

FREMONT ENVIRONMENTAL INC.

November 9, 2022

Mr. Daniel Peterson
Noble Energy Inc.
2115 117th Avenue
Greeley, CO 80634

Subject: **Facility Closure Data Submittal**
Odle 65N63W 19NESW
Facility #328087
NESW Sec. 19, T5N, R63W
Weld County, Colorado
Fremont Project No. C022-103
Remediation #23224

Dear Mr. Peterson:

As requested, Fremont Environmental Inc. (Fremont) personnel conducted facility closure activities for the Noble Energy Inc. (Noble) Odle 65N63W 19NESW tank battery. Impacted organic soil constituents were not encountered during the facility abandonment. Elevated concentrations of SAR were observed in the floor of the produced water vault at three feet below ground surface. Groundwater was encountered at the site and was unimpacted.

Details of the Odle 65N63W 19NESW facility closure activities are documented in the attached Closure Report.

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

Attachments:

- Facility Closure Checklist
- Tables
- Figures
- Photos
- Laboratory Reports

**1759 REDWING LANE, BROOMFIELD, CO 80020
(303) 956-8714 (DIRECT)**

<i>Third Party Removal Date</i>									
<i>Sample taken? Location/ Sample</i>									
<i>PID Readings</i>									
<i>Photo Number(s)</i>									

Other Facility Equipment

<i>Equipment type</i>					
<i>Equipment Condition Age</i>					
<i>Soil impacts</i>					
<i>PID Readings</i>					
<i>Sample taken? Location/ Sample</i>					
<i>Photo Number(s)</i>					

Other observations regarding other facility or third party equipment:

Summary

<i>Was impacted soil identified?</i>	
No	Yes - less than 10 cubic yards
Yes - more than 10 cubic yards	
<i>Total number of samples field screened:</i>	<i>Total number of samples collected:</i>
<i>Highest PID Reading:</i>	<i>Total number of samples submitted to lab for analysis:</i>
<i>If more than 10 cubic yards of impacted soil were observed:</i>	
<i>Vertical extent:</i>	<i>Estimated spill volume:</i>
<i>Lateral extent:</i>	<i>Volume of soil removed:</i>
<i>Is additional investigation required?</i>	
<i>Was groundwater encountered during the investigation?</i>	
No	Yes - not impacted or in contact with impacted soils
Yes - groundwater impacted and/or in contact with impacted soils	
<i>Measured depth to groundwater:</i>	<i>Was remedial groundwater removal conducted? Yes No</i>
<i>Date Groundwater was encountered:</i>	<i>Commencement date of removal:</i>
<i>Sheen on groundwater? Yes No</i>	<i>Volume of groundwater removed prior to sampling:</i>
<i>Free product observed? Yes No</i>	<i>Volume of groundwater removed post sampling:</i>
<i>Total number of samples collected:</i>	<i>Total Volume of groundwater removed:</i>
<i>Total number of samples submitted to lab for analysis:</i>	

Buried or Partially Buried Vessel Closure Checklist

COGCC Rule 911.a.(4) Environmental Site Closure Assessment Field Form

Additional attachments (optional):		Pit Closure		Wellhead Closure		Flowline Closure		Tank Battery Closure	
Site Name & COGCC Facility Number:		Date:						Remediation Project #:	
Associated Wells:		Age of Site:						Number of Photos Attached:	
Location: (GPS coordinates of vault or southeastern tank berm for multiple)							Estimated Facility Size (acres):		
General Condition of Site: (General observations regarding housekeeping, corrosion, waste management, etc.)									
USCS Soil Type:				Estimated Depth to Groundwater:					
Hydrocarbon Impacted Soils / Spills: (Note estimated size and if impact appears to be surficial or extends to an unknown depth)									
Salt Crusted Soils or Impacted Vegetation: (Note estimated size and if impact appears to be surficial or extends to an unknown depth)									
Buried or Partially Buried Vessels									
Tank Contents									
Size (barrels)									
Age									
Construction Material									
Visual Integrity of Tank									
Condition of tank Foundation									
PID Readings									
Condition of Jumps Lines									
PID Readings									
Sample taken? Location/Sample ID#									
Photo Number(s)									
Other observations regarding partially buried vessels:									
Summary									
Was impacted soil identified? <div style="display: flex; justify-content: space-between;"> No Yes - less than 10 cubic yards Yes - more than 10 cubic yards </div>									
Total number of samples field screened:				Total number of samples collected:					
Highest PID Reading:				Total number of samples submitted to lab for analysis:					
If more than 10 cubic yards of impacted soil were observed:									
Vertical extent:				Estimated spill volume:					
Lateral extent:				Volume of soil removed:					
Is additional investigation required?									
Was groundwater encountered during the investigation? <div style="display: flex; justify-content: space-between;"> No Yes - not impacted or in contact with impacted soils Yes - groundwater impacted and/or in contact with impacted soils </div>									
Measured depth to groundwater:				Was remedial groundwater removal conducted? Yes No					
Date Groundwater was encountered:				Commencement date of removal:					
Sheen on groundwater? Yes No				Volume of groundwater removed prior to sampling:					
Free product observed? Yes No				Volume of groundwater removed post sampling:					
Total number of samples collected:				Total Volume of groundwater removed:					
Total number of samples submitted to lab for analysis:									

TABLE 1
SUMMARY OF VOLATILE ORGANIC SOIL CHEMISTRY DATA
NOBLE ENERGY INC.
ODLE 65N63W 19NESW, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C022-103

Sample	Date Sampled	Depth (ft)	Location	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)
AST Load Out-Surface	08/16/2022	0	Floor	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	140	62
PWV - E Wall 2ft	08/16/2022	2	Wall	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	0.070	<0.0038	10	59	<50
PWV - Floor 3ft	08/16/2022	3	Floor	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<50	<50
Sep - E Wall 2ft	08/16/2022	2	Wall	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<50	<50
COGCC Table 915-1 Limits (Residential SSL)				1.2	490	5.8	58	30	27	2	500	500	500
COGCC Table 915-1 Limits (Protection of Groundwater SSL)				0.0026	0.69	0.78	9.9	0.0081	0.0087	0.0038	500	500	500

Bold faced values exceed the COGCC Table 915-1 concentrations

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

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

TABLE 2
SUMMARY OF POLYCYCLIC AROMATIC HYDROCARBON SOIL CHEMISTRY DATA
NOBLE ENERGY INC.
ODLE 65N63W 19NESW, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C022-103

Sample	Date Sampled	Depth (ft)	Location	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)	Dibenz (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)
AST Load Out-Surface	08/16/2022	0	Floor	<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
FL01 - W Wall 2ft	08/16/2022	2	Wall	0.00990	0.0335	0.0518	0.0423	0.0682	0.0300	0.0558	<0.00500	0.156	0.0155	0.0170	0.109	<0.00500	<0.00500
PWV - E Wall 2ft	08/16/2022	2	Wall	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00926	<0.00500	<0.00500	0.0559	<0.00500	0.00522	0.0473	<0.00500
PWV - Floor 3ft	08/16/2022	3	Floor	<0.00500	<0.00500	0.00992	0.0115	0.0121	0.00536	0.0111	<0.00500	0.0124	<0.00500	<0.00500	0.0217	<0.00500	<0.00500
Sep - E Wall 2ft	08/16/2022	2	Wall	<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
COGCC 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
COGCC 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

Bold faced values exceed the COGCC Table 915-1 concentrations
Blue highlighted 915-1 Limits indicate the referenced soil screening level (SSL)

TABLE 3
SUMMARY OF INORGANIC SOIL CHEMISTRY DATA
NOBLE ENERGY INC.
ODLE 65N63W 19NESW, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C022-103

SAMPLE LOCATION	DATE SAMPLED	DEPTH ft	EC mmhos/cm	pH pH units	SAR units	BORON mg/L
AST Load Out-Surface	08/16/2022	0	0.249	7.44	0.163	0.102
PWV - E Wall 2ft	08/16/2022	2	0.661	7.79	2.57	0.248
PWV - Floor 3ft	08/16/2022	3	1.29	7.85	9.34	0.580
Sep - E Wall 2ft	08/16/2022	2	0.832	7.36	1.79	0.275
Table 915-1 Limits			<4	6-8.3	<6	2

Bold face values exceed the COGCC Limits

TABLE 4
SUMMARY OF ORGANIC GROUNDWATER CHEMISTRY DATA
NOBLE ENERGY INC.
ODLE 65N63W 19NESW, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C022-103

SAMPLE LOCATION	DATE	BENZENE (µg/L)	TOLUENE (µg/L)	ETHYL BENZENE (µg/L)	TOTAL XYLENES (µg/L)	NAPHTHALENE (µg/L)	1,2,4 TRIMETHYL- BENZENE (µg/L)	1,3,5 TRIMETHYL- BENZENE (µg/L)
Sep	08/16/2022	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0
Table 915-1 Limits		5	560	700	1,400	140	67	67

TABLE 5
SUMMARY OF INORGANIC GROUNDWATER CHEMISTRY DATA
NOBLE ENERGY INC.
ODLE 65N63W 19NESW, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C022-103

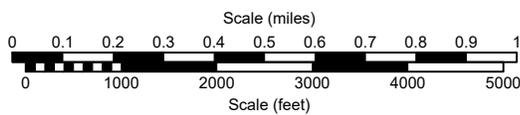
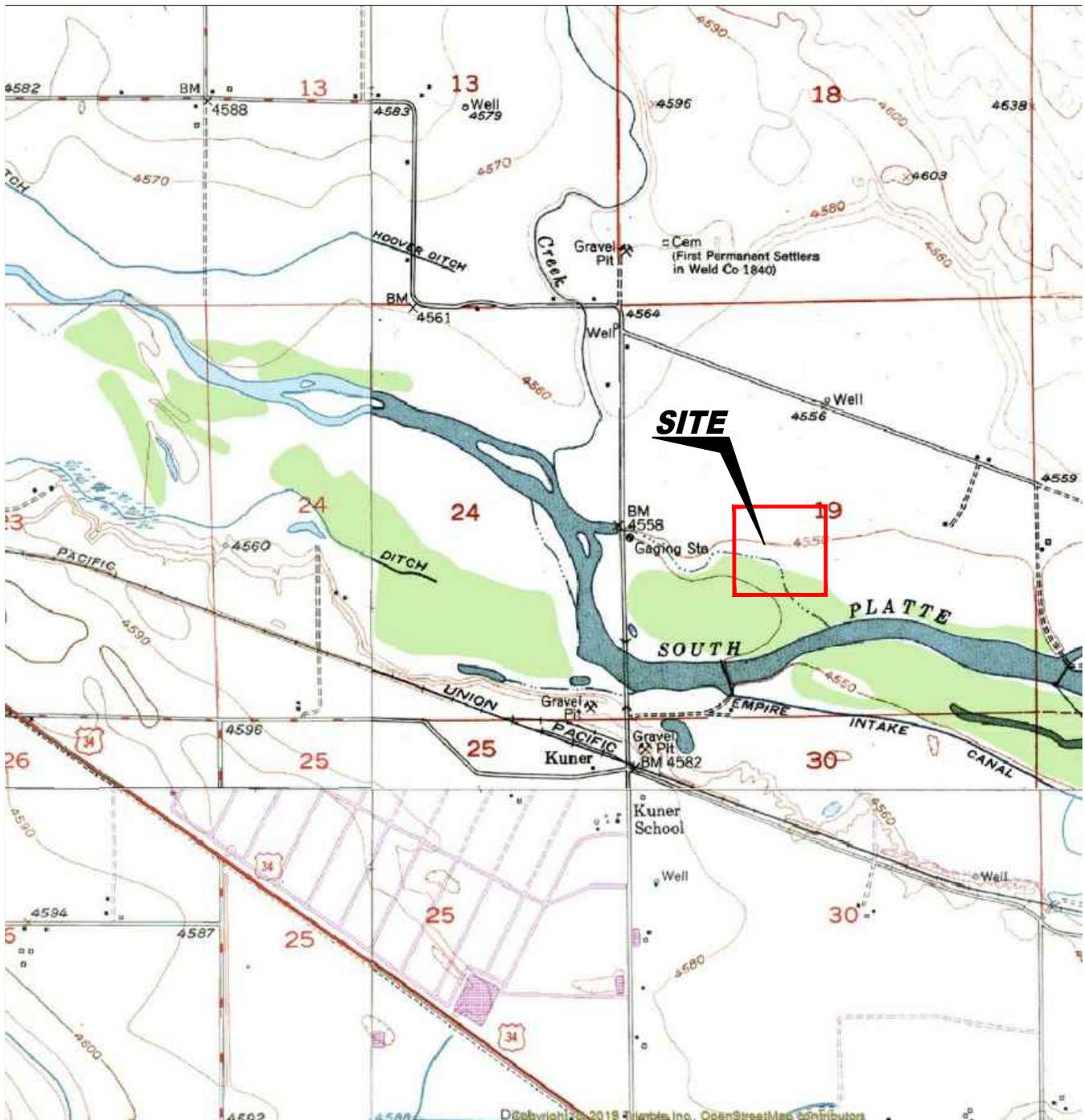
SAMPLE LOCATION	DATE	TOTAL DISSOLVED SOLIDS (mg/L)	CHLORIDE ION (mg/L)	SULFATE ION (mg/L)
Sep	08/16/2022	713	58.4	164
Table 915-1 Limits		<1.25 x local background	250	250

Bold face values exceed the COGCC limits

NP - No Free Product

NA - Not Analyzed

NAP - Not Applicable



USGS 7.5 MINUTE SERIES (TOPOGRAPHIC)

Figure 1
SITE LOCATION MAP

NOBLE ENERGY, INC. ~ ODLE-65N63W 19NESW
 NESW Sec. 19, T5N, R63W, 6th PM
 Weld County, Colorado
 40.384849°, -104.488323°

Project # C022-103	API #	Facility # 328087
Date 11/29/22	Remediation # 23224	Filename 22103T3





LEGEND

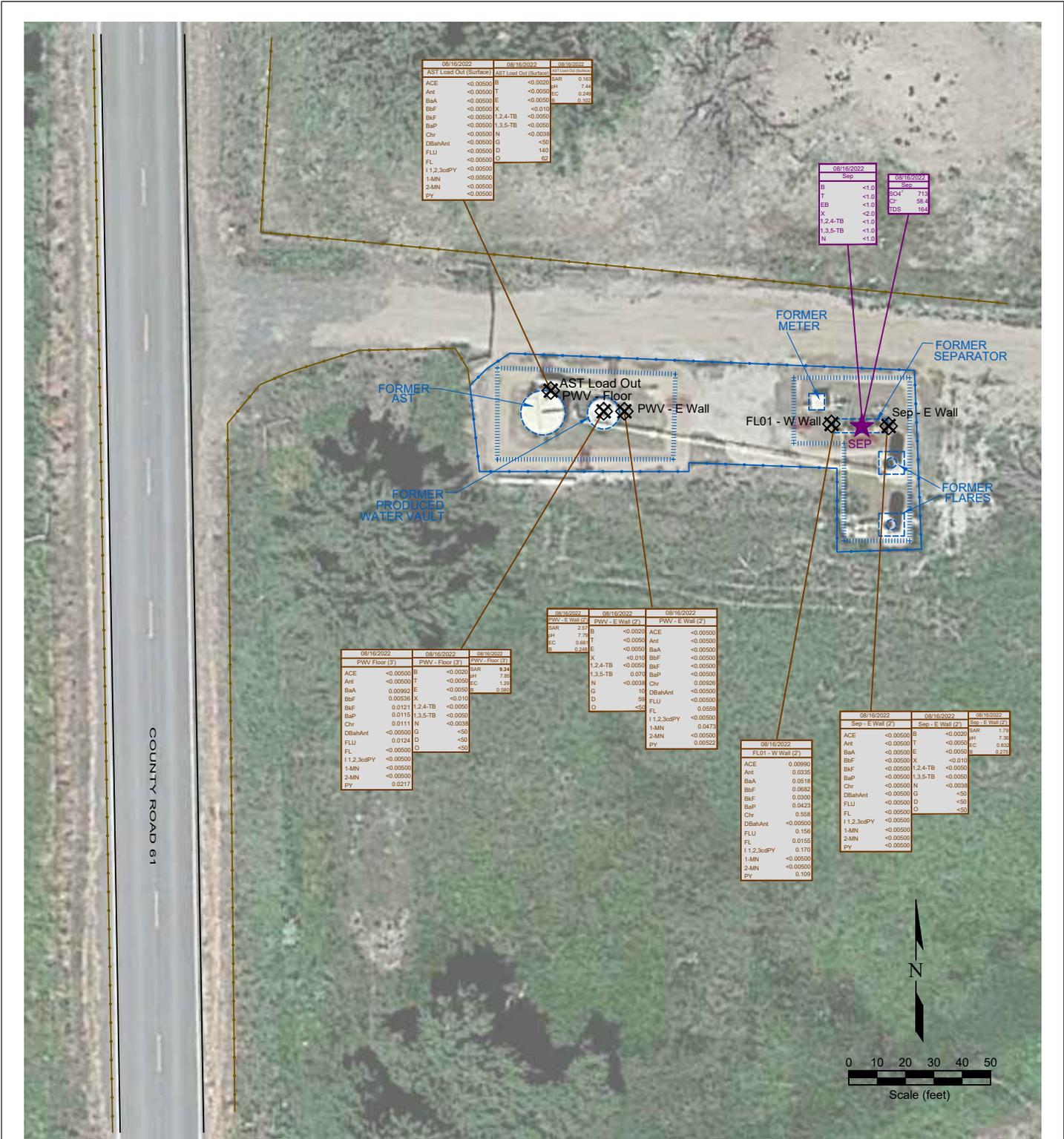
- ABOVE GROUND STORAGE TANK
- FORMER FACILITY
- FORMER FACILITY
- CONTAINMENT BERM
- FENCE LINE

**Figure 2
SITE MAP**

NOBLE ENERGY, INC. ~ ODLE-65N63W 19NESW
 NESW Sec. 19, T5N, R63W, 6th PM
 Weld County, Colorado
 40.384849°, -104.488323°

Project No. C022-103	API #	Facility # 328087
Date 11/29/22	Remediation # 23224	Filename 22103QTB





08/16/2022	08/16/2022	08/16/2022
AST Load Out (Surface)	AST Load Out (Surface)	AST Load Out (Surface)
ACE <0.0050	B <0.0020	SAR 0.163
Ant <0.0050	T <0.0050	SH 7.44
BaA <0.0050	E <0.0050	EC 0.244
BaP <0.0050	L <0.010	EC 0.102
BbF <0.0050	1,2,4-TB <0.0050	
BaP <0.0050	1,3,5-TB <0.0050	
Chr <0.0050	N <0.0038	
DbaAnt <0.0050	G <50	
FLU <0.0050	D 140	
FL <0.0050	O 62	
1,1,2,3cdPY <0.0050		
1-MN <0.0050		
2-MN <0.0050		
PY <0.0050		

08/16/2022	08/16/2022	08/16/2022
Sep	Sep	Sep
B <1.0	SO4 ²⁻ 713	
T <1.0	SH 7.36	
EB <1.0	EC 0.182	
X <2.0	TDS 164	
1,2,4-TB <1.0		
1,3,5-TB <1.0		
N <1.0		

08/16/2022	08/16/2022	08/16/2022
PWV Floor (2)	PWV - Floor (2)	PWV - Floor (2)
ACE <0.0050	B <0.0020	SAR 8.34
Ant <0.0050	T <0.0050	SH 7.85
BaA 0.00992	E <0.0050	EC 0.882
BaP 0.00536	K <0.010	
BbF 0.01121	1,2,4-TB <0.0050	
BaP 0.01115	1,3,5-TB <0.0050	
Chr 0.01111	N <0.0038	
DbaAnt <0.0050	G <50	
FLU 0.0124	D <50	
FL <0.0050	O <50	
1,1,2,3cdPY <0.0050		
1-MN <0.0050		
2-MN <0.0050		
PY 0.0217		

08/16/2022	08/16/2022	08/16/2022
PWV - E Wall (2)	PWV - E Wall (2)	PWV - E Wall (2)
SAR 2.31	B <0.0020	ACE <0.0050
SH 7.78	T <0.0050	Ant <0.0050
EC 0.646	E <0.0050	BaA <0.0050
EC 0.348	K <0.010	BbF <0.0050
	X <0.010	BbF <0.0050
	1,2,4-TB <0.0050	BaP <0.0050
	1,3,5-TB 0.078	BaP <0.0050
	N <0.0038	Chr <0.0050
	G 10	DbaAnt <0.0050
	D 59	FLU <0.0050
	O <50	FL 0.056
	1,1,2,3cdPY <0.0050	
	1-MN 0.0473	
	2-MN <0.0050	
	PY 0.0052	

08/16/2022	08/16/2022	08/16/2022
FL01 - W Wall (2)	FL01 - W Wall (2)	FL01 - W Wall (2)
ACE 0.00990	B <0.0020	ACE <0.0050
Ant 0.0335	T <0.0050	Ant <0.0050
BaA 0.05116	E <0.0050	BaA <0.0050
BbF 0.0082	K <0.010	BbF <0.0050
BaP 0.0300	1,2,4-TB <0.0050	BaP <0.0050
BbF 0.0423	1,3,5-TB <0.0050	Chr <0.0050
Chr 0.058	N <0.0038	DbaAnt <0.0050
DbaAnt <0.0050	G <50	FLU <0.0050
FLU 0.158	D <50	FL <0.0050
FL 0.0155	O <50	FL <0.0050
1,1,2,3cdPY 0.170		1,1,2,3cdPY <0.0050
1-MN <0.0050		1-MN <0.0050
2-MN <0.0050		2-MN <0.0050
PY 0.109		PY <0.0050

08/16/2022	08/16/2022	08/16/2022
Sep - E Wall (2)	Sep - E Wall (2)	Sep - E Wall (2)
ACE <0.0050	B <0.0020	SAR 1.15
Ant <0.0050	T <0.0050	SH 7.36
BaA <0.0050	E <0.0050	EC 0.182
BbF <0.0050	K <0.010	EC 0.221
BaP <0.0050	1,2,4-TB <0.0050	
Chr <0.0050	1,3,5-TB <0.0050	
DbaAnt <0.0050	N <0.0038	
FLU <0.0050	G <50	
FL <0.0050	D <50	
1,1,2,3cdPY <0.0050	O <50	
1-MN <0.0050		
2-MN <0.0050		
PY <0.0050		

LEGEND

- SOIL SAMPLE LOCATION
- WATER SAMPLE LOCATION
- ABOVE GROUND STORAGE TANK
- FORMER FACILITY
- CONTAINMENT BERM
- FENCE LINE

08/16/2022	DATE SAMPLED	08/16/2022	DATE SAMPLED	08/16/2022	DATE SAMPLED
AST Load Out (Surface)	SAMPLE ID and DEPTH (ft)	AST Load Out (Surface)	SAMPLE ID and DEPTH (ft)	Sep	SAMPLE ID
ACE <0.0050	ACENAPHTHENE (mg/kg)	B <0.0020	BENZENE (mg/kg)	SO4 ²⁻ 713	SULFATE ION (mg/L)
Ant <0.0050	ANTHRACENE (mg/kg)	T <0.0050	TOLUENE (mg/kg)	SH 7.36	CHLORIDE ION (mg/L)
BaA <0.0050	BENZO (A) ANTHRACENE (mg/kg)	E <0.0050	ETHYLBENZENE (mg/kg)	EC 0.182	TOTAL DISSOLVED SOLIDS (mg/L)
BbF <0.0050	BENZO (B) FLUORANTHENE (mg/kg)	K <0.010	TOTAL XYLENES (mg/kg)		
BaP <0.0050	BENZO (K) FLUORANTHENE (mg/kg)	1,2,4-TB <0.0050	1,2,4-TRIMETHYLBENZENE (mg/kg)		
Chr <0.0050	BENZO (A) PYRENE (mg/kg)	1,3,5-TB <0.0050	1,3,5-TRIMETHYLBENZENE (mg/kg)		
DbaAnt <0.0050	CHRYSENE (mg/kg)	N <0.0038	NAPHTHALENE (mg/kg)		
FLU <0.0050	DIBENZ (A,H) ANTHRACENE (mg/kg)	G <50	TPH-GRO (mg/kg)		
FL <0.0050	FLUORANTHENE (mg/kg)	D 140	TPH-ORO (mg/kg)		
FL <0.0050	FLUORENE (mg/kg)	O 62			
1,1,2,3cdPY <0.0050	INDENO (1,2,3-CD) PYRENE (mg/kg)				
1-MN <0.0050	1-METHYLNAPHTHALENE (mg/kg)				
2-MN <0.0050	2-METHYLNAPHTHALENE (mg/kg)				
PY <0.0050	PYRENE (mg/kg)				

Figure 3
SOIL AND GROUNDWATER CHEMISTRY MAP

NOBLE ENERGY, INC. ~ ODLE-65N63W 19NESW
 NESW Sec. 19, T5N, R63W, 6th PM
 Weld County, Colorado
 40.384849° , -104.488323°

Project No. C022-103	API #	Facility # 328087
Date 11/29/22	Remediation # 23224	Filename 22103QTB



Description:

Photo Log



Description:

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Photo Log



Description:

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Photo Log



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Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

September 06, 2022

Paul Henchan
Fremont Environmental
PO Box 1289
Wellington, CO 80549
RE: Noble - Odle BB19-11
Work Order #2208304

Enclosed are the results of analyses for samples received by Summit Scientific on 08/22/22 16:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Mikayla Axtell For Paul Shrewsbury
President



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Odle BB19-11

Project Number: [none]
Project Manager: Paul Henchan

Reported:
09/06/22 09:29

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
AST Load Out-Surface	2208304-01	Soil	08/16/22 00:00	08/22/22 16:00
PWV - E Wall 2ft	2208304-02	Soil	08/16/22 00:00	08/22/22 16:00
PWV - Floor 3ft	2208304-03	Soil	08/16/22 00:00	08/22/22 16:00
Sep - E Wall 2ft	2208304-04	Soil	08/16/22 00:00	08/22/22 16:00
FL01 - W Wall 2ft	2208304-05	Soil	08/16/22 00:00	08/22/22 16:00
Sep	2208304-07	Water	08/16/22 00:00	08/22/22 16:00
FL01	2208304-08	Water	08/16/22 00:00	08/22/22 16:00

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

2208304

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

Client: Fremont Environmental

Project Manager: Hendrich

Page 1 of 1

Address:

E-Mail: fremont env dist list (jeffg, paulh, ethanb), chrisl

City/State/Zip:

Bill To: Noble

Phone:

Project Name: Noble - Cde BB 19-11

Sampler Name: Black

Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested						Special Instructions			
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	VOCs (q15)	TPH (q15)	PAHs (q15)	TDS/Cl/SO4	SAR/EC/PH	BORON		METALS (q15)		
1	AST LOAD OUT - SURFACE	8/16/22		3			X															
2	PWV - E WALL 2FT			1						X												
3	PWV - FLOOR 3FT			1						X												
4	SEP - E WALL 2FT			1						X												
5	FLO1 - W WALL 2FT			1						X												
6	FLO6 - FLOOR 2FT			1						X												
7	SEP			4						X												
8	FLO1			4						X												
9																						
10																						

Relinquished by: <u>Ethan Black</u>	Date/Time: <u>8/16/22</u>	Received by: <u>[Signature]</u>	Date/Time: <u>8/22/22</u>	Turn Around Time (Check) Same Day _____ 72 hours 24 hours _____ Standard <u>X</u> 48 hours _____	Notes:
Relinquished by:	Date/Time:	Received by:	Date/Time:		
Temperature Upon Receipt: <u>8.0</u>	Corrected Temperature: <u>8</u>	HNO3 lot #	Sample Integrity:		
IR gun correction: <u>0</u>	IR gun #: <u>1</u>		Samples Intact: <u>Yes</u> No		

S₂

2208304

Sample Receipt Checklist

S2 Work Order#

Client: Fremont Client Project ID: Noble-Adle BB 19-11

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

-

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.	-			on ICE
Were all samples received intact ⁽¹⁾ ?	-			
Was adequate sample volume provided ⁽¹⁾ ?	-			
If custody seals are present, are they intact ⁽¹⁾ ?	-			
Are samples due within 48 hours present?		-		
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			-	
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	-			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	-			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	-			
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	-			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.		-		
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.			-	
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ? Record the pH in Comments.			-	
If dissolved metals are requested, were samples field filtered?			-	
Additional Comments (if any):				

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

[Signature]
Custodian Printed Name

82222
Date/Time



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Odle BB19-11

Project Number: [none]
Project Manager: Paul Henchan

Reported:
09/06/22 09:29

AST Load Out-Surface
2208304-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFH0508	08/24/22	08/25/22	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: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		94.6 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		118 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		119 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	140	50	mg/kg	1	BFH0509	08/24/22	08/25/22	EPA 8015M	
C28-C36 (ORO)	62	50	"	"	"	"	"	"	

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		58.5 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Odle BB19-11

Project Number: [none]
Project Manager: Paul Henchan

Reported:
09/06/22 09:29

AST Load Out-Surface
2208304-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFH0500	08/24/22	08/25/22	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: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		61.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		46.7 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.102	0.0100	mg/L	1	BFH0576	08/26/22	08/27/22	EPA 6020B	

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

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Odle BB19-11

Project Number: [none]
Project Manager: Paul Henchan

Reported:
09/06/22 09:29

AST Load Out-Surface
2208304-01 (Soil)

Summit Scientific

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	33.1	0.0618	mg/L dry	1	BFH0612	08/29/22	08/31/22	EPA 6020B	
Magnesium	6.64	0.0618	"	"	"	"	"	"	
Sodium	3.94	0.0618	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.163	0.00100	units	1	BFH0694	08/31/22	08/31/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	80.9		%	1	BFH0516	08/24/22	08/24/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.249	0.0100	mmhos/cm	1	BFH0647	08/30/22	08/31/22	EPA 120.1	

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

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.44		pH Units	1	BFH0648	08/30/22	08/31/22	EPA 9045D	

Summit Scientific

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PO Box 1289
Wellington CO, 80549

Project: Noble - Odle BB19-11

Project Number: [none]
Project Manager: Paul Henchan

Reported:
09/06/22 09:29

PWV - E Wall 2ft
2208304-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFH0508	08/24/22	08/25/22	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	0.070	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	10	0.50	"	"	"	"	"	"	

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		96.8 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		119 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		128 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	59	50	mg/kg	1	BFH0509	08/24/22	08/26/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		76.5 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Odle BB19-11

Project Number: [none]
Project Manager: Paul Henchan

Reported:
09/06/22 09:29

PWV - E Wall 2ft
2208304-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFH0500	08/24/22	08/25/22	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	0.00926	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	0.0559	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	0.00522	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	0.0473	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		79.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		70.0 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.248	0.0100	mg/L	1	BFH0576	08/26/22	08/27/22	EPA 6020B	

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

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Odle BB19-11

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 09/06/22 09:29

**PWV - E Wall 2ft
 2208304-02 (Soil)**

Summit Scientific

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	31.6	0.0542	mg/L dry	1	BFH0612	08/29/22	08/31/22	EPA 6020B	
Magnesium	5.21	0.0542	"	"	"	"	"	"	
Sodium	59.2	0.0542	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.57	0.00100	units	1	BFH0694	08/31/22	08/31/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	92.2		%	1	BFH0516	08/24/22	08/24/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.661	0.0100	mmhos/cm	1	BFH0647	08/30/22	08/31/22	EPA 120.1	

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

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.79		pH Units	1	BFH0648	08/30/22	08/31/22	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Odle BB19-11

Project Number: [none]
Project Manager: Paul Henchan

Reported:
09/06/22 09:29

**PWV - Floor 3ft
2208304-03 (Soil)**

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFH0508	08/24/22	08/25/22	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: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		88.2 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		118 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		113 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFH0509	08/24/22	08/26/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		74.5 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Odle BB19-11

Project Number: [none]
Project Manager: Paul Henchan

Reported:
09/06/22 09:29

PWV - Floor 3ft
2208304-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFH0500	08/24/22	08/25/22	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	0.00992	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	0.0115	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	0.0121	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	0.00536	0.00500	"	"	"	"	"	"	
Chrysene	0.0111	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	0.0124	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	0.0217	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		64.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		61.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.580	0.0100	mg/L	1	BFH0576	08/26/22	08/27/22	EPA 6020B	

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

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Odle BB19-11

Project Number: [none]
Project Manager: Paul Henchan

Reported:
09/06/22 09:29

PWV - Floor 3ft
2208304-03 (Soil)

Summit Scientific

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	21.4	0.0610	mg/L dry	1	BFH0612	08/29/22	08/31/22	EPA 6020B	
Magnesium	5.46	0.0610	"	"	"	"	"	"	
Sodium	187	0.0610	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	9.34	0.00100	units	1	BFH0694	08/31/22	08/31/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	81.9		%	1	BFH0516	08/24/22	08/24/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.29	0.0100	mmhos/cm	1	BFH0647	08/30/22	08/31/22	EPA 120.1	

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

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.85		pH Units	1	BFH0648	08/30/22	08/31/22	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Odle BB19-11

Project Number: [none]
Project Manager: Paul Henchan

Reported:
09/06/22 09:29

Sep - E Wall 2ft
2208304-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFH0508	08/24/22	08/25/22	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: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		91.7 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		118 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		117 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFH0509	08/24/22	08/26/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		76.4 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Odle BB19-11

Project Number: [none]
Project Manager: Paul Henchan

Reported:
09/06/22 09:29

Sep - E Wall 2ft
2208304-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFH0500	08/24/22	08/25/22	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: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		77.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		59.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.275	0.0100	mg/L	1	BFH0576	08/26/22	08/27/22	EPA 6020B	

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

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Odle BB19-11

Project Number: [none]
Project Manager: Paul Henchan

Reported:
09/06/22 09:29

Sep - E Wall 2ft
2208304-04 (Soil)

Summit Scientific

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	46.8	0.0629	mg/L dry	1	BFH0612	08/29/22	08/31/22	EPA 6020B	
Magnesium	21.1	0.0629	"	"	"	"	"	"	
Sodium	58.8	0.0629	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.79	0.00100	units	1	BFH0694	08/31/22	08/31/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	79.5		%	1	BFH0516	08/24/22	08/24/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.832	0.0100	mmhos/cm	1	BFH0647	08/30/22	08/31/22	EPA 120.1	

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

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.36		pH Units	1	BFH0648	08/30/22	08/31/22	EPA 9045D	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Odle BB19-11

Project Number: [none]
Project Manager: Paul Henchan

Reported:
09/06/22 09:29

FL01 - W Wall 2ft
2208304-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFH0508	08/24/22	08/25/22	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: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		91.1 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		122 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		121 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFH0509	08/24/22	08/26/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		65.6 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Odle BB19-11

Project Number: [none]
Project Manager: Paul Henchan

Reported:
09/06/22 09:29

FL01 - W Wall 2ft
2208304-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	0.00990	0.00500	mg/kg	1	BFH0500	08/24/22	08/25/22	EPA 8270D SIM	
Anthracene	0.0335	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	0.0518	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	0.0423	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	0.0682	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	0.0300	0.00500	"	"	"	"	"	"	
Chrysene	0.0558	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	0.156	0.00500	"	"	"	"	"	"	
Fluorene	0.0155	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	0.0170	0.00500	"	"	"	"	"	"	
Pyrene	0.109	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		66.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		66.2 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.349	0.0100	mg/L	1	BFH0576	08/26/22	08/27/22	EPA 6020B	

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

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	162	0.0598	mg/L dry	1	BFH0612	08/29/22	08/31/22	EPA 6020B	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Odle BB19-11

Project Number: [none]
Project Manager: Paul Henchan

Reported:
09/06/22 09:29

FL01 - W Wall 2ft
2208304-05 (Soil)

Summit Scientific

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Magnesium	183	0.0598	mg/L dry	1	BFH0612	08/29/22	08/31/22	EPA 6020B	
Sodium	909	0.0598	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	11.6	0.00100	units	1	BFH0694	08/31/22	08/31/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	83.6		%	1	BFH0516	08/24/22	08/24/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	6.19	0.0100	mmhos/cm	1	BFH0647	08/30/22	08/31/22	EPA 120.1	

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

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.90		pH Units	1	BFH0648	08/30/22	08/31/22	EPA 9045D	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Odle BB19-11

Project Number: [none]
Project Manager: Paul Henchan

Reported:
09/06/22 09:29

Sep
2208304-07 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BFH0525	08/24/22	08/25/22	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	
Naphthalene	ND	1.0		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0		"	"	"	"	"	"	

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		111 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		97.4 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.5 %		21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	58.4	12.0		mg/L	200	BFH0510	08/24/22	08/24/22	EPA 300.0	
Sulfate	164	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	713	10.0		mg/L	1	BFH0493	08/23/22	08/23/22	SM2540C	I-03

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Odle BB19-11

Project Number: [none]
Project Manager: Paul Henchan

Reported:
09/06/22 09:29

FL01
2208304-08 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	BFH0525	08/24/22	08/25/22	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	3.3	1.0	"	"	"	"	"	"	
Xylenes (total)	12	2.0	"	"	"	"	"	"	
Naphthalene	12	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	1.5	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	6.0	1.0	"	"	"	"	"	"	

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		97.1 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		85.0 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.6 %	21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chloride	124	12.0	mg/L	200	BFH0510	08/24/22	08/24/22	EPA 300.0	
Sulfate	791	60.0	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **08/16/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Total Dissolved Solids	1730	10.0	mg/L	1	BFH0493	08/23/22	08/23/22	SM2540C	I-03

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Odle BB19-11

Project Number: [none]
Project Manager: Paul Henchan

Reported:
09/06/22 09:29

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 BFH0508 - EPA 5030 Soil MS

Blank (BFH0508-BLK1)

Prepared & Analyzed: 08/24/22

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	"								
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0366		"	0.0400		91.4	50-150				
<i>Surrogate: Toluene-d8</i>	0.0438		"	0.0400		109	50-150				
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0444		"	0.0400		111	50-150				

LCS (BFH0508-BS1)

Prepared & Analyzed: 08/24/22

Benzene	0.160	0.0020	mg/kg	0.150		106	70-130				
Toluene	0.163	0.0050	"	0.150		109	70-130				
Ethylbenzene	0.155	0.0050	"	0.150		103	70-130				
m,p-Xylene	0.295	0.010	"	0.300		98.5	70-130				
o-Xylene	0.142	0.0050	"	0.150		94.9	70-130				
1,2,4-Trimethylbenzene	0.133	0.0050	"	0.150		88.8	70-130				
1,3,5-Trimethylbenzene	0.134	0.0050	"	0.150		89.2	70-130				
Naphthalene	0.141	0.0038	"	0.150		94.2	70-130				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0352		"	0.0400		88.0	50-150				
<i>Surrogate: Toluene-d8</i>	0.0436		"	0.0400		109	50-150				
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0418		"	0.0400		104	50-150				

Matrix Spike (BFH0508-MS1)

Source: 2208299-01

Prepared & Analyzed: 08/24/22

Benzene	0.154	0.0020	mg/kg	0.150	ND	103	70-130				
Toluene	0.159	0.0050	"	0.150	ND	106	70-130				
Ethylbenzene	0.148	0.0050	"	0.150	ND	98.9	70-130				
m,p-Xylene	0.286	0.010	"	0.300	ND	95.3	70-130				
o-Xylene	0.136	0.0050	"	0.150	ND	90.8	70-130				
1,2,4-Trimethylbenzene	0.125	0.0050	"	0.150	ND	83.2	70-130				
1,3,5-Trimethylbenzene	0.126	0.0050	"	0.150	ND	84.1	70-130				
Naphthalene	0.134	0.0038	"	0.150	ND	89.4	70-130				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0359		"	0.0400		89.8	50-150				
<i>Surrogate: Toluene-d8</i>	0.0441		"	0.0400		110	50-150				
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0427		"	0.0400		107	50-150				

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Odle BB19-11

Project Number: [none]
Project Manager: Paul Henchan

Reported:
09/06/22 09:29

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		

Batch BFH0508 - EPA 5030 Soil MS

Matrix Spike Dup (BFH0508-MSD1)

Source: 2208299-01

Prepared & Analyzed: 08/24/22

Benzene	0.173	0.0020	mg/kg	0.150	ND	115	70-130	11.5	30
Toluene	0.153	0.0050	"	0.150	ND	102	70-130	4.04	30
Ethylbenzene	0.147	0.0050	"	0.150	ND	98.3	70-130	0.588	30
m,p-Xylene	0.288	0.010	"	0.300	ND	95.9	70-130	0.649	30
o-Xylene	0.139	0.0050	"	0.150	ND	92.4	70-130	1.79	30
1,2,4-Trimethylbenzene	0.127	0.0050	"	0.150	ND	84.8	70-130	1.95	30
1,3,5-Trimethylbenzene	0.130	0.0050	"	0.150	ND	86.5	70-130	2.86	30
Naphthalene	0.134	0.0038	"	0.150	ND	89.0	70-130	0.404	30
Surrogate: 1,2-Dichloroethane-d4	0.0349		"	0.0400		87.3	50-150		
Surrogate: Toluene-d8	0.0438		"	0.0400		109	50-150		
Surrogate: 4-Bromofluorobenzene	0.0412		"	0.0400		103	50-150		

Batch BFH0525 - EPA 5030 Water MS

Blank (BFH0525-BLK1)

Prepared: 08/24/22 Analyzed: 08/25/22

Benzene	ND	1.0	ug/l						
Toluene	ND	1.0	"						
Ethylbenzene	ND	1.0	"						
Xylenes (total)	ND	2.0	"						
Naphthalene	ND	1.0	"						
1,2,4-Trimethylbenzene	ND	1.0	"						
1,3,5-Trimethylbenzene	ND	1.0	"						
Surrogate: 1,2-Dichloroethane-d4	14.5		"	13.3		109	23-173		
Surrogate: Toluene-d8	13.1		"	13.3		98.3	20-170		
Surrogate: 4-Bromofluorobenzene	12.7		"	13.3		95.5	21-167		

LCS (BFH0525-BS1)

Prepared: 08/24/22 Analyzed: 08/25/22

Benzene	40.8	1.0	ug/l	41.7		97.9	51-132		
Toluene	35.6	1.0	"	41.7		85.3	51-138		
Ethylbenzene	47.1	1.0	"	41.7		113	58-146		
m,p-Xylene	91.7	2.0	"	83.3		110	57-144		
o-Xylene	44.6	1.0	"	41.7		107	53-146		
Naphthalene	49.9	1.0	"	41.7		120	70-130		
1,2,4-Trimethylbenzene	46.2	1.0	"	41.7		111	70-130		
1,3,5-Trimethylbenzene	46.5	1.0	"	41.7		112	70-130		
Surrogate: 1,2-Dichloroethane-d4	12.7		"	13.3		95.1	23-173		
Surrogate: Toluene-d8	11.4		"	13.3		85.9	20-170		
Surrogate: 4-Bromofluorobenzene	13.0		"	13.3		97.4	21-167		

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Odle BB19-11

Project Number: [none]
Project Manager: Paul Henchan

Reported:
09/06/22 09:29

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 BFH0525 - EPA 5030 Water MS

Matrix Spike (BFH0525-MS1)

Source: 2208317-01

Prepared: 08/24/22 Analyzed: 08/25/22

Benzene	40.7	1.0	ug/l	41.7	ND	97.8	34-141			
Toluene	36.0	1.0	"	41.7	ND	86.4	27-151			
Ethylbenzene	48.0	1.0	"	41.7	ND	115	29-160			
m,p-Xylene	93.3	2.0	"	83.3	ND	112	20-166			
o-Xylene	44.8	1.0	"	41.7	ND	108	33-159			
Naphthalene	47.8	1.0	"	41.7	ND	115	70-130			
1,2,4-Trimethylbenzene	46.9	1.0	"	41.7	ND	113	70-130			
1,3,5-Trimethylbenzene	46.9	1.0	"	41.7	ND	113	70-130			
Surrogate: 1,2-Dichloroethane-d4	12.8		"	13.3		95.7	23-173			
Surrogate: Toluene-d8	11.6		"	13.3		86.7	20-170			
Surrogate: 4-Bromofluorobenzene	12.7		"	13.3		95.3	21-167			

Matrix Spike Dup (BFH0525-MSD1)

Source: 2208317-01

Prepared: 08/24/22 Analyzed: 08/25/22

Benzene	41.3	1.0	ug/l	41.7	ND	99.0	34-141	1.29	30	
Toluene	40.4	1.0	"	41.7	ND	96.9	27-151	11.5	30	
Ethylbenzene	45.2	1.0	"	41.7	ND	109	29-160	5.79	30	
m,p-Xylene	90.7	2.0	"	83.3	ND	109	20-166	2.86	30	
o-Xylene	44.2	1.0	"	41.7	ND	106	33-159	1.46	30	
Naphthalene	49.7	1.0	"	41.7	ND	119	70-130	3.86	30	
1,2,4-Trimethylbenzene	44.5	1.0	"	41.7	ND	107	70-130	5.27	30	
1,3,5-Trimethylbenzene	45.6	1.0	"	41.7	ND	109	70-130	2.88	30	
Surrogate: 1,2-Dichloroethane-d4	13.0		"	13.3		97.8	23-173			
Surrogate: Toluene-d8	12.8		"	13.3		96.2	20-170			
Surrogate: 4-Bromofluorobenzene	12.5		"	13.3		94.1	21-167			

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Odle BB19-11

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 09/06/22 09:29

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BFH0509 - EPA 3550A

Blank (BFH0509-BLK1)

Prepared: 08/24/22 Analyzed: 08/25/22

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							

LCS (BFH0509-BS1)

Prepared: 08/24/22 Analyzed: 08/25/22

C10-C28 (DRO)	496	50	mg/kg	500	99.2	70-130				
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Matrix Spike (BFH0509-MS1)

Source: 2208299-01

Prepared: 08/24/22 Analyzed: 08/25/22

C10-C28 (DRO)	416	50	mg/kg	500	14.8	80.3	70-130			
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Matrix Spike Dup (BFH0509-MSD1)

Source: 2208299-01

Prepared: 08/24/22 Analyzed: 08/25/22

C10-C28 (DRO)	420	50	mg/kg	500	14.8	81.1	70-130	0.903	20	
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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Odle BB19-11

Project Number: [none]
Project Manager: Paul Henchan

Reported:
09/06/22 09:29

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BFH0500 - EPA 5030 Soil MS

Blank (BFH0500-BLK1)

Prepared: 08/24/22 Analyzed: 08/25/22

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	0.0320		"	0.0333	95.9	40-150				
Surrogate: Fluoranthene-d10	0.0292		"	0.0333	87.6	40-150				

LCS (BFH0500-BS1)

Prepared: 08/24/22 Analyzed: 08/25/22

Acenaphthene	0.0333	0.00500	mg/kg	0.0333	99.8	31-137				
Anthracene	0.0351	0.00500	"	0.0333	105	30-120				
Benzo (a) anthracene	0.0261	0.00500	"	0.0333	78.2	30-120				
Benzo (a) pyrene	0.0297	0.00500	"	0.0333	89.0	30-120				
Benzo (b) fluoranthene	0.0305	0.00500	"	0.0333	91.4	30-120				
Benzo (k) fluoranthene	0.0374	0.00500	"	0.0333	112	30-120				
Chrysene	0.0309	0.00500	"	0.0333	92.6	30-120				
Dibenz (a,h) anthracene	0.0307	0.00500	"	0.0333	92.2	30-120				
Fluoranthene	0.0371	0.00500	"	0.0333	111	30-120				
Fluorene	0.0325	0.00500	"	0.0333	97.4	30-120				
Indeno (1,2,3-cd) pyrene	0.0272	0.00500	"	0.0333	81.5	30-120				
Pyrene	0.0294	0.00500	"	0.0333	88.2	35-142				
1-Methylnaphthalene	0.0298	0.00500	"	0.0333	89.3	35-142				
2-Methylnaphthalene	0.0298	0.00500	"	0.0333	89.3	35-142				
Surrogate: 2-Methylnaphthalene-d10	0.0312		"	0.0333	93.5	40-150				
Surrogate: Fluoranthene-d10	0.0354		"	0.0333	106	40-150				

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Odle BB19-11

Project Number: [none]
Project Manager: Paul Henchan

Reported:
09/06/22 09:29

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BFH0500 - EPA 5030 Soil MS

Matrix Spike (BFH0500-MS1)	Source: 2208304-01			Prepared: 08/24/22 Analyzed: 08/25/22						
Acenaphthene	0.0255	0.00500	mg/kg	0.0333	ND	76.6	31-137			
Anthracene	0.0217	0.00500	"	0.0333	ND	65.1	30-120			
Benzo (a) anthracene	0.0161	0.00500	"	0.0333	ND	48.4	30-120			
Benzo (a) pyrene	0.0175	0.00500	"	0.0333	ND	52.4	30-120			
Benzo (b) fluoranthene	0.0226	0.00500	"	0.0333	ND	67.7	30-120			
Benzo (k) fluoranthene	0.0256	0.00500	"	0.0333	ND	76.8	30-120			
Chrysene	0.0202	0.00500	"	0.0333	ND	60.6	30-120			
Dibenz (a,h) anthracene	0.0139	0.00500	"	0.0333	ND	41.6	30-120			
Fluoranthene	0.0176	0.00500	"	0.0333	ND	52.9	30-120			
Fluorene	0.0238	0.00500	"	0.0333	ND	71.5	30-120			
Indeno (1,2,3-cd) pyrene	0.0158	0.00500	"	0.0333	ND	47.5	30-120			
Pyrene	0.0356	0.00500	"	0.0333	ND	107	35-142			
1-Methylnaphthalene	0.0192	0.00500	"	0.0333	ND	57.7	15-130			
2-Methylnaphthalene	0.0216	0.00500	"	0.0333	ND	64.7	15-130			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0196</i>		<i>"</i>	<i>0.0333</i>		<i>58.7</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0154</i>		<i>"</i>	<i>0.0333</i>		<i>46.1</i>	<i>40-150</i>			

Matrix Spike Dup (BFH0500-MSD1)	Source: 2208304-01			Prepared: 08/24/22 Analyzed: 08/25/22						
Acenaphthene	0.0203	0.00500	mg/kg	0.0333	ND	60.8	31-137	23.0	30	
Anthracene	0.0211	0.00500	"	0.0333	ND	63.2	30-120	2.95	30	
Benzo (a) anthracene	0.0159	0.00500	"	0.0333	ND	47.7	30-120	1.61	30	
Benzo (a) pyrene	0.0191	0.00500	"	0.0333	ND	57.2	30-120	8.75	30	
Benzo (b) fluoranthene	0.0226	0.00500	"	0.0333	ND	67.9	30-120	0.261	30	
Benzo (k) fluoranthene	0.0269	0.00500	"	0.0333	ND	80.8	30-120	4.96	30	
Chrysene	0.0202	0.00500	"	0.0333	ND	60.6	30-120	0.0181	30	
Dibenz (a,h) anthracene	0.0156	0.00500	"	0.0333	ND	46.8	30-120	11.7	30	
Fluoranthene	0.0194	0.00500	"	0.0333	ND	58.3	30-120	9.73	30	
Fluorene	0.0190	0.00500	"	0.0333	ND	56.9	30-120	22.7	30	
Indeno (1,2,3-cd) pyrene	0.0158	0.00500	"	0.0333	ND	47.4	30-120	0.213	30	
Pyrene	0.0333	0.00500	"	0.0333	ND	100	35-142	6.52	30	
1-Methylnaphthalene	0.0186	0.00500	"	0.0333	ND	55.8	15-130	3.20	50	
2-Methylnaphthalene	0.0189	0.00500	"	0.0333	ND	56.8	15-130	13.1	50	
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0189</i>		<i>"</i>	<i>0.0333</i>		<i>56.7</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0169</i>		<i>"</i>	<i>0.0333</i>		<i>50.7</i>	<i>40-150</i>			

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Odle BB19-11

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 09/06/22 09:29

Total Metals by EPA 6020B Hot Water Soluble Extraction - Quality Control
Summit Scientific

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

Batch BFH0576 - EPA 3050B

Blank (BFH0576-BLK1)

Prepared: 08/26/22 Analyzed: 08/27/22

Boron ND 0.0100 mg/L

LCS (BFH0576-BS1)

Prepared: 08/26/22 Analyzed: 08/27/22

Boron 5.41 0.0100 mg/L 5.00 108 80-120

Duplicate (BFH0576-DUP1)

Source: 2208304-01

Prepared: 08/26/22 Analyzed: 08/27/22

Boron 0.0966 0.0100 mg/L 0.102 5.44 20

Matrix Spike (BFH0576-MS1)

Source: 2208304-01

Prepared: 08/26/22 Analyzed: 08/27/22

Boron 5.39 0.0100 mg/L 5.00 0.102 106 75-125

Matrix Spike Dup (BFH0576-MSD1)

Source: 2208304-01

Prepared: 08/26/22 Analyzed: 08/27/22

Boron 5.49 0.0100 mg/L 5.00 0.102 108 75-125 1.86 25

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Odle BB19-11

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 09/06/22 09:29

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

Summit Scientific

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

Batch BFH0612 - General Preparation

Blank (BFH0612-BLK1)

Prepared: 08/29/22 Analyzed: 08/31/22

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

LCS (BFH0612-BS1)

Prepared: 08/29/22 Analyzed: 08/31/22

Calcium	5.18	0.0500	mg/L wet	5.00	104	70-130				
Magnesium	4.93	0.0500	"	5.00	98.7	70-130				
Sodium	4.69	0.0500	"	5.00	93.8	70-130				

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Odle BB19-11

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 09/06/22 09:29

Anions by EPA Method 300.0 - Quality Control

Summit Scientific

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

Batch BFH0510 - General Preparation

Blank (BFH0510-BLK1)

Prepared & Analyzed: 08/24/22

Chloride	ND	0.0600	mg/L							
Sulfate	ND	0.300	"							

LCS (BFH0510-BS1)

Prepared & Analyzed: 08/24/22

Chloride	2.99	0.0600	mg/L	3.00	99.8	90-110				
Sulfate	15.4	0.300	"	15.0	103	90-110				

Duplicate (BFH0510-DUP1)

Source: 2208297-01

Prepared & Analyzed: 08/24/22

Chloride	82.2	12.0	mg/L		94.4		13.8	20		
Sulfate	214	60.0	"		161		28.0	20		QR-04

Matrix Spike (BFH0510-MS1)

Source: 2208297-01

Prepared & Analyzed: 08/24/22

Chloride	649	12.0	mg/L	600	94.4	92.5	80-120			
Sulfate	3310	60.0	"	3000	161	105	80-120			

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Odle BB19-11

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 09/06/22 09:29

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

Summit Scientific

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

Batch BFH0516 - General Preparation

Duplicate (BFH0516-DUP1)

Source: 2208304-01

Prepared & Analyzed: 08/24/22

% Solids	81.6		%		80.9			0.789		20	
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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Odle BB19-11

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 09/06/22 09:29

Total Dissolved Solids by SM2540C - Quality Control
Summit Scientific

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

Batch BFH0493 - General Preparation

Blank (BFH0493-BLK1)

Prepared & Analyzed: 08/23/22

Total Dissolved Solids ND 10.0 mg/L

Duplicate (BFH0493-DUP1)

Source: 2208290-01

Prepared & Analyzed: 08/23/22

Total Dissolved Solids 1280 10.0 mg/L 1260 2.20 20

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Odle BB19-11

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 09/06/22 09:29

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

Summit Scientific

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

Batch BFH0647 - General Preparation

Blank (BFH0647-BLK1)

Prepared: 08/30/22 Analyzed: 08/31/22

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BFH0647-BS1)

Prepared: 08/30/22 Analyzed: 08/31/22

Specific Conductance (EC) 0.158 0.0100 mmhos/cm 0.150 105 95-105

Duplicate (BFH0647-DUP1)

Source: 2208303-01

Prepared: 08/30/22 Analyzed: 08/31/22

Specific Conductance (EC) 3.73 0.0100 mmhos/cm 3.74 0.268 20

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Odle BB19-11

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 09/06/22 09:29

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

Summit Scientific

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

Batch BFH0648 - General Preparation

LCS (BFH0648-BS1)

Prepared: 08/30/22 Analyzed: 08/31/22

pH 8.93 pH Units 9.18 97.3 95-105

Duplicate (BFH0648-DUP1)

Source: 2208303-01

Prepared: 08/30/22 Analyzed: 08/31/22

pH 7.68 pH Units 7.67 0.130 20

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Odle BB19-11

Project Number: [none]
Project Manager: Paul Henchan

Reported:
09/06/22 09:29

Notes and Definitions

- QR-04 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
- I-03 This sample was recieved and analyzed outside of the recommended holding time.
- 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