H																							
2			+																							
00			M																		-					192
6		Γ	=									B														
0			+			-										-										
SPECIAL INSTRUCTIONS/COMMENTS:			1		SIGNA	SIGNATURE	1				PRIN	PRINTED NAME	AME				CON	COMPANY			"	DATE			TIME	Π
A TO CARD	RELINQUISHED BY	BY	1	1.1	//	\			Ke	Kevin Wilkereson	Vilke	resc	Ĕ			NES, Inc.	i, Inc	ó			*	(a) (b) (c)	B	8	\$:50 PN	2
No. MIST.	RECEIVED BY	1	九	S		N	1		A	g	1	JHC.	7	L	1	SH	SHORT STAPING	15%	'A		6	19	To.	7	53	1
المساحد عدما	RELINQUISHED BY	) BY	1	2	1001	T. M.	ut		PA	4RM SEET	J.F.E	L	SHUTY	F		She	ext Stob Sulline	190	2	Com	- 3	1	. 5	Ť,	4:55pm	E C
	RECEIVED BY		X	V	11	1	1		2	Me	42		0	38		Z	9	3	د	-	0	10	10	7	201	
RETURN SAMPLES DISPOSE SAMPLES	Payment Terms: Net 30 day attomsy's fees and all other	ns: Net 30 s and all o	days	Past osts o	due a	ccount	s sub) egardi	s. Past due accounts subject to 1 1/2 % per month interest. Customer agrees to pay all costs of collection including reasonable costs of collection regardless of whether suit is filed in Pieroe Co., WA venue. Spectra Analytical, Inc.	1 1/2 wheth	% per er sui	mont t is filk	h intel	æst. Pierce	Custo Co.,	WA v	agrees	Spec	ay all	costs	of c	iolect Inc.	tion in	cludir	Ng rea	sonat ible	<u>o</u>

The above Spectra analytical test report shows that the following test results information:

Sample #1 was taken in from below the NW Dispenser which pumped only Gasoline. "Old" Gasoline was found at 1,440 ppm., far above the Gasoline MTCA Cleanup Level. (This Gasoline may be classified as "Old", because the Benzene level was non-detect.)

Sample #2 was taken in from below the NE Dispenser which pumped both Gasoline and Diesel. Gasoline was non-detect, BUT, Diesel was found at 9,230 ppm., far above the 2,000 ppm. MTCA Cleanup Level.

Sample #3 was taken in from below the SW Dispenser which pumped only Gasoline. "Old" Gasoline was found at 201 ppm. which is above the Gasoline MTCA Cleanup Level of 100 ppm. (This Gasoline may be classified as "Old", because the Benzene level was non-detect.)

Sample #4 was taken in from below the NE Dispenser which pumped both Gasoline and Diesel. Gasoline was non-detect, BUT, Diesel was found at 8,020 ppm., far above the 2,000 ppm. MTCA Cleanup Level.

Conclusions from the above data are: that ALL FOUR Dispensers (without sumps) have soil contamination above the MTCA Cleanup Levels. Mr. Wilkerson determined: that the unknown extent (depth) of contamination beneath each of the Dispensers would have an impact on the required project completion date, and therefore the existing contamination could not be removed at this time.

"Runs" for the new piping were "saw-cut" into the concrete slabs for the new piping installation and the site readied for the installation of the two new USTs.

In accordance with directions from the ECY Site Inspector, Mr. Wilkerson, who had performed "Passing" piping system tightness testing studies for many years at this site, uncovered the old piping runs within the "saw-cut" trenches and made PID sweeps of the soil at four "tee" locations on the old piping. Mr. Wilkerson advised me that his PID responses were at a "ZERO" level. He also advised me that he had taken confirming soil samples at each of the four "tee" location, but those samples containers were "smashed" (along with everything else in his truck) when he had an accident and "rolled" his large service truck off the freeway upon its top, before delivering those samples to the Lab.

## **INSTALLATION OF THE USTs**

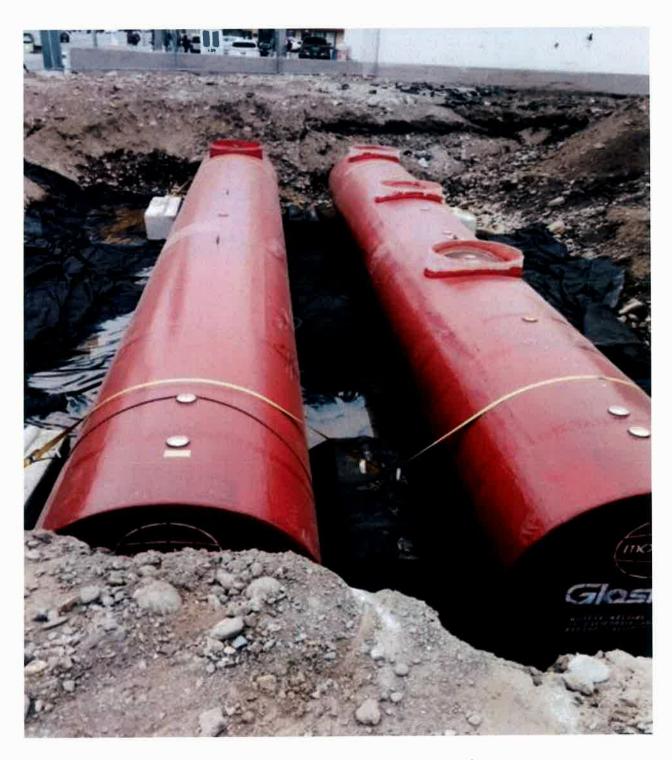
The new Tanks arrived into Cle Elum! One UST has three compartments, while the other has a single compartment. Each 12,000 gallon UST was six feet in diameter and forty-seven feet in length.



The Cle Elum Police Chief was of great assistance, as his force directed traffic on West First Street, (the busy main street of the city), while each of the two large red tanks were removed by a crane, (see the shadow of the crane sitting on the sidewalk), and deposited each UST into the "prepared area" within the new Tank Pit.

A one-foot layer of Pea-gravel had been placed atop the large backfilled rock surface, which had been compacted with the use of the 30-ton excavator. The thick layer of pea-gravel had brought the level of the Tank Pit to the top of the Groundwater Table level, were a layer of thick black Visqueen was laid atop the pea-gravel.

Six large "Concrete Ecology Barriers" (the "Deadmen") were placed between and beside, the two USTs and "strapped-down" over the USTs, to provide protection for prevention of tank floatation in case of high groundwater, or a flood.



The two new USTs installed in the new Tank Pit.

The two USTs were "equipped" and the new piping system was installed and tested. A concrete slab was then placed atop the tank pit of the two new tanks. The project area was now ready for final site grading and the installation of the asphalt surfacing.



A "Concrete Slab" was poured atop the Tank Pit of the two new USTs

#### **Summation**

The Senior Environmental Professional Engineer, George Webster, P.E., and Mr. Kevin Wilkerson, a WA State UST Decommissioner and Head of Northwest Environmental Solutions, Inc. (NES), are pleased to submit this "Interim Report" related to the following matters: 1) the planned Decommissioning of five Underground Storage Tanks (USTs), (together with the "unplanned Decommissioning" of a sixth "Surprise" UST); 2) the Site Assessments of soils to define petroleum hydrocarbon soil contamination; and the necessary Soil Remedial Actions of removal and proper disposal of petroleum hydrocarbon contaminated soils within "the Revised Cleanup Area" in excess of the Washington State Model Toxics Control Act (MTCA) Method "A" Cleanup Levels for Unrestricted Land Uses; from the at the Short Stop#7 Gasoline Station and convenience store, located at 207 West First Street in Cle Elum, Washington 98922. Future "Clean-up" efforts of the "Surprise Tank" contamination area, adjacent to, and southeast of the cleaned "Revised Cleanup Area" will be scheduled in the future.

Mr. Kevin Wilkerson directed all the Decommissioning activities, while Mr. George Webster, P.E., directed and performed the UST Site Assessments and directed Remedial Cleanup Actions of removal of petroleum hydrocarbon contaminated soil in excess of MTCA Method "A" Cleanup Levels. Soil samples were analyzed by the on-site mobile laboratory of Libby Environmental Inc. Evaluation the soils utilizing a hand-held photo-ionization detector (PID) instrument, together with results obtained from the on-site laboratory analytical tests allowed the contaminated soils to be chased and excavated from the UST Pit Nest and adjacent contaminated areas of the "Revised Cleanup Area".

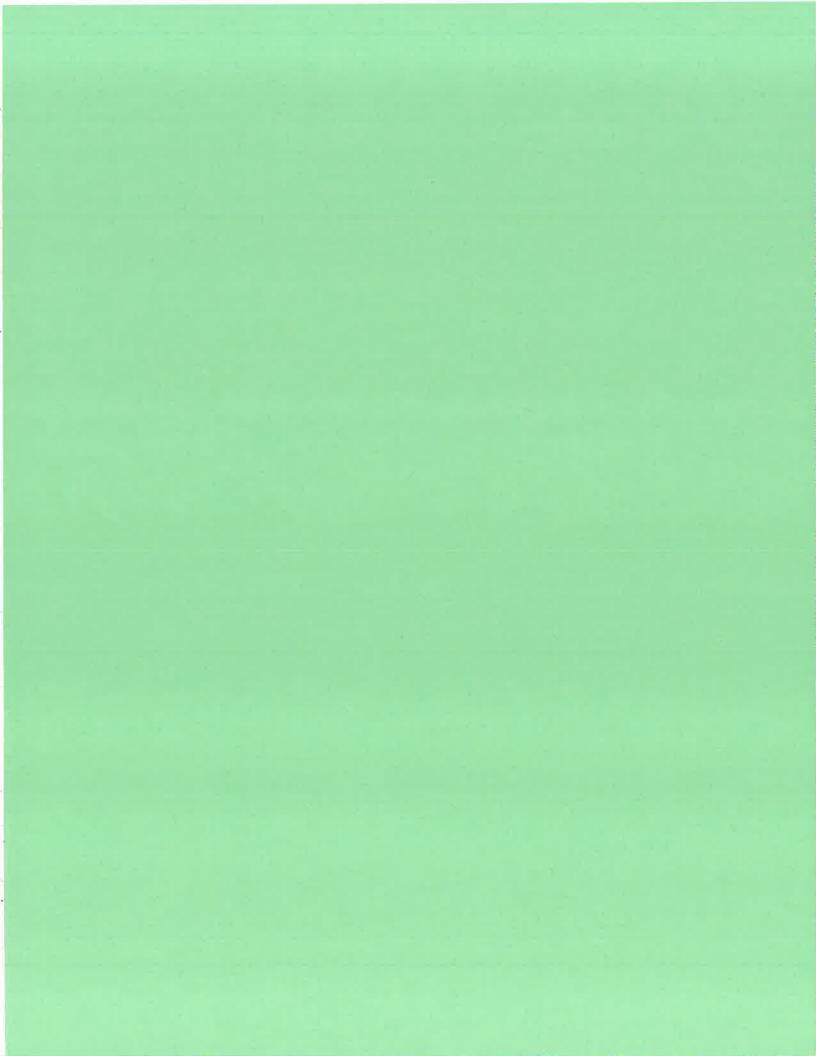
Whereas the original "goal" of this Cleanup Action was to enable the request, in the near future, a "No Further Action" (NFA) determination letter from the Washington State Department of Ecology. That "goal" was required to be changed, just as the site clean-up effort was nearing completion, because of: 1) the "surprise" discovery of an ""old" leaking Gasoline UST, located to the southeast of the UST Pit Nest; and 2) sampling test results for both Diesel and Gasoline in excess of the MTCA Cleanup Standards level of the soils beneath the four fuel dispensers on the Pump Island.

The timing of the original operational plan was to clean-up the site, install the new tanks and piping, and obtain asphalt paving of the work area so that the Gasoline Station and Sandwich Shop could reopen before the end of October closure of the local asphalt plant. BUT, based on the additional operational time that would be required to satisfactorily clean-up the unplanned "Surprise Tank contamination area", the owner, Mr. Jhuty, determined that total site clean-up could not be addressed and completed within the allowable time remaining before the shutdown of the Asphalt Plant. Therefore, because all petroleum hydrocarbon contaminated soils in excess of MTCA Method "A" Cleanup Levels have NOT been successfully removed from this Short Stop #7 site, a Department of Ecology "No Further Action" letter shall not now be requested, and future continuations of necessary required Cleanup Actions shall be scheduled. These Remedial Cleanup Actions of removal of petroleum hydrocarbon contaminated soil by excavation from within the contaminated USTs Pit Nest and the adjacent "chased" contamination areas, produced a total of two thousand and seventy two (2,072) tons of Waste Soil, which were trucked in seventy-six (76) truckloads, to the Waste Management landfill facility in Wenatchee, Washington for disposal.

Should anyone have questions related to any aspect of these actions contained within this Report, please contact Mr. Wilkerson or myself directly. Sincerely;

George R. Webster, P.E.

12-16-15



### **APPENDII**

Libby Environmental Inc. Lab Test Reports



4139 Libby Road NE · Olympia, WA 98506-2518

September 22, 2015

George Webster 207 West 1<sup>st</sup> Street Cle Elum, WA 98922

Dear Mr. Webster:

Please find enclosed the analytical data report for the Short Stop #7 UST Demo & Clean Up Project located in Cle Elum, Washington.

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

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

Sincerely,

Sherry L. Chilcutt Senior Chemist

4139 Libby Road NE Olympia, WA 98506

Phone: (360) 352-2110 FAX: (360) 352-4154

Email: libbyenv@aol.com

SHORT STOP #7 UST DEMO & CLEAN UP PROJECT

George Webster Cle Elum, Washington Libby Project # L150914-30 Client Project # WEB-15-5

## Volatile Aromatic Compounds by EPA Method 8260C & Gasoline by NWTPH-Gx in Soil

Sample Description		Method	G2-2	G3-1	D1	D2	Small
		Blank					CPS-1
Date Sampled	Reporting	N/A	9/14/15	9/14/15	9/14/15	9/14/15	9/14/15
Date Analyzed	Limits	9/14/15	9/14/15	9/14/15	9/14/15	9/14/15	9/14/15
•	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
							_
Benzene	0.02	nd	51	25	0.39	0.061	nd
Toluene	0.1	nd	13	30	0.64	0.68	nd
Ethylbenzene	0.03	nd	186	64	4.7	0.27	nd
Total Xylenes	0.1	nd	934	252	31	3.5	nd
Gasoline	10	nd	9030	12000	1590	79	nd
Surrogate Recovery							
Dibromofluoromethane		109	115	114	117	111	102
1,2-Dichloroethane-d4		76	85	81	86	79	65
Toluene-d8		98	97	98	98	96	101
4-Bromofluorobenzene		106	112	111	118	108	107

<sup>&</sup>quot;nd" Indicates not detected at listed detection limit.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATES: 65% TO 135%

<sup>&</sup>quot;int" Indicates that interference prevents determination.

4139 Libby Road NE Olympia, WA 98506

Phone: (360) 352-2110 FAX: (360) 352-4154

Email: libbyenv@aol.com

SHORT STOP #7 UST DEMO & CLEAN UP PROJECT

George Webster

Cle Elum, Washington

Libby Project # L150914-30

Client Project # WEB-15-5

## Volatile Aromatic Compounds by EPA Method 8260C & Gasoline by NWTPH-Gx in Soil

Sample Description		Small	Waste P S-	
2		CPS-1	1	
		Dup		
Date Sampled	Reporting	9/14/15	9/14/15	
Date Analyzed	Limits	9/14/15	9/14/15	
	(mg/kg)	(mg/kg)	(mg/kg)	
Benzene	0.02	nd	13	
Toluene	0.1	nd	4.0	
Ethylbenzene	0.03	nd	42	
Total Xylenes	0.1	nd	317	
Gasoline	10	nd	3300	
Surrogate Recovery				
Dibromofluoromethane		104	110	
1,2-Dichloroethane-d4		80	81	
Toluene-d8		92	98	
4-Bromofluorobenzene		92	108	

<sup>&</sup>quot;nd" Indicates not detected at listed detection limit.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATES: 65% TO 135%

<sup>&</sup>quot;int" Indicates that interference prevents determination.

4139 Libby Road NE Olympia, WA 98506

Phone: (360) 352-2110 FAX: (360) 352-4154

Email: libbyenv@aol.com

SHORT STOP #7 UST DEMO & CLEAN UP PROJECT

George Webster Cle Elum, Washington Libby Project # L150914-30 Client Project # WEB-15-5

### QA/QC Data - EPA 8260C Analyses

×		Sample Idea	ntification:	Small CPS			
<u> </u>		Matrix Spike			x Spike Dup	licate	RPD
		Maurx Spike		Iviaui	x Spike Dup	meate	KID
	Spiked Conc.	Measured Conc.	Spike Recovery	Spiked Conc.	Measured Conc.	Spike Recovery	
	(mg/kg)	(mg/kg)	(%)	(mg/kg)	(mg/kg)	(%)	
Benzene	0.50	0.46	92	0.50	0.47	94	2.15
Toluene	0.50	0.61	122	0.50	0.68	136	10.85
Surrogate Recovery							
Dibromofluoromethane			110			112	
1,2-Dichloroethane-d4			78			78	
Toluene-d8			98			98	
4-Bromofluorobenzene			99			94	

	Laboratory	Control Sai	mple
	Spiked Conc. (mg/kg)	Measured Conc. (mg/kg)	Spike Recovery (%)
Benzene Toluene	0.50 0.50	0.44 0.45	88 90
Surrogate Recovery			
Dibromofluoromethane			108
1,2-Dichloroethane-d4			78
Toluene-d8			100
4-Bromofluorobenzene			81

ACCEPTABLE RECOVERY LIMITS FOR MATRIX SPIKES: 65%-135% ACCEPTABLE RPD IS 35%

4139 Libby Road NE Olympia, WA 98506

Phone: (360) 352-2110 FAX: (360) 352-4154

Email: libbyenv@aol.com

SHORT STOP #7 UST DEMO & CLEAN UP PROJECT

George Webster Cle Elum, Washington Libby Project # L150914-30 Client Project # WEB-15-5

### Analyses of Gasoline (NWTPH-Gx) & BTEX (EPA Method 8021B) in Soil

Sample	Date	Benzene	Toluene	Ethylbenzene	DK 5/2991 - 101	Gasoline	2523 550,200,000
Number	Analyzed	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	Recovery (%)
Method Blank	9/14/15	nd	nd	nd	nd	nd	103
LCS	9/14/15	107%	97%				105
G1	9/14/15	8.3	6.1	19	71 E	5960 E	121
G2-1	9/14/15	4.3	25	30	96 E	7670 E	105
Large CPS-1	9/14/15	0.25	0.52	0.35	2.8	70	92
Large CPS-1 Dup	9/14/15	0.23	0.61	0.22	2.5	57	93
Large CPS-1 Dup MS	9/14/15	96%	110%				90
Large CPS-1 Dup MSD	9/14/15	112%	103%				93
Practical Quantitation Li	mit	0.02	0.10	0.05	0.15	10	

<sup>&</sup>quot;E" Reported result is an estimate because it exceeds the calibration range.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Trifluorotoluene): 65% TO 135%

ANALYSES PERFORMED BY: Kodey Eley

<sup>&</sup>quot;nd" Indicates not detected at the listed detection limits.

<sup>&</sup>quot;int" Indicates that interference prevents determination.

4139 Libby Road NE Olympia, WA 98506

Phone: (360) 352-2110

FAX: (360) 352-4154

Email: libbyenv@aol.com

SHORT STOP #7 UST DEMO & CLEAN UP PROJECT

George Webster

Cle Elum, Washington

Libby Project # L150914-30

Client Project # WEB-15-5

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

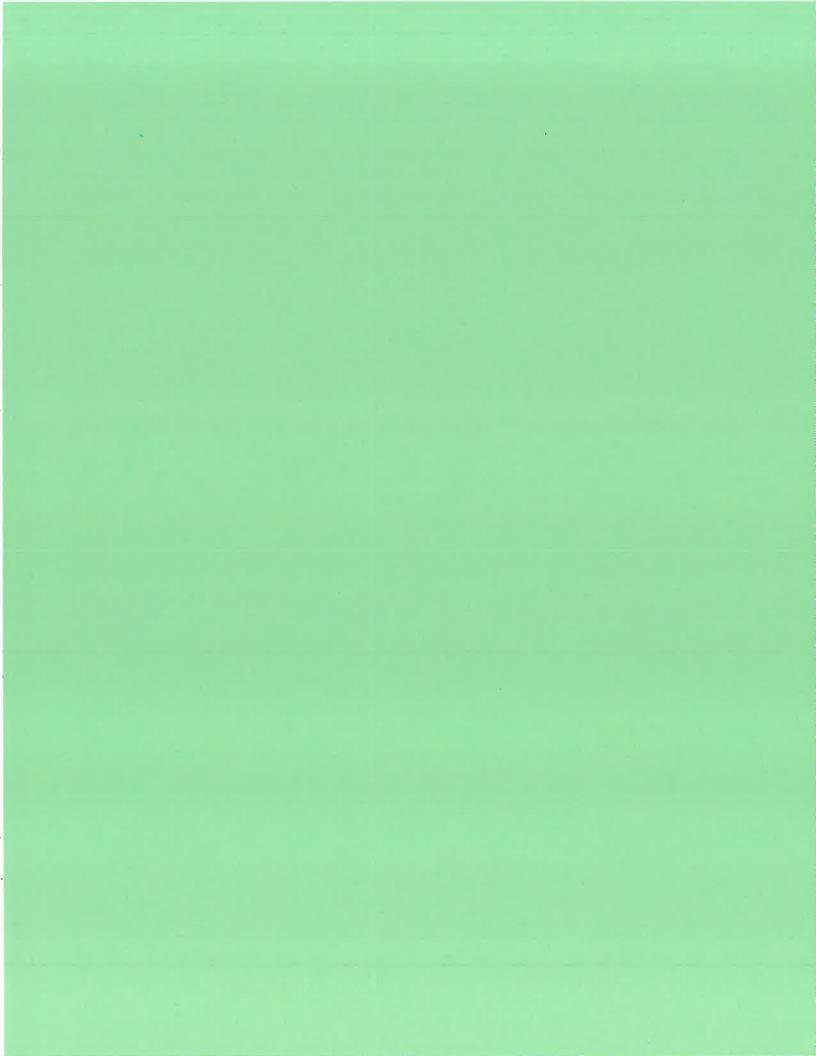
Sample	Date	Surrogate	Diesel	Oil
Number	Analyzed	Recovery (%)	(mg/kg)	(mg/kg)
Method Blank	9/14/15	100	nd	nd
G1	9/14/15	int	222	nd
G2-1	9/14/15	int	428	nd
G2-2	9/14/15	int	2790	nd
G3-1	9/14/15	int	272	nd
D1	9/14/15	104	nd	nd
D2	9/14/15	int	517	nd
Small CPS-1	9/14/15	117	nd	nd
Large CPS-1	9/14/15	107	nd	nd
Large CPS-1 Dup	9/14/15	119	nd	nd
Waste P S-1	9/14/15	int	1110	nd
Practical Quantitation Lin	mit		50	100

<sup>&</sup>quot;nd" Indicates not detected at the listed detection limits.

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

<sup>&</sup>quot;int" Indicates that interference prevents determination.

www.LibbyEnvironmental.com	1 0 1	WST DEMOT COL	City, State: W.A.	Collection THUR + 1-AP	1-6 + do- b mop 1	Field Notes	-										3			av.		•		Remarks:	35		71.1	TAT: 24HR 48HR 5-DAY Distribution: White - Lab, Yellow - File, Pink - Originator
p.	1.5 Page:	STOPH	EL Um City, Stat	15855	E-White answidon	\$1616 M. S. 1616 S. 16																		Sample Receipt	Good Condition? Y N	Temp. °C	Seals Intact? Y N N/A	Containers
Chain of Custody Record	Date: 9-14-	のせい	177	V	Email: gandal	CLO INDO SOLIDAN SOLID	×								<b>&gt;</b>									Date/Time	SM/1 9/14/15	Date / Time		Date / Hitte
Chain	10 George Wiebster	TW.	14 Zip: 98922			Sample Container Type	1-40,5	7		/	15 4nt	-	5	477485+15K	1 14ge									Received by /	In	Received by:		RECEIVED DY. s to pay the costs of collection including court costs and to
Libby Environmental, Inc.	Ph: 360-352-2110 Fax: 360-352-4154	7-F1RST 5	Lum State: U	542-2218 Fax:	WEB 15-5	Depth	877 9	CH10-84	8 110-109	4pt 10-130	Pur 11 09-34	Put 149-3	P3-1 1st 11-48	1 1st 11-430	5-1 14 11-52	Mas							(	Date / Time	Mostle 9	Date / Time	i.	Neceived by:  EGAL ACTION CLAUSE in the event of definal of payment sorter blaue to pay. Clenit agrees to pay the cests of collection including co
Libby Envir	4139 Libby Road NE Olympia, WA 98506 Client:	Address: 2.0 *	City: OCSS	Phone: 206-	Client Project # 6	Sample Number	161-	2 G2-1	3 62-2	4 G3-1	5 D1	6 P2	1 Sulla	8 29 CPS	9 Waster	10 21 con 1	11	12	13	14	15	16	17 /	Relinguished by:	Theory	Relinquished by:		Reminduished by. LEGAL ACTION CLAUSE In the event





4139 Libby Road NE • Olympia, WA 98506-2518

September 22, 2015

George Webster 207 West 1<sup>st</sup> Street Cle Elum, WA 98922

Dear Mr. Webster:

Please find enclosed the analytical data report for the Short Stop #7 UST Demo & Clean Up Project located in Cle Elum, Washington.

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

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

Sincerely.

Sherry L. Chilcutt
Senior Chemist

Libby Environmental, Inc.

Shy & Unx

4139 Libby Road NE Olympia, WA 98506

Phone: (360) 352-2110 FAX: (360) 352-4154

Email: libbyenv@aol.com

SHORT STOP #7 UST DEMO & CLEAN UP PROJECT

George Webster

Cle Elum, Washington

Libby Project # L150915-30

Client Project # WEB-15-5

### Analyses of Gasoline (NWTPH-Gx) & BTEX (EPA Method 8021B) in Soil

Sample	Date	Benzene	Toluene	Ethylbenzene	Xylenes	Gasoline	Surrogate
Number	Analyzed	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	Recovery (%)
Method Blank	9/15/15	nd	nd	nd	nd	nd	133
LCS	9/15/15	106%	100%				129
Waste Pile #1	9/15/15	16 E	19 E	17 E	84 E	1980 E	111
Waste Pile #2	9/15/15	43 E	41 E	13 E	129 E	2330 E	117
Waste Pile #3	9/15/15	11	11	19 E	111 E	3020 E	104
Waste Pile #3 Dup	9/15/15	11	12	22 E	113 E	3110 E	108
Waste Pile #3 MS	9/15/15	72%	85%				110
Practical Quantitation	Limit	0.02	0.10	0.05	0.15	10	

<sup>&</sup>quot;E" Indicates value is an estimate because it exceeds the calibration range.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Trifluorotoluene): 65% TO 135%

<sup>&</sup>quot;nd" Indicates not detected at the listed detection limits.

<sup>&</sup>quot;int" Indicates that interference prevents determination.

4139 Libby Road NE Olympia, WA 98506

Phone: (360) 352-2110

FAX: (360) 352-4154

Email: libbyenv@aol.com

SHORT STOP #7 UST DEMO & CLEAN UP PROJECT

George Webster

Cle Elum, Washington

Libby Project # L150915-30

Client Project # WEB-15-5

### Hydrocarbon Identification by NWTPH-HCID for Soil

Sample	Date	Surrogate	Gasoline	Diesel	Oil
Number	Analyzed	Recovery (%)	(mg/kg)	(mg/kg)	(mg/kg)
Method Blank	9/15/15	110	nd	nd	nd
New Clean Pile #1	9/15/15	116	nd	nd	nd
New Clean Pile #2	9/15/15	79	nd	nd	nd
New Clean Pile #3	9/15/15	74	nd	nd	nd
New Clean Pile #3 Dup	9/15/15	78	nd	nd	nd
-					
Practical Quantitation Limit	t		20	50	100

<sup>&</sup>quot;nd" Indicates not detected at listed detection limits.

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

<sup>&</sup>quot;D" Indicates detected above the listed detection limit.

<sup>&</sup>quot;int" Indicates that interference prevents determination.

4139 Libby Road NE Olympia, WA 98506

Phone: (360) 352-2110

FAX: (360) 352-4154

Email: libbyenv@aol.com

SHORT STOP #7 UST DEMO & CLEAN UP PROJECT

George Webster

Cle Elum, Washington

Libby Project # L150915-30

Client Project # WEB-15-5

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

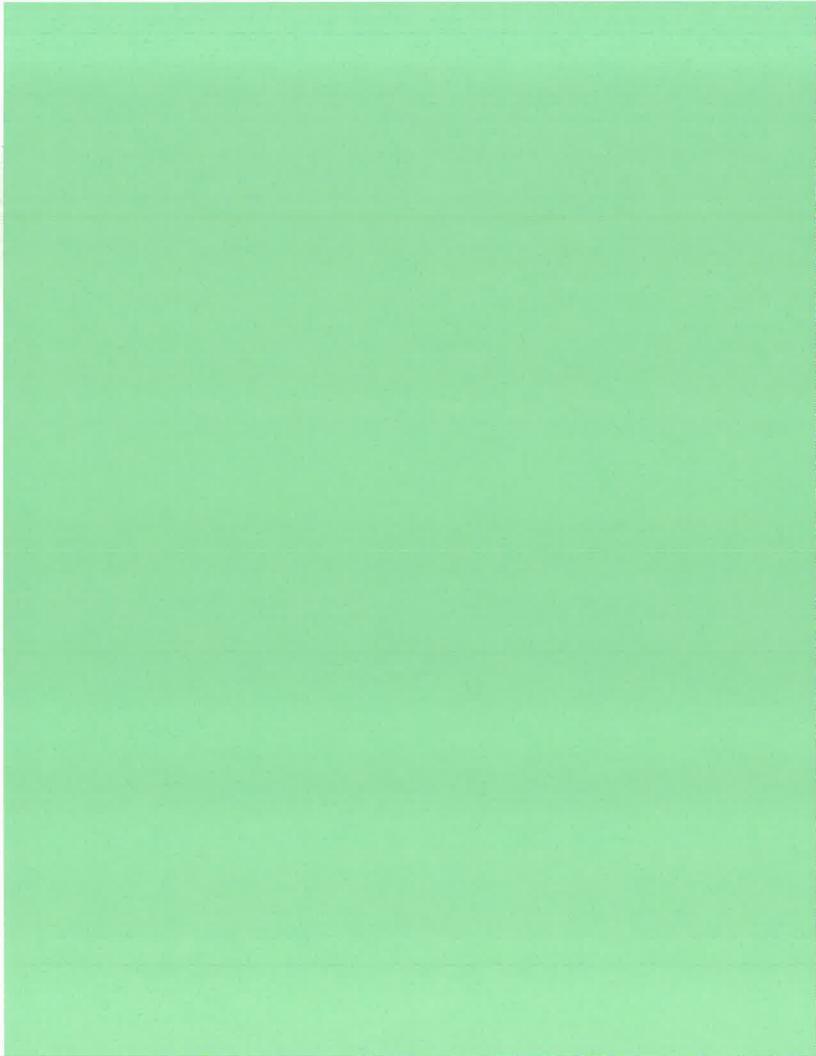
Sample	Date	Surrogate	Diesel	Oil
Number	Analyzed	Recovery (%)	(mg/kg)	(mg/kg)
Method Blank	9/15/15	110	nd	nd
Waste Pile #1	9/15/15	115	nd	nd
Waste Pile #2	9/15/15	103	nd	nd
Waste Pile #3	9/15/15	int	206	nd
Waste Pile #3 Dup	9/15/15	132	205	nd
Practical Quantitation La	imit		50	100

<sup>&</sup>quot;nd" Indicates not detected at the listed detection limits.

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

<sup>&</sup>quot;int" Indicates that interference prevents determination.

	na reasonable. Barney fees to be determined by a cost of any	press to pay the costs of collection inpluding court costs un	coursed and or district to pay. Closif as	EGAL ACTION CLAUSE IN THI EVENT OF CHIRMS OF
Seals Intact? Total Number of Containers	Date / Time	Received by:	Date / Time	Relinquished by:
Cold?	i c		ļ	
Good Condition?	Date / Time	Received by:	Date / Time	Relinquished by:
Sample Receipt:	9/15/15 Date / Time	In	M	Lerry Just
				17
				16
				15
				14
				13
				12
				11
				10
				0
				80
			21	7
	×	2 Vans 5		
	×	2 VUL 5		5NEW Cloun Pilott
	X	2 Mas J		EWGean
	X X	5 17		
	XXX			21/asto Dilo #2
	×	Jan 5		1 Waste Pile #
	W W W 85 67	Type		Sample Number
to the	15 14 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Container		TAYAB WWO OO NOON
	1 9	si		B TY
white Omsn.com	Email: gandalf -	5-5	3 WER 15	Client Project # ***********************************
			542-2218 Fax	
	Location: Cle Elun	9897	State:	/mw
# 7	Project Name: Short		ist St. W	Address: 201 F
	Date:	154	Fax: 360-352-4	, WA 98506
		110	Ph: 360-352-2	1139 Libby Road NE
р	n of Custody Recor	Chair	nental, Inc.	Libby Environmental, Inc.
	be ter best by the	be ter best by the	Chain of Custody Record   Project Manager   George Usebst	Sample Container Collector: George Webster Final Type York of the Sample Received by:  Sample Container Collector: Cearge Webster Final Type York of Sample Container Collector: Cearge Webster Final Type York of Sample Receipt: Trans.  Received by: Date / Time Sample Receipt: Trans. S





4139 Libby Road NE · Olympia, WA 98506-2518

September 22, 2015

George Webster 207 West 1<sup>st</sup> Street Cle Elum, WA 98922

Dear Mr. Webster:

Please find enclosed the analytical data report for the Short Stop #7 UST Demo & Clean Up Project located in Cle Elum, Washington.

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

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

Sincerely,

Sherry L. Chilcutt Senior Chemist

4139 Libby Road NE Olympia, WA 98506

Phone: (360) 352-2110 FAX: (360) 352-4154

Email: libbyenv@aol.com

SHORT STOP #7 UST DEMO & CLEAN UP PROJECT

George Webster
Cle Elum, Washington
Libby Project # L150916-30
Client Project # WEB-15-5

### Analyses of Gasoline (NWTPH-Gx) & BTEX (EPA Method 8021B) in Soil

Sample	Date	Benzene	Toluene	Ethylbenzene	Xylenes	Gasoline	Surrogate
Number	Analyzed	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	Recovery (%)
Method Blank	9/16/15	nd	nd	nd	nd	nd	89
LCS	9/16/15	105%	110%				91
NW Test Pit 10'	9/16/15	0.38	2.0	4.3	5.8	404	83
East Central Pot Hole	9/16/15	2.0	1.4	5.5	12	2270	87
Pit Bottom 1'	9/16/15	2.2	0.60	0.80	2.3	178	78
Pit Bottom 4'	9/16/15	4.2	3.7	5.5	29	650	125
Pit Bottom 4' Dup	9/16/15	15	13	27	88	1930	int
Pond West Edge Ctr 8'	9/16/15	0.57	0.37	0.35	2.5	90	91
Pond West Edge Ctr 9'	9/16/15	0.078	< 0.2	< 0.1	0.86	126	88
Pond West Edge Ctr 9' MS	9/16/15	122%	88%				91
Pond West Edge Ctr 9' MSD	9/16/15	113%	79%				85
Practical Quantitation Limit		0.02	0.10	0.05	0.15	10	

<sup>&</sup>quot;nd" Indicates not detected at the listed detection limits.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Trifluorotoluene): 65% TO 135%

<sup>&</sup>quot;int" Indicates that interference prevents determination.

4139 Libby Road NE Olympia, WA 98506

Phone: (360) 352-2110

FAX: (360) 352-4154

Email: libbyenv@aol.com

SHORT STOP #7 UST DEMO & CLEAN UP PROJECT

George Webster

Cle Elum, Washington

Libby Project # L150916-30

Client Project # WEB-15-5

### Analyses of Diesel (NWTPH-Dx) in Soil

Sample	Date	Surrogate	Diesel
Number	Analyzed	Recovery (%)	(mg/kg)
Method Blank	9/16/15	101	nd
NW Test Pit 10'	9/16/15	89	nd
East Central Pot Hole	9/16/15	96	nd
Pit Bottom 1'	9/16/15	82	nd
Pit Bottom 4'	9/16/15	99	nd
Pit Bottom 4' Dup	9/16/15	97	nd
Pond West Edge Ctr 8'	9/16/15	76	nd
Pond West Edge Ctr 9'	9/16/15	112	nd
_			
Practical Quantitation Limit			25

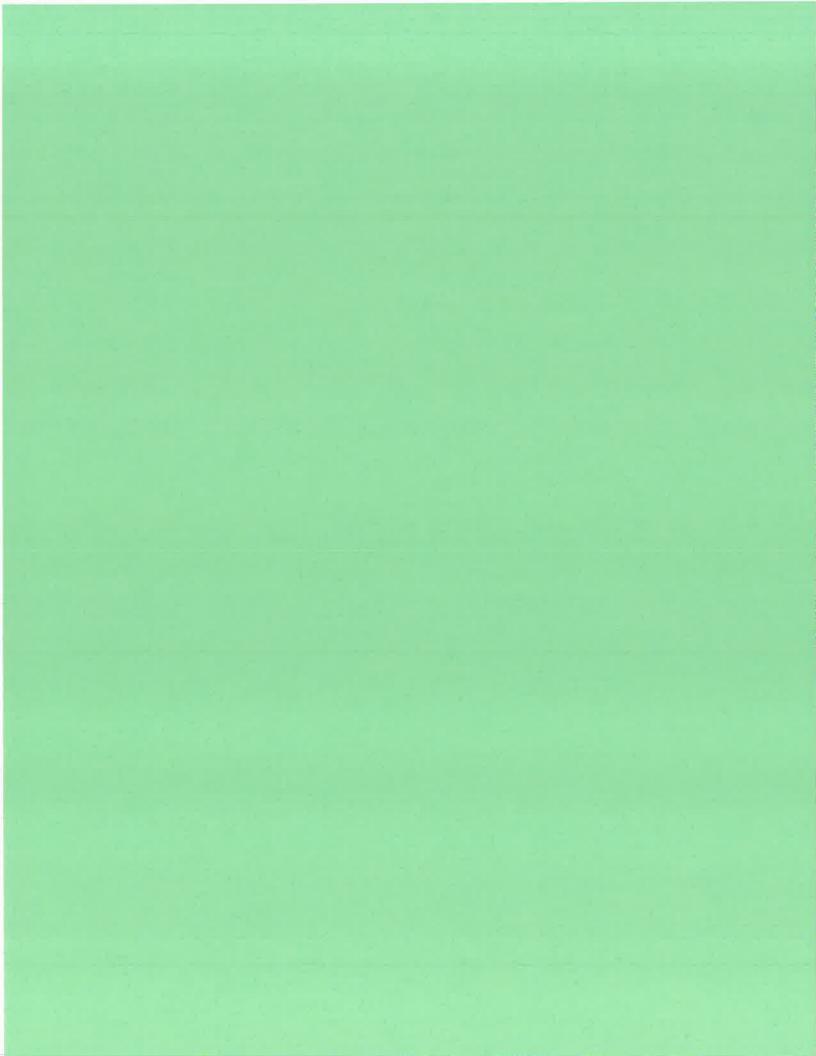
<sup>&</sup>quot;nd" Indicates not detected at the listed detection limits.

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

<sup>&</sup>quot;int" Indicates that interference prevents determination.

_																										_	_	_		į.
www.LibbyEnvironmental.com	of		no e cleun up		Date of Collection: 9/16/15			Field Notes	×															397		Remarks:	2	7-	TAT: 24HR 48HR 5-DAY	Distribution: White - Lab Yellow - File Pink - Originator
	Page:	ter	UST Demo	City, State:	Date of C	msn.com	\$10.00 m	10 250 SIN											- 21								٠,	Y N/A		SIO O
		40 Webster	9	,	as ter	(9)	1/30	00 80 0 14 16 8 16 16 16 16 16 16 16 16 16 16 16 16 16																81		Sample Receipt	Good Conditions	Seals Intact?	Total Number of Containers	
Chain of Custody Record	5/19	ger: George	hon	cle Elum	Collector: George Webs ter	gandalf-white @	tore	STAN S		7																./ Time	Date / Time			semanted by a coul of law.
of Custod	Date: 9/16/15	Project Manager:	Project Name:	Location:	Collector: 6	Email:	1/3	6 10 10 10 10 10 10 10 10 10 10 10 10 10	×	X X Z	XXX	メイン	ヘーメス	XXX												1 olici	10/1/0			court and masonable attorney less to be determined by a could be
Chain (				77				181			\ \ \ \ \ \	2	· ·	( )												6	1			I٠
				989				Container Type	15ax, 2 Vocs	11, 1	27	ני	) 1	7.7												Reported by	/Received DV		Received by:	the of and and and are a section
	.2110 .4154			WA Zip			2	Sample Type		5	ካ	5	5	5												30	Pm	<i>\_</i>		social vento to separate
II, Inc.	Ph: 360-352-2110 Fax: 360-352-4154	+61	5t. W	State:	Fax:	15-15		h Time		1220	1:00	04:1	05:50	3:00								-				Date / Time	Date / Time		Date / Time	or failure to day Chart
menta		Webster	4157		8172-	IEB-		Depth	01	e	<u>`</u>	4	× 8	6			-									1.9 %			Δ	of previous and by
Libby Environmental, Inc.	oad NE 98506	PUTGE	-	c Elum	206-542-	Z # 12	4 · 7 V	Sample Number	1 NW Test Pit 10	Alta Bothde	Botton 1	Botton 4	VestElectr	West Educar9												21/4			oy:	ESS SOTTON TAILS IN the example of default of example failure for the Case process to not the rest of reflamment on the Case
Libby E	4139 Libby Road NE Olympia, WA 98506	Client: Georg	Address: 7	City: Cl	Phone: 20	Client Project #	T. EN	Sample	1 NW Te	2 East Central	3 P.+ B	4 Pi+B	5Pm/Ve	6	7	80	6	10	11	12	13	14	15	16	17	Relinglished by:	Relinquished by:	-	Relinquished by:	PERSON ACTION CLASS

利





4139 Libby Road NE • Olympia, WA 98506-2518

September 22, 2015

George Webster 207 West 1<sup>st</sup> Street Cle Elum, WA 98922

Dear Mr. Webster:

Please find enclosed the analytical data report for the Short Stop #7 UST Demo & Clean Up Project located in Cle Elum, Washington.

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

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

Sincerely,

Sherry L. Chilcutt Senior Chemist

4139 Libby Road NE Olympia, WA 98506

Phone: (360) 352-2110

FAX: (360) 352-4154 Email: libbyenv@aol.com

SHORT STOP #7 UST DEMO & CLEAN UP PROJECT

George Webster

Cle Elum, Washington Libby Project # L150917-30

Client Project # WEB-15-5

#### Analyses of Gasoline (NWTPH-Gx) & BTEX (EPA Method 8021B) in Soil

Sample	Date	Benzene	Toluene	Ethylbenzene	Xylenes	Gasoline	Surrogate
Number	Analyzed	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	Recovery (%)
Method Blank	9/17/15	nd	nd	nd	nd	nd	92
LCS	9/17/15	134%	98%				99
Pit Bottom NW Crnr 9'	9/17/15	134 E	75 E	281 E	1030 E	20200 E	int
Pit Bottom NW Crnr 9' Dup	9/17/15	103	60	220 E	833 E	16100	121
Pit NW Crnr Bot 16'	9/17/15	0.028	nd	nd	0.21	7.5 J	94
Dup 1	9/17/15	0.028	nd	nd	0.26	12	99
NWW Pit Crnr 9'	9/17/15	D	D	D	D	D	int
Dup 1 MS	9/17/15	123%	99%				89
Dup 1 MSD	9/17/15	119%	109%				90
•							
Practical Quantitation Limit		0.02	0.10	0.05	0.15	10	

<sup>&</sup>quot;D" Indicates analyte was detected but impacted by high levels of diesel.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Trifluorotoluene): 65% TO 135%

<sup>&</sup>quot;E" Indicates value is an estimate because it exceeds the calibration range.

<sup>&</sup>quot;J" Indicates analyte was positively identified but is below the PQL.

<sup>&</sup>quot;nd" Indicates not detected at the listed detection limits.

<sup>&</sup>quot;int" Indicates that interference prevents determination.

4139 Libby Road NE Olympia, WA 98506

Phone: (360) 352-2110

FAX: (360) 352-4154

Email: libbyenv@aol.com

SHORT STOP #7 UST DEMO & CLEAN UP PROJECT

George Webster

Cle Elum, Washington

Libby Project # L150917-30

Client Project # WEB-15-5

#### Analyses of Diesel (NWTPH-Dx) in Soil

Sample	Date	Surrogate	Diesel
Number	Analyzed	Recovery (%)	(mg/kg)
Method Blank	9/17/15	91	nd
Pit Bottom NW Crnr 9'	9/17/15	int	nd
Pit Bottom NW Crnr 9' Dup	9/17/15	int	nd
Pit NW Crnr Bot 16'	9/17/15	78	nd
Dup 1	9/17/15	93	nd
NWW Pit Crnr 9'	9/17/15	int	13600 E
NWW Pit Crnr 9' Dup	9/17/15	int	11700 E
Practical Quantitation Limit			25

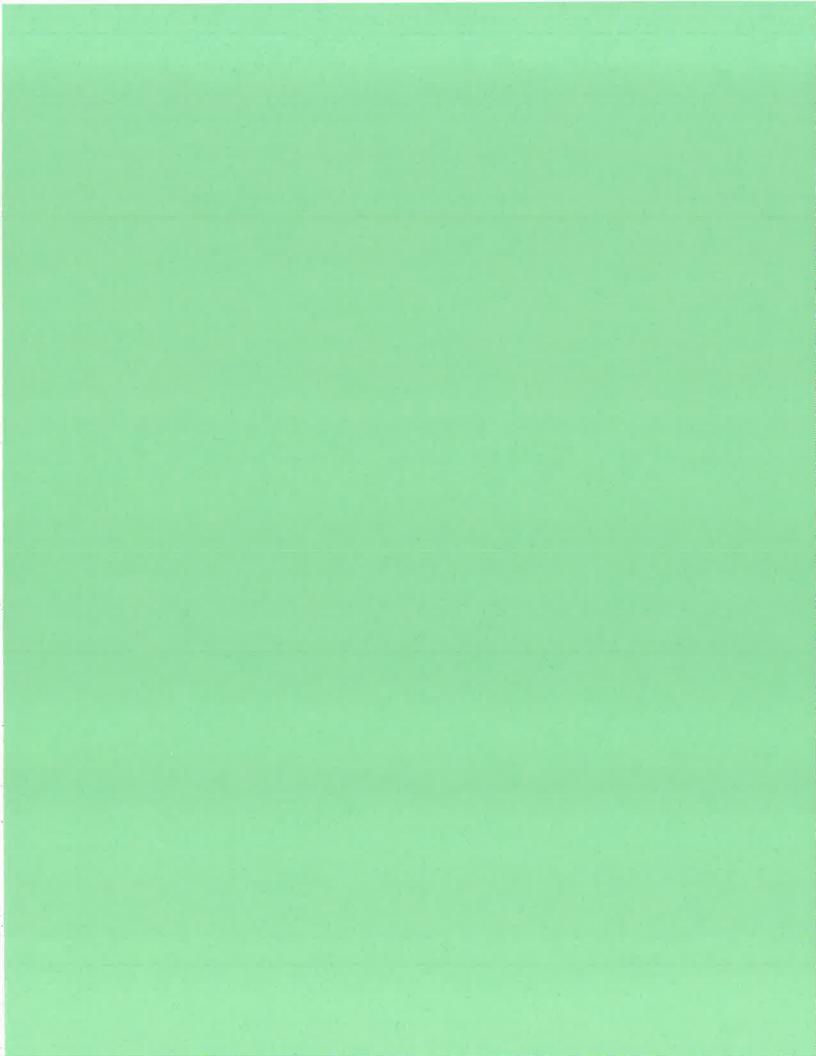
<sup>&</sup>quot;E" Indicates value is an estimate because it exceeds the calibration range.

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

<sup>&</sup>quot;nd" Indicates not detected at the listed detection limits.

<sup>&</sup>quot;int" Indicates that interference prevents determination.

Selenis Solvinos Solv	Signature Color Co				Sample Receipt  Seals Intact?  You wanted to the seal of the seal
	A X X SPICE CO	Cana Bolina Cica Color Indiana A A A A A A A A A A A A A A A A A A	Cooperation of the state of the	CORPAN A A A A A A A A A A A A A A A A A A	A A Serial Parish Condition?  Date / Time  Date / Time  Containers  Containers  Containers  Containers  Containers  Containers
C ( 3	C (	Cas Hara And	Class Society Control of the Control	Classific Action of the Control of t	Date / Time Total
×××× ××××	×××* ×××*				Date / Time Sample  Seals Intact?  Date / Time Temp.  Seals Intact?  Date / Time Total Number of Containers
XX	XX				Date / Time Sample Receipt Good Condition? Y Date / Time Temp.  Seals Intact? Y N Seals Intact? Y N Containers
X	×			*	Date / Time Sample Receipt Good Condition? Y Good Condition? Y Seals Intact? Y N Seals Intact? Y N Containers
					Sample Receipt Good Condition? Y N Temp. °C Seals Intact? Y N N/A Total Number of Containers
					Sample Receipt Good Condition? Y N Temp. °C Seals Intact? Y N V/A Total Number of Containers
					Sample Receipt Good Condition? Y N Temp. °C Seals Intact? Y N N/A Total Number of Containers
					Sample Receipt Good Condition? Y N Temp. °C Seals Intact? Y N N/A Total Number of Total Number of
					Sample Receipt Good Condition? Y N Temp. °C Seals Intact? Y N N/A Total Number of Total Number of
					Sample Receipt Good Condition? Y N Temp. °C Seals Intact? Y N N/A Total Number of
					Sample Receipt Good Condition? Y N Temp. °C Seals Intact? Y N N/A Total Number of Total Number of
Tipe Sample Receipt	Tipe Sample Receipt	Tipe Sample Receipt	Tipe Sample Receipt		Seals Intact? Y N N/A Total Number of
Tipe Sample Receipt Good Condition? Y N	Tipe Sample Receipt Good Condition? Y N	Tipe Sample Receipt Good Condition? Y N	Sample Receipt  Good Condition? Y N	>	Total Number of Containers
Time Sample Receipt Good Condition? Y N Time Condition? Y N Seals Intact? Y N N/A	Time Sample Receipt Good Condition? Y N Time Temp. °C	Tipe Sample Receipt Rema  Good Condition? Y N  Time Temp. °C  Seals Intact? Y N N/A	Time Sample Receipt Rema	Time Temp. °C	





4139 Libby Road NE • Olympia, WA 98506-2518

September 22, 2015

George Webster 207 West 1<sup>st</sup> Street Cle Elum, WA 98922

Dear Mr. Webster:

Please find enclosed the analytical data report for the Short Stop #7 UST Demo & Clean Up Project located in Cle Elum, Washington.

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

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

Sincerely,

Sherry L. Chilcutt
Senior Chemist

4139 Libby Road NE Olympia, WA 98506

Phone: (360) 352-2110 FAX: (360) 352-4154

Email: libbyenv@aol.com

SHORT STOP #7 UST DEMO & CLEAN UP PROJECT

George Webster Cle Elum, Washington Libby Project # L150918-30 Client Project # WEB-15-5

### Analyses of Gasoline (NWTPH-Gx) & BTEX (EPA Method 8021B) in Soil

Sample	Date	Benzene	Toluene	Ethylbenzene	Xylenes	Gasoline	Surrogate
Number	Analyzed	140	(mg/kg)		(mg/kg)	(mg/kg)	Recovery (%)
Method Blank	9/18/15	nd	nd	nd	nd	nd	84
LCS	9/18/15	106%	96%				101
Ctr Pit 9'	9/18/15	7.9	2.9	11 E	47 E	1060	131
Ctr Pit 9' Dup	9/18/15	12 E	3.8	11 E	75 E	1540	97
N Ctr 9'	9/18/15	7.7	6.0	39	143	5680	int
N Ctr 11'	9/18/15	1.3	0.62	nd	24	1870	112
NE Pond Crnr 8'	9/18/15	3.1	<5	< 0.25	43	4200	95
NE Pond Crnr 11'	9/18/15	0.088	0.13	0.093	0.46	62	84
Ctr Pit 9' MS	9/18/15	80%	89%				96
Ctr Pit 9' MSD	9/18/15	86%	87%				67
Practical Quantitation Limit		0.02	0.10	0.05	0.15	10	

<sup>&</sup>quot;E" Indicates value is an estimate because it exceeds the calibration range.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Trifluorotoluene): 65% TO 135%

<sup>&</sup>quot;nd" Indicates not detected at the listed detection limits.

<sup>&</sup>quot;int" Indicates that interference prevents determination.

4139 Libby Road NE Olympia, WA 98506

Phone: (360) 352-2110

FAX: (360) 352-4154

Email: libbyenv@aol.com

SHORT STOP #7 UST DEMO & CLEAN UP PROJECT

George Webster

Cle Elum, Washington

Libby Project # L150918-30

Client Project # WEB-15-5

### Hydrocarbon Identification by NWTPH-HCID for Soil

Sample	Date	Surrogate	Gasoline	Diesel
Number	Analyzed	Recovery (%)	(mg/kg)	(mg/kg)
Method Blank	9/18/15	97	nd	nd
Asphalt & Debris #1	9/18/15	100	nd	nd
Asphalt & Debris #2	9/18/15	121	nd	nd
Asphalt & Debris #3	9/18/15	101	nd	nd
Asphalt & Debris #4	9/18/15	94	nd	nd
Practical Quantitation Lin	nit		20	50

<sup>&</sup>quot;nd" Indicates not detected at listed detection limits.

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

<sup>&</sup>quot;D" Indicates detected above the listed detection limit.

<sup>&</sup>quot;int" Indicates that interference prevents determination.

4139 Libby Road NE Olympia, WA 98506

Phone: (360) 352-2110

FAX: (360) 352-4154

Email: libbyenv@aol.com

SHORT STOP #7 UST DEMO & CLEAN UP PROJECT

George Webster

Cle Elum, Washington

Libby Project # L150918-30

Client Project # WEB-15-5

#### Analyses of Diesel (NWTPH-Dx) in Soil

Sample	Date	Surrogate	Diesel
Number	Analyzed	Recovery (%)	(mg/kg)
Method Blank	9/18/15	97	nd
Ctr Pit 9'	9/18/15	134	161
Ctr Pit 9' Dup	9/18/15	123	144
Practical Quantitation Limit			25

<sup>&</sup>quot;nd" Indicates not detected at the listed detection limits.

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

<sup>&</sup>quot;int" Indicates that interference prevents determination.

www.LibbyEnvironmental.com	/ of /		Clean up	i WA	ollection: 9/17-18/15	MSM. Com	Field Notes	Coll													e e				Remarks:			71.	TAT: 24HR 48HR 5-DAY Distribution: White - Lab. Yellow - File, Pink - Originator
	Page:	w Webster	Ep#7 US+ DOMUG		ebster Date of Collection:	Lalf-white@	10/0%																		П	Good Condition? Y N	Temp. °C	Seals Intact? Y N N/A	Total Number of Containers Dist
Chain of Custody Record	Date: 9/18/15	Project Manager: George	Project Name: Short Stop # 7	Location: Cle Eller	Collector: George Webster	Email:	Story Solver I'm Solver Solver Solver I'm So	X	×	×	×	×	×	× >	`X	×									Date / Time	EN 7/18/15 1350	Date / Time	i	Uate / Time reasonable attorney feet to be determined by a cout of law.
Chair				. Zip: 98922			Sample Container Type	Harz Man	Say	1 5ar	1 Sar	5 1 Jar	5 Isarzhous		150 2 May	1 Jar 2 Mas									20 Received of	Jan / 100 / 15	Received by!	7	Received by:  pay the contr. of collection including court costs and
mental, Inc.	Ph: 360-352-2110 Fax: 360-352-4154	bstor	チゼ	State: WA	- 2218 Fax:	EB-15-15	Deoth Time	9 4:30	11:05	2 - 1103 5	1 1107	0011	9 3:00	11 3:25 1	8 8 4:30 5	1 5:00									Time	100 C/8/2 23	Date / Time	i	Refinquished by: Date / Time Receive Received Re
Libby Environmental, Inc.	4139 Libby Road NE Olympia, WA 98506	Client: Fearge We	Address 207 1 +	City: Cle Flum	Phone: 206-542-	Client Project #	Sample Number	1 9 1	2 Asphult & Dobnit	3 Arphall & Doby #	4 Asphalt & Dehr #3	5Arphalte Debris #4	6N CH 9	TN CHT II	8 NE Pordans 8	ONE Pand conr 11	10	11	12	13	14	15	16	17 /	Relinduished by:	Champho.	Relinquished by:		Relinquished by: LEGAL ACTION CLAUSE: In the svent of beliated.





4139 Libby Road NE • Olympia, WA 98506-2518

· September 29, 2015

George Webster 207 West 1<sup>st</sup> Street Cle Elum, WA 98922

Dear Mr. Webster:

Please find enclosed the analytical data report for the Short Stop #7 UST Demo & Clean Up Project located in Cle Elum, Washington.

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

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

Sincerely,

Sherry L. Chilcutt Senior Chemist

4139 Libby Road NE Olympia, WA 98506

Phone: (360) 352-2110 FAX: (360) 352-4154

Email: libbyenv@aol.com

SHORT STOP #7 UST DEMO & CLEAN UP PROJECT

George Webster

Cle Elum, Washington

Libby Project # L150923-30

Client Project # WEB-15-5

#### Analyses of Gasoline (NWTPH-Gx) & BTEX (EPA Method 8021B) in Soil

Sample	Date	Benzene	Toluene	Ethylbenzene	Xylenes	Gasoline	Surrogate
Number	Analyzed		(mg/kg)	(mg/kg)	(mg/kg)		Recovery (%)
Method Blank	9/23/15	nd	nd	nd	nd	nd	98
LCS	9/23/15	130%	93%				98
Pool NC 14'	9/23/15	4.1 E	7.0 E	8.6 E	35 E	848 E	int
Surprize TK North	9/23/15	5.5	7.0	< 2.5	156	6360	102
Surprize TK Ctr	9/23/15	0.80	1.7	1.3	18	1330	104
Surprize TK South	9/23/15	0.61	1.3	2.0	22 E	3080 E	113
"D" S End Pit 10'	9/23/15	15	14	20 E	59 E	4340 E	104
"E" SE Crnr 12'	9/23/15	0.63	0.39	0.92	3.3 E	141	91
"E" SE Crnr 12' Dup	9/23/15	0.81	0.44	1.2	3.9 E	171 E	int
"G" SE Crnr Pit 14'	9/23/15	0.58	0.51	0.63	3.2	124	99
"F" SE Crnr PIT 13'	9/23/15	4.7 E	1.1	2.6 E	7.6	252	131
NE Crnr 11' New	9/23/15	6.8	12	25 E	170 E	4370 E	int
NE Crnr 12' New	9/23/15	22	9.8	33	164 E	3810	130
NE Crnr 13' New	9/23/15	2.1	2.0	1.1	11	284	112
Load Out T1 & 2	9/23/15	8.7	13	14	85 E	2090 E	int
Load Out T3	9/23/15	4.8	4.1	< 0.5	44 E	1030	121
Load Out T4	9/23/15	12	22 E	10	94 E	2090 E	113
Load Out T4 Dup	9/23/15	7.1	13	7.6	60 E	1190	127
"G" SE Crnr Pit 14' MS	9/23/15	118%	79%				73
"G" SE Crnr Pit 14' MSD	9/23/15	100%	95%				80
Practical Quantitation Lim	it	0.02	0.10	0.05	0.15	10	

<sup>&</sup>quot;E" Indicates value is an estimate because it exceeds the calibration range.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Trifluorotoluene): 65% TO 135%

ANALYSES PERFORMED BY: Paul Burke

<sup>&</sup>quot;nd" Indicates not detected at the listed detection limits.

<sup>&</sup>quot;int" Indicates that interference prevents determination.

4139 Libby Road NE Olympia, WA 98506

Phone: (360) 352-2110

FAX: (360) 352-4154

Email: libbyenv@aol.com

SHORT STOP #7 UST DEMO & CLEAN UP PROJECT

George Webster

Cle Elum, Washington

Libby Project # L150923-30

Client Project # WEB-15-5

#### Analyses of Diesel (NWTPH-Dx) in Soil

Sample	Date	Surrogate	Diesel
Number	Analyzed	Recovery (%)	(mg/kg)
Method Blank	9/23/15	99	nd
Pool NC 14'	9/23/15	97	nd
Surprize TK North	9/23/15	int	nd
Surprize TK Ctr	9/23/15	108	nd
Surprize TK South	9/23/15	int	nd
"D" S End Pit 10'	9/23/15	109	nd
"E" SE Crnr 12'	9/23/15	105	nd
"E" SE Crnr 12' Dup	9/23/15	91	nd
"G" SE Crnr Pit 14'	9/23/15	111	nd
"F" SE Crnr PIT 13'	9/23/15	114	nd
"F" SE Crnr PIT 13' Dup	9/23/15	119	nd
NE Crnr 11' New	9/23/15	int	nd
NE Crnr 12' New	9/23/15	int	nd
NE Crnr 13' New	9/23/15	86	nd
Load Out T1 & 2	9/23/15	100	67
Load Out T3	9/23/15	int	91
Load Out T4	9/23/15	int	106
Load Out T4 Dup	9/23/15	111	112
Practical Quantitation Limit			25

<sup>&</sup>quot;nd" Indicates not detected at the listed detection limits.

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

ANALYSES PERFORMED BY: Paul Burke

<sup>&</sup>quot;int" Indicates that interference prevents determination.

www.LibbyEnvironmental.com	of			state: w.f.	Date of Collection: 9/15/15		John S. Completing	/ Fiel	9/23/15	9/12/15	9/22/15	ghi/15	g/rs/B	9/21/15	9/22/15	9/22/15	51/12/6	3/12/6	4/21/15	4/21/15	9/11/15	9/21/15			C	Kemarks:	္စ	NA	TAT: 24HR 48HR 5-DAY
rd	Page:	-eorge Webstar	Star #7	um City, State	Webster	te @ Mrn. com	\$60 00 00 00 00 00 00 00 00 00 00 00 00 0	01/00/100/1																		Sample Receipt  Good Condition? Y N		z >	Total Number of Containers
Chain of Custody Record	Date: 1/13/15		Project Name: Short	Location: Cle El	Collector: George	Email: Gandelph- White @ Mrn	10 to 10 11 10 10 to 10 10 10 10 10 10 10 10 10 10 10 10 10	100 m m m 100	X	×××	×	スメメ	XXX	XX	X	XX	×	X	XXX	,× ,× ,×	× ××	X XX				m/ 9/23/15 150	Date / Time	1	Date / Time
Chai				Zip:			Samule	Type	2 Voas, 1 Sar	2 Voas I Jar		- 1	-1-	11	11	11	l'	11	11	11	11	5				-23-15 Keeped by	Received by/		Date / Time Received by:
ental, Inc.	Ph: 360-352-2110 Fax: 360-352-4154	Websta		State:	Fax:	8-15-15	, and the second	Depth Time T		~	1:20	٦ 25:27 ٢	10 2:50	12 3:00 5	14 3:20 5	13 3:10 5		11	13 4:20 5	7 5:15 -	- 528 J	_ 5:35 J			1	Carle Ime 4-13	Date / Time		Date / Time
Libby Environmental, Inc.	4139 Libby Road NE Olympia, WA 98506	Client: George	Address:	City:	Phone:	Client Project # WE	E HVIQ	Sample Number	1 POO NC 14	2 Surprise TK North	3 Surprise TK Ctr	45urprize TK Sout	155 EndotPit 10	EBSE CINT 12	76 SECONT PH 14	8F'SE CANTAGE 13	9NE Crip II New	11	11 NE Crar 13 vew	12/000/04+T/ &2	13 Load out T.S		15	16.	A	Kelinguighed by:	Relinquished by:		Relinquished by:





4139 Libby Road NE • Olympia, WA 98506-2518

September 29, 2015

George Webster 207 West 1<sup>st</sup> Street Cle Elum, WA 98922

Dear Mr. Webster:

Please find enclosed the analytical data report for the Short Stop #7 UST Demo & Clean Up Project located in Cle Elum, Washington.

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

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

Sincerely,

Sherry L. Chilcutt Senior Chemist

Libby Environmental, Inc.

Shy & Un

4139 Libby Road NE Olympia, WA 98506

Phone: (360) 352-2110 FAX: (360) 352-4154

Email: libbyenv@aol.com

SHORT STOP #7 UST DEMO & CLEAN UP PROJECT

George Webster

Cle Elum, Washington

Libby Project # L150924-30

Client Project # WEB-15-5

#### Analyses of Gasoline (NWTPH-Gx) & BTEX (EPA Method 8021B) in Soil

Sample	Date	Benzene	Toluene	Ethylbenzene	Xylenes	Gasoline	Surrogate
Number	Analyzed	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	Recovery (%)
Method Blank	9/24/15	nd	nd	nd	nd	nd	94
LCS	9/24/15	112%	97%				89
E Ctr New Tk	9/24/15	0.25	0.24	1.3	3.4 E	209 E	116
Ctr Pit Bot 17'	9/24/15	1.2 E	0.74	0.32	2.4	58	108
S Bot (Sand) 14'	9/24/15	4.4 E	3.2 E	4.6 E	18 E	534 E	132
Near S Side 14'	9/24/15	4.7 E	3.1 E	3.6 E	17 E	475 E	int
ENE Bot 14'	9/24/15	1.7 E	0.84	1.3 E	5.5 E	159	int
ENE Bot 14' Dup	9/24/15	1.6 E	1.3 E	1.1 E	6.9 E	169	int
Sur-T Pit 9'	9/24/15	8.8	8.1	25 E	97 E	4630 E	int
Ctr Pit Bot 17' MS	9/24/15	92%	66%				118
Ctr Pit Bot 17' MSD	9/24/15	94%	72%				124
Practical Quantitation I	Limit	0.02	0.10	0.05	0.15	10	

<sup>&</sup>quot;E" Indicates value is an estimate because it exceeds the calibration range.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Trifluorotoluene): 65% TO 135%

ANALYSES PERFORMED BY: Paul Burke

<sup>&</sup>quot;nd" Indicates not detected at the listed detection limits.

<sup>&</sup>quot;int" Indicates that interference prevents determination.

Libby Environmental, Inc.	ental, Inc.		Ch	ain of Cu	Chain of Custody Record	ą		www.LibbyEr	www.LibbyEnvironmental.com
4139 Libby Road NE Olympia, WA 98506	Ph: 360-352-2110 Fax: 360-352-4154	-2110 -4154		Date:	4/23/15	9-24-15	Page:	<b>/</b> of	1
2	Webster			Proje	Project Manager:	Fourth We	ebster		
S				Proje	Project Name: Short	- stop "	7		
City:	State:	Zip:	2.0	Location:	tion: Cle El	MM	City, State:	11/4	1
Phone:	Fax:			Collector:	ctor: George	Webster	Date of Collection:	lection:	3-24/15
Client Project # WEB-	- 15-15			Email:	Candalph	-White Omen	A. Cum	8	51/12/
A J PAN MIN Signature of the state of the st	time	Sample	Container	\$37614W	to the state of th	25 05 16 05	\$160 M \$ \$200 6	Field Notes	otes
1 E CTR New TK	+	H	2 Voas 1 Sar	XX				collected	(9/21/15
	17 9:45	7	11	X X				9/23	11.5
35 Bot (Sand) 14	1: 1 H	7	1.1	メメ				1	
4Near S side 14	14 12:40	5 1	tı	X				11	
	14 3:30	5	11	XX		0		-	
65ur-T P'+ 9	4:17	5	1/	X				1.1	
7									
80									
O									
10									
11									
12							3-		×
13									
14								.:	
15									
16									
17			1		j			-	
Relinguished by:	A STA	11 21.	Scelved by:	1476	5 4:15	Good Condition?	z	Kemarks:	설
Relinquished by:	Date / Time	1	Receive by:	1	Date / Time	Temp.	ပ္	2	
						ntact?	V N/A	7	
Relinquished by:	Date / Time	.*	Received by:		Date / Time	Total Number of Containers		TAT: 24HR	48HR 5-DAY
LEGAL ACTION CLAUSE. In the event of defaul of payment and/or failure to pay, Client agrees to pay the coats of collection including count coats and ressonable atturney fees to be determined by a could of la	yment andfor fature to pay, Clern	agrees to pay the cost	is of collection including court	costs and reasonable atturney	fees to be determined by a cost of law.		Distri	Distribution: White - Lab, Yellow - File, Pink - Originator	llow - File, Pink - Origina





4139 Libby Road NE • Olympia, WA 98506-2518

September 29, 2015

George Webster 207 West 1<sup>st</sup> Street Cle Elum, WA 98922

Dear Mr. Webster:

Please find enclosed the analytical data report for the Short Stop #7 UST Demo & Clean Up Project located in Cle Elum, Washington.

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

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

Sincerely,

Sherry L. Chilcutt Senior Chemist

Libby Environmental, Inc.

Shy & Unx

4139 Libby Road NE Olympia, WA 98506

Phone: (360) 352-2110

FAX: (360) 352-4154

Email: libbyenv@aol.com

SHORT STOP #7 UST DEMO & CLEAN UP PROJECT

George Webster

Cle Elum, Washington

Libby Project # L150925-30

Client Project # WEB-15-5

# Analyses of Gasoline (NWTPH-Gx) & BTEX (EPA Method 8021B) in Soil

Sample	Date	Benzene	Toluene	Ethylbenzene	Xylenes	Gasoline	Surrogate
Number	Analyzed	57 (ES) 53	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	Recovery (%)
Method Blank	9/25/15	nd	nd	nd	nd	nd	86
LCS	9/25/15	113%	94%				91
Hole in Concrete 15'	9/25/15	0.081	0.23	nd	0.20	13	87
Hole in Concrete 15' Dup	9/25/15	0.025	0.71	nd	0.27	28	75
ENE Bot 14'	9/25/15	0.048	0.24	nd	0.34	22	89
EE Ctr Bot 16'	9/25/15	0.028	0.27	nd	0.19	nd	67
Hole in Concrete 15' MS	9/25/15	92%	70%				79
Hole in Concrete 15' MSD	9/25/15	72%	69%				74
Practical Quantitation Lim	it	0.02	0.10	0.05	0.15	10	

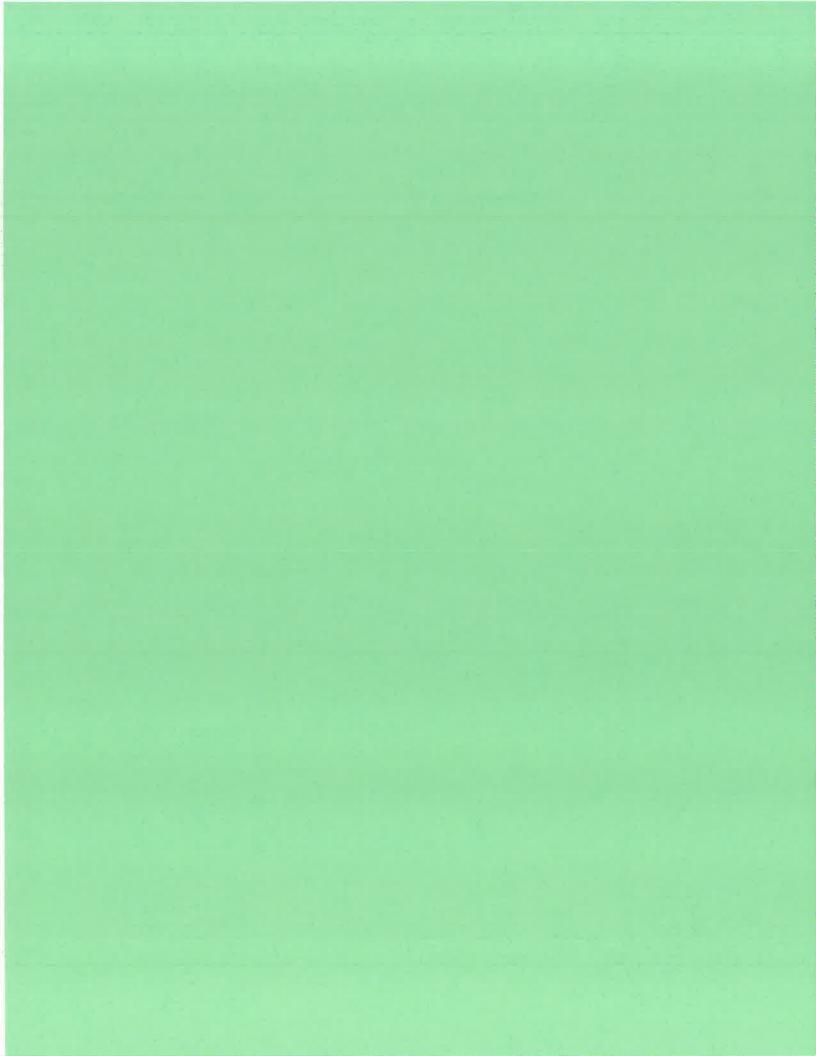
<sup>&</sup>quot;nd" Indicates not detected at the listed detection limits.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Trifluorotoluene): 65% TO 135%

ANALYSES PERFORMED BY: Paul Burke

<sup>&</sup>quot;int" Indicates that interference prevents determination.

www.LibbyEnvironmental.com	l of			ate: W/4	Date of Collection: 9/24-25/15		Field Notes	Co	11	-			·						n		5.0			Domonto	T		<b>I</b>	TAT: 24HR 48HR 5-DAY
	Page:	Webs	5 top #7			hite @MEn.com	\$16.84 8 \$2.00 80 0 1.00 8																		Good Condition? Y N		Seals intact? Y N N/A	Total Number of Containers
Chain of Custody Record	Date: 9/25/15		3	Location: Cle E/um	Collector: George Webster	Email: Gandalph - White @	Oto in a line in a so of	X	メメー	×						2								Dodg / Times			1	
Cha				Zip:			Sample Container	2 Has 15ar		11															lall.	Received by:	>	Received by:
nental, Inc.	Ph: 360-352-2110 Fax: 360-352-4154	lebster		State:	Fax:	WEB-15-15	Sar	15 4:00	S 44:44 51	L 16 5:00 J	6														12 4 25-13	Date / Time		Date / Time
Libby Environmental, Inc.	4139 Libby Road NE Olympia, WA 98506	Client: (Footbe In	S:	City:	Phone:	roject #	B TO THE MUTE OF THE PARTY OF T	1Hole in Concrete 15	VE I	EE CTR BOTI	4	5	9	7	8	6	10	11	12	13	14	15	16	17	Kelindeside by:	Relinquished by:		Relinquished by:





4139 Libby Road NE · Olympia, WA 98506-2518

October 2, 2015

George Webster 207 West 1<sup>st</sup> Street Cle Elum, WA 98922

Dear Mr. Webster:

Please find enclosed the analytical data report for the Short Stop #7 Project located in Cle Elum, Washington.

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

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

Sincerely,

Sherry L. Chilcutt Senior Chemist

Libby Environmental, Inc.

4139 Libby Road NE Olympia, WA 98506 Phone: (360) 352-2110

FAX: (360) 352-4154

Email: libbyenv@aol.com

SHORT STOP #7 PROJECT George Webster Cle Elum, Washington Libby Project # L150930-40 Client Project # WEB-15-15

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

Sample	Date	Benzene	Toluene	Ethylbenzene	Xylenes	Gasoline	Surrogate
Number	Analyzed	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	Recovery (%)
Method Blank	9/30/15	nd	nd	nd	nd	nd	88
LCS	9/30/15	79%	79%				90
N Clean Pile #1	9/30/15	nd	nd	nd	nd	nd	83
N Clean Pile #2	9/30/15	nd	nd	nd	nd	nd	88
N Clean Pile #3	9/30/15	nd	nd	nd	nd	nd	89
Side Wall #1	9/30/15	nd	nd	nd	nd	nd	80
Side Wall #2	9/30/15	nd	nd	nd	nd	nd	79
Side Wall #2 Dup	9/30/15	nd	nd	nd	nd	nd	77
Eastside Contaminate #1	9/30/15	0.040	nd	0.067	0.28	474 E	85
Waste Pile #1	9/30/15	0.20	0.18	0.16	2.4	427 E	91
Waste Pile #2	9/30/15	0.14	0.11	0.13	1.2	154	91
Waste Pile #3	9/30/15	0.087	0.078	0.32	2.5	177	88
Blue Spot	9/30/15	nd	nd	0.11	0.20	193	86
E Ctr Wall (1 of 3)	9/30/15	nd	nd	nd	nd	nd	89
E Ctr Wall (2 of 3)	9/30/15	nd	nd	nd	nd	nd	87
E Ctr Wall (3 of 3)	9/30/15	nd	nd	nd	nd	nd	84
RUST Side Wall #5	9/30/15	nd	nd	nd	nd	nd	88
Side Wall #6	9/30/15	nd	nd	nd	nd	nd	87
Side Wall #6 Dup	9/30/15	nd	nd	nd	nd	nd	92
Side Wall #3	9/30/15	nd	nd	nd	nd	nd	81
Side Wall #4	9/30/15	nd	nd	nd	nd	21	88
Side Wall #7	9/30/15	nd	nd	nd	nd	nd	84
Side Wall #8	9/30/15	nd	nd	nd	nd	nd	92
Side Wall #9	9/30/15	nd	nd	nd	nd	nd	80
Side Wall #3 MS	9/30/15	95%	96%				94
Side Wall #3 MSD	9/30/15	94%	92%				88
Practical Quantitation	Limit	0.02	0.10	0.05	0.15	10	

<sup>&</sup>quot;E" Indicates value is an estimate because it exceeds the calibration range.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Toluene-d8): 65% TO 135%

ANALYSES PERFORMED BY: Paul Burke

<sup>&</sup>quot;nd" Indicates not detected at the listed detection limits.

<sup>&</sup>quot;int" Indicates that interference prevents determination.

LIDER LINE CHEEN TO	rital, mo.		5	idili ol custotty necolu	200	3		www.cibbyciiviioliiifeiilai.colli	
4139 Libby Road NE Olympia, WA 98506	Ph: 360-352-2110 Fax: 360-352-4154	-2110 4154		Date: 9/30	51/08		Page:	/ of 2	
Client: ( Leorge h	Pebster			Project Manager:	7	Feorge Webs	ebster		
Address:				Project Name:	5	-5 top #7			
City:	State:	Zip:	2.2	Location:	Cle Elum		City, State:	W4/	1
Phone:	Fax:			Collector:	reorge W	ebster	Date of Collection:	9/28-	39/18
Client Project # WE	ER-15-15			Email: (	randalph	White & Mrn	1. COM	•	
D TVIA				1 1 1 1 1 1 1 1 1	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	136	\$6.00 CO		
Sample Number	Depth Time	Sample Type	Container Type	1450 407 407	ALIN .			Field Notes	
11/Clean Pile#	-		Jar 2 Voas		V		Col	lected 9/28	Co
2/V Clean Pile#2	7:55	5	11,	×	×			1.1	
PI	- 8.00	<b>ک</b>		X	×				
45ide Wall #1	4 3:30	5	11	×	<			11	
55:00 Wall # 2	6 3:40	5	7	×	×			/ /	
6 Fastoide Contaminate	- 11	5	1,1	×	X			-	
7 Wastr Pile #1		4	-	×	×				
8 Waste Pile#2	74.8	<u>_</u>	11	X	×				105
9 Waste Pile#3	7 11:15	4	1)	X	×,		00	Hected #	27/17/
10 Blue 5pot	7	4	1.	×	4		9	Collected 19/3	9
11 F Ctr Wall (1 of 3)	3- 11:30	4	51	<b>X</b> :	×		00	llected 9	124
E CH WAILD		5	> '	4	*			> =	
136 (tr Wall 3 or3)	8 111.40	7	4	\ X;	4.			0 1+	-
14 RUST 5 4 1/4 11#5	5, 4:16	<u></u>	3 3	××	<>		3	Collected 7/28	
	2				Ł				
17 See 19. K			9	10					
Relinquished by	Date / Time	1302m	Received Sy:	Shelf Ind	Date / Time	Sample Receipt:		Remarks:	
Relinquished by:	Date / Time		Repeived by: /		Date / Time	Good Condition?		=	
					į	Cold?		7 = -	
Relinquished by:	Date / Time		Received by:		Date / Time	Seals Intact?		!	
						Total Number of Containers		TAT: 24HR 48HR 5-DAY	5-DAY

Libby Environmental, Inc.	ental, Inc.		S	ain of Cus	ain of Custody Record	-		www.LibbyEnvironmental.com
4139 Libby Road NE Olympia, WA 98506	Ph: 360-352-2110 Fax: 360-352-4154	2-2110		Date:	Date: 9/30/15		Page:	2 of 2
Client: George W	lehster			Project	Project Manager: George	e Websta	$  \lambda  $	
 				Project	hort	-Stop #7		
City:	State:	Zip:	×	Location:	Cle Elui	,	City, State:	WA
Phone:	Fax:			Collector:	tor. George	Webstar	Date of Collection:	Ilection: 9/28/15
Client Project # WEB	1-12-1			Email:	Email: Gandelph - White @	Msh.	em	
Sample Number	Denth	Sample	Container	1 10/10/1	to light was a sound of the control	0 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	\$18.84 8 50 14 818.14 8 50 14 015 60 6	Field Notes
15, do Wall #3	-		Was I Sar	メメ				collected 9/28
3	P 3:59	5 6	(1)	×				1,1
35ide Wall #7	1 4:20	٦ ر	1.	×				1)
45: do Wall #8	1 4.25	5	11	× ×				1/
55 ide Wall#9	6 4:30	7	,,,	X				
9								
7								
80								
б								
10								
11								
12								
13								
14								
15								
16								
Relinquished by:	Date / Time		Received by	111	Date / Time	Sample Receipt		Remarks:
MINIMA	5 2/8 Was 2	2:30 pm	Haw ha	21/2/3/19	250	Good Condition?	z >	
Relinquished by.	Date / Time	7	Received by:		Date / Time	Temp.	ပ္	
					į	-	× NA	
Relinquished by:	Date / Time		Received by:		Date / Time	Total Number of Containers		TAT: 24HR 48HR 5-DAY
LEGAL ACTION CLAUSE: In the event of default of paym	nont and	vor finere to pay, Cevit agrees to pay the ca	sts of collection incerding cour	rt costs and reasonable	attorney fees to be determined by a coul of law.		Dis	Distribution: White - Lab, Yellow - File, Pink - Originator



#### **APPENDII**

FRIEDMAN & BRUYA Inc. Lab Test Reports

#### **ENVIRONMENTAL CHEMISTS**

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Michael Erdahl, B.S. Arina Podnozova, B.S. Eric Young, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 (206) 285-8282 fbi@isomedia.com www.friedmanandbruya.com

April 28, 2015

George Webster, Project Manager Websters, Inc. 16355 Densmore North Shoreline, WA 98133

Dear Mr. Webster:

Included are the results from the testing of material submitted on April 20, 2015 from the Shortstop Cle Elum, WA, F&BI 504344 project. There are 34 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl Project Manager

Enclosures NAA0428R.DOC

#### ENVIRONMENTAL CHEMISTS

#### CASE NARRATIVE

This case narrative encompasses samples received on April 20, 2015 by Friedman & Bruya, Inc. from the Websters Shortstop Cle Elum, WA, F&BI 504344 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	$\underline{\text{Websters}}$
504344 -01	A1
504344 -02	A2
504344 -03	A3
504344 -04	A4
504344 -05	A5
504344 -06	B1
504344 -07	B2
504344 -08	B3
504344 -09	B3 DUP
504344 -10	B4

Samples A5 and B3 DUP were not received in 5035 sampling containers. The data were flagged accordingly.

All other quality control requirements were acceptable.

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 04/28/15 Date Received: 04/20/15

Project: Shortstop Cle Elum, WA, F&BI 504344

Date Extracted: 04/21/15 Date Analyzed: 04/21/15

#### RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

Results Reported on a Dry Weight Basis Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
A1 504344-01	<2	110
A2 504344-02	2.8	92
A3 504344-03 1/20	5,600	ip
A4 504344-04 1/5	230	129
A5 pc 504344-05	120	ip
B1 504344-06	<2	112
B2 504344-07	<2	111
B3 504344-08 1/20	5,300	ip
B3 DUP pc 504344-09 1/10	1,400	ip
B4 504344-10 1/20	3,900	ip
Method Blank 05-0813 MB	<2	91

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 04/28/15 Date Received: 04/20/15

Project: Shortstop Cle Elum, WA, F&BI 504344

Date Extracted: 04/20/15 Date Analyzed: 04/20/15

# RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	$rac{ ext{Diesel Range}}{ ext{(C}_{10} ext{-} ext{C}_{25})}$	Motor Oil Range (C <sub>25</sub> -C <sub>36</sub> )	Surrogate (% Recovery) (Limit 56-165)
A1 504344-01	<50	340	111
A2 504344-02	<50	<250	99
A3 504344-03	1,400 x	<250	113
<b>A4</b> 504344-04	440 x	<250	110
A5 504344-05	320 х	<250	108
B1 504344-06	130 х	<250	108
B2 504344-07	<50	<250	96
B3 504344-08	2,200 x	460	116
B3 DUP 504344-09	2,100 x	730	109
B4 504344-10	3,400 x	510	114
Method Blank 05-824 MB	<50	<250	101

#### **ENVIRONMENTAL CHEMISTS**

#### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: **A**3 Client: Websters Project:

Shortstop Cle Elum, WA, F&BI 504344 Date Received: 04/20/15 Lab ID: 504344-03 Date Extracted: 04/21/15

Data File: 042115.D 04/21/15 Date Analyzed: GCMS4 Instrument: Matrix: Soil Units: mg/kg (ppm) Dry Weight Operator: JS

Lower Upper Limit: % Recovery: Limit: Surrogates: 14262 1,2-Dichloroethane-d4 108 145 Toluene-d8 102 55 65 139 4-Bromofluorobenzene 116

4-Bromoiluoropenzene	110	00 100	
	Concentration		Concentration
Compounds:	mg/kg (ppm)	Compounds:	mg/kg (ppm)
Dichlorodifluoromethane	< 0.5	1,3-Dichloropropane	< 0.05
Chloromethane	< 0.5	Tetrachloroethene	< 0.025
Vinyl chloride	< 0.05	Dibromochloromethane	< 0.05
Bromomethane	< 0.5	1,2-Dibromoethane (EDB)	< 0.05
Chloroethane	< 0.5	Chlorobenzene	< 0.05
Trichlorofluoromethane	< 0.5	Ethylbenzene	8.5
Acetone	< 0.5	1,1,1,2-Tetrachloroethane	< 0.05
1,1-Dichloroethene	< 0.05	m,p-Xylene	35 ve
Methylene chloride	< 0.5	o-Xylene	7.4
Methyl t-butyl ether (MTBE)	< 0.05	Styrene	< 0.05
trans-1,2-Dichloroethene	< 0.05	Isopropylbenzene	1.5
1,1-Dichloroethane	< 0.05	Bromoform	< 0.05
2,2-Dichloropropane	< 0.05	n-Propylbenzene	8.8
cis-1,2-Dichlor oethene	< 0.05	Bromobenzene	< 0.05
Chloroform	< 0.05	1,3,5-Trimethylbenzene	19 ve
2-Butanone (MEK)	< 0.5	1,1,2,2-Tetrachloroethane	< 0.05
1,2-Dichloroethane (EDC)	< 0.05	1,2,3-Trichloropropane	< 0.05
1,1,1-Trichloroethane	< 0.05	2-Chlorotoluene	< 0.05
1,1-Dichloropropene	< 0.05	4-Chlorotoluene	< 0.05
Carbon tetrachloride	< 0.05	tert-Butylbenzene	< 0.05
Benzene	1.2	1,2,4-Trimethylbenzene	44 ve
Trichloroethene	< 0.02	sec-Butylbenzene	1.2
1,2-Dichloropropane	< 0.05	p-Isopropyltoluene	0.73
Bromodichloromethane	< 0.05	1,3-Dichlorobenzene	< 0.05
Dibromomethane	< 0.05	1,4-Dichlorobenzene	< 0.05
4-Methyl-2-pentanone	< 0.5	1,2-Dichlorobenzene	< 0.05
cis-1,3-Dichloropropene	< 0.05	1,2-Dibromo-3-chloropropane	< 0.5
Toluene	0.89	1,2,4-Trichlorobenzene	< 0.25
trans-1,3-Dichloropropene	< 0.05	Hexachlorobutadiene	< 0.25
1,1,2-Trichloroethane	< 0.05	Naphthalene	7.3
2-Hexanone	< 0.5	1,2,3-Trichlorobenzene	< 0.25

#### **ENVIRONMENTAL CHEMISTS**

#### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: A3 Client: Websters
Date Received: 04/20/15 Project: Shortstop Cle Elum, WA, F&BI 504344
Date Extracted: 04/21/15 Lab ID: 504344-03 1/10

 Date Extracted:
 04/21/15
 Lab ID:
 504344-03 1/10

 Date Analyzed:
 04/22/15
 Data File:
 042235.D

 Matrix:
 Soil
 Instrument:
 GCMS4

 Units:
 mg/kg (ppm) Dry Weight
 Operator:
 JS

		Lower	$\mathbf{U}_{\mathbf{pper}}$
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	103	62	142
Toluene-d8	102	55	145
4-Bromofluorobenzene	98	65	139

4-Diomondonoscuzene	00		
	Concentration		Concentration
Compounds:	mg/kg (ppm)	Compounds:	mg/kg (ppm)
Dichlorodifluoromethane	<5	1,3-Dichloropropane	< 0.5
Chloromethane	<5	${f Tetrachloroethene}$	< 0.25
Vinyl chloride	< 0.5	Dibromochloromethane	< 0.5
Bromomethane	<5	1,2-Dibromoethane (EDB)	< 0.5
Chloroethane	<5	Chlorobenzene	< 0.5
Trichlorofluoromethane	<5	Ethylbenzene	11
Acetone	<5	1,1,1,2-Tetrachloroethane	< 0.5
1,1-Dichloroethene	< 0.5	m,p-Xylene	42
Methylene chloride	<5	o-Xylene	9.2
Methyl t-butyl ether (MTBE)	< 0.5	Styrene	< 0.5
trans-1,2-Dichloroethene	< 0.5	Isopropylbenzene	1.6
1,1-Dichloroethane	< 0.5	Bromoform	< 0.5
2,2-Dichloropropane	< 0.5	n-Propylbenzene	8.2
cis-1,2-Dichloroethene	< 0.5	Bromobenzene	< 0.5
Chloroform	< 0.5	1,3,5-Trimethylbenzene	18
2-Butanone (MEK)	<5	1,1,2,2-Tetrachloroethane	< 0.5
1,2-Dichloroethane (EDC)	< 0.5	1,2,3-Trichloropropane	< 0.5
1,1,1-Trichloroethane	< 0.5	2-Chlorotoluene	< 0.5
1,1-Dichloropropene	< 0.5	4-Chlorotoluene	< 0.5
Carbon tetrachloride	< 0.5	tert-Butylbenzene	< 0.5
Benzene	2.4	1,2,4-Trimethylbenzene	60
Trichloroethene	< 0.2	sec-Butylbenzene	0.95
1,2-Dichloropropane	< 0.5	p-Isopropyltoluene	0.61
Bromodichloromethane	< 0.5	1,3-Dichlorobenzene	< 0.5
Dibromomethane	< 0.5	1,4-Dichlorobenzene	< 0.5
4-Methyl-2-pentanone	<5	1,2-Dichlorobenzene	< 0.5
cis-1,3-Dichloropropene	< 0.5	1,2-Dibromo-3-chloropropane	<5
Toluene	1.9	1,2,4-Trichlorobenzene	<2.5
trans-1,3-Dichloropropene	< 0.5	Hexachlorobutadiene	<2.5
1,1,2-Trichloroethane	< 0.5	Naphthalene	10
2-Hexanon e	<5	1,2,3-Trichlorobenzene	<2.5

#### ENVIRONMENTAL CHEMISTS

# Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: A4 Client: Websters

Date Received: 04/20/15 Project: Shortstop Cle Elum, WA, F&BI 504344

Date Extracted: 04/21/15 Lab ID: 504344-04

Date Applyingd: 04/23/15 Date File: 042305.D

Date Analyzed: 04/23/15 Data File: 042305.D Matrix: Soil Instrument: GCMS4 Units: mg/kg (ppm) Dry Weight Operator: JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	101	62	142
Toluene-d8	98	55	145
4-Bromofluorobenzene	105	65	139

4-Bromofluorobenzene	105	65 139	
	Concentration		Concentration
Compounds:	mg/kg (ppm)	Compounds:	mg/kg (ppm)
Dichlorodifluoromethane	<0.5 ca	1,3-Dichloropropane	< 0.05
Chloromethane	<0.5 ca	Tetrachloroethene	< 0.025
Vinyl chloride	< 0.05	Dibromochloromethane	< 0.05
Bromomethane	< 0.5	1,2-Dibromoethane (EDB)	< 0.05
Chloroethane	< 0.5	Chlorobenzene	< 0.05
Trichlorofluoromethane	< 0.5	Ethylbenzene	21 ve
Acetone	< 0.5	1,1,1,2-Tetrachloroethane	< 0.05
1,1-Dichloroethene	< 0.05	m,p-Xylene	73 ve
Methylene chloride	< 0.5	o-Xylene	12
Methyl t-butyl ether (MTBE)	0.12	Styrene	< 0.05
trans-1,2-Dichloroethene	< 0.05	Isopropylbenzene	1.5
1,1-Dichloroethane	< 0.05	Bromoform	< 0.05
2,2-Dichloropropane	< 0.05	n-Propylbenzene	7.4
cis-1,2-Dichloroethene	< 0.05	Bromobenzene	< 0.05
Chloroform	< 0.05	1,3,5-Trimethylbenzene	13 ve
2-Butanon e (MEK)	< 0.5	1,1,2,2-Tetrachloroethane	< 0.05
1,2-Dichloroethane (EDC)	< 0.05	1,2,3-Trichloropropane	< 0.05
1,1,1-Trichloroethane	< 0.05	2-Chlorotoluene	< 0.05
1,1-Dichloropropene	< 0.05	4-Chlorotoluene	< 0.05
Carbon tetrachloride	< 0.05	tert-Butylbenzene	< 0.05
Benzene	14	1,2,4-Trimethylbenzene	43 ve
Trichloroethene	< 0.02	sec-Butylbenzene	0.66
1,2-Dichloropropane	< 0.05	p-Isopropyltoluene	0.45
Bromodichloromethane	< 0.05	1,3-Dichlorobenzene	< 0.05
Dibromomethane	< 0.05	1,4-Dichlorobenzene	< 0.05
4-Methyl-2-pentanone	< 0.5	1,2-Dichlorobenzene	< 0.05
cis-1,3-Dichloropropene	< 0.05	1,2-Dibromo-3-chloropropane	< 0.5
Toluene	7.5	1,2,4-Trichlorobenzene	< 0.25
trans-1,3-Dichloropropene	< 0.05	Hexachlorobutadiene	< 0.25
1,1,2-Trichloroethane	< 0.05	Naphthalene	8.3
2-Hexanone	< 0.5	1,2,3-Trichlorobenzene	< 0.25

#### **ENVIRONMENTAL CHEMISTS**

#### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: A4 Client: Websters Shortstop Cle Elum, WA, F&BI 504344

Project: Date Received: 04/20/15 Lab ID:

504344-04 1/10 04/21/15 Date Extracted: Data File: 042236.D04/22/15 Date Analyzed: GCMS4 Instrument: Matrix: Soil Units: mg/kg (ppm) Dry Weight Operator: JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	105	62	142
Toluene-d8	101	55	145
4-Bromofluorobenzene	98	65	139

4-Bromofluorobenzene	98	69 199	
	Concentration		Concentration
Compounds:	mg/kg (ppm)	Compounds:	mg/kg (ppm)
Dichlorodifluoromethane	<5	1,3-Dichloropropane	< 0.5
Chloromethane	<5	Tetrachloroethene	< 0.25
Vinyl chloride	< 0.5	Dibromochloromethane	< 0.5
Bromomethane	<5	1,2-Dibromoethane (EDB)	< 0.5
Chloroethane	<5	Chlorobenzene	< 0.5
Trichlorofluoromethane	<5	Ethylbenzene	16
Acetone	<5	1,1,1,2-Tetrachloroethane	< 0.5
1,1-Dichloroethene	< 0.5	m,p-Xylene	57
Methylene chloride	<5	o-Xylene	9.3
Methyl t-butyl ether (MTBE)	< 0.5	Styrene	< 0.5
trans-1,2-Dichloroethene	< 0.5	Isopropylbenzene	1.2
1,1-Dichloroethane	< 0.5	Bromoform	< 0.5
2,2-Dichloropropane	< 0.5	n-Propylbenzene	5.3
cis-1,2-Dichloroethene	< 0.5	Bromobenzene	< 0.5
Chloroform	< 0.5	1,3,5-Trimethylbenzene	11
2-Butanone (MEK)	<5	1,1,2,2-Tetrachloroethane	< 0.5
1,2-Dichloroethane (EDC)	< 0.5	1,2,3-Trichloropropane	< 0.5
1,1,1-Trichloroethane	< 0.5	2-Chlorotoluene	< 0.5
1,1-Dichloropropene	< 0.5	4-Chlorotoluene	< 0.5
Carbon tetrachloride	< 0.5	tert-Butylbenzene	< 0.5
Benzene	10	1,2,4-Trimethylbenzene	39
Trichloroethene	< 0.2	sec-Butylbenzene	0.55
1,2-Dichloropropane	< 0.5	p-Isopropyltoluene	< 0.5
Bromodichloromethane	< 0.5	1,3-Dichlorobenzene	< 0.5
Dibromomethane	< 0.5	1,4-Dichlorobenzene	< 0.5
4-Methyl-2-pentanone	<5	1,2-Dichlorobenzene	< 0.5
cis-1,3-Dichloropropene	< 0.5	1,2-Dibromo-3-chloropropane	<5
Toluene	3.9	1,2,4-Trichlorobenzene	<2.5
trans-1,3-Dichloropropene	< 0.5	Hexachlorobutadiene	< 2.5
1,1,2-Trichloroethane	< 0.5	Naphthalene	6.8
2-Hexanone	<5	1,2,3-Trichlorobenzene	<2.5

#### ENVIRONMENTAL CHEMISTS

#### Analysis For Volatile Compounds By EPA Method 8260C

Client: Websters Client Sample ID: A5 pcShortstop Cle Elum, WA, F&BI 504344 Project: Date Received: 04/20/15 Lab ID: 504344-05 Date Extracted: 04/21/15 042234.DData File: 04/22/15 Date Analyzed:

Date Analyzed: 04/22/15 Data File: 042234.D

Matrix: Soil Instrument: GCMS4

Units: mg/kg (ppm) Dry Weight Operator: JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	104	62	142
Toluene-d8	101	55	145
4-Bromofluorobenzene	99	65	139
	Concentration		
a 1	71 / \	O	

	Concentration		Concentration
Compounds:	mg/kg (ppm)	Compounds:	mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	< 0.05
Chloromethane	<0.5	Tetrachloroethene	< 0.025
Vinyl chloride	< 0.05	Dibromochloromethane	< 0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	< 0.05
Chloroethane	<0.5	Chlorobenzene	< 0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	4.2
Acetone	<0.5	1,1,1,2-Tetrachloroethane	< 0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	12
Methylene chloride	<0.5	o-Xylene	1.3
Methyl t-butyl ether (MTBE)	0.090	Styrene	< 0.05
trans-1,2-Dichloroethene	< 0.05	Isopropylbenzene	0.39
1,1-Dichloroethane	< 0.05	Brom oform	< 0.05
2,2-Dichloropropane	< 0.05	n-Propylbenzene	2.1
cis-1,2-Dichloroethene	< 0.05	Bromobenzene	< 0.05
Chloroform	< 0.05	1,3,5-Trimethylbenzene	2.6
2-Butanone (MEK)	< 0.5	1,1,2,2-Tetrachloroethane	< 0.05
1,2-Dichloroethane (EDC)	< 0.05	1,2,3-Trichloropropane	< 0.05
1,1,1-Trichloroethane	< 0.05	2-Chlorotoluene	< 0.05
1,1-Dichloropropene	< 0.05	4-Chlorotoluene	< 0.05
Carbon tetrachloride	< 0.05	tert-Butylbenzene	< 0.05
Benzene	3.3	1,2,4-Trimethylbenzene	12
Trichloroethene	< 0.02	sec-Butylbenzene	0.21
1,2-Dichloropropane	< 0.05	p-Isopropyltoluene	0.18
Bromodichloromethane	< 0.05	1,3-Dichlorobenzene	< 0.05
Dibromomethane	< 0.05	1,4-Dichlorobenzene	< 0.05
4-Methyl-2-pentanone	< 0.5	1,2-Dichlorobenzene	< 0.05
cis-1,3-Dichloropropene	< 0.05	1,2-Dibromo-3-chloropropane	< 0.5
Toluene	2.0	1,2,4-Trichlorobenzene	< 0.25
trans-1,3-Dichloropropene	< 0.05	Hexachlorobutadiene	< 0.25
1,1,2-Trichloroethane	< 0.05	Naphthalene	2.6
2-Hexanone	< 0.5	1,2,3-Trichlorobenzene	< 0.25

#### **ENVIRONMENTAL CHEMISTS**

#### Analysis For Volatile Compounds By EPA Method 8260C

Websters Client Sample ID: B3Client: Shortstop Cle Elum, WA, F&BI 504344 Date Received: 04/20/15 Project: Lab ID: 504344-08 Date Extracted: 04/21/15 Data File: 042307.D Date Analyzed: 04/23/15

Matrix: Soil Instrument: GCMS4
Units: mg/kg (ppm) Dry Weight Operator: JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	105	62	142
Toluene-d8	100	55	145
4-Bromofluorobenzene	135	65	139

4-Bromofluorobenzene	135	09 199	
	Concentration		Concentration
Compounds:	mg/kg (ppm)	Compounds:	mg/kg (ppm)
Dichlorodifluoromethane	<0.5 ca	1,3-Dichloropropane	< 0.05
Chloromethane	<0.5 ca	Tetrachloroethene	< 0.025
Vinyl chloride	<0.05 ca	Dibromochloromethane	< 0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	< 0.05
Chloroethane	<0.5	Chlorobenzene	< 0.05
		Ethylbenzene	32 ve
Trichlorofluoromethane	<0.5		<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	81 ve
1,1-Dichloroethene	<0.05	m,p-Xylene	5.4
Methylene chloride	<0.5	o-Xylene	< 0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	4.7
trans-1,2-Dichloroethene	< 0.05	Isopropylbenzene	
1,1-Dichloroethane	< 0.05	Bromoform	< 0.05
2,2-Dichloropropane	< 0.05	n-Propylbenzene	25 ve
cis-1,2-Dichloroethene	< 0.05	Bromobenzene	< 0.05
Chloroform	< 0.05	1,3,5-Trimethylbenzene	61 ve
2-Butanone (MEK)	< 0.5	1,1,2,2-Tetrachloroethane	< 0.05
1,2-Dichloroethane (EDC)	< 0.05	1,2,3-Trichloropropane	< 0.05
1,1,1-Trichloroethane	< 0.05	2-Chlorotoluene	< 0.05
1,1-Dichloropropene	< 0.05	4-Chlorotoluene	< 0.05
Carbon tetrachloride	< 0.05	tert-Butylbenzene	0.057
Benzene	5.8	1,2,4-Trimethylbenzene	140 ve
Trichloroethene	< 0.02	sec-Butylbenzene	4.2
1,2-Dichloropropane	< 0.05	p-Isopropyltoluene	3.4
Bromodichloromethane	< 0.05	1,3-Dichlorobenzene	< 0.05
Dibromomethane	< 0.05	1,4-Dichlorobenzene	< 0.05
4-Methyl-2-pentanone	< 0.5	1,2-Dichlorobenzene	< 0.05
cis-1,3-Dichloropropene	< 0.05	1,2-Dibromo-3-chloropropane	< 0.5
Toluene	2.9	1,2,4-Trichlorobenzene	< 0.25
trans-1,3-Dichloropropene	< 0.05	Hexachlorobutadiene	< 0.25
1,1,2-Trichloroethane	< 0.05	Naphthalene	22  ve
2-Hexanone	< 0.5	1,2,3-Trichlorobenzene	< 0.25

#### **ENVIRONMENTAL CHEMISTS**

Limit:

62

Upper

Limit:

142

<6.2

#### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: B3 Client: Websters
Date Received: 04/20/15 Project: Shortstop Cle Elum, WA, F&BI 504344

 Date Received:
 04/20/15
 Project:
 Shortstop Cle E

 Date Extracted:
 04/21/15
 Lab ID:
 504344-08 1/25

 Date Analyzed:
 04/22/15
 Data File:
 042238.D

 Matrix:
 Soil
 Instrument:
 GCMS4

% Recovery:

102

Matrix: Soil Instrument: GCMS4 Units: operator: JS Lower

Surrogates:

2-Hexanone

1,2-Dichloroethane-d4

1,2-Dichiolochiane-da	102		
Toluene-d8	101	55   145	
4-Bromofluorobenzene	98	65 139	
	C acoustica		Concentration
	Concentration	Compounds:	mg/kg (ppm)
Compounds:	mg/kg (ppm)	Compounds.	mg/kg (ppm)
Dichlorodifluoromethane	<12	1,3-Dichloropropane	<1.2
Chloromethane	<12	Tetrachloroethene	< 0.62
Vinyl chloride	<1.2	Dibromochloromethane	<1.2
Bromomethane	<12	1,2-Dibromoethane (EDB)	<1.2
Chloroethane	<12	Chlorobenzene	<1.2
Trichlorofluoromethane	<12	Ethylbenzene	30
Acetone	<12	1,1,1,2-Tetrachloroethane	<1.2
1,1-Dichloroethene	<1.2	m,p-Xylene	72
Methylene chloride	<12	o-Xylene	3.8
Methyl t-butyl ether (MTBE)	<1.2	Styrene	<1.2
trans-1,2-Dichloroethene	<1.2	Isopropylbenzene	4.6
1,1-Dichloroethane	<1.2	Bromoform	<1.2
2,2-Dichloropropane	<1.2	n-Propylbenzene	20
cis-1,2-Dichloroethene	<1.2	Bromobenzene	<1.2
Chloroform	<1.2	1,3,5-Trimethylbenzene	59
2-Butanone (MEK)	<12	1,1,2,2-Tetrachloroethane	<1.2
1,2-Dichloroethane (EDC)	<1.2	1,2,3-Trichloropropane	<1.2
1,1,1-Trichloroethane	<1.2	2-Chlorotoluene	<1.2
1,1-Dichloropropene	<1.2	4-Chlorotoluene	<1.2
Carbon tetrachloride	<1.2	tert-Butylbenzene	<1.2
Benzene	3.9	1,2,4-Trimethylbenzene	250
Trichloroethene	< 0.5	sec-Butylbenzene	3.7
1,2-Dichloropropane	<1.2	p-Isopropyltoluene	3.2
Bromodichloromethane	<1.2	1,3-Dichlorobenzene	<1.2
Dibromomethane	<1.2	1,4-Dichlorobenzene	<1.2
4-Methyl-2-pentanone	<12	1,2-Dichlorobenzene	<1.2
cis-1,3-Dichloropropene	<1.2	1,2-Dibromo-3-chloropropane	<12
Toluene	1.5	1,2,4-Trichlorobenzene	< 6.2
trans-1,3-Dichloropropene	<1.2	Hexachlorobutadiene	< 6.2
1,1,2-Trichloroethane	<1.2	Naphthalene	23
_,_,	-10	1 O O Walah lawah ammana	<b>-6</b> 9

<12

1,2,3-Trichlorobenzene

#### **ENVIRONMENTAL CHEMISTS**

# Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: B3 DUP pc Client: Websters

Date Received: 04/20/15 Project: Shortstop Cle Elum, WA, F&BI 504344
Date Extracted: 04/21/15 Lab ID: 504344-09

Date Analyzed: 04/23/15 Data File: 042306.D

Matrix: Soil Instrument: GCMS4

Units: mg/kg (ppm) Dry Weight Operator: JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	105	62	142
Toluene-d8	96	55	145
4-Bromofluorobenzene	111	65	139

1 Bromondorosome			
Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
		<u>-</u>	
Dichlorodifluoromethane	<0.5 ca	1,3-Dichloropropane	< 0.05
Chloromethane	<0.5 ca	Tetrachloroethene	< 0.025
Vinyl chloride	< 0.05	Dibromochloromethane	< 0.05
Bromomethane	< 0.5	1,2-Dibromoethane (EDB)	< 0.05
Chloroethane	< 0.5	Chlorobenzene	< 0.05
Trichlorofluoromethane	< 0.5	Ethylbenzene	5.4
Acetone	< 0.5	1,1,1,2-Tetrachloroethane	< 0.05
1,1-Dichloroethene	< 0.05	m,p-Xylen e	13
Methylene chloride	< 0.5	o-Xylene	1.1
Methyl t-butyl ether (MTBE)	< 0.05	Styrene	< 0.05
trans-1,2-Dichloroethene	< 0.05	Isopropylbenzene	0.71
1,1-Dichloroethane	< 0.05	Bromoform	< 0.05
2,2-Dichloropropane	< 0.05	n-Propylbenzene	2.9
cis-1,2-Dichloroethene	< 0.05	Bromobenzene	< 0.05
Chloroform	< 0.05	1,3,5-Trimethylbenzene	11
2-Butanone (MEK)	< 0.5	1,1,2,2-Tetrachloroethane	< 0.05
1,2-Dichloroethane (EDC)	< 0.05	1,2,3-Trichloropropane	< 0.05
1,1,1-Trichloroethane	< 0.05	2-Chlorotoluene	< 0.05
1,1-Dichloropropene	< 0.05	4-Chlorotoluene	< 0.05
Carbon tetrachloride	< 0.05	tert-Butylbenzene	< 0.05
Benzene	1.0	1,2,4-Trimethylbenzene	52  ve
Trichloroethene	< 0.02	sec-Butylbenzene	0.65
1,2-Dichloropropane	< 0.05	p-Isopropyltoluene	0.67
Bromodichloromethane	< 0.05	1,3-Dichlorobenzene	< 0.05
Dibromomethane	< 0.05	1,4-Dichlorobenzene	< 0.05
4-Methyl-2-pentanone	< 0.5	1,2-Dichlorobenzene	< 0.05
cis-1,3-Dichloropropene	< 0.05	1,2-Dibromo-3-chloropropane	< 0.5
Toluene	0.38	1,2,4-Trichlorobenzene	< 0.25
trans-1,3-Dichloropropene	< 0.05	Hexachlorobutadiene	< 0.25
1,1,2-Trichloroethane	< 0.05	Naphthalene	7.8
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	< 0.25
_ 110110110		, ,	

#### **ENVIRONMENTAL CHEMISTS**

#### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: B3 DUP pc Client: Websters

Shortstop Cle Elum, WA, F&BI 504344 Project: Date Received: 04/20/15Lab ID: 504344-09 1/10 Date Extracted: 04/21/15 042237.DData File: Date Analyzed: 04/22/15GCMS4 Instrument: Soil Matrix:

Units: mg/kg (ppm) Dry Weight Operator: JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	105	62	142
Toluene-d8	100	55	145
4-Bromofluorobenzene	97	65	139

4-Bromofluorobenzene	97	65 139	
	Concentration		Concentration
Compounds:	mg/kg (ppm)	Compounds:	mg/kg (ppm)
Dichlorodifluoromethane	<5	1,3-Dichloropropane	< 0.5
Chloromethane	<5	Tetrachloroethene	< 0.25
Vinyl chloride	< 0.5	Dibromochloromethane	< 0.5
Bromomethane	<5	1,2-Dibromoethane (EDB)	< 0.5
Chloroethane	<5	Chlorobenzene	< 0.5
Trichlorofluoromethane	<5	Ethylbenzene	4.9
Acetone	<5	1,1,1,2-Tetrachloroethane	< 0.5
1,1-Dichloroethene	< 0.5	m,p-Xylene	12
Methylene chloride	<5	o-Xylene	0.82
Methyl t-butyl ether (MTBE)	< 0.5	Styrene	< 0.5
trans-1,2-Dichloroethene	< 0.5	Isopropylbenzene	0.71
1,1-Dichloroethane	< 0.5	Bromoform	< 0.5
2,2-Dichloropropane	< 0.5	n-Propylbenzene	2.5
cis-1,2-Dichloroethene	< 0.5	Bromobenzene	< 0.5
Chloroform	< 0.5	1,3,5-Trimethylbenzene	10
2-Butanone (MEK)	<5	1,1,2,2-Tetrachloroethane	< 0.5
1,2-Dichloroethane (EDC)	< 0.5	1,2,3-Trichloropropane	< 0.5
1,1,1-Trichloroethane	< 0.5	2-Chlorotoluene	< 0.5
1,1-Dichloropropene	< 0.5	4-Chlorotoluene	< 0.5
Carbon tetrachloride	< 0.5	tert-Butylbenzene	< 0.5
Benzene	0.76	1,2,4-Trimethylbenzene	51
Trichloroethene	< 0.2	sec-Butylbenzene	0.61
1,2-Dichloropropane	< 0.5	p-Isopropyltoluene	0.64
Bromodichloromethane	< 0.5	1,3-Dichlorobenzene	< 0.5
Dibromomethane	< 0.5	1,4-Dichlorobenzene	< 0.5
4-Methyl-2-pentanone	<5	1,2-Dichlorobenzene	< 0.5
cis-1,3-Dichloropropene	< 0.5	1,2-Dibromo-3-chloropropane	<5
Toluene	< 0.5	1,2,4-Trichlorobenzene	<2.5
trans-1,3-Dichloropropene	< 0.5	Hexachlorobutadiene	< 2.5
1,1,2-Trichloroethane	< 0.5	Naphthalene	7.8
2-Hexanone	<5	1,2,3-Trichlorobenzene	<2.5

#### **ENVIRONMENTAL CHEMISTS**

# Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: B4 Client: Websters
Date Received: 04/20/15 Project: Shortstop Cle Elum, WA, F&BI 504344

Lab ID: 504344-10 1/5 Date Extracted: 04/21/15 042114.D Data File: 04/21/15 Date Analyzed: GCMS4 Instrument: Matrix: Soil Operator: JSmg/kg (ppm) Dry Weight Units:

Upper Lower Limit: Limit: Surrogates: % Recovery: 142 62 1,2-Dichloroethane-d4 104 145 102 55 Toluene-d8 139 65 102 4-Bromofluorobenzene

4-Dromonuorobenzene	102	200	
Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
_			< 0.25
Dichlorodifluoromethane	<2.5	1,3-Dichloropropane Tetrachloroethene	<0.12
Chloromethane	< 2.5	Dibromochloromethane	< 0.25
Vinyl chloride	<0.25		< 0.25
Bromomethane	<2.5	1,2-Dibromoethane (EDB)	< 0.25
Chloroethane	<2.5	Chlorobenzene	16
Trichlorofluoromethane	<2.5	Ethylbenzene	< 0.25
Acetone	<2.5	1,1,1,2-Tetrachloroethane	
1,1-Dichloroethene	< 0.25	m,p-Xylene	30
Methylene chloride	< 2.5	o-Xylene	0.65
Methyl t-butyl ether (MTBE)	< 0.25	Styrene	< 0.25
trans-1,2-Dichloroethene	< 0.25	Isopropylbenzene	2.7
1,1-Dichloroethane	< 0.25	Bromoform	< 0.25
2,2-Dichloropropane	< 0.25	n-Propylbenzene	11
cis-1,2-Dichloroethene	< 0.25	Bromobenzene	< 0.25
Chloroform	< 0.25	1,3,5-Trimethylbenzene	30
2-Butanone (MEK)	< 2.5	1,1,2,2-Tetrachloroethane	< 0.25
1,2-Dichloroethane (EDC)	< 0.25	1,2,3-Trichloropropane	< 0.25
1,1,1-Trichloroethane	< 0.25	2-Chlorotoluene	< 0.25
1,1-Dichloropropene	< 0.25	4-Chlorotoluene	< 0.25
Carbon tetrachloride	< 0.25	tert-Butylbenzene	< 0.25
Benzene	0.89	1,2,4-Trimethylbenzene	130 ve
Trichloroethene	< 0.1	sec-Butylbenzene	2.2
1,2-Dichloropropane	< 0.25	p-Isopropyltoluene	1.9
Bromodichloromethane	< 0.25	1,3-Dichlorobenzene	< 0.25
Dibromomethane	< 0.25	1,4-Dichlorobenzene	< 0.25
4-Methyl-2-pentanone	< 2.5	1,2-Dichlorobenzene	< 0.25
cis-1,3-Dichloropropene	< 0.25	1,2-Dibromo-3-chloropropane	<2.5
Toluene	< 0.25	1,2,4-Trichlorobenzene	<1.2
trans-1,3-Dichloropropene	< 0.25	Hexachlorobutadiene	<1.2
1,1,2-Trichloroethane	< 0.25	Naphthalene	13
2-Hexanone	< 2.5	1,2,3-Trichlorobenzene	<1.2

#### **ENVIRONMENTAL CHEMISTS**

#### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: B4 Client: Websters

 Date Received:
 04/20/15
 Project:
 Shortstop Cle Elum, WA, F&BI 504344

 Date Extracted:
 04/21/15
 Lab ID:
 504344-10 1/50

 Date File:
 04/21/22 D

Date Analyzed: 04/21/15 Data File: 042122.D

Matrix: Soil Instrument: GCMS4

Units: mg/kg (ppm) Dry Weight Operator: JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	100	62	142
Toluene-d8	99	55	145
4-Bromofluorobenzene	97	65	139

4-Diomondolenzene	01		
	Concentration		Concentration
Compounds:	mg/kg (ppm)	Compounds:	mg/kg (ppm)
Dichlorodifluoromethane	<25	1,3-Dichloropropane	< 2.5
Chloromethane	<25	Tetrachloroethene	<1.2
Vinyl chloride	< 2.5	Dibromochloromethane	<2.5
Bromomethane	<25	1,2-Dibromoethane (EDB)	<2.5
Chloroethane	<25	Chlorobenzene	<2.5
Trichlorofluoromethane	<25	Ethylbenzene	20
Acetone	<25	1,1,1,2-Tetrachloroethane	<2.5
1,1-Dichloroethene	< 2.5	m,p-Xylene	36
Methylene chloride	<25	o-Xylene	<2.5
Methyl t-butyl ether (MTBE)	< 2.5	Styrene	<2.5
trans-1,2-Dichloroethene	< 2.5	Isopropylbenzene	3.0
1,1-Dichloroethane	< 2.5	Bromoform	<2.5
2,2-Dichloropropane	< 2.5	n-Propylbenzene	12
cis-1,2-Dichloroethene	< 2.5	Bromobenzene	< 2.5
Chloroform	<2.5	1,3,5-Trimethylbenzene	32
2-Butanone (MEK)	<25	1,1,2,2-Tetrachloroethane	<2.5
1,2-Dichloroethane (EDC)	<2.5	1,2,3-Trichloropropane	<2.5
1,1,1-Trichloroethane	< 2.5	2-Chlorotoluene	<2.5
1,1-Dichloropropene	< 2.5	4-Chlorotoluene	<2.5
Carbon tetrachloride	<2.5	tert-Butylbenzene	<2.5
Benzene	<1.5	1,2,4-Trimethylbenzene	160
Trichloroethene	<1	sec-Butylbenzene	<2.5
1,2-Dichloropropane	<2.5	p-Isopropyltoluene	<2.5
Bromodichloromethane	<2.5	1,3-Dichlorobenzene	<2.5
Dibromomethane	< 2.5	1,4-Dichlorobenzene	<2.5
4-Methyl-2-pentanone	<25	1,2-Dichlorobenzene	<2.5
cis-1,3-Dichloropropene	< 2.5	1,2-Dibromo-3-chloropropane	<25
Toluene	< 2.5	1,2,4-Trichlorobenzene	<12
trans-1,3-Dichloropropene	<2.5	Hexachlorobutadiene	<12
1,1,2-Trichloroethane	< 2.5	Naphthalene	17
2-Hexanone	<25	1,2,3-Trichlorobenzene	<12

#### **ENVIRONMENTAL CHEMISTS**

#### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: Method Blank Client: Websters

Date Received: Not Applicable Project: Shortstop Cle Elum, WA, F&BI 504344

Date Extracted: 04/21/15 Lab ID: 05-0784 mb

Date Analyzed: 04/21/15 Data File: 042106.D

Matrix: Soil Instrument: GCMS4
Units: mg/kg (ppm) Dry Weight Operator: JS

		$\mathbf{Lower}$	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	103	62	142
Toluene-d8	99	55	145
4-Bromofluorobenzene	97	65	139

4 Diomondorosomeono			
	Concentration		Concentration
Compounds:	mg/kg (ppm)	Compounds:	mg/kg (ppm)
Dichlorodifluoromethane	< 0.5	1,3-Dichloropropane	< 0.05
Chloromethane	< 0.5	Tetrachloroethene	< 0.025
Vinyl chloride	< 0.05	Dibromochloromethane	< 0.05
Bromomethane	< 0.5	1,2-Dibromoethane (EDB)	< 0.05
Chloroethane	< 0.5	Chlorobenzene	< 0.05
Trichlorofluoromethane	< 0.5	Ethylbenzene	< 0.05
Acetone	< 0.5	1,1,1,2-Tetrachloroethane	< 0.05
1,1-Dichloroethene	< 0.05	m,p-Xylene	< 0.1
Methylene chloride	< 0.5	o-Xylene	< 0.05
Methyl t-butyl ether (MTBE)	< 0.05	Styrene	< 0.05
trans-1,2-Dichloroethene	< 0.05	Isopropylbenzene	< 0.05
1,1-Dichloroethane	< 0.05	Bromoform	< 0.05
2,2-Dichloropropane	< 0.05	n-Propylbenzene	< 0.05
cis-1,2-Dichloroethene	< 0.05	Bromobenzene	< 0.05
Chloroform	< 0.05	1,3,5-Trimethylbenzene	< 0.05
2-Butanone (MEK)	< 0.5	1,1,2,2-Tetrachloroethane	< 0.05
1,2-Dichloroethane (EDC)	< 0.05	1,2,3-Trichloropropane	< 0.05
1,1,1-Trichloroethane	< 0.05	2-Chlorotoluene	< 0.05
1,1-Dichloropropene	< 0.05	4-Chlorotoluene	< 0.05
Carbon tetrachloride	< 0.05	tert-Butylbenzene	< 0.05
Benzene	< 0.03	1,2,4-Trimethylbenzene	< 0.05
Trichloroethene	< 0.02	sec-Butylbenzene	< 0.05
1,2-Dichloropropane	< 0.05	p-Isopropyltoluene	< 0.05
Bromodichloromethane	< 0.05	1,3-Dichlorobenzene	< 0.05
Dibromomethane	< 0.05	1,4-Dichlorobenzene	< 0.05
4-Methyl-2-pentanone	< 0.5	1,2-Dichlorobenzene	< 0.05
cis-1,3-Dichloropropene	< 0.05	1,2-Dibromo-3-chloropropane	< 0.5
Toluene	< 0.05	1,2,4-Trichlorobenzene	< 0.25
trans-1,3-Dichloropropene	< 0.05	Hexachlorobutadiene	< 0.25
1,1,2-Trichloroethane	< 0.05	Naphthalene	< 0.05
2-Hexanone	< 0.5	1,2,3-Trichlorobenzene	< 0.25

#### **ENVIRONMENTAL CHEMISTS**

#### Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID: A3Date Received: 04/20/15 Date Extracted: 04/20/15 04/21/15 Date Analyzed:

Matrix:

Units:

Soil mg/kg (ppm) Dry Weight Client:

Websters

Project:

Shortstop Cle Elum, WA, F&BI 504344

Lab ID: Data File: Instrument:

Operator:

504344-03 1/5 042119.D

GCMS6 VM

Surrogates:  $\begin{array}{c} 89 \\ 133 \end{array}$ Anthracene d10 Benzo(a)anthracene-d12

% Recovery:

Upper Lower Limit: Limit: 163 31 168 24

	Concentration
Compounds:	mg/kg (ppm)
Naphthalene	8.4 ve
-	
Acenaphthylene	< 0.01
Acenaphthene	0.027
Fluorene	0.058
Phenanthrene	0.13
Anthracene	0.023
Fluoranthene	0.019
Pyrene	0.028
Benz(a)anthracene	0.012
Chrysene	0.011
Benzo(a)pyrene	< 0.01
Benzo(b)fluoranthene	0.010
Benzo(k)fluoranthene	< 0.01
Indeno(1,2,3-cd)pyrene	< 0.01
Dibenz(a,h)anthracene	< 0.01
Benzo(g,h,i)perylene	< 0.01

#### **ENVIRONMENTAL CHEMISTS**

# Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID: **A**3 04/20/15 Date Received: 04/20/15 Date Extracted: Date Analyzed: 04/23/15 Matrix: Soil

Units: mg/kg (ppm) Dry Weight Client:

Websters Shortstop Cle Elum, WA, F&BI 504344 Project:

Lab ID: Data File: Instrument:

Operator:

504344-03 1/100

042315.D GCMS6 VM

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
Anthracene-d10	120 d	31	163
Benzo(a)anthracene-d12	86 d	24	168

Compounds:	Concentration mg/kg (ppm)
Naphthalene	8.5
Acenaphthylene	< 0.2
Acenaphthene	< 0.2
Fluorene	< 0.2
Phenanthrene	< 0.2
Anthracene	< 0.2
Fluoranthene	< 0.2
Pyrene	< 0.2
Benz(a)anthracene	< 0.2
Chrysene	< 0.2
Benzo(a)pyrene	< 0.2
Benzo(b)fluoranthene	< 0.2
Benzo(k)fluoranthene	< 0.2
Indeno(1,2,3-cd)pyrene	< 0.2
Dibenz(a,h)anthracene	< 0.2
Benzo(g,h,i)perylene	< 0.2

#### **ENVIRONMENTAL CHEMISTS**

# Analysis For Semivolatile Compounds By EPA Method 8270D SIM

% Recovery:

89

133

Client Sample ID: A4
Date Received: 04/20/15
Date Extracted: 04/20/15
Date Analyzed: 04/21/15
Matrix: Soil

Matrix: Units:

Surrogates:

Anthracene d10

Benzo(a)anthracene-d12

Units: mg/kg (ppm) Dry Weight

Client:

Websters

Project:

Shortstop Cle Elum, WA, F&BI 504344

Lab ID: Data File: Instrument:

Operator:

504344-04 1/5 042120.D

GCMS6 VM

Lower Limit: 31 24

Upper Limit: 163 168

Compounds:	Concentration mg/kg (ppm)
Naphthalene	7.0 ve
Acenaphthylene	< 0.01
Acenaphthene	0.018
Fluorene	0.040
Phenanthrene	0.10
Anthracene	0.018
Fluoranthene	0.013
Pyrene	0.017
Benz(a)anthracene	< 0.01
Chrysene	< 0.01
Benzo(a)pyrene	< 0.01
Benzo(b)fluoranthene	< 0.01
Benzo(k)fluoranthene	< 0.01
Indeno(1,2,3-cd)pyrene	< 0.01
Dibenz(a,h)anthracene	< 0.01
Benzo(g,h,i)perylene	< 0.01

#### **ENVIRONMENTAL CHEMISTS**

# Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID: A4
Date Received: 04/20/15
Date Extracted: 04/20/15
Date Analyzed: 04/23/15
Matrix: Soil

Units: mg/kg (ppm) Dry Weight

Client: Websters

Project: Shortstop Cle Elum, WA, F&BI 504344

 Lab ID:
 504344-04 1/100

 Data File:
 042316.D

 Instrument:
 GCMS6

 Operator:
 VM

		$\mathbf{Lower}$	Upper
Surrogates:	% Recovery:	Limit:	Limit:
Anthracene d10	106 d	31	163
Benzo(a)anthracene-d12	105 d	24	168

` '	
	Concentration
Compounds:	mg/kg (ppm)
Naphthalene	7.5
Acenaphthylene	< 0.2
Acenaphthene	< 0.2
Fluorene	< 0.2
Phenanthrene	< 0.2
Anthracene	< 0.2
Fluoranthene	< 0.2
Pyrene	< 0.2
Benz(a)anthracene	< 0.2
Chrysene	< 0.2
Benzo(a)pyrene	< 0.2
Benzo(b)fluoranthene	< 0.2
Benzo(k)fluoranthene	< 0.2
Indeno(1,2,3-cd)pyrene	< 0.2
Dibenz(a,h)anthracene	< 0.2
Benzo(g,h,i)perylene	< 0.2

#### **ENVIRONMENTAL CHEMISTS**

# Analysis For Semivolatile Compounds By EPA Method 8270D SIM

% Recovery:

91

140

Client Sample ID: **A5** 04/20/15 Date Received: Date Extracted: 04/20/15 Date Analyzed: 04/21/15 Matrix: Soil

Units:

Surrogates:

Anthracene-d10

Benzo(a)anthracene-d12

mg/kg (ppm) Dry Weight

Client:

Websters

Project:

Shortstop Cle Elum, WA, F&BI 504344

Lab ID: Data File: Instrument:

504344-05 1/5 042121.D

GCMS6 VM

Operator:

Upper Lower Limit: Limit: 31 163 168 24

	Concentration
Compounds:	mg/kg (ppm)
Naphthalene	2.6 ve
Acenaphthylene	< 0.01
Acenaphthene	0.010
Fluorene	0.032
Phenanthrene	0.078
Anthracene	0.014
Fluoranthene	0.014
Pyrene	0.020
Benz(a)anthracene	< 0.01
Chrysene	< 0.01
Benzo(a)pyrene	< 0.01
Benzo(b)fluoranthene	< 0.01
Benzo(k)fluoranthene	< 0.01
Indeno(1,2,3-cd)pyrene	< 0.01
Dibenz(a,h)anthracene	< 0.01
Benzo(g,h,i)perylene	< 0.01

#### **ENVIRONMENTAL CHEMISTS**

# Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID: A5 Date Received: 04/20/15 Date Extracted: 04/20/15 Date Analyzed: 04/23/15 Matrix: Soil

mg/kg (ppm) Dry Weight Units:

Client:

Operator:

Shortstop Cle Elum, WA, F&BI 504344 Project:

504344-05 1/100 Lab ID: 042317.DData File: GCMS6 Instrument: VM

Surrogates: Anthracene-d10 Benzo(a)anthracene-d12	% Recovery: 119 d 98 d	Lower Limit: 31 24	Upper Limit: 163 168
---	------------------------------	-----------------------------	-------------------------------

` '	
	Concentration
Compounds:	mg/kg (ppm)
Naphthalene	2.8
Acenaphthylene	< 0.2
Acenaphthene	< 0.2
Fluorene	< 0.2
Phenanthrene	< 0.2
Anthracene	< 0.2
Fluoranthene	< 0.2
Pyrene	< 0.2
Benz(a)anthracene	< 0.2
Chrysene	< 0.2
Benzo(a)pyrene	< 0.2
Benzo(b)fluoranthene	< 0.2
Benzo(k)fluoranthene	< 0.2
Indeno(1,2,3-cd)pyrene	< 0.2
Dibenz(a,h)anthracene	< 0.2
Benzo(g,h,i)perylene	< 0.2

#### **ENVIRONMENTAL CHEMISTS**

## Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:

**B**3

Date Received: Date Extracted: 04/20/15 04/20/15

Date Analyzed: Matrix:

04/21/15 Soil

Units:

mg/kg (ppm) Dry Weight

Client:

Websters

Project:

Shortstop Cle Elum, WA, F&BI 504344

Lab ID: Data File: 504344-08 1/5 042124.D

Instrument: Operator:

31

24

GCMS6 VM

% Recovery: Surrogates: Anthracene d10 75 119 Benzo(a)anthracene-d12

Lower Limit: Upper Limit: 163 168

	Concentration
Compounds:	mg/kg (ppm)
Naphthalene	10 ve
Acenaphthylene	< 0.01
Acenaphthene	0.027
Fluorene	0.086
Phenanthrene	0.15
Anthracene	0.026
Fluoranthene	0.025
Pyrene	0.051
Benz(a)anthracene	0.017
Chrysene	0.021
Benzo(a)pyrene	0.014
Benzo(b)fluoranthene	0.024
Benzo(k)fluoranthene	< 0.01
Indeno(1,2,3-cd)pyrene	0.013
Dibenz(a,h)anthracene	< 0.01
Benzo(g,h,i)perylene	0.017

#### **ENVIRONMENTAL CHEMISTS**

#### Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID: **B**3 04/20/15 Date Received: Date Extracted: 04/20/15 Date Analyzed: 04/21/15 Matrix: Soil

Units:

mg/kg (ppm) Dry Weight

Client:

Shortstop Cle Elum, WA, F&BI 504344 Project:

Lab ID: 504344-08 1/50 Data File: 042130.D GCMS6 Instrument: VMOperator:

		Lower	$\mathbf{U}_{\mathbf{p}\mathbf{p}\mathbf{e}\mathbf{r}}$
Surrogates:	% Recovery:	Limit:	Limit:
Anthracene-d10	130 d	31	163
Benzo(a)anthracene-d12	301 d	24	168

	Concentration
Compounds:	mg/kg (ppm)
Naphthalene	9.2
Acenaphthylene	< 0.1
Acenaphthene	< 0.1
Fluorene	< 0.1
Phenanthrene	0.16
Anthracene	< 0.1
Fluoranthene	< 0.1
Pyrene	< 0.1
Benz(a)anthracene	< 0.1
Chrysene	< 0.1
Benzo(a)pyrene	< 0.1
Benzo(b)fluoranthene	< 0.1
Benzo(k)fluoranthene	< 0.1
Indeno(1,2,3-cd)pyrene	< 0.1
Dibenz(a,h)anthracene	< 0.1
Benzo(g,h,i)perylene	< 0.1

#### **ENVIRONMENTAL CHEMISTS**

## Analysis For Semivolatile Compounds By EPA Method 8270D SIM

**B3 DUP** Client Sample ID: 04/20/15 Date Received: Date Extracted: 04/20/15 Date Analyzed: 04/21/15 Matrix: Soil

mg/kg (ppm) Dry Weight Units:

Client: Project: Websters

Operator:

Shortstop Cle Elum, WA, F&BI 504344

504344-09 1/5 Lab ID: Data File: GCMS6 Instrument:

042125.D

VM

Surrogates: Anthracene-d10 80 106 Benzo(a)anthracene-d12

% Recovery:

Lower Limit: 31 24

Upper Limit: 163 168

Concentration mg/kg (ppm) Compounds: 5.5 ve Naphthalene < 0.01 Acenaphthylene Acenaphthene 0.026 0.063 Fluorene 0.10 Phenanthrene Anthracene < 0.01 0.020 Fluoranthene 0.038 Pyrene 0.011 Benz(a)anthracene 0.012 Chrysene < 0.01 Benzo(a)pyrene 0.017 Benzo(b)fluoranthene Benzo(k)fluoranthene < 0.01 Indeno(1,2,3-cd)pyrene 0.011 < 0.01 Dibenz(a,h)anthracene Benzo(g,h,i)perylene 0.015

#### **ENVIRONMENTAL CHEMISTS**

# Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID: Date Received: Date Extracted:	B3 DUP 04/20/15 04/20/15
Date Analyzed:	04/21/15
Matrix:	Soil

Units: mg/kg (ppm) Dry Weight

Client: Websters

Project: Shortstop Cle Elum, WA, F&BI 504344

 Lab ID:
 504344-09 1/50

 Data File:
 042131.D

 Instrument:
 GCMS6

 Operator:
 VM

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
Anthracene d10	155 d	31	163
Benzo(a)anthracene-d12	182 d	24	168

Compounds:	Concentration mg/kg (ppm)
Naphthalene	4.8
Acenaphthylene	< 0.1
Acenaphthene	< 0.1
Fluorene	< 0.1
Phenanthrene	0.11
Anthracene	< 0.1
Fluoranthene	< 0.1
Pyrene	< 0.1
Benz(a)anthracene	< 0.1
Chrysene	< 0.1
Benzo(a)pyrene	< 0.1
Benzo(b)fluoranthene	< 0.1
Benzo(k)fluoranthene	< 0.1
Indeno(1,2,3-cd)pyrene	< 0.1
Dibenz(a,h)anthracene	< 0.1
Benzo(g,h,i)perylene	< 0.1

#### **ENVIRONMENTAL CHEMISTS**

## Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID: B4
Date Received: 04/20/15

Date Extracted: 04/20/15 Date Analyzed: 04/21/15 Matrix: Soil

Matrix: Units:

mg/kg (ppm) Dry Weight

Client:

Websters

Project:

Shortstop Cle Elum, WA, F&BI 504344

Lab ID: Data File: Instrument: 504344-10 1/5 042126.D

GCMS6

Operator:

VM

Surrogates:	
Anthracene d10	
Benzo(a)anthracene-d12	

% Recovery: 84 133 Lower Limit: 31 24 Upper Limit: 163 168

Compounds:	Concentration mg/kg (ppm)
Naphthalene	13
Acenaphthylene	< 0.01
Acenaphthene	0.043
Fluorene	0.11
Phenanthrene	0.20
Anthracene	0.034
Fluoranthene	0.043
Pyrene	0.072
Benz(a)anthracene	0.022
Chrysene	0.028
Benzo(a)pyrene	0.019
Benzo(b)fluoranthen e	0.036
Benzo(k)fluoranthene	< 0.01
Indeno(1,2,3-cd)pyrene	0.017
Dibenz(a,h)anthracene	< 0.01
Benzo(g,h,i)perylene	0.019

#### **ENVIRONMENTAL CHEMISTS**

#### Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID: B4
Date Received: 04/20/15
Date Extracted: 04/20/15
Date Analyzed: 04/21/15
Matrix: Soil

Units: mg/kg (ppm) Dry Weight

Client: Websters

Project: Shortstop Cle Elum, WA, F&BI 504344

 Lab ID:
 504344-10 1/50

 Data File:
 042132.D

 Instrument:
 GCMS6

 Operator:
 VM

		$\operatorname{Lower}$	$\mathbf{Upper}$
Surrogates:	% Recovery:	Limit:	Limit:
Anthracene d10	125 d	31	163
Benzo(a)anthracene-d12	326 d	24	168

Compounds:	Concentration mg/kg (ppm)
Naphthalene	13
Acenaphthylene	< 0.1
Acenaphthene	< 0.1
Fluorene	0.12
Phenanthrene	0.21
Anthracene	< 0.1
Fluoranthene	< 0.1
Pyrene	< 0.1
Benz(a)anthracen e	< 0.1
Chrysene	< 0.1
Benzo(a)pyrene	< 0.1
Benzo(b)fluoranthene	< 0.1
Benzo(k)fluoranthene	< 0.1
Indeno(1,2,3-cd)pyrene	< 0.1
Dibenz(a,h)anthracene	< 0.1
Benzo(g,h,i)perylene	< 0.1

#### **ENVIRONMENTAL CHEMISTS**

## Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID: Method Blank Not Applicable Date Received:

Date Extracted: 04/20/15 Date Analyzed: 04/21/15 Soil

Matrix: Units:

mg/kg (ppm) Dry Weight

Client:

Project:

Shortstop Cle Elum, WA, F&BI 504344

Lab ID: Data File: Instrument:

Operator:

05-810 mb 1/5 042117.D

GCMS6 VM

% Recovery: Surrogates: Anthracene d10  $\begin{array}{c} 82 \\ 102 \end{array}$ Benzo(a)anthracene-d12

Lower Limit: 31  $\overline{24}$ 

Upper Limit: 163 168

	Concentration
Compounds:	mg/kg (ppm)
Naphthalene	< 0.01
Acenaphthylene	< 0.01
Acenaphthene	< 0.01
Fluorene	< 0.01
Phenanthrene	< 0.01
Anthracene	< 0.01
Fluoranthene	< 0.01
Pyrene	< 0.01
Benz(a)anthracene	< 0.01
Chrysene	< 0.01
Benzo(a)pyrene	< 0.01
Benzo(b)fluoranthene	< 0.01
Benzo(k)fluoranthene	< 0.01
Indeno(1,2,3-cd)pyrene	< 0.01
Dibenz(a,h)anthracene	< 0.01
Benzo(g,h,i)perylene	< 0.01

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 04/28/15 Date Received: 04/20/15

Project: Shortstop Cle Elum, WA, F&BI 504344

# QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TPH AS GASOLINE USING METHOD NWTPH-Gx

Laboratory Code: 504356-01 (Duplicate)

		Sample	Duplicate	
	Reporting	Result	Result	RPD
Analyte	Units	(Wet Wt)	(Wet Wt)	(Limit 20)
Gasoline	mg/kg (ppm)	<2	<2	nm

			Percent		
	Reporting	Spike	Recovery	Acceptance	
Analyte	Units	Level	LCS	Criteria	_
Gasoline	mg/kg (ppm)	20	100	71-131	

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 04/28/15 Date Received: 04/20/15

Project: Shortstop Cle Elum, WA, F&BI 504344

# QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 504343-01 (Matrix Spike)

Laboratory couci.	001010 01 (1.11111	- 10 - 1 - 1	Sample	Percent	Percent		
	Reporting	Spike	Result	Recovery	Recovery	Acceptance	m RPD
Analyte	Units	Level	(Wet Wt)	MS	MSD	Criteria	(Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	102	101	63-146	1

			$\operatorname{Percent}$		
	Reporting	Spike	Recovery	Acceptance	
Analyte	Units	Level	LCS	Criteria	
Diesel Extended	mg/kg (ppm)	5,000	101	79-144	

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 04/28/15 Date Received: 04/20/15

Project: Shortstop Cle Elum, WA, F&BI 504344

# QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: 504333-01 (Matrix Spike)

	Reporting	Spike	Sample Result	Percent Recovery	Acceptance
Analyte	Units	Level	(Wet wt)	MS	Criteria
Dichlorodifluoromethane	mg/kg (ppm)	2,5	<0.5	19	10-142
Chloromethane	mg/kg (ppm)	2.5	<0.5	40	10-126
Vinyl chloride	mg/kg (ppm)	2.5	< 0.05	44	10-138
Bromomethane	mg/kg (ppm)	2.5	<0,5	60	10-163
Chloroethane	mg/kg (ppm)	2.5	< 0.5	59	10-176
Prichlorofluoromethane	mg/kg (ppm)	2.5	< 0.5	46	10-176
Acetone	mg/kg (ppm)	12.5	< 0.5	87	10-163
1,1-Dichloroethene	mg/kg (ppm)	2.5	< 0.05	60	10-160
Methylene chloride	mg/kg (ppm)	2.5	<0.5	85	10-156
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	< 0.05	84	21-145
rans-1,2-Dichloroethene	mg/kg (ppm)	2.5	< 0.05	74	14-137
,1-Dichloroethane	mg/kg (ppm)	2.5	<0.05	80	19-140
,2-Dichloropropane	mg/kg (ppm)	2.5	< 0.05	74	10-158
is-1,2-Dichloroethene	mg/kg (ppm)	2.5	< 0.05	84	25-135
Chloroform	mg/kg (ppm)	2.5	< 0.05	83	21-145
-Butanone (MEK)	mg/kg (ppm)	12.5	<0.5	91	19-147
,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	<0.05	81	12-160
l,1,1-Trichloroethane	mg/kg (ppm)	2.5	< 0.05	81	10-156
,1-Dichloropropene	mg/kg (ppm)	2.5	< 0.05	79	17-140
Carbon tetrachloride	mg/kg (ppm)	2.5	< 0.05	85	9-164
Benzene	mg/kg (ppm)	2.5	< 0.03	80	29-129
Prichloroethene	mg/kg (ppm)	2.5	< 0.02	89	21-139
1,2-Dichloropropane	mg/kg (ppm)	2.5	< 0.05	86	30-135
Bromodichloromethane	mg/kg (ppm)	2.5	< 0.05	87	23-155
Dibromomethane	mg/kg (ppm)	2.5	< 0.05	85	23-145
l-Methyl-2-pentanone	mg/kg (ppm)	12.5	< 0.5	96	24-155
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	< 0.05	93	28-144
l'oluene	mg/kg (ppm)	2.5	< 0.05	79	35-130
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	< 0.05	90	26-149
1,1,2 Trichloroethane	mg/kg (ppm)	2.5	< 0.05	87	10-205
2-Hexanone	mg/kg (ppm)	12.5	<0.5	91	15-166
1,3-Dichloropropane	mg/kg (ppm)	2.5	< 0.05	83	31-137
Petrachloroethene	mg/kg (ppm)	2.5	< 0.025	82	20-133
Dibromochloromethane	mg/kg (ppm)	2.5	< 0.05	90	28-150
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	< 0.05	90	28-142
Chlorobenzene	mg/kg (ppm)	2,5	< 0.05	83	32-129
Ethylbenzene	mg/kg (ppm)	2.5	< 0.05	83	32-137
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	< 0.05	91	31-143
m,p-Xylene	mg/kg (ppm)	5	<0.1	85	34-136
-Xylene	mg/kg (ppm)	2.5	<0.05	88	33-134
Styrene	mg/kg (ppm)	2.5	< 0.05	87	35-137 31-142
Isopropylbenzene	mg/kg (ppm)	2.5	< 0.05	88	
Bromoform	mg/kg (ppm)	2.5	<0.05	88	21-156 23-146
n-Propylbenzene	mg/kg (ppm)	2.5	< 0.05	86 88	34-130
Bromobenzene	mg/kg (ppm)	2.5	<0.05		18-149
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	<0.05	88 85	28-140
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	< 0.05	89	25-144
1,2,3-Trichloropropane	mg/kg (ppm)	2.5	<0.05	85	31-134
2-Chlorotoluene	mg/kg (ppm)	2.5	<0.05		31-136
4-Chlorotoluene	mg/kg (ppm)	2.5	<0.05	85 89	30-137
ert-Butylbenzene	mg/kg (ppm)	2.5	<0.05		
1,2,4 Trimethylbenzene	mg/kg (ppm)	2.5	<0.05	87	10-182
sec-Butylbenzene	mg/kg (ppm)	2.5	<0.05	89 87	23-145 21-149
p-Isopropyltoluene	mg/kg (ppm)	2.5	<0.05		
1,3-Dichlorobenzene	mg/kg (ppm)	2.5	< 0.05	85	30-131
1,4-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	84	29-129
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	< 0.05	87	31-132
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	<0.5	89	11-161
1,2,4 Trichlorobenzene	mg/kg (ppm)	2.5	<0.25	85	22-142
Hexachlorobutadiene	mg/kg (ppm)	2.5	< 0.25	88	10-142
Naphthalene	mg/kg (ppm)	2.5	<0.05	91	14-157
1,2,3-Trichlorobenzene	mg/kg (ppm)	2.5	< 0.25	88	20-144

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 04/28/15 Date Received: 04/20/15

Project: Shortstop Cle Elum, WA, F&BI 504344

# QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260C

			Percent	Percent		
	Reporting	Spike	Recovery	Recovery	Acceptance	m RPD
Analyte	Units	Level	LCS	LCSD	Criteria	(Limit 20)
Dichlorodifluoromethane	mg/kg (ppm)	2.5	46	40	10-146	14
Chloromethane	mg/kg (ppm)	2.5	72	61	27-133	17 9
Vinyl chloride	mg/kg (ppm)	2.5	79	72	22-139 38-114	1
Bromomethane	mg/kg (ppm)	2.5	82	83 83	38-114 10-163	9
Chloroethane	mg/kg (ppm)	2.5	91 85	75	10-196	12
Trichlorofluoromethane	mg/kg (ppm)	2.5	99	93	52-141	6
Acetone	mg/kg (ppm)	12.5 2.5	89	79	47-128	12
1,1-Dichloroethene	mg/kg (ppm) mg/kg (ppm)	2.5	105	92	42-132	13
Methylene chloride	mg/kg (ppm)	2.5	98	91	60-123	7
Methyl t-butyl ether (MTBE) trans-1.2-Dichloroethene	mg/kg (ppm)	2.5	99	91	67-127	8
1.1-Dichloroethane	mg/kg (ppm)	2.5	100	93	68-115	7
2,2-Dichloropropane	mg/kg (ppm)	2.5	98	84	52-170	15
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	101	93	72-113	8
Chloroform	mg/kg (ppm)	2.5	98	91	66-120	7
2-Butanone (MEK)	mg/kg (ppm)	12.5	109	104	57-123	5
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	97	93	56-135	4
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	101	93	62-131	8
1.1-Dichloropropene	mg/kg (ppm)	2.5	98	91	69-128	7
Carbon tetrachloride	mg/kg (ppm)	2.5	109	98	60-139	11
Benzene	mg/kg (ppm)	2.5	97	91	68-114	6
Trichloroethene	mg/kg (ppm)	2.5	103	99	64-117	4
1,2-Dichloropropane	mg/kg (ppm)	2.5	100	95	72-127	5
Bromodichloromethane	mg/kg (ppm)	2.5	104	95	72-130	9 7
Dibromomethane	mg/kg (ppm)	2.5	99	92	70-120	4
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	108	104	45-145	9
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	109	100	75-136	8
Toluene	mg/kg (ppm)	2.5	95	88	66-126 72-132	7
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5 2.5	109 100	102 95	75-113	5
1,1,2-Trichloroethane	mg/kg (ppm)		98	97	33-152	1
2-Hexanone	mg/kg (ppm)	12.5 2.5	96	91	72-130	5
1,3-Dichloropropane	mg/kg (ppm)	2.5	99	91	72-114	8
Tetrachloroethene	mg/kg (ppm) mg/kg (ppm)	2.5	109	97	74-125	12
Dibromochloromethane 1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	103	97	74-132	6
Chlorobenzene	mg/kg (ppm)	2,5	94	89	76-111	5
Ethylbenzene	mg/kg (ppm)	2.5	96	90	64-123	6
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	109	97	69-135	12
m,p-Xylene	mg/kg (ppm)	5	98	91	78-122	7
o-Xylene	mg/kg (ppm)	2.5	101	94	77-124	7
Styrene	mg/kg (ppm)	2.5	98	93	74-126	5
Isopropylbenzene	mg/kg (ppm)	2.5	102	94	76-127	8
Bromoform	mg/kg (ppm)	2.5	105	94	56-132	11
n-Propylbenzene	mg/kg (ppm)	2.5	97	92	74-124	5 5
Bromobenzene	mg/kg (ppm)	2.5	96	91	72-122	7
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	100	93	76-126 56-143	7
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	98 98	91 95	61-137	3
1,2,3 Trichloropropane	mg/kg (ppm)	2.5		90 91	74-121	5
2-Chlorotoluene	mg/kg (ppm)	2.5	96 96	90	75-122	6
4-Chlorotoluene	mg/kg (ppm)	2.5 2.5	100	93	73-130	7
tert-Butylbenzene	mg/kg (ppm)	2.5	97	93	76-125	4
1,2,4 Trimethylbenzene	mg/kg (ppm) mg/kg (ppm)	2.5	99	92	71-130	$\overline{7}$
sec-Butylbenzene	mg/kg (ppm)	2.5	99	91	70-132	8
p-Isopropyltoluene 1,3-Dichlorobenzene	mg/kg (ppm)	2.5	95	89	75-121	7
1.4-Dichlorobenzene	mg/kg (ppm)	2.5	94	89	74-117	5
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	97	91	76-121	6
1.2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	100	95	58-138	5
1,2,4 Trichlorobenzene	mg/kg (ppm)	2.5	97	89	64-135	9
Hexachlorobutadiene	mg/kg (ppm)	2.5	103	91	50-153	12
Naphthalene	mg/kg (ppm)	2,5	103	96	63-140	7
1.2.3-Trichlorobenzene	mg/kg (ppm)	2.5	98	92	63-138	6

#### ENVIRONMENTAL CHEMISTS

Date of Report: 04/28/15 Date Received: 04/20/15

Project: Shortstop Cle Elum, WA, F&BI 504344

# QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR PNA'S BY EPA METHOD 8270D SIM

Laboratory Code: 504344-05 1/5 (Matrix Spike)

			Sample	$\mathbf{Percent}$	Percent		
	Reporting	Spike	Result	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	(Wet wt)	MS	MSD	Criteria	(Limit 20)
Naphthalene	mg/kg (ppm)	0.17	2.2	63 b	0 b	44-129	0 b
Acenaphthylene	mg/kg (ppm)	0.17	< 0.01	99	97	52 - 121	2
Acenaphthene	mg/kg (ppm)	0.17	0.0084	93	94	51-123	1
Fluorene	mg/kg (ppm)	0.17	0.026	93	90	37-137	3
Phenanthrene	mg/kg (ppm)	0.17	0.065	87 b	83 b	34-141	5 b
Anthracene	mg/kg (ppm)	0.17	0.012	93	93	32-124	0
Fluoranthene	mg/kg (ppm)	0.17	0.012	101	99	16-160	2
Pyrene	mg/kg (ppm)	0.17	0.016	100	103	10-180	3
Benz(a)anthracene	mg/kg (ppm)	0.17	< 0.01	105	107	23-144	<b>2</b>
Chrysene	mg/kg (ppm)	0.17	< 0.01	94	96	32-149	2
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	< 0.01	118	114	23-176	3
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	< 0.01	112	108	42-139	4
Benzo(a)pyrene	mg/kg (ppm)	0.17	< 0.01	122	121	21-163	1
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	< 0.01	126	117	23-170	7
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	< 0.01	123	118	31-146	4
Benzo(g,h,i)perylene	mg/kg (ppm)	0.17	< 0.01	112	105	37-133	6

	Percent					
	Reporting	Spike	Recovery	Acceptance		
Analyte	Units	Level	LCS	Criteria		
Naphthalene	mg/kg (ppm)	0.17	88	58-121		
Acenaphthylene	mg/kg (ppm)	0.17	90	54-121		
Acenaphthene	mg/kg (ppm)	0.17	89	54-123		
Fluorene	mg/kg (ppm)	0.17	91	56-127		
Phenanthrene	mg/kg (ppm)	0.17	90	55-122		
Anthracene	mg/kg (ppm)	0.17	89	50-120		
Fluoranthene	mg/kg (ppm)	0.17	95	54 - 129		
Pyrene	mg/kg (ppm)	0.17	93	53-127		
Benz(a)anthracene	mg/kg (ppm)	0.17	92	51-115		
Chrysene	mg/kg (ppm)	0.17	92	55-129		
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	117	56-123		
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	107	54-131		
Benzo(a)pyrene	mg/kg (ppm)	0.17	104	51-118		
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	120	49-148		
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	117	50-141		
Benzo(g,h,i)perylene	mg/kg (ppm)	0.17	114	52-131		

#### **ENVIRONMENTAL CHEMISTS**

#### Data Qualifiers & Definitions

- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.
- c The presence of the analyte may be due to carryover from previous sample injections.
- cf The sample was centrifuged prior to analysis.
- d The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.
- dv Insufficient sample volume was available to achieve normal reporting limits.
- f The sample was laboratory filtered prior to analysis.
- fb The analyte was detected in the method blank.
- fc The compound is a common laboratory and field contaminant.
- hr The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.
- hs Headspace was present in the container used for analysis.
- ht The analysis was performed outside the method or client-specified holding time requirement.
- ip Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.
- J The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.
- js The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc The presence of the analyte is likely due to laboratory contamination.
- L The reported concentration was generated from a library search.
- nm The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.
- ve The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.
- vo The value reported fell outside the control limits established for this analyte.
- x The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

☐ Return samples ☐ Will call with instructions TURNAROUND TIME Rush charges authorized by SAMPLE DISPOSAL □ Dispose after 30 days Standard (2 Weeks)RUSH 51/00/10 ME PO# SAMPLE CHAIN OF CUSTODY. SAMPLERS K REMARKS Address (6355 DENSMORE AVE. N. and No strict where But constants City, State, ZIP JH BRKLIA/E WH SAKES A ADON Phone #2065 422 7/5 ax # Send Report To Scokes Company

						1	ŀ	-	¥.	NAT.	YSE	S. R.E.	QUE	ANALYSES REQUESTED	1			П
	Lab ID	Date	Time	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BLEX PY 8021B	AOCs by 8260	SVOCs by 8270	RFS H	5,7777	1052	•		* -	Notes	<del>- :</del>
	OI A-E 4-17-15 1100	4-17-15	1100	Soil	12	X	X		-				-	ļ .	-			
	02	7	01/1	\	7	X	X		-		-	-	-					T
	93	7	or 11	`	157	X	X			-			<b>\</b>					T
	) hg	\	W 30	\ \	5	X	X		-	<del> </del>	-			-	-			
	05	\	0417	3		X	X			ļ			×	-		CH HX2 ST	attel	1.7
	06 A.E	/	00 1	`	7	X	X		-		-	-	E 1 2		<del> </del>			1
	67	/:	011	, ,	5	X	X	-	-		-		<u> </u>	-	-			
	1 %	\	091	`	70	又	X					V	V	-	-			
And	60	/	1:20	,	~	X	X				-	1	7					
•	10 AE	•	1:30	,	7	X	X				~	V	V		-			
Friedman & Bruya, Inc.		SIGNATURE	RE		PRINT	NAME	哥			Н	1	S	COMPANY	Z.		DATE	TIME	
3012 16th Avenue West	The bod by	a s	tille	1	STURE	\$	7	35	1	4	,	Ň	325	V		4-20	04.6	0
Seattle, WA 98119-2029 . Ph. (206) 285-8282	Relinquished by:	3	1	Ä	Mchal E-dh	46	_			-		74	Fall			T	-3:	
Fax (206) 283-5044	Received by:									+			į			.7		T

Samples received at

FORMS\COC\COC.DOC



#### **ENVIRONMENTAL CHEMISTS**

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Michael Erdahl, B.S. Arina Podnozova, B.S. Eric Young, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 (206) 285-8282 fbi@isomedia.com www.friedmanandbruya.com

September 15, 2015

George Webster Websters, Inc. 16355 Densmore N Shoreline, WA 98133

Dear Mr. Webster:

Included are the results from the testing of material submitted on September 11, 2015 from the Short Stop 7 Cle Elum, F&BI 509197 project. There are 11 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl Project Manager

Enclosures

c: lwhitman@republicservices.com, hmiller1@wm.com NAA0915R.DOC

#### **ENVIRONMENTAL CHEMISTS**

#### CASE NARRATIVE

This case narrative encompasses samples received on September 11, 2015 by Friedman & Bruya, Inc. from the George Webster Short Stop 7 Cle Elum, F&BI 509197 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID

George Webster

509197 -01

PWPS 1

The 200.8 silver and the TCLP benzene relative percent difference did not pass the acceptance criteria. The laboratory control samples passed the acceptance criteria, therefore the results are likely due to sample inhomogeneity.

All other quality control requirements were acceptable.

#### **ENVIRONMENTAL CHEMISTS**

#### Analysis For Total Metals By EPA Method 200.8

PWPS 1 Client ID: 09/11/15 Date Received: Date Extracted: 09/14/15 Date Analyzed: 09/14/15 Matrix: Soil

mg/kg (ppm) Dry Weight Units:

George Webster

Short Stop 7 Cle Elum, F&BI 509197 Project:

Lab ID: 509197-01 509197-01.053 Data File: ICPMS1

Instrument:

SPOperator:

		Lower	$\mathbf{Upper}$
Internal Standard:	% Recovery:	Limit:	Limit:
Germanium	113	60	125
Indium	100	60	125
Holmium	105	60	125

Concentration Analyte: mg/kg (ppm) 4.06 Arsenic 48.6 Barium <1 Cadmium Chromium 13.1Lead 19.2 <1 Mercury Selenium <1 <1 Silver

#### **ENVIRONMENTAL CHEMISTS**

#### Analysis For Total Metals By EPA Method 200.8

Client ID: Method Blank
Date Received: Not Applicable
Date Extracted: 09/14/15
Date Analyzed: 09/14/15
Matrix: Soil

Units: mg/kg (ppm) Dry Weight

Client: George Webster

Project: Short Stop 7 Cle Elum, F&BI 509197

Lab ID: I5-519 mb
Data File: I5-519 mb.016
Instrument: ICPMS1
Operator: SP

Lower Upper Limit: Limit: Internal Standard: % Recovery: 60 125 95 Germanium 125 60 Indium 96 102 60 125 Holmium

Concentration mg/kg (ppm) Analyte: <1 Arsenic <1 Barium <1 Cadmium <1 Chromium Lead <1 <1 Mercury <1 Selenium <1 Silver

#### **ENVIRONMENTAL CHEMISTS**

#### TCLP Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: PWPS 1 Date Received: 09/11/15 09/14/15 Date Extracted: Date Analyzed: 09/14/15 TCLP Extract Matrix: Units: ug/L (ppb)

Benzene

Lab ID: Data File: Instrument: Operator:

Client:

Project:

George Webster

Short Stop 7 Cle Elum, F&BI 509197

509197-01 091415.D GCMS4 JS

Upper Lower Limit: Surrogates: % Recovery: Limit: 1,2-Dichloroethane-d4 57 121 98 63 127 102 Toluene-d8 60 133 99 4-Bromofluorobenzene

Concentration ug/L (ppb) Compounds: 5.8

4

#### **ENVIRONMENTAL CHEMISTS**

#### TCLP Analysis For Volatile Compounds By EPA Method 8260C

Method Blank Client Sample ID: Date Received: Not Applicable 09/14/15 Date Extracted: Date Analyzed: 09/14/15 TCLP Extract Matrix:

1,2-Dichloroethane-d4

4-Bromofluorobenzene

Surrogates:

Toluene-d8

Units: ug/L (ppb) Client:

George Webster

Short Stop 7 Cle Elum, F&BI 509197 Project:

Lab ID: 05-1852 mb Data File: 091414.D Instrument: GCMS4

Operator: JS

Upper Lower Limit: Limit: 57 121 63 127 60 133

Concentration

% Recovery:

100

103

98

Compounds: ug/L (ppb)

< 0.35 Benzene

#### **ENVIRONMENTAL CHEMISTS**

## Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	PWPS 1
Date Received:	09/11/15
Date Extracted:	09/11/15
Date Analyzed:	09/12/15
Matrix:	Soil
Units:	mg/kg (ppm) Dry V

mg/kg (ppm) Dry	Weight
-----------------	--------

Client:	
Project:	

George Webster

Short Stop 7 Cle Elum, F&BI 509197

Lab ID: 509197-01 Data File: 091140.D Instrument: GCMS4Operator: JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	101	62	142
Toluene-d8	104	55	145
4-Bromofluorobenzene	101	65	139

Concentration mg/kg (ppm)
0.050
0.19
0.064
0.54
0.21

#### **ENVIRONMENTAL CHEMISTS**

# Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: Method Blank
Date Received: Not Applicable

Date Extracted: 09/11/15
Date Analyzed: 09/11/15
Matrix: Soil

Matrix: Soil
Units: mg/kg (ppm) Dry Weight

Client: George Webster

Project: Short Stop 7 Cle Elum, F&BI 509197

Lab ID: 05-1846 mb2
Data File: 091112.D
Instrument: GCMS4
Operator: JS

		Lower	Upper
Surrogates:	% Recovery:	Limit:	Limit:
1,2-Dichloroethane-d4	102	62	142
Toluene-d8	101	55	145
4-Bromofluorobenzene	97	65	139

 Concentration

 Compounds:
 Concentration

 Benzene
 <0.03</th>

 Toluene
 <0.05</th>

 Ethylbenzene
 <0.05</th>

 m,p-Xylene
 <0.1</th>

 o-Xylene
 <0.05</th>

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 09/15/15 Date Received: 09/11/15

Project: Short Stop 7 Cle Elum, F&BI 509197

#### QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 509194-01 (Matrix Spike)

·		G 11 -	Sample	Percent	Percent	Acceptance	RPD
	$\operatorname{Reporting}$	$\mathbf{Spike}$	Result	Recovery	Recovery	-	
Analyte	Units	Level	(Wet wt)	MS	MSD	Criteria	(Limit 20)
Arsenic	mg/kg (ppm)	10	5.07	70	71	67-121	1
Barium	mg/kg (ppm)	50	139	44 b	39 b	74 - 135	12 b
Cadmium	mg/kg (ppm)	10	<1	92	96	88-121	4
Chromium	mg/kg (ppm)	50	4.61	73	83	57-128	13
Lead	mg/kg (ppm)	50	14.8	79	80	59-148	1
Mercury	mg/kg (ppm	10	<1	94	89	50-150	5
Selenium	mg/kg (ppm)	5	<1	70	69	55-130	1
Silver	mg/kg (ppm)	10	<1	53	69	41-139	26 vo

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Arsenic	mg/kg (ppm)	10	90	83-113
Barium	mg/kg (ppm)	50	102	85-116
Cadmium	mg/kg (ppm)	10	98	85-114
Chromium	mg/kg (ppm)	50	87	78-121
Lead	mg/kg (ppm)	50	104	80-120
Mercury	mg/kg (ppm)	10	100	70-130
Selenium	mg/kg (ppm)	5	88	87-117
Silver	mg/kg (ppm)	10	57	42-142

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 09/15/15 Date Received: 09/11/15

Project: Short Stop 7 Cle Elum, F&BI 509197

# QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF TCLP SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: 509197-01 (Duplicate)

Reporting Sample Duplicate RPD

Analyte Units Result Result (Limit 20)

Benzene ug/L (ppb) 5.8 3.8 42 vo

·	•		Percent	Percent		
	Reporting	Spike	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	LCS	LCSD	Criteria	(Limit 20)
Benzene	ug/L (ppb)	50	98	94	69-134	4

#### ENVIRONMENTAL CHEMISTS

Date of Report: 09/15/15 Date Received: 09/11/15

Project: Short Stop 7 Cle Elum, F&BI 509197

# QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: 509113-15 (Matrix Spike)

·	- '		Sample	Percent	Percent		
	Reporting	Spike	Result	Recovery	Recovery	Acceptance	RPD
Analyte	$\overline{ ext{Units}}$	Level	(Wet wt)	MS	MSD	Criteria	(Limit 20)
Benzene	mg/kg (ppm)	2.5	< 0.03	85	88	29-129	3
Toluene	mg/kg (ppm)	2.5	< 0.05	85	84	35-130	1
Ethylbenzene	mg/kg (ppm)	2.5	< 0.05	88	89	32-137	1
m,p-Xylene	mg/kg (ppm)	5	< 0.1	89	90	34-136	1
o-Xylene	mg/kg (ppm)	2.5	< 0.05	88	89	33-134	1

•			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Benzene	mg/kg (ppm)	2.5	96	68-114
Toluene	mg/kg (ppm)	2.5	93	66-126
Ethylbenzene	mg/kg (ppm)	2.5	95	64-123
m,p-Xylene	mg/kg (ppm)	5	98	78-122
o-Xylene	mg/kg (ppm)	2.5	95	77 - 124

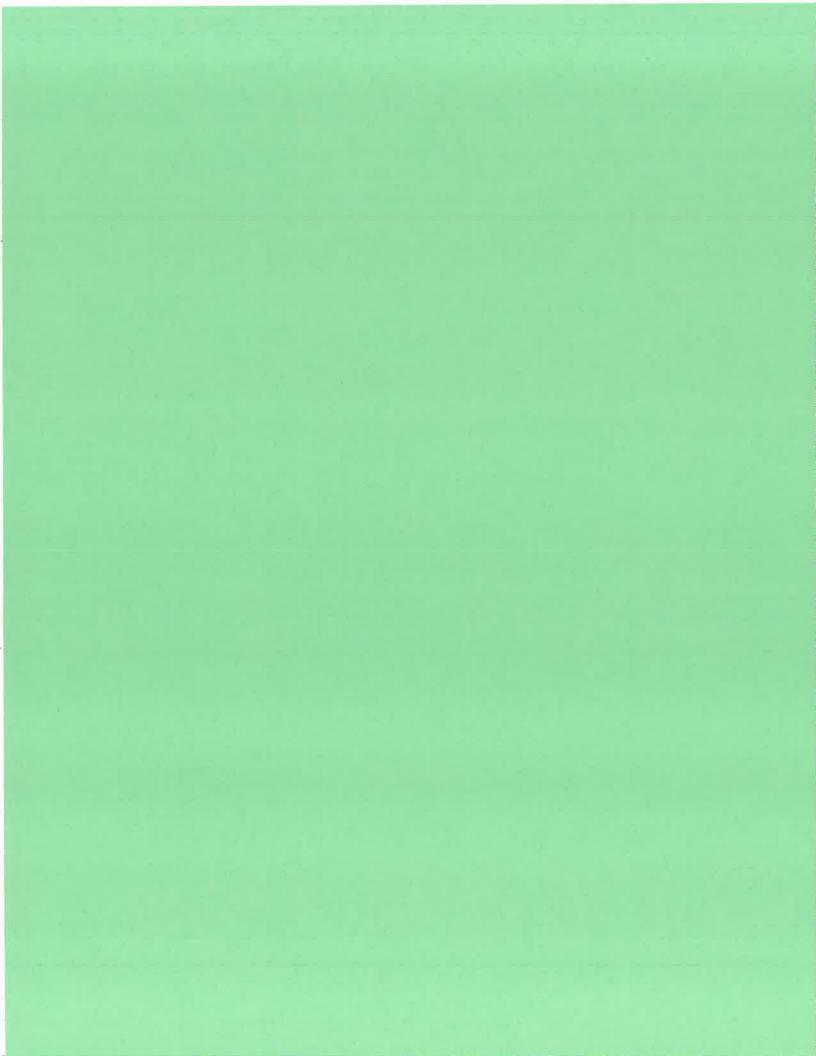
#### **ENVIRONMENTAL CHEMISTS**

#### Data Qualifiers & Definitions

- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.
- c The presence of the analyte may be due to carryover from previous sample injections.
- cf The sample was centrifuged prior to analysis.
- d The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.
- dv Insufficient sample volume was available to achieve normal reporting limits.
- f The sample was laboratory filtered prior to analysis.
- fb The analyte was detected in the method blank.
- fc The compound is a common laboratory and field contaminant.
- hr The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.
- hs Headspace was present in the container used for analysis.
- ht The analysis was performed outside the method or client-specified holding time requirement.
- ip Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.
- J The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.
- is The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc The presence of the analyte is likely due to laboratory contamination.
- L The reported concentration was generated from a library search.
- nm The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.
- ve The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.
- vo The value reported fell outside the control limits established for this analyte.
- x The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

Standard (10 Business Days)RUSH TIME 3 4 3 TURNAROUND TIME Rush charges authorized by: SAMPLE DISPOSAL Notes XE 09-11-15 4/M/F Dispose after 30 days ž 9-11-15 O Archive Samples 19-11-15 DATE ٥ Page # Other. ANALYSES REQUESTED S COMPANY INVOICE TO HES SVOCs by 8270D SAMPLE CHAIN OF CUSTODY NWTPH-Gx xQ-H4TWN PRINT NAME containers # of M SAMPERRS (signature) Sample Type Sail REMARK Sampled 9-11-15 8-85 Time 454 Can olline W# 98/33 white Sampled SIGNATURE 5500 CC U 155075R Chi Smike Phone 2065 th 22 Smail gundal Relinquished by: Lab ID 01A-E Received by: ABOUR Friedman & Bruya, Inc. Seattle, WA 98119-2026 3012 16th Avenue West Address 1635 Sample ID Fax (206) 283-5044 Ph. (206) 285-8282 City, State, ZIP Report To

FORMS\COC\COCDOC



#### **ENVIRONMENTAL CHEMISTS**

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Michael Erdahl, B.S. Arina Podnozova, B.S. Eric Young, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 (206) 285-8282 fbi@isomedia.com www.friedmanandbruya.com

September 19, 2015

George Webster Websters, Inc. 16355 Densmore N Shoreline, WA 98133

Dear Mr. Webster:

Included are the results from the testing of material submitted on September 11, 2015 from the Short Stop 7 Cle Elum, F&BI 509198 project. There are 5 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl Project Manager

Enclosures NAA0919R.DOC

#### **ENVIRONMENTAL CHEMISTS**

#### CASE NARRATIVE

This case narrative encompasses samples received on September 11, 2015 by Friedman & Bruya, Inc. from the George Webster Short Stop 7 Cle Elum, F&BI 509198 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u> <u>George Webster</u> 509198 -01 Ground Water

The 200.8 silver laboratory control sample failed the acceptance criteria. The data were flagged accordingly.

All other quality control requirements were acceptable.

#### ENVIRONMENTAL CHEMISTS

# Analysis For Dissolved Metals By EPA Method 200.8

Date Received: 09/11/15 Date Extracted: 09/17/15 Date Analyzed: 09/17/15 Matrix: Water Units: ug/L (ppb)	Date Analyzed: Matrix:	09/17/15 09/17/15 Water
--	---------------------------	-------------------------------

		TOWEL	Oppor
Internal Standard:	% Recovery:	Limit:	Limit:
Germanium	87	60	125
Indium	88	60	125
Holmium	91	60	125
	Concentration		
Analyte:	ug/L (ppb)		

Analyte:	ug/L (ppb)
Arsenic	4.46
Barium	76.1
Cadmium	<1
Chromium	<1
Lead	1.30
Mercury	<1
Selenium	<1
Silver	<1 jl

### **ENVIRONMENTAL CHEMISTS**

Limit:

60

60

60

### Analysis For Dissolved Metals By EPA Method 200.8

% Recovery:

97

Internal Standard:

Germanium

Client: Project: Lab ID: Data File: Instrument:	Websters Short Stop 7 Cle Elum, F&BI 509198 I5-531 mb I5-531 mb.018 ICPMS1 SP
Operator: Lower	Upper
LOWCI	Cppci

Limit:

125

125

125

Indium	96
Holmium	96
	Concentration
Analyte:	ug/L (ppb)
-	
Arsenic	<1
Barium	<1
Cadmium	<1
Chromium	<1
Load	<1

### **ENVIRONMENTAL CHEMISTS**

Date of Report: 09/19/15 Date Received: 09/11/15

Project: Short Stop 7 Cle Elum, F&BI 509198

### QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR DISSOLVED METALS USING EPA METHOD 200.8

Laboratory Code: 509232-05 (Matrix Spike)

v		, –		Percent	Percent		
	Reporting	Spike	Sample	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	Result	MS	MSD	Criteria	(Limit 20)
Arsenic	ug/L (ppb)	10	<1	98	95	60-150	3
Barium	ug/L (ppb)	50	25.7	96	91	79-126	5
Cadmium	ug/L (ppb)	5	<1	98	96	80-124	2
Chromium	ug/L (ppb)	20	<1	94	96	64 - 132	2
Lead	ug/L (ppb)	10	<1	97	99	79-121	2
Mercury	ug/L (ppb)	10	<1	99	101	50-150	2
Selenium	ug/L (ppb)	5	<1	99	95	68-142	4
Silver	ug/L (ppb)	5	<1	44	51	32-131	15

Laboratory Code: Laboratory Control Sample

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Arsenic	ug/L (ppb)	10	97	80-111
Barium	ug/L (ppb)	50	94	83-117
Cadmium	ug/L (ppb)	5	100	83-113
Chromium	ug/L (ppb)	20	95	80-119
Lead	ug/L (ppb)	10	101	83-115
Mercury	ug/L (ppb)	10	98	70-130
Selenium	ug/L (ppb)	5	100	81-119
Silver	ug/L (ppb)	5	21 vo	50-133

### **ENVIRONMENTAL CHEMISTS**

### **Data Qualifiers & Definitions**

- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.
- c The presence of the analyte may be due to carryover from previous sample injections.
- cf The sample was centrifuged prior to analysis.
- d The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.
- dv Insufficient sample volume was available to achieve normal reporting limits.
- f The sample was laboratory filtered prior to analysis.
- fb The analyte was detected in the method blank.
- fc The compound is a common laboratory and field contaminant.
- hr The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.
- hs Headspace was present in the container used for analysis.
- ht The analysis was performed outside the method or client-specified holding time requirement.
- ip Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.
- J The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.
- js The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc The presence of the analyte is likely due to laboratory contamination.
- L The reported concentration was generated from a library search.
- nm The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.
- ve The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.
- vo The value reported fell outside the control limits established for this analyte.
- x The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

4164312 TIME ☐ Standard (10 Business Days) TURNAROUND TIME Rush charges authorized by: SAMPLE DISPOSAL Notes Dispose after 30 days イントク ☐ Archive Samples DATE O RUSH ANALYSES REQUESTED 0 Other Samples COMPANY Feb 3 なるか INVOICE TO HES **ZAOC<sup>8</sup> PA 8510D** VOCe by 8260C Frence W 25874 BLEX PA 80SIB NWTPH-Gx SAMPLE CHAIN OF CUSTODY xQ.HqTWN PRINT NAME containers **у**0 # N Mar Sample Type PROJECT NAME アプ Phone 2006 5422 718 Email garded for while pensa con WA 78 33 REMARKS X-11-12 845× Sampled Time MANANA SIGNATURE Sampled Date Report To (95 Mer WIPSSE Sutsation Relixed lished by: Lab ID 0 AB Relinquished Received by: There Friedman & Bruya, Inc. Seattle, WA 98119-2029 DESKI OMORE 3012 16th Avenue West Fax (206) 283-5044 Sample ID Ph. (206) 285-8282 861605 City, State, ZIP\_

として とうしょうしょう とうしょうしょう



### **ENVIRONMENTAL CHEMISTS**

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Michael Erdahl, B.S. Arina Podnozova, B.S. Eric Young, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 (206) 285-8282 fbi@isomedia.com www.friedmanandbruya.com

October 28, 2015

George Webster, PS George Webster 16355 Densmore N Shoreline, WA 98133

Dear Mr. Webster:

Included are the results from the testing of material submitted on September 22, 2015 from the Short Stop 2 Cle Elum, F&BI 509380 project. There are 8 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl Project Manager

Enclosures NAA1028R.DOC

### **ENVIRONMENTAL CHEMISTS**

### CASE NARRATIVE

This case narrative encompasses samples received on September 22, 2015 by Friedman & Bruya, Inc. from the George Webster Short Stop 2 Cle Elum, F&BI 509380 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>George Webster</u>
509380 -01	Bottle 1
509380 -02	Bottle 2
509380 -03	Bottle 3

All quality control requirements were acceptable.

### **ENVIRONMENTAL CHEMISTS**

### Analysis For Total Organic Lead and Manganese By EPA Method 200.8

Client ID:

Bottle 1

Date Received:

09/22/15

Date Extracted:

10/06/15

Date Analyzed:

10/06/15

Matrix: Units:

Soil/Product mg/kg (ppm) Client:

George Webster

Project:

Short Stop 2 Cle Elum, F&BI 509380

Lab ID:

509380-01

Data File:

509380-01.065

Instrument: Operator:

ICPMS1 SP

Concentration

Analyte:

mg/kg (ppm)

Organic Lead

982

Organic Manganese

### **ENVIRONMENTAL CHEMISTS**

### Analysis For Total Organic Lead and Manganese By EPA Method 200.8

Client ID:

Bottle 2

Date Received:

09/22/15

Date Extracted: Date Analyzed:

10/06/15 10/06/15

Matrix: Units:

Soil/Product

mg/kg (ppm)

Client:

George Webster

Project:

Short Stop 2 Cle Elum, F&BI 509380

Lab ID:

509380-02

Data File:

509380-02.066

Instrument:

ICPMS1

Operator:

SP

Concentration

Analyte:

mg/kg (ppm)

Organic Lead

878

Organic Manganese

### **ENVIRONMENTAL CHEMISTS**

### Analysis For Total Organic Lead and Manganese By EPA Method 200.8

Client ID:

Bottle 3

Date Received:

09/22/15

Date Extracted:

10/06/15

Date Analyzed:

10/06/15

Matrix: Units:

Soil/Product

mg/kg (ppm)

Client:

George Webster

Project:

Short Stop 2 Cle Elum, F&BI 509380

Lab ID:

509380-03

Data File:

509380-03.067

Instrument:

ICPMS1

Operator:

SP

Concentration

Analyte:

mg/kg (ppm)

Organic Lead

929

Organic Manganese

### **ENVIRONMENTAL CHEMISTS**

### Analysis For Total Organic Lead and Manganese By EPA Method 200.8

Client ID:

Method Blank

Date Received:

Not Applicable

Date Extracted: Date Analyzed:

10/06/15 10/06/15

Matrix: Units:

Soil/Product mg/kg (ppm) Client:

George Webster

Project:

Short Stop 2 Cle Elum, F&BI 509380

Lab ID:

I5-570 mb

Data File:

I5-570 mb.061

Instrument:

ICPMS1

SP

Operator:

Concentration

Analyte:

mg/kg (ppm)

Organic Lead

<1

Organic Manganese

### **ENVIRONMENTAL CHEMISTS**

Date of Report: 10/28/15 Date Received: 09/22/15

Project: Short Stop 2 Cle Elum, F&BI 509380

Date Extracted: 10/23/15 Date Analyzed: 10/23/15

### RESULTS FROM THE ANALYSIS OF SOIL/PRODUCT SAMPLES FOR ORGANIC LEAD SPECIATION AND MANGANESE BY METHOD 8082 MODIFIED

Sample ID Laboratory ID	TEL
Bottle 1 509380-01	D
Bottle 2 509380-02	D
Bottle 3 509380-03	D
Method Blank	ND

TEL Tetraethyl Lead

### **ENVIRONMENTAL CHEMISTS**

Date of Report: 10/28/15 Date Received: 09/22/15

Project: Short Stop 2 Cle Elum, F&BI 509380

# QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL/PRODUCT SAMPLES FOR ORGANIC LEAD AND MANGANESE USING EPA METHOD 200.8

Laboratory Code: Laboratory Control Sample

-	·	_	Percent	Percent		
	Reporting	$\mathbf{Spike}$	Recovery	Recovery	Acceptance	RPD
Analyte	Units	Level	LCS	LCSD	Criteria	(Limit 20)
Organic Lead	mg/kg (ppm)	10.0	69	67	50-150	3

### **ENVIRONMENTAL CHEMISTS**

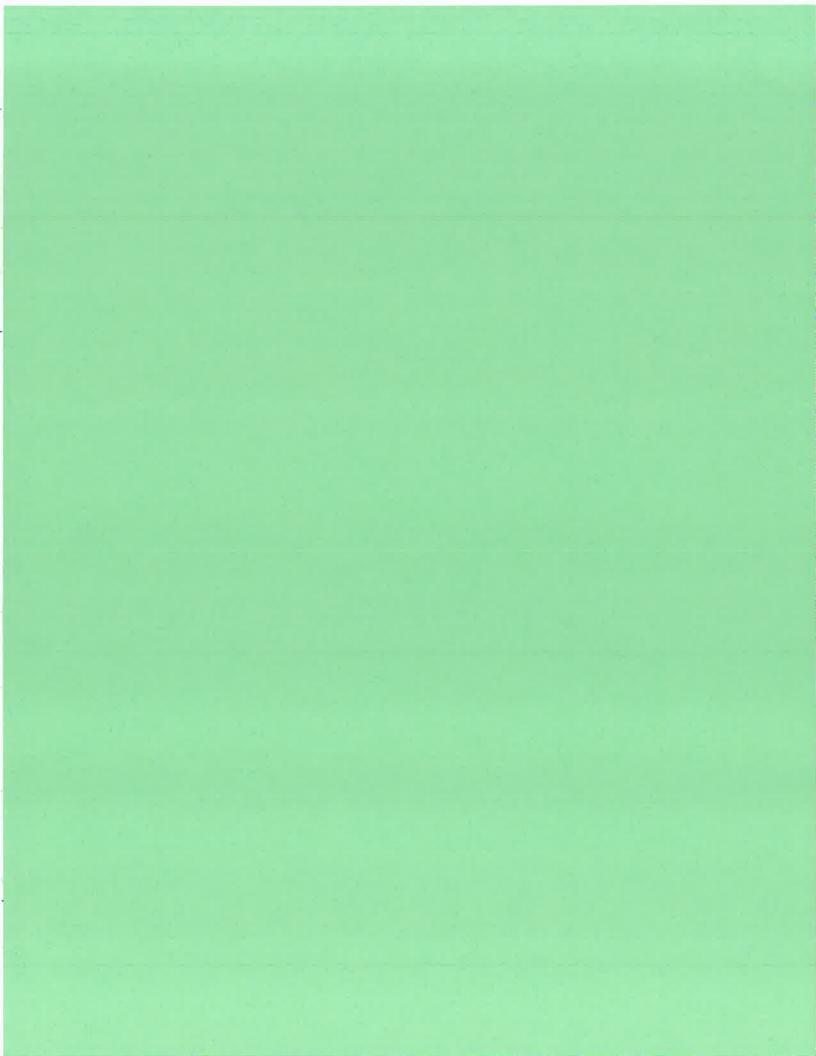
### **Data Qualifiers & Definitions**

- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.
- c The presence of the analyte may be due to carryover from previous sample injections.
- cf The sample was centrifuged prior to analysis.
- d The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.
- dv Insufficient sample volume was available to achieve normal reporting limits.
- f The sample was laboratory filtered prior to analysis.
- fb The analyte was detected in the method blank.
- fc The compound is a common laboratory and field contaminant.
- hr The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.
- hs Headspace was present in the container used for analysis.
- ht The analysis was performed outside the method or client-specified holding time requirement.
- ip Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.
- J The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.
- js The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc The presence of the analyte is likely due to laboratory contamination.
- L The reported concentration was generated from a library search.
- nm The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.
- ve The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.
- vo The value reported fell outside the control limits established for this analyte.
- x The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

Standard (10 Business Days) Dog Page # of TURNAROUND TIME Rush charges authorized by: アークライン SAMPLE DISPOSAL 1/20/12 ☐ Dispose after 30 days 9-22 4/24/5 DATE ☐ Archive Samples RUSH ANALYSES REQUESTED Other HFS
Organic had
200.8

we hend
Ecb Sarr X COMPANY X All Deviese ME 09/22 Febr Feed DUPE. INVOICE TO PO# SAOC® PA 8510D SAMPLE CHAIN OF CUSTODY
SAMPLE CHAIN OF CUSTODY Address 16355 DED SWEEKE NORTH Short Stoft Classen XU-H4TWN PRINT NAME orusa container **Jo** # Sampled | Sample Type 710 REMARKS \*583 250 **S**48 9 mes 4 . Can City, State, IIP SHOKLY 1/4 WA 98133 Sampled 2-27 SIGNATURE Phospe 86 5 4221 8 Email gardalf-utile Date Relinquished by Lab ID 03 Received by 40 9 Friedman & Bruya, Inc. Seattle, WA 98119-2029 3012 16th Avenue West Fax (206) 283-5044 Ph. (206) 285-8282 Sample ID 509380 Company Report To

PORMS COC COC DOC



### **APPENDII**

Waste Management Trucking Documents

Waste Management

Customer Summary Report
Criteria: 09/16/2015 12:00 AM to 10/23/2015 11:59 PN
Business Unit Name: Greater Wenatchee Regional LF - B01048 (USA)
Profile: 110335WA

TIONES: TEODOS	100	- Contraction		Name of the last	A STATE OF THE PARTY OF THE PAR	0.000	Salar.	STATE OF THE PERSON AS	The second second second	Section of the section of the section of	A DESIGNATION OF THE PERSON OF
licket Date	IIICKET III	licket ID Customer		Pronie	Material Description	Kate	Tons	Material Revenue	Tax Revenue	Surcharge Revenue	Total
9/16/2015	739921	739921 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Profile Approval Fee	\$75.00	0	\$0.00	\$0.00	\$75.00	\$75.00
Material Total	1						0	\$0.00	\$0.00	\$75.00	\$75,00
9/29/2015	741373	741373 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	32.27	\$847.09	\$6.49	\$180.39	\$1,033.97
9/29/2015	741496	741496 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	30.46	85.667\$	\$6.13	\$170.27	\$975.98
9/29/2015	741502	741502 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	26.92	\$706.65	\$5.42	\$150.48	\$862.55
9/29/2015	741506	741506 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	28.23	\$741.04	\$5.68	\$157.81	\$904.53
9/29/2015	741516	741516 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	28.2	\$740,25	\$5.68	\$157.64	\$903.57
9/21/2015	741693	741693 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	20.22	\$530,78	\$4.07	\$113.03	\$647.88
9/21/2015	741694	741694 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26,25	23.21	\$609.26	\$4.68	\$129.74	\$743.68
9/21/2015	741695	741695 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	26.91	\$706.39	\$5.42	\$150.43	\$862.24
9/21/2015	741696	741696 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26,25	25.9	\$679,88	\$5,21	\$144.78	\$829.87
9/21/2015	741697	741697 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	27.4	\$719.25	\$5.52	\$153.17	\$877.94
9/28/2015	741698	741698 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	27.56	\$723.45	\$5.54	\$154.06	\$883.05
9/28/2015	741700	741700 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	72	\$708,75	\$5.43	\$150.93	\$865.11
9/28/2015	741701	741701 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	27.51	\$722.14	\$5.54	\$153.78	\$881.46
9/28/2015	741702	741702 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	29.01	\$761.51	\$5.83	\$162.17	\$929.51
9/28/2015	741703	741703 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	26.17	96 989\$	\$5.26	\$146.29	\$838.51
9/28/2015	741704	741704 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	23.96	\$628.95	\$4.82	\$133.94	\$767.71
9/28/2015	741705	741705 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	24.77	\$650,21	\$4.98	\$138.46	\$793.65
9/28/2015	741706	741706 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	26.17	96'989\$	\$5.26	\$146.29	\$838.51
9/28/2015	741707	741707 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	28.14	\$738.68	\$5.66	\$157.30	\$901.64
9/29/2015	741708	741708 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	25.12	\$659.40	\$5,05	\$140.42	\$804.87
9/29/2015	741709	741709 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont, Soil - Petroleum, PMT is RGC	\$26.25	33.34	\$875.18	\$6.71	\$186.37	\$1,068.26
9/29/2015	741710	741710 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	25.19	\$661.24	\$5.07	\$140.81	\$807.12
9/29/2015	741711	741711 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	26.95	\$707.44	\$5.42	\$150.65	\$863.51
9/29/2015	741712	741712 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	32.52	\$853.65	\$6.54	\$181.79	\$1,041.98
9/29/2015	741713	741713 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	36.42	\$956,03	\$7.33	\$203.59	\$1,166.95
9/21/2015	741714	741714 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	30.12	\$790.65	\$6.06	\$168.37	\$965.08
9/21/2015	741715	741715 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	26.18	\$687.23	\$5.27	\$146.35	\$838.85
9/21/2015	741716	741716 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	28.64	\$751.80	\$5.76	\$160.10	\$917.66
9/21/2015	741717	741717 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	35.98	\$944.48	\$7.25	\$201.13	\$1,152.86
9/22/2015	741718	741718 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	34.01	\$892.76	\$6.84	\$190.12	\$1,089.72
9/22/2015	741719	741719 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	28,94	\$759.68	\$5.82	\$161.77	\$927.27
9/22/2015	741720	741720 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	31.9	\$837.38	\$6.42	\$178.32	\$1,022.12
9/22/2015	741721	741721 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	33.69	\$884.36	\$6.78	\$188.33	\$1,079.47
9/22/2015	741722	741722 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	32.37	\$849,71	\$6.52	\$180.95	\$1,037.18

9/22/2015	741723	741723 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont., Soil - Petroleum, PMT is RGC	\$26.25	25.92	\$680.40	\$5.21	\$144.89	\$830.50
9/22/2015	741724	741724 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	25,45	\$668.06	\$5.13	\$142.27	\$815.46
9/23/2015	741725	741725 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26,25	26.22	\$688.28	\$5.27	\$146.57	\$840.12
9/23/2015	741726	741726 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26,25	27,64	\$725.55	\$5.57	\$154.51	\$885.63
9/23/2015	741727	741727 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26,25	28.66	\$752.33	\$5.77	\$160.21	\$918.31
9/23/2015	741728	741728 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26,25	27,5	\$721.88	\$5.53	\$153.73	\$881.14
9/23/2015	741729	741729 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26,25	34.21	\$898.01	\$6.88	\$191.23	\$1,096.12
9/23/2015	741730	741730 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	26.9	\$706,13	\$5,41	\$150.37	\$861.91
9/23/2015	741731	741731 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	23.53	\$617.66	\$4.74	\$131.53	\$753.93
9/23/2015	741732	741732 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26,25	25.61	\$672.26	\$5.15	\$143.16	\$820,57
9/24/2015	741733	741733 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	29.77	\$781.46	\$5.99	\$166.41	\$953.86
9/24/2015	741734	741734 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	28.81	\$756,26	\$5.80	\$161.05	\$923.11
9/24/2015	741735	741735 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	21.54	\$565,43	\$4,34	\$120.41	\$690.18
9/24/2015	741736	741736 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	30.04	\$788,55	\$6.04	\$167.92	\$962,51
9/24/2015	741737	741737 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	26.14	\$686.18	\$5.26	\$146.12	\$837.56
9/24/2015	741738	741738 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	32,3	\$847.88	\$6.50	\$180.56	\$1,034,94
9/24/2015	741740	741740 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	25,04	\$657.30	\$5,04	\$139.97	\$802.31
9/24/2015	741741	741741 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	23.85	\$626.06	\$4.80	\$133.32	\$764.18
9/24/2015	741742	741742 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	27,51	\$722.14	\$5.54	\$153.78	\$881.46
9/24/2015	741743	741743 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	23.56	\$618.45	\$4.74	\$131.70	\$754.89
9/24/2015	741744	741744 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	24.19	\$634.99	\$4.87	\$135.22	\$775.08
9/25/2015	741745	741745 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	24,41	\$640.76	\$4.91	\$136.45	\$782.12
9/25/2015	741746	741746 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	23.53	\$617.66	\$4.74	\$131.53	\$753.93
9/25/2015	741747	741747 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	23.6	\$619,50	\$4.75	\$131.92	\$756.17
9/25/2015	741748	741748 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	23.45	\$615.56	\$4.72	\$131.09	\$751.37
9/25/2015	741749	741749 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	29.52	\$774.90	\$5.94	\$165.02	\$945.86
9/30/2015	741758	741758 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	29.44	\$772.80	\$5.92	\$164.57	\$943.29
9/30/2015	741759	741759 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	30.86	\$810.08	\$6.21	\$172.51	\$988.80
9/30/2015	741762	741762 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	30.42	\$798.53	\$6.13	\$170.05	\$974.71
9/30/2015	741790	741790 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	31.27	\$820.84	\$6.30	\$174.80	\$1,001.94
9/30/2015	741797	741797 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	24.77	\$650.21	\$4.98	\$138.46	\$793.65
9/30/2015	741798	741798 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	26.29	\$690.11	\$5.29	\$146.96	\$842.36
9/30/2015	741799	741799 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	29.08	\$763.35	\$5.86	\$162.56	\$931,77
9/30/2015	741803	741803 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	19,87	\$521.59	\$4.00	\$111.07	\$636.66
9/30/2015	741808	741808 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26,25	24.77	\$650.21	\$4.98	\$138.46	\$793.65
9/30/2015	741821	741821 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	33.6	\$882.00	\$6.76	\$187.82	\$1,076.58
9/30/2015	741834	741834 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	23.13	\$607.16	\$4.65	\$129.30	\$741.11
9/30/2015	741846	741846 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	30.72	\$806.40	\$6.19	\$171.72	\$984.31
10/1/2015	741934	741934 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont. Soil - Petroleum, PMT is RGC	\$26.25	29.88	\$784.35	\$6.02	\$167.03	\$957.40
10/13/2015	743060	743060 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Cont, Soil - Petroleum, PMT is RGC	\$26.25	21.86	\$573.83	\$4.40	\$122.20	\$700.43
9/28/2015	740941	740941 SHORT STOP SHELL LLC	WA-SHORT STOP 7 GASOLINE STA	110335WA	Special Waste Solid Other	\$26.25	26.56	\$697.20	\$30.45	\$148.47	\$876.12
Customer Total	76						2072.8	\$54,411.07	\$442.24	\$11,661.95	\$66,515.26

Ticket Totals	76				2072.8	\$54,411.07	\$442.24	\$11,661.95	\$66,515.26
	= =			The last of the la					
External Customer	Loads	Total Ticket Amount							
SHORT STOP SHELL LLC	92	\$66,515,26							

### **APPENDII**

**SPRECTRA Labs Testing Report** 

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850 • Fax (253) 572-9838 • www.spectra-lab.com

10/08/2015

PO Box 1583

Sumner, WA 98390

Attn: Kevin Wilkerson

Northwest Environmental Solutions, Inc

P.O.#:

CC 07509B

Project:

Short Stop -Cle Elum

Client ID:

1NW-Disp

Sample Matrix:

Soil

Date Sampled:

10/06/2015

Date Received: 10/06/2015

Spectra Project: 2015100132

Spectra Number: 1

Rush

<u>Analyte</u>	Result	Units	Method
Gasoline	1440	mg/Kg	NWTPH-G
Benzene	< 0.025	mg/Kg	SW846 8260C
Ethylbenzene	0.124	mg/Kg	SW846 8260C
Methyl-tert-Butyl Ether	< 0.025	mg/Kg	SW846 8260C
Toluene	0.155	mg/Kg	SW846 8260C
Total Xylenes	5.84	mg/Kg	SW846 8260C

Surrogate	Recovery	Method
Toluene-d8	93	NWTPH-G
4-Bromofluorobenzene	104	NWTPH-G

SPECTRA LABORATORIES

Steve Hibbs, Laboratory Manager a6/mlh

Page 1 of 4

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850 • Fax (253) 572-9838 • www.spectra-lab.com

10/08/2015

Northwest Environmental Solutions, Inc

PO Box 1583

Sumner, WA 98390 Attn: Kevin Wilkerson P.O.#:

CC 07509B

Project:

Short Stop -Cle Elum

Client ID:

2NE-Disp

Sample Matrix:

Soil

Date Sampled:

10/06/2015

Date Received:

10/06/2015

Spectra Project: 2015100132

Spectra Number: 2

Rush

Analyte	Result	Units	Method
Diesel	9230	mg/Kg	NWTPH-D
Oil	<2500	mg/Kg	NWTPH-D
Gasoline	<10	mg/Kg	NWTPH-G
Benzene	<0.025	mg/Kg	SW846 8260C
Ethylbenzene	0.128	mg/Kg	SW846 8260C
Methyl-tert-Butyl Ether	<0.025	mg/Kg	SW846 8260C
Toluene	0.062	mg/Kg	SW846 8260C
Total Xylenes	5.45	mg/Kg	SW846 8260C

<sup>\*</sup>Surrogate diluted out of sample.

Surrogate	Recovery	Method
4-Bromofluorobenzene	104	NWTPH-G
Toluene-d8	93	NWTPH-G
p-Terphenyl	0*	NWTPH-D

### SPECTRA LABORATORIES

Northwest Environmental Solutions, Inc

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850 • Fax (253) 572-9838 • www.spectra-lab.com

10/08/2015

PO Box 1583

Sumner, WA 98390

Attn: Kevin Wilkerson

P.O.#:

CC 07509B

Project:

Short Stop -Cle Elum

Client ID:

3SW-Disp

Sample Matrix:

Soil

Date Sampled:

10/06/2015

Date Received:

10/06/2015

Spectra Project: 2015100132

Spectra Number: 3

Rush

Analyte	Result	Units	Method
Gasoline	201	mg/Kg	NWTPH-G
Benzene	<0.025	mg/Kg	SW846 8260C
Ethylbenzene	0.091	mg/Kg	SW846 8260C
Methyl-tert-Butyl Ether	<0.025	mg/Kg	SW846 8260C
Toluene	0.200	mg/Kg	SW846 8260C
Total Xylenes	3.26	mg/Kg	SW846 8260C

Surrogate	Recovery	Method		
4-Bromofluorobenzene	108	NWTPH-G		
Toluene-d8	88	NWTPH-G		

SPECTRA LABORATORIES

Steve Hibbs, Laboratory Manager a6/mlh

Page 3 of 4

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850 • Fax (253) 572-9838 • www.spectra-lab.com

10/08/2015

Northwest Environmental Solutions, Inc.

PO Box 1583

Sumner, WA 98390 Attn: Kevin Wilkerson P.O.#:

CC 07509B

Project:

Short Stop -Cle Elum

Client ID:

4SE-Disp

Sample Matrix:

Soil

Date Sampled:

10/06/2015

Date Received: 10/06/2015

Spectra Project: 2015100132

Spectra Number: 4

Rush

Analyte	Result	Units	Method
Diesel	8020	mg/Kg	NWTPH-D
Oil	<2500	mg/Kg	NWTPH-D
Gasoline	<10	mg/Kg	NWTPH-G
Benzene	<0.025	mg/Kg	SW846 8260C
Ethylbenzene	0.045	mg/Kg	SW846 8260C
Methyl-tert-Butyl Ether	<0.025	mg/Kg	SW846 8260C
Toluene	<0.025	mg/Kg	SW846 8260C
Total Xylenes	1.81	mg/Kg	SW846 8260C

<sup>\*</sup>Surrogate diluted out of sample.

Surrogate	Recovery	Method
4-Bromofluorobenzene	118	NWTPH-G
Toluene-d8	93	NWTPH-G
p-Terphenyl	0*	NWTPH-D

### SPECTRA LABORATORIES

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850 • Fax (253) 572-9838 • www.spectra-lab.com

October 7, 2015

Northwest Environmental Solutions, Inc.

P.O. Box 1583

Sumner, WA 98390

Sample Matrix:

Soil

EPA Method: SW-846 8260-C

Spectra Project: 2015100132

Date Analyzed:

10/7/2015

Units:

mg/Kg

Spiked Sample: 2015100131-1 Applies to: #1-4

### **GCMS VOLATILE ORGANIC ANALYSIS** Matrix Spike/ Matrix Spike Duplicate Results

COMPOUND	SAMPLE RESULT	SPIKE AMOUNT	SPIKE RESULT	% REC	DUP RESULT	DUP %REC	RPD
1,1-Dichloroethene	<0.025	0.50	0.592	118	0.588	118	0.7
Benzene	<0.025	0.50	0.530	106	0.531	106	0.2
Trichloroethene	<0.025	0.50	0.584	117	0.593	119	1.5
oluene	0.115	0.50	0.624	102	0.635	104	2.1
Chlorobenzene	<0.025	0.50	0.499	100	0.520	104	4.1
ample results listed are on a wet weight basis fo	r calculation p	urposes.					
Surrogates		MS	MSD	МВ	Method Blank		mg/Kg
Dibromofluoromethane		129	134	136	Benzene		< 0.025
1,2-Dichloroethane-d4		132	131	140	Toluene		< 0.025
Toluene-d8		79	79	78	Ethyl Benzene		< 0.025
4-Bromofluorobenzene	•	92	96	88	Total Xylenes		<0.05
					MTBE		< 0.025

Spectra Laboratories, Inc.

Steven G. Hibbs

Laboratory Manager

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850 • Fax (253) 572-9838 • www.spectra-lab.com

October 8, 2015

Northwest Environmental Solutions, Inc.

PO Box 1583

Sumner, WA 98390

Method:

**NWTPH-Dx** 

Sample Matrix:

Soil

Spectra Project:

2015100132

Applies to Spectra #: 2 & 4

Units:

mg/Kg

### HYDROCARBON ANALYSIS **QUALITY CONTROL RESULTS**

MS/MSD

Spiked Sample:

2015100067-3

Date Extracted:

10/6/2015

Date Analyzed:

10/6/2015

Dup.

Spike Sample Amount Amount

Added

125

Spike

Found

Spike Percent

**Amount** Percent

% Recovery RPD

Diesel

Compound

Result <10

92.5

74

Recovery

93.7

Found

75

1.3

BLANK SPIKE (LCS)

Date Extracted:

10/7/2015

Date Analyzed:

10/7/2015

Sample

Spike

Spike

Amount Amount Percent

Compound

Result

Added

Found Recovery

Diesel

<10 125 87.2

69.76

METHOD BLANK

Date Extracted:

10/7/2015

Date Analyzed:

10/7/2015

Diesel

<10.0

mg/Kg

Heavy Oil

< 50.0

mg/Kg

Surrogate Recovery:

p-terphenyl

64%

SPECTRA LABORATORIES

Steven G. Hibbs, Laboratory Manager

2221 Ross Way • Tacoma, WA 98421 • (253) 272-4850 • Fax (253) 572-9838 • www.spectra-lab.com

October 8, 2015

Northwest Environmental Solutions, Inc.

PO Box 1583

Sumner, WA 98390

Method:

**NWTPH-G** 

Sample Matrix:

Soil

Units:

mg/Kg dry wt.

Spectra Project:

2015100132

Applies to Spectra # 1 - 4

### HYDROCARBON ANALYSIS QUALITY CONTROL RESULTS

### **DUPLICATE**

Duplicate Sample # 2015100102-1

Date Analyzed:

10/7/2015

Sample

Duplicate

Compound

Result

Result

**RPD** 

Gasoline

<5

<5

0

### METHOD BLANK

Date Analyzed:

10/1/2015

WTPH-G

<5

Surrogate Recoveries:

Toluene-d8

91%

**BFB** 

123%

SPECTRA LABORATORIES

Steven G. Hibbs, Laboratory Manager

# CHAIN of CUSTODY

SPECTRA Laboratories

1
- 11
-
~ 7
-
( )
-
100
11 31
11 3
~ 3
-
$\sim$ 1
( ) 1
~ 1
\ I

www.spectra-lab.com

Fax (253) 572-9838

(253) 272-4850

Tacoma, WA 98421

2221 Ross Way

RUSH 🗶

ð

PAGE

STANDARD

4. 55 pm \$ 50 PM CHANGE ADDRES,S,E Payment Terms: Net 30 days, Past due accounts subject to 1 1/2 % per month interest. Customer agrees to pay all costs of collection including reasonable attomay's fees and all other costs of collection regardless of whether suit is filed in Pierce Co., WA venue. Spectra Analytical, Inc. OTHER × CA3. × SOL **COLIDS (SPECIFY)** COB SHORT STAPIN THIOH HSAL TTIGIBAUT 8708 XOT/XI NES, Inc. METALS CLP METALS (SPECIFY) ICLP METALS RCRA 8 (YAIDEAS) STATEM JATO OTAL METALS RCRA 8 PRINTED NAME Kevin Wilkereson ADDRESS: POB 1583 Sumner, WA. 98390 ORGANICS 9087/808 PCB PARMSEET ANG/HAG OTS ISSO CHLOR SOLVENTS SEOVEZ4 VOA **HYDROCARBONS** (EOC) WEH (EOC) (HPT) M3H-TOS 200 × × XQ-H9TWV S-HALLM × BITEX/MWTPH-G × XELLEX имтрн-нспр NUMBER OF CONTAINERS MATRIX Soil RELINQUISHED BY RELINQUISHED BY Prefer FAX 360-872-0699 RECEIVED BY RECEIVED BY or e-MAIL SAMPLED 12:25 13:10 14:00 14"11 TIME SAMPLED Short Stop -Cle Elum DATE SPECIAL INSTRUCTIONS/COMMENTS: FAX: DISPOSE SAMPLES Paul Jhuty - NES CONTACT: Kevin Wilkerson e-MAIL: nesinc@hotmail.com Du To C. CARD PARC JAOFY 253-241-6213 PURCHASE ORDER# SAMPLE ID RETURN SAMPLES 1NW-Disp 3SW-Disp PROJECT: 2NE-Disp 4SE-Disp PHONE CLENT