

FREMONT ENVIRONMENTAL INC.

September 14, 2020

Mr. Jason Davidson
Great Western Operating Company, LLC
1801 Broadway, Suite 500
Denver, CO 80202

Subject: **Excavation Report**
Pierce Central Station
SESE Sec 22, T8N, R66W
Weld County, Colorado
Fremont Project No. C020-025
Remediation #15435

Dear Mr. Davidson:

Enclosed please find a copy of the above referenced Excavation Report for the Pierce Central Station release site in Weld County, Colorado. The enclosed report describes excavation actions to remove impacted soil from the site.

Residual soil contamination was left in place upon completion of the excavation work. It is anticipated that these impacts will be remediated with an insitu soil vapor extraction (SVE) system in the future.

Please contact me at (303) 956-8714 if you require any additional information.

Fremont appreciates the opportunity to provide this service.

Sincerely,
FREMONT ENVIRONMENTAL INC.



Paul V. Henehan, P.E.
Senior Consultant

Enclosure

EXCAVATION REPORT

GREAT WESTERN OPERATING COMPANY, LLC

PIERCE CENTRAL STATION

WELD COUNTY, COLORADO

FREMONT PROJECT NO. C020-025

REMEDICATION #15435

Prepared by:

**Fremont Environmental Inc.
1759 Redwing Lane
Broomfield, CO 80020
(303) 956-8714**

September 14, 2020

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EXCAVATION REPORT
GREAT WESTERN OPERATING COMPANY, LLC
PIERCE CENTRAL STATION
WELD COUNTY, COLORADO
FREMONT PROJECT NO. C020-025
REMEDIATION #15435

1.0 INTRODUCTION

The purpose of this document is to present information collected during the excavation of petroleum-impacted soil at the Great Western Operating Company, LLC (GWOC) Pierce Central Station release location in Weld County, Colorado. This two-day excavation project was completed on August 13, 2020.

2.0 BACKGROUND INFORMATION

2.1 Site Location

The Pierce Station site is located approximately one mile north of Pierce, Colorado in Weld County as shown on Figure 1. The site is located in an agricultural area approximately 0.1 miles west of the intersection of Highway 85 and County Road 90. The location is further described as the SE $\frac{1}{4}$ of the SE $\frac{1}{4}$ of Section 22, Township 8N, Range 66W.

2.2 Site History

The site's excavation area consisted of the soil immediately beneath the facility bermed area which included several aboveground storage tanks, separators and treating equipment. Soil impacts were identified within the bermed area following a February 2020 release at the facility. GWOC took this facility completely out of service and removed all the equipment from the site in anticipation of soil excavation.

3.0 FIELD ACTIVITIES

Remediation efforts consisted of the excavation of petroleum-impacted soil at this site. Excavation was initiated at the facility on August 12, 2020 and completed on August 13, 2020. Soil removal was limited to the area immediately beneath the former secondary containment at the facility as well as an area south of the facility where surface impacts were present due to the February 2020 release.

The soil consisted of road base which was underlain by sandy clay to a depth of approximately five feet. The clay was then underlain by permeable sand and gravel to a depth of at least 17 feet. The 65' x 100' excavated area is shown on Figure 2. The depth of the excavation ranged from 5 feet to 17 feet.

A silty clay layer was present from a depth of 9 to 10 feet in the western half of the excavation that acted as a partial barrier to downward migration of petroleum contamination. A significant amount of condensate was present just above the silty clay lens; this contaminated soil was removed during the excavation. This silty clay layer was not present in the eastern portion of the excavation area.

A deeper test pit was excavated in the western portion of the site to determine the depth of the soil impacts. At that point, the maximum reach of the excavator was 17 feet; a soil sample collected at this depth had a photoionization detector (PID) reading of 1,300 ppm. This soil sample from a depth of 17 feet was collected and submitted for analyses to Summit Scientific Inc. of Golden, Colorado for benzene, toluene, ethylbenzene and xylenes (BTEX), Total Petroleum Hydrocarbons - Gasoline Range Organics (TPH-GRO) by EPA method 8260B, and TPH - Diesel Range Organics (TPH-DRO) by EPA method 8015. The sample had a TPH concentration of 1,790 mg/kg, which exceeds the Colorado Oil and Gas Conservation Commission's (COGCC's) Table 910-1 limit of 500 mg/kg. The laboratory report and chain-of-custody documentation are included in Appendix B.

A soil sample was also collected from the area south of the former secondary containment after the removal of contaminated surface soil. When analyzed, this sample had petroleum hydrocarbon concentrations that were less than the COGCC Table 910-1 limits.

Summaries of the soil sample laboratory data are included in Table 1. The laboratory reports are provided in Appendix A.

A total of 1,232 cubic yards of petroleum-impacted soil was removed by M&M Excavation Inc. from the location over this two-day project. The impacted soil was disposed of at the North Weld County Landfill in Ault, Colorado as non-hazardous waste.

4.0 DISCUSSION

As a result of a February 2020 release within the bermed area of Pierce Station, an excavation was conducted to remove contaminated soil in August 2020. Approximately 1,232 cubic yards of impacted soil were removed and transported to the North Weld County landfill as non-hazardous waste.

As demonstrated by field observations and soil sampling, the petroleum-impacted soil was only partially removed from the site by excavation. Residual soil contamination was left in place and will be addressed by insitu remediation in the future. It is likely that a portion of the residual soil impacts were due to historical releases rather than the February 2020 release.

Due to the permeable soil characteristics and the volatility of the petroleum present in the subsurface, it is anticipated that a soil vapor extraction (SVE) remediation system will be utilized to complete the site cleanup. This further remediation will be discussed in future reporting.

5.0 REMARKS

The discussion and conclusions contained in this report represent our professional opinions. These opinions are based on currently available information and are arrived at in accordance with currently accepted hydrogeologic and engineering practices at this time and location. Other than this, no warranty is implied or intended.

This report was prepared by **FREMONT ENVIRONMENTAL INC.**



9/14/20

Date _____

Paul V. Henehan, P.E.
Senior Consultant

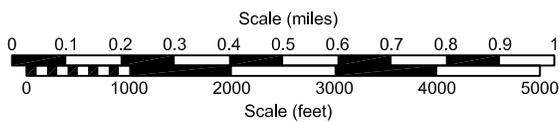
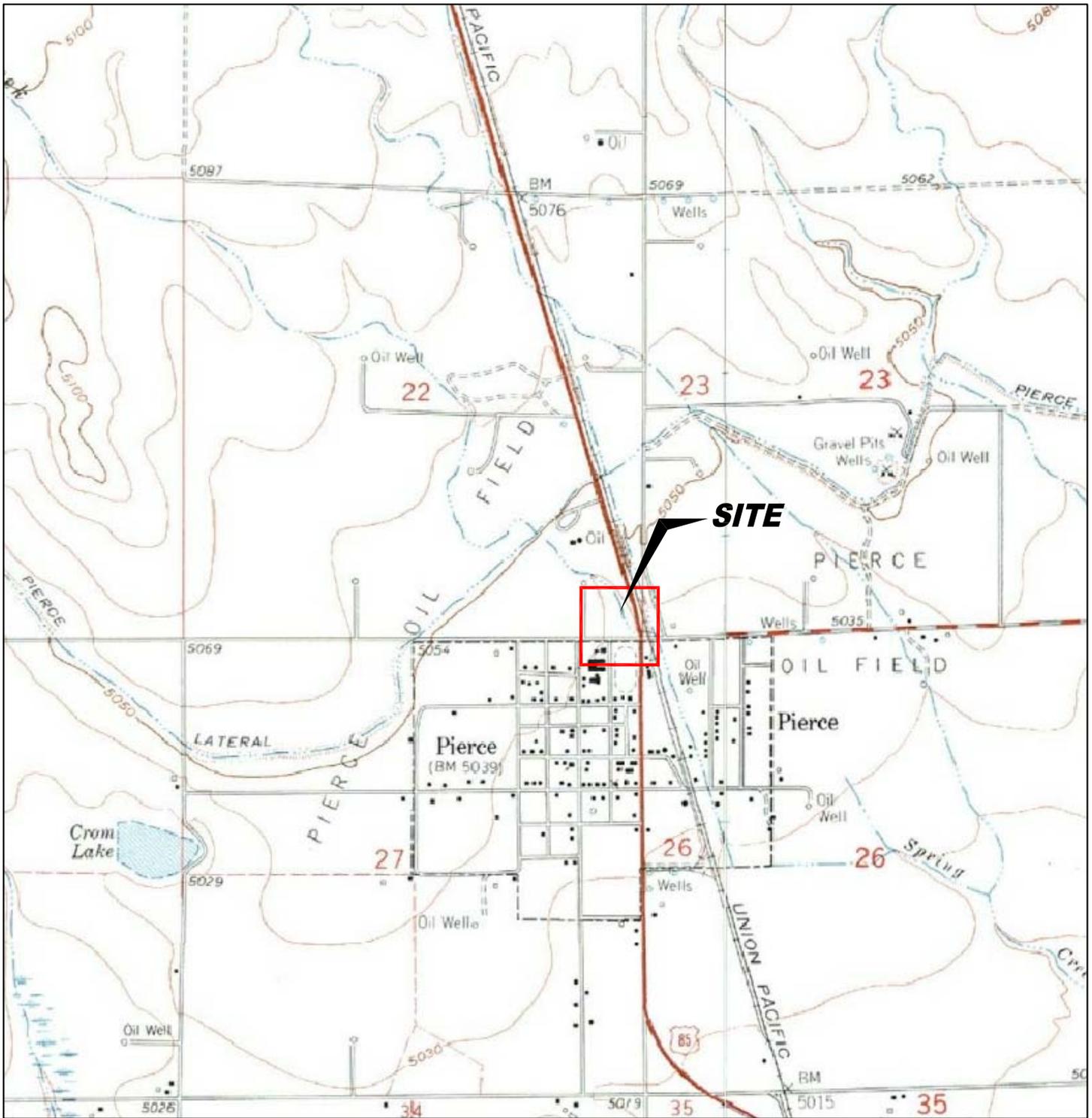
TABLE

TABLE 1
SUMMARY OF SOIL CHEMISTRY DATA
GREAT WESTERN OPERATING COMPANY, LLC
PIERCE CENTRAL STATION, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C020-025

SAMPLE LOCATION	DATE SAMPLED	DEPTH ft	BENZENE mg/kg	TOLUENE mg/kg	ETHYL BENZENE mg/kg	TOTAL XYLENES mg/kg	TPH-GRO mg/kg	TPH-DRO mg/kg
Floor-NW 17 Ft	08/12/20	17	<0.002	<0.005	0.074	<0.01	390	1400
SS-1-6"	08/13/20	0.5	<0.002	<0.005	<0.005	<0.01	<0.50	<50
COGCC Table 910-1 Concentrations			0.17	85	100	175	500*	500*

The TPH-GRO and TPH-DRO concentrations are added together; if the sum of the two is >500 mg/kg, this exceeds the COGCC Table 910-1 limit

FIGURES



USGS 7.5 MINUTE SERIES (TOPOGRAPHIC)

Figure 1

SITE LOCATION MAP

PIERCE CENTRAL STATION
GREAT WESTERN OPERATING COMPANY, LLC
 SESE Sec 22, T8N, R66W ~ 40.6438°, -104.7572°
 Weld County, Colorado

Project No. CO20-025	Prepared by	Drawn by TA
Date 8/25/20	Reviewed by MG	Filename 20025T





LEGEND

	SOIL SAMPLE LOCATION	Floor-NW @ 17	LOCATION and DEPTH (ft)
	PHOTO IONIZATION DETECTION (ppm)	08/12/2020	DATE SAMPLED
	ABOVE GROUND STORAGE TANK	B <0.002	BENZENE (mg/kg)
	FORMER FACILITY	T <0.005	TOLUENE (mg/kg)
	BUILDING	E 0.074	ETHYLBENZENE (mg/kg)
	FENCE LINE	X <0.01	TOTAL XYLENES (mg/kg)
	CONTAINMENT BERM	G 390	TPH-GRO (mg/kg)
	DCP FLOWLINE	D 1400	TPH-DRO (mg/kg)
	EXTENT OF EXCAVATION		

Figure 2
EXTENT OF EXCAVATION WITH SOIL CHEMISTRY MAP
PIERCE CENTRAL STATION
GREAT WESTERN OPERATING COMPANY, LLC
 SESE Sec 22, T8N, R66W ~ 40.6438°, -104.7572°
 Weld County, Colorado

Project No. CO20-025	Prepared by	Drawn by TA
Date 9/8/20	Reviewed by PH	Filename 20025Q



APPENDIX A
LABORATORY DOCUMENTATION

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

August 18, 2020

Paul Henchan

Fremont Environmental

PO Box 1289

Wellington, CO 80549

RE: Great Western - Pierce Central Station

Work Order #2008113

Enclosed are the results of analyses for samples received by Summit Scientific on 08/13/20 17:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Muri Premer". The signature is written in a cursive style with a large initial "M".

Muri Premer For Paul Shrewsbury

President



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Great Western - Pierce Central Station

Project Number: [none]
Project Manager: Paul Henchan

Reported:
08/18/20 13:23

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Floor-NW 17 FT	2008113-01	Soil	08/12/20 00:00	08/13/20 17:00

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Summit Scientific

2008113

S₂

4653 Table Mountain Drive ♦ Golden, Colorado 80403
303-277-9310 ♦ 303-374-5933 (f)

Page 1 of 1

Client: Fremont Environmental	Project Manager: Paul Henehan
Address: P.O Box 1289	E-Mail: paulh@fremontenv.com, ethanb@fremontenv.com
City/State/Zip: Wellington, CO 80549	Bill to: PAUL
Phone: 303-956-8714	Project Name: GREAT WESTERN - PIERCE CENTRAL STATION
Sampler Name: HENEHAN	Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested						Special Instructions	
					HCl	HNO ₃	None	Other	Water	Soil	Air-Canister #	Other	BTEX	Naphthalene	GRO	DRO	SAR		EC
1	FLOOR-NW 17 FT	8/12/20		1			✓			✓			✓	✓	✓				
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			

Relinquished by: <i>PAH/FE</i>	Date/Time: 8/13/20 17:00	Received by: <i>[Signature]</i>	Date/Time: 8/13/2020 17:00	Turn Around Time (Check)	Notes:
Relinquished by:	Date/Time:	Received by:	Date/Time:	Same Day <input type="checkbox"/> 72 hours	
Relinquished by:	Date/Time:	Received by:	Date/Time:	24 hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/>	
Relinquished by:	Date/Time:	Received by:	Date/Time:	48 hours <input type="checkbox"/>	
				Sample Integrity:	
				Temperature Upon Receipt: 4.1	
				Samples Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

2008113

Sample Receipt Checklist

S2 Work Order _____

Client: Fremont Environmental Client Project ID: GN9AT WESTERN - PIERCE CENTRAL STATION

Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other _____ Airbill #: _____

Matrix (check all that apply): Air Soil/Solid Water Other: _____ (Describe)

Temp (°C) 4.1

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C ⁽¹⁾ ? NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact ⁽¹⁾ ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples with holding times due within 48 hours sample due within 48 hours present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ? Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ? Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Additional Comments (if any):

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.

TCB
Custodian Printed Name or Initials

[Signature]
Signature of Custodian

02/13/2000
Date/Time



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Great Western - Pierce Central Station

Project Number: [none]
Project Manager: Paul Henchan

Reported:
08/18/20 13:23

Floor-NW 17 FT
2008113-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/12/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	2008145	08/14/20	08/14/20	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.074	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	390	5.0	"	10	"	"	"	"	

Date Sampled: **08/12/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		111 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		107 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		329 %	21-167		"	"	"	"	S-02

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/12/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	1400	50	mg/kg	1	2008146	08/14/20	08/15/20	EPA 8015M	

Date Sampled: **08/12/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		133 %	30-150		"	"	"	"	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Great Western - Pierce Central Station

Project Number: [none]
Project Manager: Paul Henchan

Reported:
08/18/20 13:23

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike Level	Source Result	%REC		RPD		Notes
		Limit	Units			Limits	RPD	Limit		

Batch 2008145 - EPA 5030 Soil MS

Blank (2008145-BLK1)

Prepared & Analyzed: 08/14/20

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0399		"	0.0400		99.7		23-173		
Surrogate: Toluene-d8	0.0412		"	0.0400		103		20-170		
Surrogate: 4-Bromofluorobenzene	0.0411		"	0.0400		103		21-167		

LCS (2008145-BS1)

Prepared: 08/14/20 Analyzed: 08/17/20

Benzene	0.164	0.0020	mg/kg	0.150		109		70-130		
Toluene	0.166	0.0050	"	0.150		111		70-130		
Ethylbenzene	0.176	0.0050	"	0.150		118		70-130		
m,p-Xylene	0.356	0.010	"	0.300		119		70-130		
o-Xylene	0.167	0.0050	"	0.150		111		70-130		
Surrogate: 1,2-Dichloroethane-d4	0.0396		"	0.0400		99.0		23-173		
Surrogate: Toluene-d8	0.0379		"	0.0400		94.7		20-170		
Surrogate: 4-Bromofluorobenzene	0.0397		"	0.0400		99.2		21-167		

Matrix Spike (2008145-MS1)

Source: 2008111-03

Prepared: 08/14/20 Analyzed: 08/17/20

Benzene	0.169	0.0020	mg/kg	0.150	ND	112		70-130		
Toluene	0.168	0.0050	"	0.150	ND	112		70-130		
Ethylbenzene	0.180	0.0050	"	0.150	ND	120		70-130		
m,p-Xylene	0.364	0.010	"	0.300	ND	121		70-130		
o-Xylene	0.172	0.0050	"	0.150	ND	115		70-130		
Surrogate: 1,2-Dichloroethane-d4	0.0405		"	0.0400		101		23-173		
Surrogate: Toluene-d8	0.0383		"	0.0400		95.8		20-170		
Surrogate: 4-Bromofluorobenzene	0.0397		"	0.0400		99.2		21-167		

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Great Western - Pierce Central Station

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 08/18/20 13:23

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD		Notes
		Limit	Units		Result	%REC	Limits	RPD	Limit		

Batch 2008145 - EPA 5030 Soil MS

Matrix Spike Dup (2008145-MSD1)

Source: 2008111-03

Prepared: 08/14/20 Analyzed: 08/17/20

Benzene	0.164	0.0020	mg/kg	0.150	ND	109	70-130	3.01	30
Toluene	0.164	0.0050	"	0.150	ND	109	70-130	2.69	30
Ethylbenzene	0.170	0.0050	"	0.150	ND	113	70-130	5.54	30
m,p-Xylene	0.346	0.010	"	0.300	ND	115	70-130	5.20	30
o-Xylene	0.165	0.0050	"	0.150	ND	110	70-130	4.31	30
Surrogate: 1,2-Dichloroethane-d4	0.0417		"	0.0400		104	23-173		
Surrogate: Toluene-d8	0.0385		"	0.0400		96.3	20-170		
Surrogate: 4-Bromofluorobenzene	0.0392		"	0.0400		98.0	21-167		

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Great Western - Pierce Central Station

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 08/18/20 13:23

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD		Notes
		Limit	Units		Result	%REC	Limits	RPD	Limit		

Batch 2008146 - EPA 3550A

Blank (2008146-BLK1)

Prepared & Analyzed: 08/14/20

C10-C28 (DRO) ND 50 mg/kg

LCS (2008146-BS1)

Prepared & Analyzed: 08/14/20

C10-C28 (DRO) 471 50 mg/kg 500 94.1 70-130

Matrix Spike (2008146-MS1)

Source: 2008111-03

Prepared & Analyzed: 08/14/20

C10-C28 (DRO) 496 50 mg/kg 500 37.9 91.6 70-130

Matrix Spike Dup (2008146-MSD1)

Source: 2008111-03

Prepared & Analyzed: 08/14/20

C10-C28 (DRO) 484 50 mg/kg 500 37.9 89.2 70-130 2.43 20

Summit Scientific



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Great Western - Pierce Central Station

Project Number: [none]
Project Manager: Paul Henchan

Reported:
08/18/20 13:23

Notes and Definitions

- S-02 The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

August 20, 2020

Paul Henchan

Fremont Environmental

PO Box 1289

Wellington, CO 80549

RE: Great Western - Pierce, CO

Work Order #2008110

Enclosed are the results of analyses for samples received by Summit Scientific on 08/13/20 13:15. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Muri Premer". The signature is written in a cursive style with a large initial "M" and a long, sweeping underline.

Muri Premer For Paul Shrewsbury

President



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Great Western - Pierce, CO

Project Number: C020-025
Project Manager: Paul Henchan

Reported:
08/20/20 14:44

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS-1-6"	2008110-01	Soil	08/13/20 11:05	08/13/20 13:15

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Summit Scientific

S₂

110

4653 Table Mountain Drive ♦ Golden, Colorado 80403
303-277-9310

Page 1 of 1

Client: Fremont Environmental Project Manager: Paul Hampton

Address: _____ E-Mail: _____

City/State/Zip: _____

Phone: _____ Project Name: Groundwater - Piera 0

Sampler Name: Michael R Geistner Project Number: CO20-025

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested						Special Instructions					
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other												
1	SS-1-6"	8/13/20	11:05	1						X				X	X	X								
2																								
3																								
4																								
5																								
6																								
7																								
8																								
9																								
10																								

Relinquished by: <u>[Signature]</u> Date/Time: <u>8/13/20 13:15</u>	Received by: <u>[Signature]</u> Date/Time: <u>08-13-20 13:15</u>	Turn Around Time (Check) Same Day <input type="checkbox"/> 72 hours 24 hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/> 48 hours <input type="checkbox"/> Sample Integrity: Temperature Upon Receipt: <u>6.6</u> Samples Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No	Notes: ON ICE
Relinquished by: _____ Date/Time: _____	Received by: _____ Date/Time: _____		
Relinquished by: _____ Date/Time: _____	Received by: _____ Date/Time: _____		

2008110

Sample Receipt Checklist

S2 Work Order _____

Client: Fremont Env. Client Project ID: Great Western - Pierce - CO

Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other Airbill #: _____

Matrix (check all that apply): Air Soil/Solid Water Other: _____
(Describe)

Temp (°C)	6.6
-----------	-----

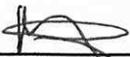
Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C ⁽¹⁾ ? NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	On Ice
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact ⁽¹⁾ ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples with holding times due within 48 hours sample due within 48 hours present?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ? Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ? Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Additional Comments (if any):

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.

MP
Custodian Printed Name or Initials


Signature of Custodian

8/13/20
Date/Time



Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Great Western - Pierce, CO

Project Number: C020-025
 Project Manager: Paul Henchan

Reported:
 08/20/20 14:44

SS-1-6"
2008110-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/13/20 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	2008152	08/14/20	08/14/20	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **08/13/20 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		60.8 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		110 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		116 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/13/20 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	2008153	08/14/20	08/14/20	EPA 8015M	

Date Sampled: **08/13/20 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		105 %	30-150		"	"	"	"	

Summit Scientific

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Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 2008152 - EPA 5030 Soil MS

Blank (2008152-BLK1)

Prepared & Analyzed: 08/14/20

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0184		"	0.0400		46.0	23-173			
Surrogate: Toluene-d8	0.0434		"	0.0400		109	20-170			
Surrogate: 4-Bromofluorobenzene	0.0445		"	0.0400		111	21-167			

LCS (2008152-BS1)

Prepared & Analyzed: 08/14/20

Benzene	0.0845	0.0020	mg/kg	0.100		84.5	70-130			
Toluene	0.111	0.0050	"	0.100		111	70-130			
Ethylbenzene	0.0939	0.0050	"	0.100		93.9	70-130			
m,p-Xylene	0.192	0.010	"	0.200		95.9	70-130			
o-Xylene	0.0976	0.0050	"	0.100		97.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0176		"	0.0400		43.9	23-173			
Surrogate: Toluene-d8	0.0461		"	0.0400		115	20-170			
Surrogate: 4-Bromofluorobenzene	0.0448		"	0.0400		112	21-167			

Matrix Spike (2008152-MS1)

Source: 2007270-02

Prepared & Analyzed: 08/14/20

Benzene	0.0860	0.0020	mg/kg	0.100	ND	86.0	70-130			
Toluene	0.119	0.0050	"	0.100	ND	119	70-130			
Ethylbenzene	0.0928	0.0050	"	0.100	ND	92.8	70-130			
m,p-Xylene	0.182	0.010	"	0.200	ND	90.9	70-130			
o-Xylene	0.0962	0.0050	"	0.100	ND	96.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0169		"	0.0400		42.3	23-173			
Surrogate: Toluene-d8	0.0473		"	0.0400		118	20-170			
Surrogate: 4-Bromofluorobenzene	0.0458		"	0.0400		115	21-167			

Summit Scientific

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Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 2008152 - EPA 5030 Soil MS

Matrix Spike Dup (2008152-MSD1)	Source: 2007270-02			Prepared & Analyzed: 08/14/20						
Benzene	0.0893	0.0020	mg/kg	0.100	ND	89.3	70-130	3.83	30	
Toluene	0.108	0.0050	"	0.100	ND	108	70-130	9.81	30	
Ethylbenzene	0.0819	0.0050	"	0.100	ND	81.9	70-130	12.5	30	
m,p-Xylene	0.168	0.010	"	0.200	ND	84.0	70-130	7.85	30	
o-Xylene	0.0882	0.0050	"	0.100	ND	88.2	70-130	8.65	30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0196</i>		<i>"</i>	<i>0.0400</i>		<i>49.0</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0454</i>		<i>"</i>	<i>0.0400</i>		<i>114</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0471</i>		<i>"</i>	<i>0.0400</i>		<i>118</i>	<i>21-167</i>			

Summit Scientific



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 08/20/20 14:44

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD		Notes
		Limit	Units		Result	%REC	Limits	RPD	Limit		

Batch 2008153 - EPA 3550A

Blank (2008153-BLK1)

Prepared & Analyzed: 08/14/20

C10-C28 (DRO) ND 50 mg/kg

LCS (2008153-BS1)

Prepared & Analyzed: 08/14/20

C10-C28 (DRO) 471 50 mg/kg 500 94.1 70-130

Matrix Spike (2008153-MS1)

Source: 2007270-02

Prepared & Analyzed: 08/14/20

C10-C28 (DRO) 496 50 mg/kg 500 34.8 92.2 70-130

Matrix Spike Dup (2008153-MSD1)

Source: 2007270-02

Prepared & Analyzed: 08/14/20

C10-C28 (DRO) 484 50 mg/kg 500 34.8 89.8 70-130 2.43 20

Summit Scientific

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Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference