

TABLE 1
SUMMARY OF VOLATILE ORGANIC SOIL CHEMISTRY DATA
CIVITAS RESOURCES
ROCKY MOUNTAIN FUEL 1-32J, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C023-055

Sample ID	Sample Date	Depth (ft)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-Benzene (mg/kg)	Xylenes (mg/kg)	1,2,4- Trimethyl- Benzene (mg/kg)	1,3,5- Trimethyl- Benzene (mg/kg)	Naphthalene (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)
ECMC Table 915-1 Limits (Residential SSL)			1.2	490	5.8	58	30	27	2	500**		
ECMC Table 915-1 Limits (Protection of Groundwater SSL)			0.0026	0.69	0.78	9.9	0.0081	0.0087	0.0038	500**		
SB-1 8 Ft	8/8/2023	8	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
SB-1 16 Ft	8/8/2023	16	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50

Bold faced values exceed the ECMC Table 915-1 concentrations

Red & blue highlighted 915-1 Limits indicate the referenced soil screening level (SSL)

* Indicates laboratory minimum detection limit in excess of SSL

** Summation of GRO+DRO+ORO must be less than 500 mg/kg

NA - Not analyzed

TABLE 2
SUMMARY OF POLYCYCLIC AROMATIC HYDROCARBON SOIL CHEMISTRY DATA
CIVITAS RESOURCES
ROCKY MOUNTAIN FUEL 1-32J, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C023-055

Sample ID	Sample Date	Depth (ft)	Acenaphthene (mg/kg)	Anthracene (mg/kg)	Benzo (a) Anthracene (mg/kg)	Benzo (a) Pyrene (mg/kg)	Benzo (b) Fluoranthene (mg/kg)	Benzo (k) Fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo (a,h) Anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3- cd) Pyrene (mg/kg)	Pyrene (mg/kg)	1-Methyl - Naphthalene (mg/kg)	2-Methyl- Naphthalene (mg/kg)
ECMC Table 915-1 Limits (Residential SSL)			360	1800	1.1	0.11	1.1	11	110	0.11	240	240	1.1	180	18	24
ECMC Table 915-1 Limits (Protection of Groundwater SSL)			0.55	5.8	0.011	0.24	0.3	2.9	9	0.096	8.9	0.54	0.98	1.3	0.006	0.019
SB-1 8 Ft	8/8/2023	8	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SB-1 16 Ft	8/8/2023	16	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500

Bold faced values exceed the ECMC Table 915-1 concentrations

Red & blue highlighted 915-1 Limits indicate the referenced soil screening level (SSL)

* Indicates laboratory minimum detection limit in excess of SSL

NA - Not analyzed

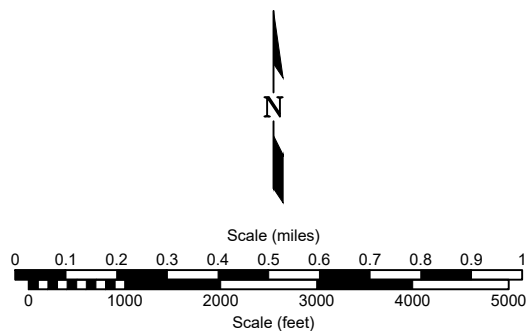
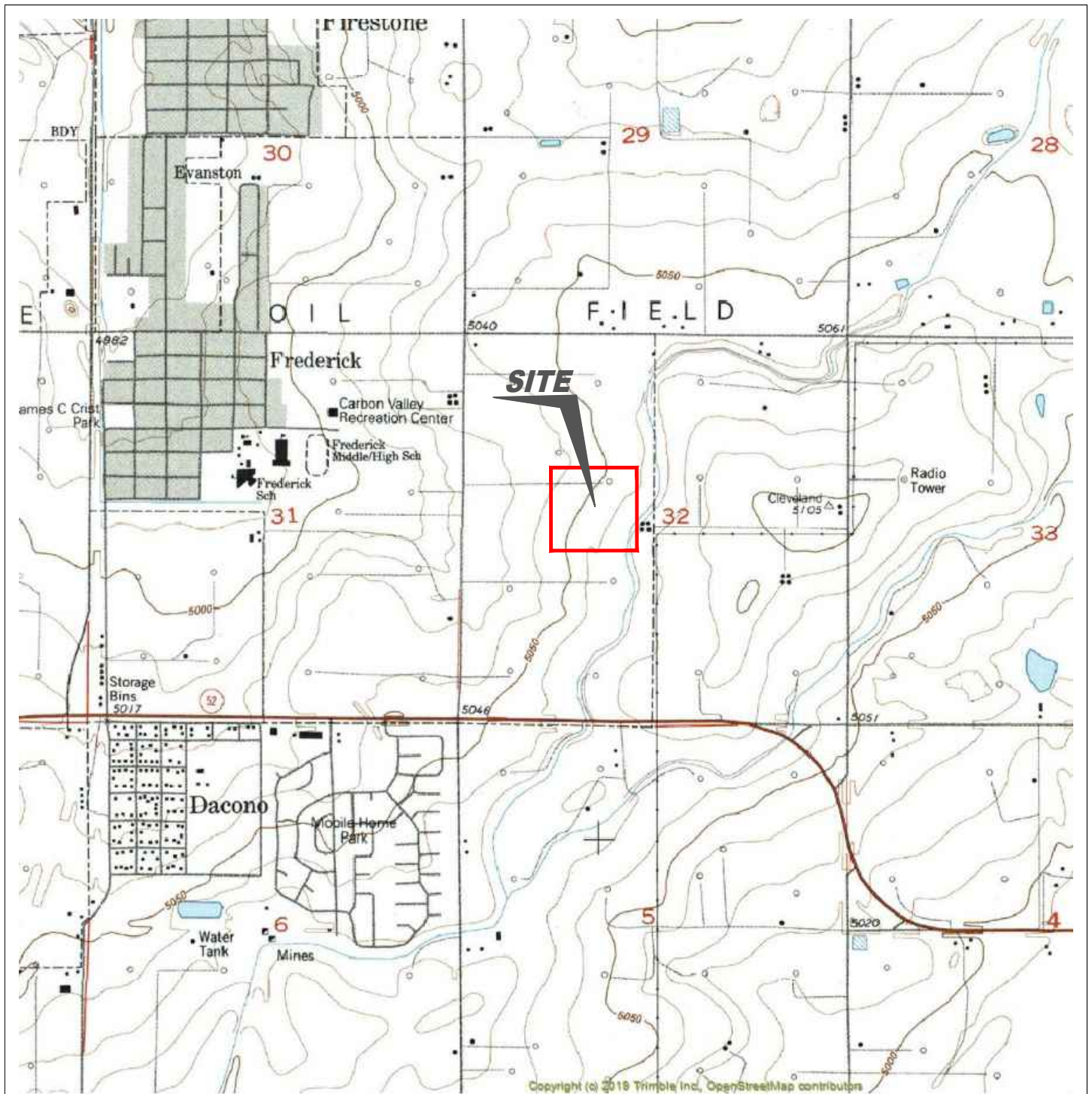
TABLE 3
SUMMARY OF SOIL SUITABILITY FOR RECLAMATION
CIVITAS RESOURCES
ROCKY MOUNTAIN FUEL 1-32J, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C023-055

Sample ID	Sample Date	Depth (ft)	pH	EC (mmhos/cm)	SAR	Boron (mg/L)
ECMC Table 915-1 Soil Suitability Limits			6 - 8.3	<4	<6	2
SB-1 8 Ft	8/8/2023	8	8.00	1.60	8.05	NA
SB-1 16 Ft	8/8/2023	16	NA	NA	9.58	NA

Bold faced values exceed the ECMC Table 915-1 concentrations

Yellow highlighted 915-1 Limits indicate the referenced soil screening level (SSL)

NA - Not analyzed



USGS 7.5 MINUTE SERIES (TOPOGRAPHIC)

Figure 1
SITE LOCATION MAP

Civitas Resources - Rocky Mountain Fuel 1-32J
 SENW Sec. 32, T2N, R67W, 6th PM
 Weld County, Colorado
 40.098184°, -104.919182°

Project # CO23-055	API #	Facility # 118076
Date 10/20/2023	Remediation # 27667	Filename 23055T





LEGEND

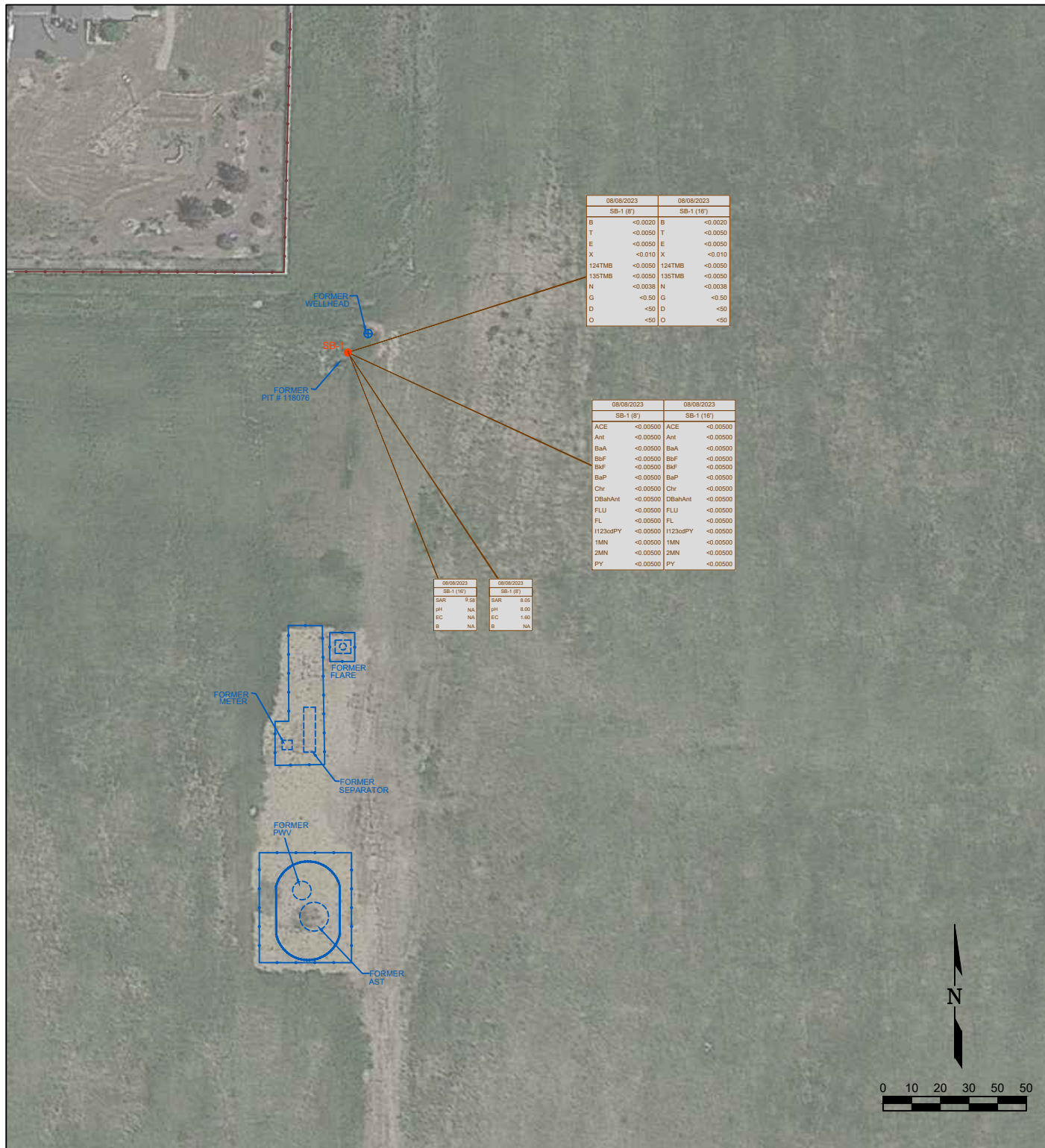
● WELLHEAD LOCATION	○ ABOVE GROUND STORAGE TANK	[FORMER] FORMER FACILITY	— FENCE LINE
● SOIL BORING LOCATION			CONTAINMENT BERM
			— CONTAINMENT WALL

Figure 2
SITE MAP

Civitas Resources - Rocky Mountain Fuel 1-32J
 SENW Sec. 32, T2N, R67W, 6th PM
 Weld County, Colorado
 40.098184°, -104.919182°

Project # CO23-055	API #	Facility # 118076
Date 10/20/2023	Remediation # 27667	Filename 23055Q





LEGEND

- WELLHEAD LOCATION
- SOIL BORING LOCATION
- ABOVE GROUND STORAGE TANK
- FORMER FACILITY
- FENCE LINE
- CONTAINMENT BERM
- CONTAINMENT WALL

08/08/2023	DATE SAMPLED
SB-1 (8')	SAMPLE ID and DEPTH (ft)
ACE	ACENAPHTHENE (mg/kg)
Ant	ANTHRACENE (mg/kg)
BaA	BENZO (A) ANTHRACENE (mg/kg)
BaF	BENZO (B) FLUORANTHENE (mg/kg)
BaP	BENZO (K) FLUORANTHENE (mg/kg)
Chr	BENZO (A) PYRENE (mg/kg)
DBahAnt	CHRYSENE (mg/kg)
FLU	DIBENZ (A,H) ANTHRACENE (mg/kg)
FL	FLUORANTHENE (mg/kg)
H123cdPY	FLUORENE (mg/kg)
1MN	INDENO (1,2,3-CD) PYRENE (mg/kg)
2MN	1-METHYLNAPHTHALENE (mg/kg)
PY	2-METHYLNAPHTHALENE (mg/kg)
	PYRENE (mg/kg)

08/08/2023	DATE SAMPLED
SB-1 (8')	SAMPLE ID and DEPTH (ft)
B	BENZENE (mg/kg)
T	TOLUENE (mg/kg)
E	ETHYLBENZENE (mg/kg)
X	TOTAL XYLENES (mg/kg)
124TMB	1,2,4-TRIMETHYLBENZENE (mg/kg)
135TMB	1,3,5-TRIMETHYLBENZENE (mg/kg)
N	NAPHTHALENE (mg/kg)
G	TPH-GRO (mg/kg)
D	TPH-DRO (mg/kg)
O	TPH-ORO (mg/kg)

08/08/2023	DATE SAMPLED
SB-1 (8')	SAMPLE ID and DEPTH (ft)
SAR	SAR (unit)
pH	pH (unit)
EC	EC (mg/kg)
B	BORON (mg/L)
NA	NOT ANALYZED

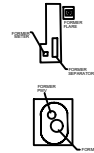
Figure 3
SOIL CHEMISTRY MAP

Civitas Resources - Rocky Mountain Fuel 1-32J
SENW Sec. 32, T2N, R67W, 6th PM
Weld County, Colorado
40.098184°, -104.919182°

Project # CO23-055	API #	Facility # 118076	
Date 10/20/2023	Remediation # 27667	Filename 23055Q	

BORING/WELL CONSTRUCTION LOG

Boring/Well Location Sketch Map



Page 1 of 1

Boring/Well No. SB-1	Total Depth 16'	Location Civitas Resources Rocky Mountain Fuel 1-32J SENW Sec. 32, T2N, R67W, 6th PM Weld County, Colorado 40.098184°, -104.919182°		
Project No./Name CO23-055 / Civitas Rocky Mountain Fuel 1-32J		Approved By		
Drilling Contractor/Driller Drill Pro		Sampling Method direct push		
Geologist/Office Paul Henehan / Fremont Environmental, Inc.		Start/Finish Date 8/8/2023		
Drilling Equipment/Method Geoprobe		Size/Type of Bit 2.5" direct push		
Well Installed? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Casing Mtrl./Dia. .	Screen: Type .	Mtrl. .	Length .
Elevation of: (ft. above datum)		Ground Surface	Top of Well Casing	Top of Screen
		Bottom of Screen	Ground Water Surface/Date Measured	

DEPTH (feet)	WELL CONSTRUCTION	LITHOLOGY		Penetration Rate (blows/6")	Recovery (%)	Sample Interval (feet)	PID Values (ppm)
		GRAPHIC LOG	VISUAL DESCRIPTION				
5		SM	Sandy silt, brown, moist, moderate plasticity, no stain, no odor				3
			Sandy silt to 6', then clayey silt, brown, moist, soft, no stain, no odor				
10		CL	Clayey silt to 9', then very firm clayey silt, brown, no stain, no odor				5
15		CL	Firm clayey silt, brown, no stain, no odor				3
20			Refusal at 16', clayey silt moderate plasticity, no stain, no odor				2
			TD 16'				
			Backfill with bentonite				

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

October 03, 2023

Paul Henchan

Fremont Environmental

PO Box 1289

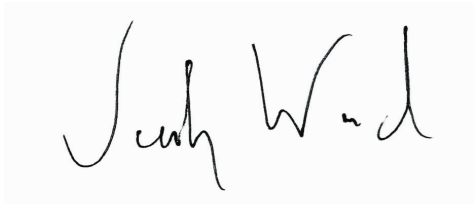
Wellington, CO 80549

RE: Civitas - Rocky Mtn Fuel 1-32J

Work Order #2308177

Enclosed are the results of analyses for samples received by Summit Scientific on 08/08/23 17:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Jacob Wood". The signature is written in a cursive, flowing style.

Jacob Wood For Paul Shrewsbury

President



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Civitas - Rocky Mtn Fuel 1-32J

Project Number: [none]
Project Manager: Paul Henchan

Reported:
10/03/23 10:57

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB-1 8FT	2308177-01	Soil	08/08/23 00:00	08/08/23 17:30
SB-1 16FT	2308177-02	Soil	08/08/23 00:00	08/08/23 17:30

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

4653 Table Mountain Drive ♦ Golden, Colorado 80403

303-277-9310

Page 1 of 1

Client: Fremont Environmental Inc.

Project Manager: Paul Henehan

Address:

E-Mail: CIVITAS TEAM

City/State/Zip:

Phone:

Project Name: ROCKY MTN FUEL 1-32J

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	GBTEXN+TMBs	DRO, RRO	PAHs	pH, EC, SAR	Boron	915-1 metals	Arsenic	BTEXN + TMBs	TDS, Cl, Su				
1	SB-1 8 FT	8/8/23		2			✓			✓				✓	✓	✓	✓								
2	SB-1 16 FT	"		2			✓			✓				✓	✓	✓	✓								
3																									
4																									
5																									
6																									
7																									
8																									
9																									
10																									

Relinquished by:	Date/Time:	Received by:	Date/Time:	Turn Around Time (Check)	Notes:
PAH/FE	8/8/23 1730	PAH/FE	8823 1730	Same Day _____ 72 hours _____	
Relinquished by:	Date/Time:	Received by:	Date/Time:	24 hours _____ Standard <input checked="" type="checkbox"/>	
Relinquished by:	Date/Time:	Received by:	Date/Time:	48 hours _____	Sample Integrity:
				Temperature Upon Receipt: 9.0	
				Samples Intact: Yes No	

S₂

Sample Receipt Checklist

S2 Work Order# 2308177Client: FremontClient Project ID: Rocky Mtn. Fuel L-32JShipped Via: H.D./P.U./FedEx/UPS/USPS/Other ☐ Airbill #:

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------	--------------------------	--------------------------

Matrix (Check all that apply)

Air

☐

Soil/Solid

☒

Water

☐

Other

☐

Temp (°C)

Thermometer #

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	mJOE
Are samples due within 48 hours present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	<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"/>	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	<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"/>	
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"/>	
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, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	<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.

Custodian Printed Name

08/08/23
Date/Time

B. A. H.



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Civitas - Rocky Mtn Fuel 1-32J

Project Number: [none]
Project Manager: Paul Henehan

Reported:
10/03/23 10:57

SB-1 8FT
2308177-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/08/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGH0345	08/09/23	08/10/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **08/08/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0268	67.1 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0391	97.6 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0375	93.8 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/08/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGH0349	08/09/23	08/11/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/08/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	12.9	103 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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PO Box 1289
Wellington CO, 80549

Project: Civitas - Rocky Mtn Fuel 1-32J

Project Number: [none]
Project Manager: Paul Henehan

Reported:
10/03/23 10:57

SB-1 8FT
2308177-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **08/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGH0403	08/10/23	08/12/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **08/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0264	79.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0184	55.1 %	40-150		"	"	"	"	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **08/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	46.6	0.0625	mg/L dry	1	BGH0488	08/11/23	08/14/23	EPA 6020B	
Magnesium	8.27	0.0625	"	"	"	"	"	"	
Sodium	227	0.0625	"	"	"	"	"	"	

Calculated Analysis

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Civitas - Rocky Mtn Fuel 1-32J

Project Number: [none]
Project Manager: Paul Henchan

Reported:
10/03/23 10:57

SB-1 8FT
2308177-01 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **08/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	8.05	0.00100	units	1	BGH0581	08/15/23	08/15/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	80.0		%	1	BGH0437	08/10/23	08/10/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **08/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.60	0.0100	mmhos/cm	1	BGH0541	08/14/23	08/14/23	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **08/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.00		pH Units	1	BGH0542	08/14/23	08/14/23	EPA 9045D	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Civitas - Rocky Mtn Fuel 1-32J

Project Number: [none]
Project Manager: Paul Henehan

Reported:
10/03/23 10:57

SB-1 16FT
2308177-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/08/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGH0345	08/09/23	08/10/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **08/08/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0241	60.2 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0395	98.8 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0344	86.0 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/08/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGH0349	08/09/23	08/11/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/08/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	12.0	96.2 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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PO Box 1289
Wellington CO, 80549

Project: Civitas - Rocky Mtn Fuel 1-32J

Project Number: [none]
Project Manager: Paul Henchan

Reported:
10/03/23 10:57

SB-1 16FT
2308177-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **08/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGH0403	08/10/23	08/12/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **08/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0207	62.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0148	44.3 %	40-150		"	"	"	"	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **08/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	57.7	0.0585	mg/L dry	1	BGI0401	09/14/23	09/18/23	EPA 6020B	
Magnesium	66.0	0.0585	"	"	"	"	"	"	
Sodium	449	0.0585	"	"	"	"	"	"	

Calculated Analysis

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Project: Civitas - Rocky Mtn Fuel 1-32J

Project Number: [none]
Project Manager: Paul Henchan

Reported:
10/03/23 10:57

SB-1 16FT
2308177-02 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **08/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	9.58	0.00100	units	1	BGI0531	09/19/23	09/19/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	85.5		%	1	BGI0403	09/14/23	09/14/23	Calculation	

Summit Scientific

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Project: Civitas - Rocky Mtn Fuel 1-32J

Project Number: [none]
Project Manager: Paul Henchan

Reported:
10/03/23 10:57

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BGH0345 - EPA 5030 Soil MS

Blank (BGH0345-BLK1)

Prepared & Analyzed: 08/09/23

Benzene	ND	0.0020	mg/kg
Toluene	ND	0.0050	"
Ethylbenzene	ND	0.0050	"
Xylenes (total)	ND	0.010	"
1,2,4-Trimethylbenzene	ND	0.0050	"
1,3,5-Trimethylbenzene	ND	0.0050	"
Naphthalene	ND	0.0038	"
Gasoline Range Hydrocarbons	ND	0.50	"

Surrogate: 1,2-Dichloroethane-d4	0.0329	"	0.0400	82.4	50-150
Surrogate: Toluene-d8	0.0400	"	0.0400	100	50-150
Surrogate: 4-Bromofluorobenzene	0.0372	"	0.0400	93.0	50-150

LCS (BGH0345-BS1)

Prepared & Analyzed: 08/09/23

Benzene	0.0969	0.0020	mg/kg	0.100	96.9	70-130
Toluene	0.104	0.0050	"	0.100	104	70-130
Ethylbenzene	0.101	0.0050	"	0.100	101	70-130
m,p-Xylene	0.218	0.010	"	0.200	109	70-130
o-Xylene	0.108	0.0050	"	0.100	108	70-130
1,2,4-Trimethylbenzene	0.112	0.0050	"	0.100	112	70-130
1,3,5-Trimethylbenzene	0.111	0.0050	"	0.100	111	70-130
Naphthalene	0.101	0.0038	"	0.100	101	70-130

Surrogate: 1,2-Dichloroethane-d4	0.0380	"	0.0400	94.9	50-150
Surrogate: Toluene-d8	0.0403	"	0.0400	101	50-150
Surrogate: 4-Bromofluorobenzene	0.0379	"	0.0400	94.8	50-150

Matrix Spike (BGH0345-MS1)

Source: 2308174-02

Prepared & Analyzed: 08/09/23

Benzene	0.105	0.0020	mg/kg	0.100	ND	105	70-130
Toluene	0.106	0.0050	"	0.100	ND	106	70-130
Ethylbenzene	0.0926	0.0050	"	0.100	ND	92.6	70-130
m,p-Xylene	0.230	0.010	"	0.200	ND	115	70-130
o-Xylene	0.105	0.0050	"	0.100	ND	105	70-130
1,2,4-Trimethylbenzene	0.118	0.0050	"	0.100	ND	118	70-130
1,3,5-Trimethylbenzene	0.101	0.0050	"	0.100	ND	101	70-130
Naphthalene	0.115	0.0038	"	0.100	ND	115	70-130

Surrogate: 1,2-Dichloroethane-d4	0.0335	"	0.0400	83.8	50-150
Surrogate: Toluene-d8	0.0398	"	0.0400	99.5	50-150
Surrogate: 4-Bromofluorobenzene	0.0385	"	0.0400	96.2	50-150

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Project: Civitas - Rocky Mtn Fuel 1-32J

Project Number: [none]
Project Manager: Paul Henchan

Reported:
10/03/23 10:57

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BGH0345 - EPA 5030 Soil MS

Matrix Spike Dup (BGH0345-MSD1)	Source: 2308174-02			Prepared & Analyzed: 08/09/23						
Benzene	0.112	0.0020	mg/kg	0.100	ND	112	70-130	6.46	30	
Toluene	0.113	0.0050	"	0.100	ND	113	70-130	7.15	30	
Ethylbenzene	0.0993	0.0050	"	0.100	ND	99.3	70-130	6.94	30	
m,p-Xylene	0.238	0.010	"	0.200	ND	119	70-130	3.33	30	
o-Xylene	0.103	0.0050	"	0.100	ND	103	70-130	2.39	30	
1,2,4-Trimethylbenzene	0.119	0.0050	"	0.100	ND	119	70-130	0.608	30	
1,3,5-Trimethylbenzene	0.107	0.0050	"	0.100	ND	107	70-130	5.98	30	
Naphthalene	0.118	0.0038	"	0.100	ND	118	70-130	1.86	30	
Surrogate: 1,2-Dichloroethane-d4	0.0378		"	0.0400		94.5	50-150			
Surrogate: Toluene-d8	0.0411		"	0.0400		103	50-150			
Surrogate: 4-Bromofluorobenzene	0.0403		"	0.0400		101	50-150			

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Project: Civitas - Rocky Mtn Fuel 1-32J

Project Number: [none]
Project Manager: Paul Henchan

Reported:
10/03/23 10:57

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BGH0403 - EPA 5030 Soil MS

Blank (BGH0403-BLK1)

Prepared: 08/10/23 Analyzed: 08/12/23

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
Surrogate: 2-Methylnaphthalene-d10	0.0215		"	0.0333		64.5	40-150			
Surrogate: Fluoranthene-d10	0.0347		"	0.0333		104	40-150			

LCS (BGH0403-BS1)

Prepared: 08/10/23 Analyzed: 08/12/23

Acenaphthene	0.0269	0.00500	mg/kg	0.0333		80.7	31-137			
Anthracene	0.0279	0.00500	"	0.0333		83.6	30-120			
Benzo (a) anthracene	0.0221	0.00500	"	0.0333		66.2	30-120			
Benzo (a) pyrene	0.0259	0.00500	"	0.0333		77.8	30-120			
Benzo (b) fluoranthene	0.0269	0.00500	"	0.0333		80.7	30-120			
Benzo (k) fluoranthene	0.0255	0.00500	"	0.0333		76.4	30-120			
Chrysene	0.0277	0.00500	"	0.0333		83.1	30-120			
Dibenz (a,h) anthracene	0.0266	0.00500	"	0.0333		79.9	30-120			
Fluoranthene	0.0265	0.00500	"	0.0333		79.4	30-120			
Fluorene	0.0271	0.00500	"	0.0333		81.2	30-120			
Indeno (1,2,3-cd) pyrene	0.0201	0.00500	"	0.0333		60.2	30-120			
Pyrene	0.0276	0.00500	"	0.0333		82.7	35-142			
1-Methylnaphthalene	0.0227	0.00500	"	0.0333		68.2	35-142			
2-Methylnaphthalene	0.0286	0.00500	"	0.0333		85.8	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0325		"	0.0333		97.5	40-150			
Surrogate: Fluoranthene-d10	0.0313		"	0.0333		94.0	40-150			

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Civitas - Rocky Mtn Fuel 1-32J

Project Number: [none]
Project Manager: Paul Henchan

Reported:
10/03/23 10:57

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BGH0403 - EPA 5030 Soil MS

Matrix Spike (BGH0403-MS1)

Source: 2308199-22

Prepared: 08/10/23 Analyzed: 08/12/23

Acenaphthene	0.0177	0.00500	mg/kg	0.0333	ND	53.1	31-137		
Anthracene	0.0176	0.00500	"	0.0333	ND	52.8	30-120		
Benzo (a) anthracene	0.0140	0.00500	"	0.0333	ND	42.1	30-120		
Benzo (a) pyrene	0.0153	0.00500	"	0.0333	ND	45.9	30-120		
Benzo (b) fluoranthene	0.0175	0.00500	"	0.0333	ND	52.5	30-120		
Benzo (k) fluoranthene	0.0161	0.00500	"	0.0333	ND	48.3	30-120		
Chrysene	0.0179	0.00500	"	0.0333	ND	53.7	30-120		
Dibenz (a,h) anthracene	0.0166	0.00500	"	0.0333	ND	49.9	30-120		
Fluoranthene	0.0173	0.00500	"	0.0333	ND	51.9	30-120		
Fluorene	0.0179	0.00500	"	0.0333	ND	53.7	30-120		
Indeno (1,2,3-cd) pyrene	0.0163	0.00500	"	0.0333	ND	49.0	30-120		
Pyrene	0.0183	0.00500	"	0.0333	ND	54.9	35-142		
1-Methylnaphthalene	0.0168	0.00500	"	0.0333	ND	50.5	15-130		
2-Methylnaphthalene	0.0202	0.00500	"	0.0333	ND	60.7	15-130		
Surrogate: 2-Methylnaphthalene-d10	0.0216		"	0.0333		64.9	40-150		
Surrogate: Fluoranthene-d10	0.0415		"	0.0333		124	40-150		

Matrix Spike Dup (BGH0403-MSD1)

Source: 2308199-22

Prepared: 08/10/23 Analyzed: 08/12/23

Acenaphthene	0.0156	0.00500	mg/kg	0.0333	ND	46.8	31-137	12.5	30
Anthracene	0.0156	0.00500	"	0.0333	ND	46.8	30-120	12.0	30
Benzo (a) anthracene	0.0150	0.00500	"	0.0333	ND	45.0	30-120	6.53	30
Benzo (a) pyrene	0.0148	0.00500	"	0.0333	ND	44.3	30-120	3.47	30
Benzo (b) fluoranthene	0.0139	0.00500	"	0.0333	ND	41.6	30-120	23.2	30
Benzo (k) fluoranthene	0.0134	0.00500	"	0.0333	ND	40.3	30-120	17.9	30
Chrysene	0.0147	0.00500	"	0.0333	ND	44.1	30-120	19.7	30
Dibenz (a,h) anthracene	0.0158	0.00500	"	0.0333	ND	47.3	30-120	5.34	30
Fluoranthene	0.0153	0.00500	"	0.0333	ND	46.0	30-120	12.0	30
Fluorene	0.0157	0.00500	"	0.0333	ND	47.0	30-120	13.5	30
Indeno (1,2,3-cd) pyrene	0.0147	0.00500	"	0.0333	ND	44.0	30-120	10.7	30
Pyrene	0.0150	0.00500	"	0.0333	ND	45.1	35-142	19.7	30
1-Methylnaphthalene	0.0152	0.00500	"	0.0333	ND	45.7	15-130	9.90	50
2-Methylnaphthalene	0.0143	0.00500	"	0.0333	ND	42.9	15-130	34.3	50
Surrogate: 2-Methylnaphthalene-d10	0.0224		"	0.0333		67.1	40-150		
Surrogate: Fluoranthene-d10	0.0399		"	0.0333		120	40-150		

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Civitas - Rocky Mtn Fuel 1-32J

Project Number: [none]
Project Manager: Paul Henchan

Reported:
10/03/23 10:57

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction - Quality Control

Summit Scientific

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

Batch BGH0488 - General Preparation

Blank (BGH0488-BLK1)

Prepared: 08/11/23 Analyzed: 08/14/23

Calcium	ND	0.0500	mg/L wet
Magnesium	ND	0.0500	"
Sodium	ND	0.0500	"

LCS (BGH0488-BS1)

Prepared: 08/11/23 Analyzed: 08/14/23

Calcium	4.92	0.0500	mg/L wet	5.00	98.4	70-130
Magnesium	6.02	0.0500	"	5.00	120	70-130
Sodium	5.93	0.0500	"	5.00	119	70-130

Batch BGI0796 - General Preparation

Blank (BGI0796-BLK1)

Prepared: 09/26/23 Analyzed: 09/30/23

Calcium	ND	0.0500	mg/L wet
Magnesium	ND	0.0500	"
Sodium	ND	0.0500	"

LCS (BGI0796-BS1)

Prepared: 09/26/23 Analyzed: 09/30/23

Calcium	4.78	0.0500	mg/L wet	5.00	95.6	70-130
Magnesium	5.33	0.0500	"	5.00	107	70-130
Sodium	5.39	0.0500	"	5.00	108	70-130

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Project: Civitas - Rocky Mtn Fuel 1-32J

Project Number: [none]
Project Manager: Paul Henchan

Reported:
10/03/23 10:57

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control

Summit Scientific

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

Batch BGH0437 - General Preparation

Duplicate (BGH0437-DUP1)

Source: 2308174-01

Prepared & Analyzed: 08/10/23

% Solids	84.0	%		80.8		3.88	20
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Batch BGI0403 - General Preparation

Duplicate (BGI0403-DUP1)

Source: 2308177-02

Prepared & Analyzed: 09/14/23

% Solids	86.1	%		85.5		0.695	20
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PO Box 1289
Wellington CO, 80549

Project: Civitas - Rocky Mtn Fuel 1-32J

Project Number: [none]
Project Manager: Paul Henchan

Reported:
10/03/23 10:57

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction - Quality Control
Summit Scientific

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

Batch BGH0541 - General Preparation

Blank (BGH0541-BLK1)

Prepared & Analyzed: 08/14/23

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BGH0541-BS1)

Prepared & Analyzed: 08/14/23

Specific Conductance (EC) 0.154 0.0100 mmhos/cm 0.150 103 95-105

Duplicate (BGH0541-DUP1)

Source: 2308174-01

Prepared & Analyzed: 08/14/23

Specific Conductance (EC) 1.56 0.0100 mmhos/cm 1.57 0.829 20

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Civitas - Rocky Mtn Fuel 1-32J

Project Number: [none]
Project Manager: Paul Henchan

Reported:
10/03/23 10:57

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction - Quality Control
Summit Scientific

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

Batch BGH0542 - General Preparation

LCS (BGH0542-BS1)

Prepared & Analyzed: 08/14/23

pH	9.01	pH Units	9.18	98.1	95-105
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Duplicate (BGH0542-DUP1)

Source: 2308174-01

Prepared & Analyzed: 08/14/23

pH	8.87	pH Units	8.89	0.225	20
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Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Civitas - Rocky Mtn Fuel 1-32J

Project Number: [none]
Project Manager: Paul Henchan

Reported:
10/03/23 10:57

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