

MEMORANDUM

Project No. 160355

April 16, 2019


To: Reinhard Distributing Co. Inc.

cc: Sara Fulton, Washington State Department of Ecology

From:



Kirsi S. Longley, PMP
Associate Environmental Scientist
klongley@aspectconsulting.com



Doug Hillman, LHG
Principal Hydrogeologist
dhillman@aspectconsulting.com

Re: Removal Action Report, Ernie's Fuel Stop Moses Lake, Diesel Spill—FINAL

Introduction

Aspect Consulting, LLC (Aspect) has prepared this memorandum documenting the release investigation, removal action, and confirmation soil sampling completed at the Ernie's Fuel Stop, located at 1810 East Kittleson Road in Moses Lake, WA (the Project site; Figure 1). A release of diesel to soil occurred on January 25, 2019 from a semitruck parked at the Site.

The objectives of this project were to investigate the extent of soil impacted by the release, excavate and dispose impacted soil, and then collect soil samples to confirm that soil exceeding applicable Model Toxics Control Act (MTCA) Method A cleanup levels for unrestricted land use was removed from the Project site. We are requesting Ecology's opinion on this independent remedial action confirming that no further action is warranted.

Background

On January 25, 2019, employees at the Ernie's Fuel Stop discovered a diesel-fuel release from the fuel tank of a semitruck parked on their property and notified the local fire department and Washington State Department of Ecology (Ecology). The fire department estimated the spill at approximately 100 gallons. Appendix A includes the Environmental Report Tracking System (ERTS) report documented by Ecology when the release was reported. Ernie's Fuel Stop employees responded by covering the release area with clean soil and cordoning off the area caution tape and cones.

Aspect conducted a preliminary investigation of the release on January 31, 2019. The initial investigation included evaluation the extent of the release, demarcating the release area using spray paint, capturing the boundary using a handheld GPS device, and potholing through the impacted

soil to evaluate the thickness of impacted soil. The release area was “L” shaped and covered an area of 872 square feet. The release area was estimated based on field observations (visual, olfactory, sheen, and photoionization detector [PID] readings) that impacted soil ranged from 8 to 12 inches thick.

Aspect conducted a second investigation on March 14, 2019, to collect soil samples from the spill area for disposal characterization. Two impacted soil samples (herein referred to as source samples) were collected from the surface of the release area for disposal characterization. Both samples were analyzed for diesel-, and motor oil-range total petroleum hydrocarbons (TPH), while the sample with the heaviest observed contamination was also analyzed for gasoline-related volatile organic compounds (benzene, toluene, ethylbenzene, and total xylenes [BTEX]) and gasoline-range TPH, in accordance with MTCA Table 830-1.¹ Laboratory analysis was conducted by Friedman & Bruya, Inc., an accredited Washington State analytical laboratory. The laboratory results for the source samples are summarized in Table 1, and the laboratory report and chromatogram are presented in Appendix B.

Analytical results confirmed the release was diesel fuel. Ethylbenzene, total xylenes, and motor oil were also detected, but at concentrations below MTCA Method A Cleanup Levels. Gasoline-range TPH was also reported; however, the laboratory noted that the presence of gasoline was due to overlap on the chromatogram from the diesel-range compounds. Benzene and toluene were not detected above the laboratory practical quantitation limit. Diesel-range TPH was identified as the representative compound to be used during the removal action to confirm that soil impacted by the diesel-fuel release was remediated to below cleanup levels.

Removal Action

The removal action was completed on March 19, 2019, by DH Environmental, and the work overseen by Aspect. The extent of the excavation is illustrated on Figure 2, and photographs of removal activities are provided in Appendix C. The following summarizes details of the removal action and sampling activities.

Soil Excavation

The impacted soil was excavated using a Case CX160D excavator and direct loaded into a truck-and-trailer for off-site disposal at the Greater Wenatchee Regional Landfill. A total of 69.54 tons of impacted soil were excavated from the release area, to a maximum depth of 12 inches below ground surface. Truck tickets are provided in Appendix D. Disposal certificates will be included in Appendix D upon receipt from the landfill.

The bottom and sidewalls of the excavation were observed for visual and olfactory indications of contamination, and screened for volatile organic compounds using a PID prior to confirmation sample collection. No indications of contamination were observed, and there were no PID readings elevated over background.

¹ As per the footnotes presented in Table 830-1, carcinogenic polyaromatic hydrocarbons, naphthalene, and extractable petroleum hydrocarbons are not required analytes because this was a fresh release of diesel fuel that only impacted soil and MTCA Method A Cleanup Levels are to be used.

Confirmation Soil Sampling and Results

Confirmation sampling results indicate that soil impacted by the January 25, 2019, diesel-fuel release was completely removed to meet MTCA requirements. No confirmation samples exhibited detectable concentrations of diesel- or motor oil-range TPH above the laboratory reporting limits. Table 2 presents a summary of the confirmation sample results.

Removal action performance was evaluated by collecting confirmation soil samples from the sidewalls and the excavation bottom. Confirmation sampling was conducted on March 28, 2019. A total of 12 discrete grab soil samples were collected from the bottom and sidewalls using a stainless-steel trowel to directly fill one, 4-ounce laboratory-provided jar at each location. Samples were labeled with their respective sample identification and placed in a cooler on ice to meet sample-preservation temperature requirements. Chain-of-custody records provided by the laboratories were initiated at the time of sampling, and the record was signed by Aspect representatives. The coolers were transported directly to the laboratory under proper chain of custody by Aspect. The soil samples were analyzed for diesel- and motor oil-range TPH, using NWTPH-Dx, by Friedman & Bruya, Inc. Laboratory analytical reports for soil confirmation samples are provided in Appendix B.

Upon completion of the removal action, the excavation was covered in plastic sheeting, weighed down by plywood sheeting to protect the excavation from precipitation until the Project site is restored. The area was also cordoned off with caution tape and traffic cones to prevent disturbance by truck traffic.

Conclusion

The removal action encompassed the entire vertical and lateral extent of the area impacted by the diesel-fuel release, as delineated during the initial release response. The results of the soil confirmation sampling document the successful excavation of soil impacted by the January 25, 2019, release. None of the final confirmation samples contained concentrations of diesel- and motor oil-range TPH above laboratory reporting limits, which in all cases are below the MTCA Method A Cleanup Levels for unrestricted land uses.

All Project site soil affected by the diesel-fuel release has been successfully remediated. The Project site should now qualify for issuance of a No Further Action status designation based on the successful removal and disposal of all impacted soil exceeding MTCA Method A Cleanup Levels.

Limitations

Work for this project was performed for the Reinhard Distributing Co. Inc. (Client), and this memorandum was prepared in accordance with generally accepted professional practices for the nature and conditions of work completed in the same or similar localities, at the time the work was performed. This memorandum does not represent a legal opinion. No other warranty, expressed or implied, is made.

All reports prepared by Aspect Consulting for the Client apply only to the services described in the Agreement(s) with the Client. Any use or reuse by any party other than the Client is at the sole risk of that party, and without liability to Aspect Consulting. Aspect Consulting's original files/reports shall govern in the event of any dispute regarding the content of electronic documents furnished to others.

Please refer to Appendix E titled "Report Limitations and Guidelines for Use" for additional information governing the use of this report.

Attachments: Table 1 – Source Sample Results
Table 2 – Removal Action Confirmation Sample Results
Figure 1 – Site Location
Figure 2 – Excavation Confirmation Sample Map
Appendix A – Ecology ERTS Report
Appendix B – Analytical Laboratory Reports
Appendix C – Photo Log
Appendix D – Disposal Documentation **(NOT AVAILABLE AT TIME OF REPORT)**
Appendix E – Report Limitations and Guidelines for Use

TABLES

Table 1. Source Sample Results

Project No. 160355, Ernie's Fuel Stop Moses Lake

		Location Date	SO-01 03/14/2019	SO-02 03/14/2019
		Sample ID	SO-1-031419	SO-2-031419
Analyte	Unit	MTCA Method A Cleanup Levels for Unrestricted Land Use		
Benzene	mg/kg	0.03	--	< 0.02 UJ
Toluene	mg/kg	7	--	< 0.1 U
Ethylbenzene	mg/kg	6	--	0.52
Total Xylenes	mg/kg	9	--	5.4
Gasoline Range Organics	mg/kg	30	--	470*
Diesel Range Organics	mg/kg	2,000	1,200	27,000
Motor Oil Range Organics	mg/kg	2,000	390	1,700

Notes:

Bold - Indicates a detected concentration.

* Detection of gasoline is due to overlap from the diesel-range due to the high concentrations of diesel present in the sample.

Blue Shading indicates a detected concentration that exceeds the MTCA Method A Cleanup Level for Unrestricted Land Use.

U = The analyte was analyzed for, but was considered not detected at the reporting limit or reported value.

J = The indicated concentration is considered an estimate.

-- = not analyzed

MTCA = Model Toxics Control Act

BTEX = benzene, toluene, ethylbenzene, total xylenes

TPH = total petroleum hydrocarbons

mg/kg = milligram per kilogram

Table 2. Removal Action Confirmation Sample Results

Project No. 160355, Ernie's Fuel Stop Moses Lake

			Bottom Samples							Sidewall Samples				
Location			SS-05	SS-06	SS-07	SS-08	SS-09	SS-10	SS-11	SS-12	SS-13	SS-14	SS-15	SS-16
Date			03/28/2019	03/28/2019	03/28/2019	03/28/2019	03/28/2019	03/28/2019	03/28/2019	03/28/2019	03/28/2019	03/28/2019	03/28/2019	03/28/2019
Sample ID			SS-5-032819	SS-6-032819	SS-7-032819	SS-8-032819	SS-9-032819	SS-10-032819	SS-11-032819	SS-12-032819	SS-13-032819	SS-14-032819	SS-15-032819	SS-16-032819
Analyte	Unit	MTCA Method A Cleanup Levels for Unrestricted Land Use												
Diesel Range Organics	mg/kg	2000	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U
Motor Oil Range Organics	mg/kg	2000	< 250 U	< 250 U	< 250 U	< 250 U	< 250 U	< 250 U	< 250 U	< 250 U	< 250 U	< 250 U	< 250 U	< 250 U

Notes:

See Figure 2 for location of samples.

U = The analyte was analyzed for, but was considered not detected at the reporting limit or reported value.

MTCA = Model Toxics Control Act

mg/kg = miligram per kilogram

FIGURES



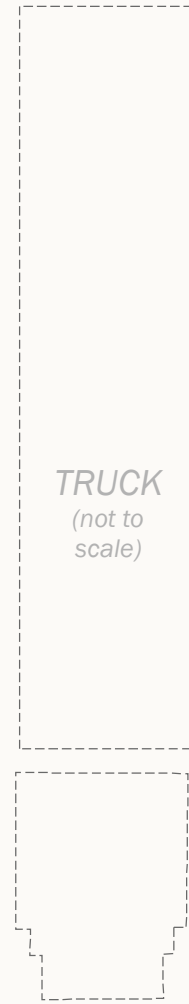
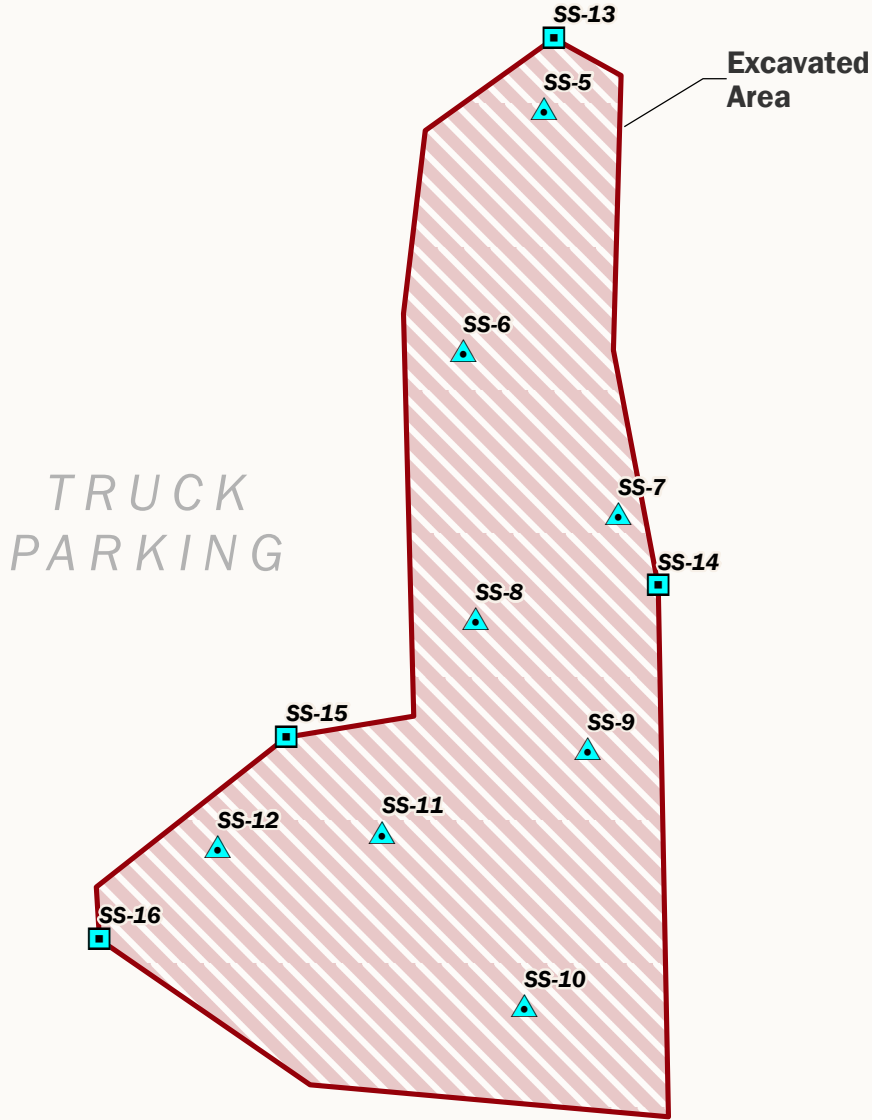
Site Location Map
 Removal Action Report
 1810 East Kittleson Road
 Moses Lake, Washington




	DEC-2016	BY: DB \ TDR	FIGURE NO. 1
	PROJECT NO. 160355-01	REVISED BY: RMB	

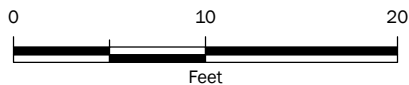
GIS Path: I:\Projects_8\Environ\FuelSpill\160355-01_160355-01\160355-01_Site_Location_Map.mxd | Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet | Date Saved: 3/26/2019 | User: trulen | Print Date: 3/26/2019



TRUCK PARKING



-  Excavated Area
-  Confirmation Sample (Bottom)
-  Confirmation Sample (Sidewall)



Excavation Confirmation Sample Map

Removal Action Report
1810 East Kittleson Road
Moses Lake, Washington



APR-2019

PROJECT NO.
160355-01

BY:
DB \ TDR

REVISED BY:

FIGURE NO.

2

APPENDIX A

Ecology ERTS Report

Department of Ecology - Environmental Report Tracking System

ERTS # 686913

Initial Report

External Reference #

Caller Information

Where did it happen

First Name Derek
Last Name Beach
Business Name Moses Lake Fire Department
Street Address 701 E 3rd Ave.
Other Address
City Moses Lake **State** WA **Zip**
E-mail Confidential_FL
Phone (509) 764-3852 **Ext** **Type** Business

Berth **Anchorage**
Location Name Ernies Truck Stop
Street Address 1810 Kittleson Rd NE
Other Address
City/Place MOSES LAKE **State** WA **Zip** 98837
County - Region GRANT **ERO** **FS ID**
WIRA #
Waterway **Type**
Latitude 47.10301 **Longitude** -119.24522
Topo Quad 1:24:000 MOSES LAKE SOUTH
Direction/Landmark (mile post, cross roads, township/range)

What happened

Spills Program Oil Spill? Y

Incident Date 1/25/2019 **Received Date** 1/25/2019 16:37
Medium
Material

Primary Potentially Responsible Party Information

Source Commercial Truck
Type Vehicle **Primary**
Cause
Incident Type Oil Spill
Activity Other
Impact SOIL CONTAMINATION
Vessel Name
Hull Number

First Name **Last Name**
Name
Business Name
Street Address
Other Address
City **State** **Zip**
Phone **Ext** **Type**
E-mail

Additional Contact Information

Name **Phone** **Ext** **Type**

More Information

Mark - Here's the NRC for the diesel spill in Moses Lake that I called you about. Jim Kadrmass State Emergency Operations Officer Washington Emergency Management Division dutyofficer@mil.wa.gov Office: (800) 258-5990-----Original Message-----From: HQS-PF-flr-NRC@uscg.mil <HQS-PF-flr-NRC@uscg.mil> Sent: Friday, January 25, 2019 4:44 PM To: DUTYOFFICER@EMD.WA.GOV; State Emergency Operations Officer (MIL) <Dutyofficer@mil.wa.gov>; State Emergency Operations Officer (MIL) <Dutyofficer@mil.wa.gov> Subject: NRC#1236035 NATIONAL RESPONSE CENTER 1-800-424-8802 ***GOVERNMENT USE ONLY***GOVERNMENT USE ONLY*** Information released to a third party shall comply with any applicable federal and/or state Freedom of Information and Privacy Laws Incident Report # 1236035 INCIDENT DESCRIPTION *Report taken by NRC at 19:37 on 25-JAN-19 Incident Type: FIXED Incident Cause: UNKNOWN Affected Area: Incident was discovered on 25-JAN-19 at 16:00 local incident time. Affected Medium: LAND / GRAVEL

Name: DEREK BEACH **Organization:** CITY OF MOSES LAKE FD **Address:** 701 E 3RD AVE **MOSES LAKE, WA** **PRIMARY Phone:** (509)7643852 **Type of Organization:** LOCAL GOVERNMENT

PARTY Name: UNKNOWN **Type of Organization:** UNKNOWN **SUSPECTED RESPONSIBLE**

1810 E KITTLESON RD **County:** GRANT **City:** MOSES LAKE **State:** WA **INCIDENT LOCATION** ERNIE'S TRUCK STOP

RELEASED MATERIAL(S) CHRIS Code: ODS **Official Material Name:** OIL: DIESEL **Also Known As:** Qty Released: 0 UNKNOWN AMOUNT **DESCRIPTION OF**

Department of Ecology - Environmental Report Tracking System

ERTS # 686913

INCIDENT CALLER REPORTS THAT THERE WAS A DIESEL DISCHARGE ONTO THE GROUND FROM AN UNKNOWN SOURCE AT A TRUCK STOP. IT IS BELIEVED TO HAVE COME FROM A TRACTOR TRAILER.

SENSITIVE

INFORMATION

INCIDENT DETAILS Package: N/A Building ID: Type of Generating Facility: UNKNOWN Type of Generating Capacity: Type of Fuel: NPDES Compliance: UNKNOWN

NO Fire Extinguished: UNKNOWN INJURIES: NO Sent to Hospital: Empl/Crew: Passenger: FATALITIES: NO Empl/Crew: Passenger: Occupant: EVACUATIONS:NO Who Evacuated: Radius/Area: Damages: NO NO Hours Direction of Closure Type Description of Closure Closed Closure Air: NO NO Major Road: NO Artery:NO Waterway:NO Track: NO Passengers Transferred: NO Environmental Impact: UNKNOWN Media Interest: UNKNOWN Community Impact due to Material:

REMEDIAL ACTIONS FD

ON-SCENE, PADS DEPLOYED, AREA CONED OFF, FACILITY WAS DUMPING DIRT ON SPILL, ADVISED TO CONTACT CONTRACTOR Release Secured: UNKNOWN Release Rate: Estimated Release Duration:

WEATHER Weather:

CLEAR, 35°F

ADDITIONAL AGENCIES

NOTIFIED Federal: State/Local: DEM State/Local On Scene: FD State Agency Number: 19-0280

NOTIFICATIONS BY

NRC CENTERS FOR DISEASE CONTROL (GRASP) 25-JAN-19 19:43 (770)4887100 DHS DEFENSE THREAT REDUCTION AGENCY (CHEMICAL AND BIOLOGICAL TECHNOLOGI 25-JAN-19 19:43 (703)7673477 DHS CYBER & INFRASTRUCTURE SECURITY (OFC OF INFRASTRUCTURE PROTECTION 25-JAN-19 19:43 (202)3097911 DHS CYBER & INFRASTRUCTURE SECURITY (OFC OF INFRASTRUCTURE PROTECTION R 25-JAN-19 19:43 (202)8215301 OFFICE OF INFRASTRUCTURE PROTECTION (WA STATE PROTECTIVE SECURITY ADVIS 25-JAN-19 19:43 (202)8053379 DOT CRISIS MANAGEMENT CENTER (MAIN OFFICE) 25-JAN-19 19:43 (202)3661863 U.S. EPA X SEATTLE (MAIN OFFICE) (206)5531263 FEMA REGION 10 (MAIN OFFICE) 25-JAN-19 19:43 (425)4874704 NATIONAL INFRASTRUCTURE COORD CTR (MAIN OFFICE) 25-JAN-19 19:43 (202)2829201 NOAA RPTS FOR WA (MAIN OFFICE) 25-JAN-19 19:43 (206)5264911 OREGON TITAN FUSION CENTER (FUSION COMMAND CENTER) 25-JAN-19 19:43 (877)6204702 WA STATE EMERGENCY MANAGEMENT (MAIN OFFICE) 25-JAN-19 19:43 (800)2585990 USCG DISTRICT 13 (DISTRICT THIRTEEN (DRAT - DRMM)) 25-JAN-19 19:43 (206)2207221 WASHINGTON STATE FUSION CENTER (FUSION COMMAND CENTER) 25-JAN-19 19:43 (877)8439522 WASHINGTON STATE NATIONAL GUARD (COMMAND CENTER) 25-JAN-19 19:43 (253)5128159 WA UTILITIES & TRANSPORTATION COMM (PIPELINE SAFETY) 25-JAN-19 19:43 (360)6641182

ADDITIONAL

INFORMATION

INCIDENT REPORT #1236035 *** Report any problems by calling 1-800-424-8802 PLEASE VISIT OUR WEB SITE AT http://www.nrc.uscg.mil *** END

Entry Person Stephens, Mark A

Entry Date 1/28/2019

ERTS # 686913

Referral

Referral Method		Person Referred to STEPHENS, MARK	Referral # 251212
<input type="radio"/> E-mail ERTS number		Phone (509) 329-3512 Fax	Primary <input checked="" type="checkbox"/>
<input type="radio"/> E-mail attachment		E-mail mste461@ecy.wa.gov	
<input type="radio"/> Print		Program/Organization SPILLS, PREVENTION, PREPAREDNESS AND RESPONSE	
<input checked="" type="radio"/> Telephone		Address	
		City WA	
		Region/Location ero	
		Referral Date 3/6/2019	
Referral Method		Person Referred to Fulton, Sara	Referral # 253043
<input type="radio"/> E-mail ERTS number		Phone (509) 329-3535 Fax	Primary <input type="checkbox"/>
<input checked="" type="radio"/> E-mail attachment		E-mail SFUL461@ecy.wa.gov	
<input type="radio"/> Print		Program/Organization TOXICS CLEANUP	
<input type="radio"/> Telephone		Address	
		City Spokane WA	
		Region/Location ERO	
		Referral Date 3/6/2019	

Followup (None)

APPENDIX B

Analytical Laboratory Reports

FRIEDMAN & BRUYA, INC.

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 1, 2019

Kirsi Longley, Project Manager
Aspect Consulting, LLC
710 2nd Ave S, Suite 550
Seattle, WA 98104

Dear Ms Longley:

Included are the results from the testing of material submitted on March 28, 2019 from the Ernies Fuel Stop 160355-01, F&BI 903542 project. There are 5 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. 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 have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
c: Data Aspect
ASP0401R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on March 28, 2019 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Ernie's Fuel Stop 160355-01, F&BI 903542 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Aspect Consulting, LLC</u>
903542 -01	SS-5-032819
903542 -02	SS-6-032819
903542 -03	SS-7-032819
903542 -04	SS-8-032819
903542 -05	SS-9-032819
903542 -06	SS-10-032819
903542 -07	SS-11-032819
903542 -08	SS-12-032819
903542 -09	SS-13-032819
903542 -10	SS-14-032819
903542 -11	SS-15-032819
903542 -12	SS-16-032819

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/01/19
Date Received: 03/28/19
Project: Ernies Fuel Stop 160355-01, F&BI 903542
Date Extracted: 03/29/19
Date Analyzed: 03/29/19

**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)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> (% Recovery) (Limit 53-144)
SS-5-032819 903542-01	<50	<250	94
SS-6-032819 903542-02	<50	<250	83
SS-7-032819 903542-03	<50	<250	82
SS-8-032819 903542-04	<50	<250	81
SS-9-032819 903542-05	<50	<250	81
SS-10-032819 903542-06	<50	<250	80
SS-11-032819 903542-07	<50	<250	90
SS-12-032819 903542-08	<50	<250	82
SS-13-032819 903542-09	<50	<250	91
SS-14-032819 903542-10	<50	<250	80
SS-15-032819	<50	<250	90

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

903542-11

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/01/19
Date Received: 03/28/19
Project: Ernie's Fuel Stop 160355-01, F&BI 903542
Date Extracted: 03/29/19
Date Analyzed: 03/29/19

**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)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 53-144)
SS-16-032819 903542-12	<50	<250	92
Method Blank 09-695 MB	<50	<250	85

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/01/19

Date Received: 03/28/19

Project: Ernies Fuel Stop 160355-01, F&BI 903542

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

Laboratory Code: 903542-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	94	96	64-133	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	80	58-147

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 analyte 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 due to sample matrix effects.
- 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.

903542

SAMPLE CHAIN OF CUSTODY

ME 03/28/19

704

Report To Klangley@aspectconsulting.com

Company Aspect Consulting

Address _____

City, State, ZIP _____

Phone 316.617.0499 Email dbbebeck@aspectconsulting.com

SAMPLERS (signature) <i>[Signature]</i>		TURNAROUND TIME <input type="checkbox"/> Standard Turnaround <input type="checkbox"/> RUSH Rush charges authorized by: _____
PROJECT NAME <u>Ernie's Fuel Stop</u>	PO # <u>160355-01</u>	SAMPLE DISPOSAL <input type="checkbox"/> Dispose after 30 days <input type="checkbox"/> Archive Samples <input type="checkbox"/> Other _____
REMARKS	INVOICE TO	

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED							Notes		
						TPH-HCID	TPH-Diesel ^X	TPH-Gasoline	BTEX by 8021B	VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM			
SS-5-032819	01	03/28/19	1030	Soil	1		1								
SS-6-032819	02		1053		1		1								
SS-7-032819	03		1036		1	1									
SS-8-032819	04		1039		1	1									
SS-9-032819	05		1042		1	1									
SS-10-032819	06		1045		1	1									
SS-11-032819	07		1048		1	1									
SS-12-032819	08		1051		1	1									
SS-13-032819	09		1054		1	1									
SS-14-032819	10		↓		1057	↓	1		1						

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <i>[Signature]</i>	<u>Daniel Bebeck</u>	<u>ASPECT</u>	<u>3/28/19</u>	<u>1603</u>
Received by: <i>[Signature]</i>	<u>[Signature]</u>	<u>TAB</u>	<u>3/28/19</u>	<u>1603</u>
Relinquished by:				
Received by:				

Samples received at 3 °C

903542

SAMPLE CHAIN OF CUSTODY

ME 03/28/19

A04

Report To Klongley@aspectconsulting.com

SAMPLERS (signature) <i>[Signature]</i>		Page # _____ of _____
PROJECT NAME 160355-01	PO #	TURNAROUND TIME <input type="checkbox"/> Standard Turnaround <input type="checkbox"/> RUSH Rush charges authorized by: _____
REMARKS	INVOICE TO	SAMPLE DISPOSAL <input type="checkbox"/> Dispose after 30 days <input type="checkbox"/> Archive Samples <input type="checkbox"/> Other _____

Company _____
Address _____
City, State, ZIP _____
Phone _____ Email _____

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED										Notes	
						TPH-HCID	TPH-Diesel <input checked="" type="checkbox"/>	TPH-Gasoline	BTEX by 8021B	VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM					
SS-15-032819	11	3/28/19	1100	Soil	1		1										
SS-16-032819	12	3/28/19	1105	Soil	1		1										

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <i>[Signature]</i>				
Received by: <i>[Signature]</i>	Daniel Black	Aspect	3/28/19	1603
Relinquished by:	McClure	F&B	3/20/19	1403
Received by:				
Samples received at				3 °C

FRIEDMAN & BRUYA, INC.

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

March 18, 2019

Kirsi Longley, Project Manager
Aspect Consulting, LLC
710 2nd Ave S, Suite 550
Seattle, WA 98104

Dear Ms Longley:

Included are the results from the testing of material submitted on March 15, 2019 from the Ernie's Fuel Stop 160355-001, F&BI 903285 project. There are 6 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. 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 have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures
c: Data Aspect
ASP0318R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on March 15, 2019 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Ernie's Fuel Stop 160355-001, F&BI 903285 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Aspect Consulting, LLC</u>
903285 -01	SO-1-031419
903285 -02	SO-2-031419

Review of the NWTPH-Dx chromatogram for sample SO-2-031419 showed a pattern of peaks indicating the presence of a middle distillate, such as a diesel fuel. A pattern indicating the presence of a low boiling product, such as gasoline, was not observed in the sample.

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 03/18/19

Date Received: 03/15/19

Project: Ernie's Fuel Stop 160355-001, F&BI 903285

Date Extracted: 03/18/19

Date Analyzed: 03/18/19

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR BENZENE, TOLUENE, ETHYLBENZENE,
XYLENES AND TPH AS GASOLINE
USING METHODS 8021B AND NWTPH-Gx**

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 50-150)
SO-2-031419 903285-02 1/5	<0.02 j	<0.1	0.52	5.4	470	117
Method Blank 09-495 MB	<0.02	<0.02	<0.02	<0.06	<5	110

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 03/18/19

Date Received: 03/15/19

Project: Ernie's Fuel Stop 160355-001, F&BI 903285

Date Extracted: 03/15/19

Date Analyzed: 03/15/19

**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)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 56-165)
SO-1-031419 903285-01	1,200	390	95
SO-2-031419 903285-02	27,000	1,700	68
Method Blank 09-600 MB	<50	<250	102

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 03/18/19

Date Received: 03/15/19

Project: Ernie's Fuel Stop 160355-001, F&BI 903285

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES
FOR BENZENE, TOLUENE, ETHYLBENZENE,
XYLENES, AND TPH AS GASOLINE
USING METHOD 8021B AND NWTPH-Gx**

Laboratory Code: 903287-01 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Benzene	mg/kg (ppm)	<0.02	<0.02	nm
Toluene	mg/kg (ppm)	<0.02	<0.02	nm
Ethylbenzene	mg/kg (ppm)	<0.02	<0.02	nm
Xylenes	mg/kg (ppm)	<0.06	<0.06	nm
Gasoline	mg/kg (ppm)	<5	<5	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent	
			Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	92	69-120
Toluene	mg/kg (ppm)	0.5	92	70-117
Ethylbenzene	mg/kg (ppm)	0.5	94	65-123
Xylenes	mg/kg (ppm)	1.5	92	66-120
Gasoline	mg/kg (ppm)	20	85	71-131

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 03/18/19

Date Received: 03/15/19

Project: Ernie's Fuel Stop 160355-001, F&BI 903285

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

Laboratory Code: 903242-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	2,200	87	97	63-146	11

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	88	79-144

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 analyte 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 due to sample matrix effects.

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.

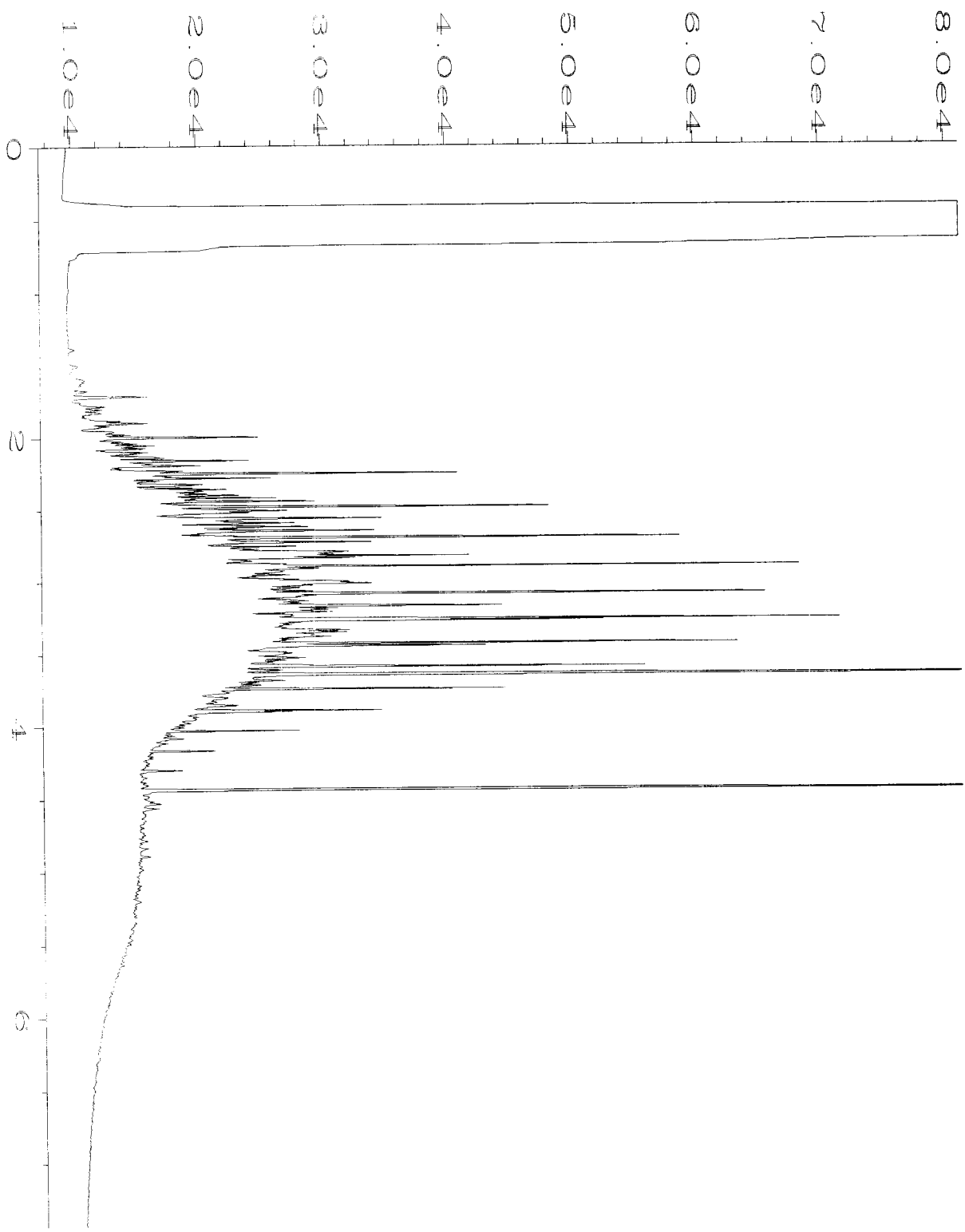
nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

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.

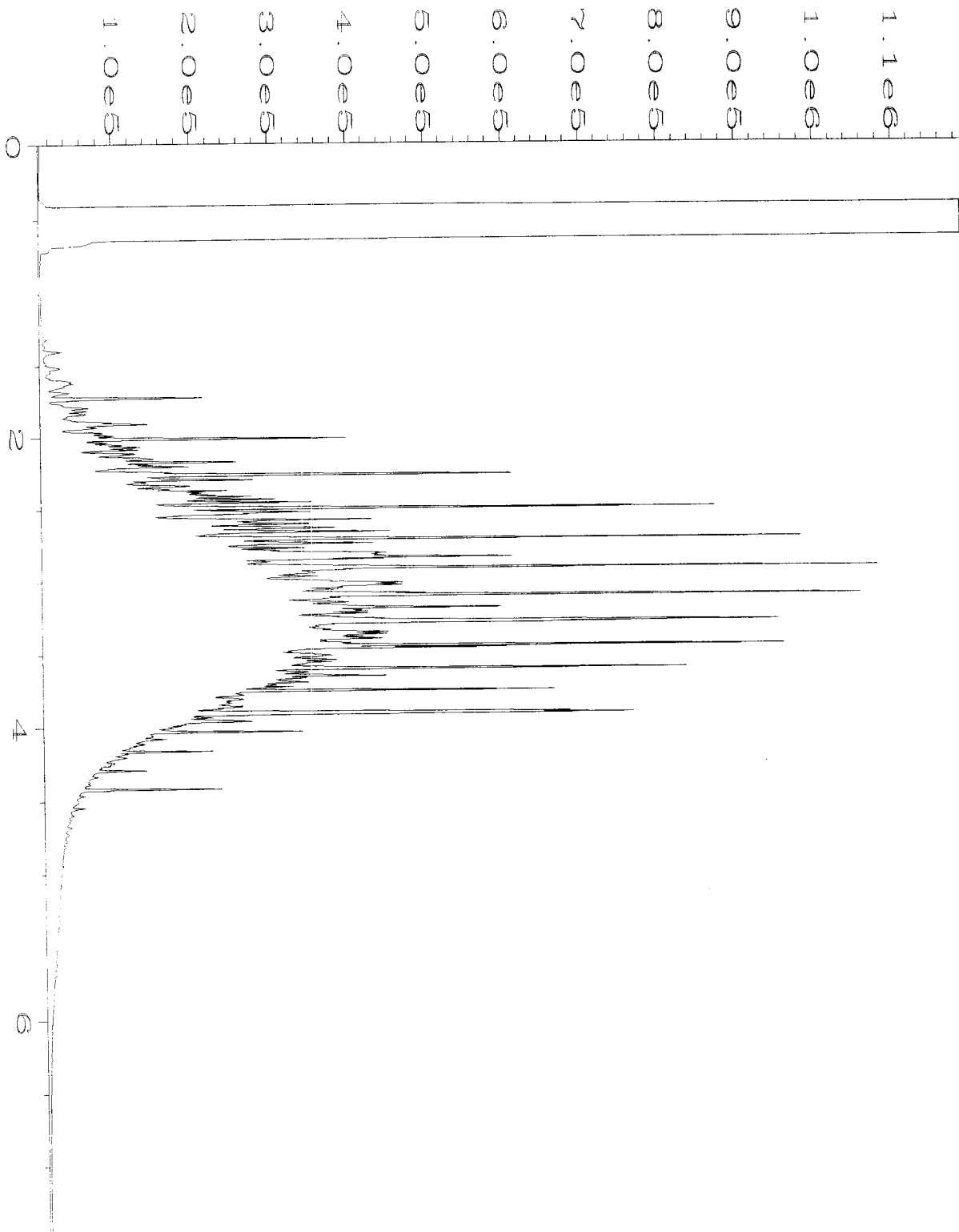
ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

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.



Data File Name	: C:\HPCHEM\1\DATA\03-15-19\019F0501.D	Page Number	: 1
Operator	: TL	Vial Number	: 19
Instrument	: GC1	Injection Number	: 1
Sample Name	: 903285-01	Sequence Line	: 5
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 15 Mar 19 02:03 PM	Analysis Method	: DX.MTH
Report Created on:	18 Mar 19 10:19 AM		



Data File Name	: C:\HPCHEM\1\DATA\03-15-19\020F0501.D	Page Number	: 1
Operator	: TL	Vial Number	: 20
Instrument	: GC1	Injection Number	: 1
Sample Name	: 903285-02	Sequence Line	: 5
Run Time Bar Code:		Instrument Method:	DX.MTH
Acquired on	: 15 Mar 19 02:12 PM	Analysis Method	: DX.MTH
Report Created on:	18 Mar 19 10:22 AM		

APPENDIX C

Photo Log



Photograph 1. Extent of diesel fuel release. White paint demarcates release boundaries.



Photograph 2. Excavator beginning excavation.



Photograph 3. Excavator direct-loading impacted soil into truck-and-trailer for off-site disposal.



Photograph 4. Completed excavation.



Photograph 5. Excavated area covered and coned off after excavation pending analytical results.

APPENDIX D

Disposal Documentation

**(NOT AVAILABLE AT TIME OF
DRAFT REPORT)**

Manual Ticket# _____ Account _____ Container 72
 Route _____ Driver _____
 Hauling Ticket# _____ Check# _____
 Destination _____ Billing# 0508442
 Manifest 114196wa Grid _____
 Profile 114196WA (LF02 - Petroleum Contaminated Soil)
 Generator WA-ERNIETRUCK ERNIE'S TRUCK STOP 1810 KITTLESON RD MOSES LAKE WA 98837
 PO# _____

	Time	Scale	Operator	Inbound	Gross	
In	03/19/2019 09:25:26	Inbound	Janelle		110000 lb	
Out	03/19/2019 09:47:31	Outbound	Janelle		Tare 39480 lb	
					Net 70520 lb	
					Tons 35.26	

Comments

Product	LD%	Qty	UOM	Rate	Tax/Fee Amount	Origin
1 Cont Soil Pet-RGC-Tons-C	100	35.26	Tons			GRANT
2 CDHD FEE-Chelan Douglas	100	35.26	Tons			GRANT

Total Tax/Fees
Total Ticket

Driver's Signature *[Handwritten Signature]*

The total amount includes fees and taxes that may not all be listed on this ticket due to technical limitation.

Greater Wenatchee Regional Landfill
191 Webb Road
Wenatchee, WA, 98802

Original
Ticket# 830294

Ph: (509) 884-2802

Customer Name DH ENVIRONMENTAL INC DH Carrier r transport
Ticket Date 03/19/2019 Vehicle# 72
Payment Type Credit Account Container
Manual Ticket# Driver
Route Check#
Hauling Ticket# Billing# 0508442
Destination Grid
Manifest 114196wa
Profile 114196WA (LF02 - Petroleum Contaminated Soil)
Generator WA-ERNIETRUCK ERNIE'S TRUCK STOP 1810 KITTLESON RD MOSES LAKE WA 98837
PO#

	Time	Scale	Operator	Inbound	Gross	107880 lb
In	03/19/2019 12:55:25	Inbound	Janelle		Tare	39320 lb
Out	03/19/2019 13:14:36	Outbound	Janelle		Net	68560 lb
					Tons	34.28

Comments

Product	LD%	Qty	UOM	Rate	Tax/Fee Amount	Origin
1 Cont Soil Pet-RGC-Tons-C	100	34.28	Tons			GRANT
2 CDHD FEE-Chelan Douglas	100	34.28	Tons			GRANT

Total Tax/Fees
Total Ticket

Driver's Signature

DL R-72

The total amount includes fees and taxes that may not all be listed on this ticket

APPENDIX E

Report Limitations and Guidelines for Use

REPORT LIMITATIONS AND USE GUIDELINES

Reliance Conditions for Third Parties

This report was prepared for the exclusive use of the Client. No other party may rely on this report or the product of our services without the express written consent of Aspect Consulting, LLC (Aspect). This limitation is to provide our firm with reasonable protection against liability claims by third parties with whom there would otherwise be no contractual conditions or limitations and guidelines governing their use of the report. Within the limitations of scope, schedule and budget, our services have been executed in accordance with our Agreement with the Client and recognized standards of professionals in the same locality and involving similar conditions.

Services for Specific Purposes, Persons and Projects

Aspect has performed the services in general accordance with the scope and limitations of our Agreement. This report has been prepared for the exclusive use of the Client and their authorized third parties, approved in writing by Aspect. This report is not intended for use by others, and the information contained herein is not applicable to other properties.

This report is not, and should not, be construed as a warranty or guarantee regarding the presence or absence of hazardous substances or petroleum products that may affect the subject property. The report is not intended to make any representation concerning title or ownership to the subject property. If real property records were reviewed, they were reviewed for the sole purpose of determining the subject property's historical uses. All findings, conclusions, and recommendations stated in this report are based on the data and information provided to Aspect, current use of the subject property, and observations and conditions that existed on the date and time of the report.

Aspect structures its services to meet the specific needs of our clients. Because each environmental study is unique, each environmental report is unique, prepared solely for the specific client and subject property. This report should not be applied for any purpose or project except the purpose described in the Agreement.

This Report Is Project-Specific

Aspect considered a number of unique, project-specific factors when establishing the Scope of Work for this project and report. You should not rely on this report if it was:

- Not prepared for you
- Not prepared for the specific purpose identified in the Agreement
- Not prepared for the specific real property assessed
- Completed before important changes occurred concerning the subject property, project or governmental regulatory actions

If changes are made to the project or subject property after the date of this report, Aspect should be retained to assess the impact of the changes with respect to the conclusions contained in the report.

Geoscience Interpretations

The geoscience practices (geotechnical engineering, geology, and environmental science) require interpretation of spatial information that can make them less exact than other engineering and natural science disciplines. It is important to recognize this limitation in evaluating the content of the report. If you are unclear how these "Report Limitations and Use Guidelines" apply to your project or site, you should contact Aspect.

Discipline-Specific Reports Are Not Interchangeable

The equipment, techniques and personnel used to perform an environmental study differ significantly from those used to perform a geotechnical or geologic study and vice versa. For that reason, a geotechnical engineering or geologic report does not usually address any environmental findings, conclusions or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. Similarly, environmental reports are not used to address geotechnical or geologic concerns regarding the subject property.

Environmental Regulations Are Not Static

Some hazardous substances or petroleum products may be present near the subject property in quantities or under conditions that may have led, or may lead, to contamination of the subject property, but are not included in current local, state or federal regulatory definitions of hazardous substances or petroleum products or do not otherwise present potential liability. Changes may occur in the standards for appropriate inquiry or regulatory definitions of hazardous substance and petroleum products; therefore, this report has a limited useful life.

Property Conditions Change Over Time

This report is based on conditions that existed at the time the study was performed. The findings and conclusions of this report may be affected by the passage of time (for example, Phase I ESA reports are applicable for 180 days), by events such as a change in property use or occupancy, or by natural events, such as floods, earthquakes, slope failure or groundwater fluctuations. If more than six months have passed since issuance of our report, or if any of the described events may have occurred following the issuance of the report, you should contact Aspect so that we may evaluate whether changed conditions affect the continued reliability or applicability of our conclusions and recommendations.