

# **FREMONT ENVIRONMENTAL INC.**

November 9, 2022

Mr. Daniel Peterson  
Noble Energy Inc.  
2115 117<sup>th</sup> 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)**

# Tank Battery Closure Checklist

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

Additional attachments (optional):		Pit Closure		Wellhead Closure		Flowline Closure		Partially Buried Vault Closure
Site Name & COGCC Facility Number:		Date:						Remediation Project #:
Associated Wells:		Age of Site:						Number of Photos Attached:
Location: (GPS coordinates of southeaster berm)								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)								
<b>Tanks</b>								
Tank Contents								
Size (barrels)								
Age								
Construction Material								
Tank type (AST/DRU, etc.)								
Visual Integrity of Tank								
Condition of tank footprint								
PID Readings								
Soil impacts present at valves or hatches?								
PID Readings								
Sample taken? Location/ Sample ID#								
Photo Number(s)								
Other observations regarding tanks:								
<b>Separators</b>								
Separator size								
Vertical or Horizontal								
Age								
Soil impacts observed? If yes,								
PID Readings								
Sample taken? Location/ Sample ID#								
Photo Number(s)								
Other observations regarding separators								
<b>Third Party Equipment</b>								
Type								
Age								

Third Party														
Removal Date														
Sample taken?														
PID Readings														
Photo Number(s)														
<b>Other Facility Equipment</b>														
Equipment type														
Equipment Condition														
Age														
Soil impacts observed during														
PID Readings														
Sample taken?														
Photo Number(s)														
Other observations regarding other facility or third party equipment:														
<b>Summary</b>														
Was impacted soil identified?														
<div> <div>No</div> <div>Yes - less than 10 cubic yards</div> <div>Yes - more than 10 cubic yards</div> </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> <div>No</div> <div>Yes - not impacted or in contact with impacted soils</div> <div>Yes - groundwater impacted and/or in contact with impacted soils</div> </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:														

## 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)								
<b>Buried or Partially Buried Vessels</b>								
Tank Contents								
Size (barrels)								
Age								
Construction Material								
Visual Integrity of Tank								
Condition of tank Foundation								
PID Readings								
Condition of Access Line								
PID Readings								
Sample taken? Location/Sample ID#								
Photo Number(s)								
Other observations regarding partially buried vessels:								
<b>Summary</b>								
Was impacted soil identified? <div style="display: flex; justify-content: space-between;"> <span>No</span> <span>Yes - less than 10 cubic yards</span> <span>Yes - more than 10 cubic yards</span> </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;"> <span>No</span> <span>Yes - not impacted or in contact with impacted soils</span> <span>Yes - groundwater impacted and/or in contact with impacted soils</span> </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	<b>9.34</b>	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

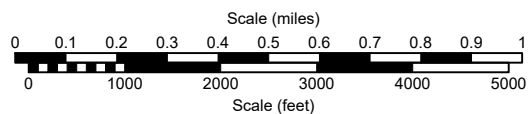
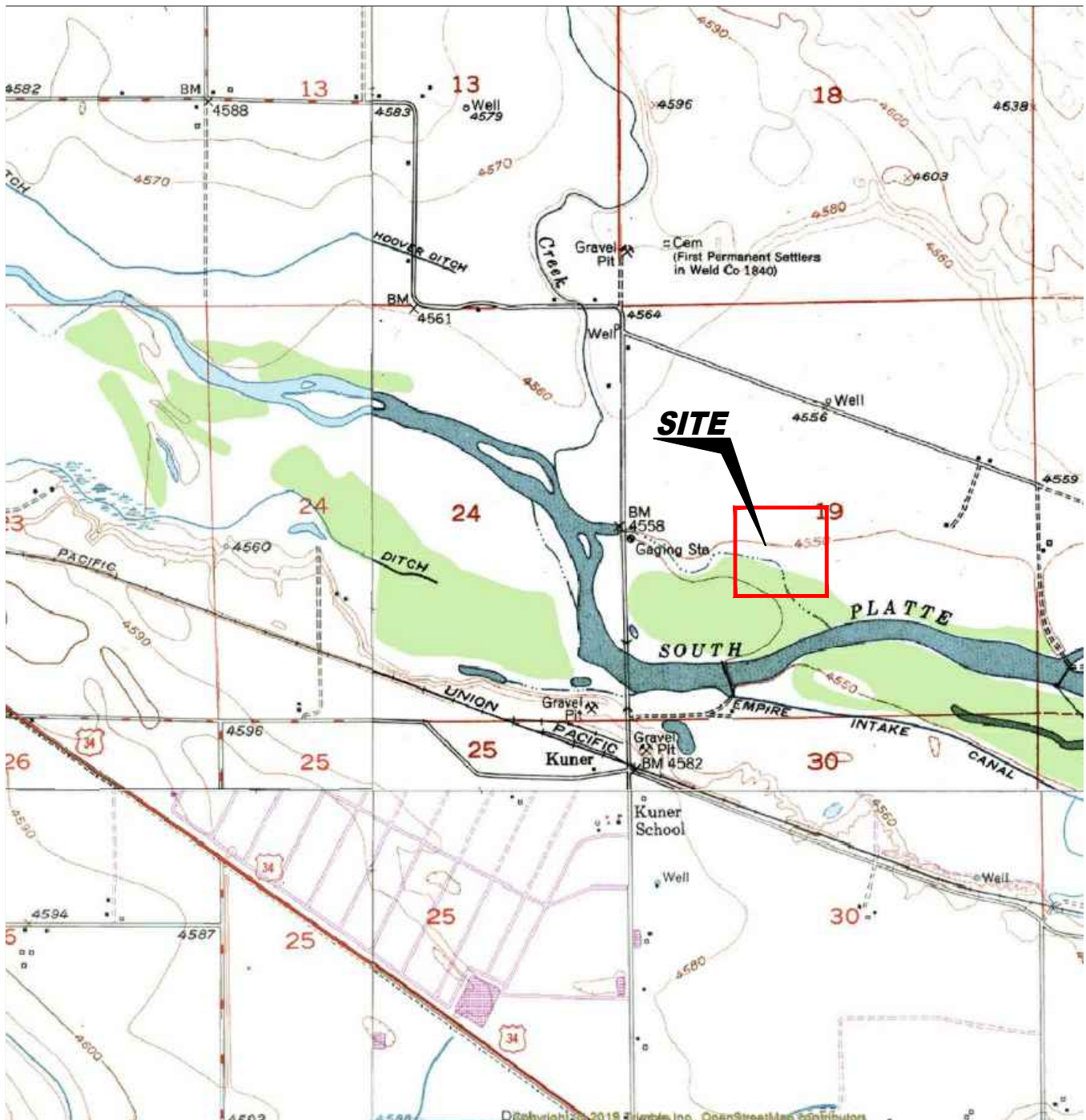
SAMPLE LOCATION	DATE	TOTAL DISSOLVED SOLIDS (mg/L)	CHLORIDE ION (mg/L)	SULFATE ION (mg/L)
Sep	08/16/2022	713	58.4	164
Table 915-1 Limits		<1.25 x local background	250	250

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





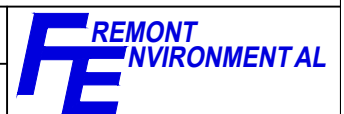
**LEGEND**

	ABOVE GROUND STORAGE TANK		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. <b>C022-103</b>	API #	Facility # <b>328087</b>
Date <b>11/29/22</b>	Remediation # <b>23224</b>	Filename <b>22103QTB</b>







## Photo Log



***Description:***

--

# Photo Log



***Description:***

--

# Photo Log



***Description:***

--

# Photo Log



***Description:***

--



# Photo Log



***Description:***

--

# Photo Log



***Description:***

--

# Photo Log



***Description:***

--

# Photo Log



***Description:***

--

# Photo Log



***Description:***

--

# Photo Log



***Description:***

--

# Photo Log



***Description:***

--

# Photo Log



***Description:***

--



# Photo Log



***Description:***

--

# Photo Log



***Description:***

--

# Photo Log



***Description:***

--

# Photo Log



***Description:***

--

# Photo Log



***Description:***

--

# Photo Log



***Description:***

--

# Photo Log



***Description:***

--

# Photo Log



***Description:***

--



# 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 BD 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																	
3	PWV - FLOOR 3FT			1																	
4	SEP - E WALL 2FT			1																	
5	FLO1 - W WALL 2FT			1																	
6	FLO6 - FLOOR 2FT			1																	
7	SEP			4																	
8	FLO1			4																	
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)	Notes:
Relinquished by:	Date/Time:	Received by:	Date/Time:	Same Day <input type="checkbox"/>	
				24 hours <input type="checkbox"/>	
				48 hours <input type="checkbox"/>	72 hours <input type="checkbox"/>
				Standard <input checked="" type="checkbox"/>	
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 <input type="checkbox"/>	

S<sub>2</sub>

2208304

## Sample Receipt Checklist

S2 Work Order#

Client: Fremont Client Project ID: Noble-Adle BB 19-11Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other Airbill #: 

	-			
--	---	--	--	--

Matrix (Check all that apply) Air ☐ Soil/Solid ☐ Water ☒ Other ☐Temp (°C) 8.0Thermometer # 1

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature $< 6^{\circ}\text{C}$ <sup>(1)</sup> ? 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 <sup>(1)</sup> ?	-			
Was adequate sample volume provided <sup>(1)</sup> ?	-			
If custody seals are present, are they intact <sup>(1)</sup> ?	-			
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 ( $\text{Fe}^{2+}$ ), Hexavalent Chromium ( $\text{Cr}^{6+}$ , 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 <sup>(1)</sup> ?	-			
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	-			
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	-			
Is the COC properly relinquished by the client w/ date and time recorded <sup>(1)</sup> ?	-			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.		-		
Are samples preserved that require preservation (excluding cooling) <sup>(1)</sup> ? Note the type of preservative in the comments column – HCl, $\text{H}_2\text{SO}_4$ , NaOH, $\text{HNO}_3$ , etc.			-	
If samples are acid preserved for metals, is the $\text{pH} \leq 2$ <sup>(1)</sup> ? Record the pH in Comments.			-	
If dissolved metals are requested, were samples field filtered?			-	
Additional Comments (if any):				

<sup>(1)</sup> If NO, then contact the client before proceeding with analysis and note in case narrative.
  
 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		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
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		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
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		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	<b>140</b>	50	mg/kg	1	BFH0509	08/24/22	08/25/22	EPA 8015M	
C28-C36 (ORO)	<b>62</b>	50	"	"	"	"	"	"	

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

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

**PAH by EPA Method 8270D SIM**

Summit Scientific

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



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: 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
<b>Boron</b>	<b>0.102</b>	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
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

Summit Scientific

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



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: 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**

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

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



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: 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	"	"	"	"	"	"	
<b>1,3,5-Trimethylbenzene</b>	<b>0.070</b>	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>10</b>	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
<b>C10-C28 (DRO)</b>	<b>59</b>	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

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





Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: 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	"	"	"	"	"	"	
<b>Chrysene</b>	<b>0.00926</b>	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
<b>Fluorene</b>	<b>0.0559</b>	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
<b>Pyrene</b>	<b>0.00522</b>	0.00500	"	"	"	"	"	"	
<b>1-Methylnaphthalene</b>	<b>0.0473</b>	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
<b>Boron</b>	<b>0.248</b>	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
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

Summit Scientific

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



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: 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**

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

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



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

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

**PAH by EPA Method 8270D SIM**

Summit Scientific

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



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: 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	"	"	"	"	"	"	
<b>Benzo (a) anthracene</b>	<b>0.00992</b>	0.00500	"	"	"	"	"	"	
<b>Benzo (a) pyrene</b>	<b>0.0115</b>	0.00500	"	"	"	"	"	"	
<b>Benzo (b) fluoranthene</b>	<b>0.0121</b>	0.00500	"	"	"	"	"	"	
<b>Benzo (k) fluoranthene</b>	<b>0.00536</b>	0.00500	"	"	"	"	"	"	
<b>Chrysene</b>	<b>0.0111</b>	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
<b>Fluoranthene</b>	<b>0.0124</b>	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
<b>Pyrene</b>	<b>0.0217</b>	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
<b>Boron</b>	<b>0.580</b>	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
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

Summit Scientific

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



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: 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**

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

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



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

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

**PAH by EPA Method 8270D SIM**

Summit Scientific

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



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: 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
<b>Boron</b>	<b>0.275</b>	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
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

Summit Scientific

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



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: 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**

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	

Summit Scientific

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





Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

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

**PAH by EPA Method 8270D SIM**

Summit Scientific

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



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: 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	

Summit Scientific

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



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: 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**

<b>Magnesium</b>	<b>183</b>	0.0598	mg/L dry	1	BFH0612	08/29/22	08/31/22	EPA 6020B
<b>Sodium</b>	<b>909</b>	0.0598	"	"	"	"	"	"

**Calculated Analysis**

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Sodium Adsorption Ratio</b>	<b>11.6</b>	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
<b>% Solids</b>	<b>83.6</b>		%	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
<b>Specific Conductance (EC)</b>	<b>6.19</b>	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
<b>pH</b>	<b>7.90</b>		pH Units	1	BFH0648	08/30/22	08/31/22	EPA 9045D	

Summit Scientific

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



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: 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	<b>58.4</b>	12.0	mg/L	200	BFH0510	08/24/22	08/24/22	EPA 300.0	
Sulfate	<b>164</b>	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	<b>713</b>	10.0	mg/L	1	BFH0493	08/23/22	08/23/22	SM2540C	I-03

Summit Scientific

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



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

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

Summit Scientific

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



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: 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	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

#### 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	"							
Surrogate: 1,2-Dichloroethane-d4	0.0366		"	0.0400		91.4	50-150			
Surrogate: Toluene-d8	0.0438		"	0.0400		109	50-150			
Surrogate: 4-Bromofluorobenzene	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			
Surrogate: 1,2-Dichloroethane-d4	0.0352		"	0.0400		88.0	50-150			
Surrogate: Toluene-d8	0.0436		"	0.0400		109	50-150			
Surrogate: 4-Bromofluorobenzene	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			
Surrogate: 1,2-Dichloroethane-d4	0.0359		"	0.0400		89.8	50-150			
Surrogate: Toluene-d8	0.0441		"	0.0400		110	50-150			
Surrogate: 4-Bromofluorobenzene	0.0427		"	0.0400		107	50-150			

Summit Scientific

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



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: 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	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

#### 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	
<hr/>										
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	"							
<hr/>										
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			
<hr/>										
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

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



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: 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	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

**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			

Summit Scientific

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





Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: 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	
		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
---------------	-----	----	-------	-----	------	--------

**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
---------------	-----	----	-------	-----	------	------	--------

**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
---------------	-----	----	-------	-----	------	------	--------	-------	----

Summit Scientific

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



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: 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

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

#### 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			

Summit Scientific

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



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: 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	
	Result	Limit	Units	Level		Result	%REC	Limits	RPD	Limit	Notes

#### 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				
Surrogate: 2-Methylnaphthalene-d10	0.0196		"	0.0333		58.7	40-150				
Surrogate: Fluoranthene-d10	0.0154		"	0.0333		46.1	40-150				

##### 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		
Surrogate: 2-Methylnaphthalene-d10	0.0189		"	0.0333		56.7	40-150				
Surrogate: Fluoranthene-d10	0.0169		"	0.0333		50.7	40-150				

Summit Scientific

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



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: 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	Source	%REC		RPD		Notes
		Limit	Units	Level	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

Summit Scientific

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



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

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

**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

Summit Scientific

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



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

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

#### 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

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



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: 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	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

**Batch BFH0516 - General Preparation**

**Duplicate (BFH0516-DUP1)**

**Source: 2208304-01**

**Prepared & Analyzed: 08/24/22**

% Solids	81.6	%		80.9		0.789	20
----------	------	---	--	------	--	-------	----

Summit Scientific

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



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: 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	Source	%REC		RPD		Notes
		Limit	Units	Level	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

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





Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: 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	
		Limit	Units		Result	%REC	Limits	RPD	Limit	Notes

**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

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



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: 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 Level	Source Result	%REC		RPD		Notes
		Limit	Units			%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
----	------	----------	------	-------	----

Summit Scientific

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



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: 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