

# **FREMONT ENVIRONMENTAL INC.**

March 3, 2024

Mr. Daniel Peterson  
Noble Energy Inc.  
2115 117<sup>th</sup> Avenue  
Greeley, CO 80634

Subject:       **Flowline Closure Data Submittal**  
Donaldson USX EE29-06D  
API # 05-123-33669  
SWNW Sec. 29, T7N, R65W  
Weld County, Colorado  
Fremont Project No. C023-249  
Remediation # 29728

Dear Mr. Peterson:

As you requested, Fremont Environmental Inc. (Fremont) personnel conducted flowline closure activities for the Noble Energy Inc. (Noble) Donaldson USX EE29-06D. Impacted soil was encountered during abandonment activities. Details of the Donaldson USX EE29-06D closure activities are documented in the attached Closure Report. Groundwater was not encountered during flowline abandonment activities.

Please contact me at (303) 261-6246 if you require any additional information. Fremont appreciates the opportunity to provide this service.

Sincerely,

**FREMONT ENVIRONMENTAL INC.**



Stanley Gilbert  
Environmental Scientist

Attachments:

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

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

# Flowline Closure Checklist

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

Additional Attachments:		Tank Battery Closure		Wellhead Closure		Pit Closure		Partially Buried Vault Closure
Site Name & COGCC Facility Number: Donaldson USX EE29-06D		Date: 09/14/2023						Remediation Project #: 29728
Associated Wells: API:05-123-33669		Age of Site: 2011						Number of Photos Attached: 6
Starting point: (GPS coordinates and descriptions) 40.549529, -104.695092								
End point: (GPS coordinates and descriptions) 40.549401, -104.691890								
USCS Soil Type: SC					Estimated Depth to Groundwater: >6'			
Hydrocarbon Impacted Soils / Spills: (Note estimated size and if impact appears to be surficial or extends to an unknown depth) <b>Impacted soils encountered and extends to an unknown depth</b>								
Salt Crusted Soils or Impacted Vegetation: (Note estimated size and if impact appears to be surficial or extends to an unknown depth) <b>None observed</b>								
Flowlines								
Flowline type	OIL/Water/Gas							
Depth	5'- 6'							
Age	2011							
Length	982'							
Construction Material	Steel							
Were flowlines pulled?	Yes							
Visual Integrity of lines	Good							
Visual impacts if trenched	N/A							
PID Readings if trenched	N/A							
Sample taken? Location/Sample ID#	Yes, see attached							
Photo Number(s)	See attached							
Other observations regarding on location flowlines:								
Summary								
Was impacted soil identified? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes - less than 10 cubic yards <input type="checkbox"/> Yes - more than 10 cubic yards								
Total number of samples field screened: 5					Total number of samples collected: 6			
Highest PID Reading: 342ppm (FL01 5')					Total number of samples submitted to lab for analysis: 1			
If more than 10 cubic yards of impacted soil were observed:								
Vertical extent: Unknown					Estimated spill volume: Unknown			
Lateral extent: Unknown					Volume of soil removed: Unknown			
Is additional investigation required? <b>Yes, Site investigation required.</b>								
Was groundwater encountered during the investigation? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes - not impacted or in contact with impacted soils <input type="checkbox"/> Yes - groundwater impacted and/or in contact with impacted soils								
Measured depth to groundwater:					Was remedial groundwater removal conducted? Yes <input type="checkbox"/> No <input type="checkbox"/>			
Date Groundwater was encountered:					Commencement date of removal:			
Sheen on groundwater? <input type="checkbox"/> Yes <input type="checkbox"/> No					Volume of groundwater removed prior to sampling:			
Free product observed? <input type="checkbox"/> Yes <input type="checkbox"/> 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.  
DONALDSON USX EE29-06D, WELD COUNTY, COLORADO  
FREMONT PROJECT NO. C023-249

Sample ID	Sample Date	Depth (ft)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl- Benzene (mg/kg)	Xylenes (mg/kg)	1,2,4- Trimethyl- Benzene (mg/kg)	1,3,5- Trimethyl- Benzene (mg/kg)	Naphthalene (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)
ECMC Table 915-1 Limits (Residential SSL)			1.2	490	5.8	58	30	27	2	500**		
ECMC Table 915-1 Limits (Protection of Groundwater SSL)			0.0026	0.69	0.78	9.9	0.0081	0.0087	0.0038	500**		
FL01 5'	09/14/2023	5.0 FT	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	12	670	160

Bold faced values exceed the COGCC Table 915-1 concentrations

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

\* Indicates laboratory minimum detection limit in excess of SSL

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

NA - Not analyzed

TABLE 2  
SUMMARY OF POLYCYCLIC AROMATIC HYDROCARBON SOIL CHEMISTRY DATA  
NOBLE ENERGY INC.  
DONALDSON USX EE29-06D, WELD COUNTY, COLORADO  
FREMONT PROJECT NO. C023-249

Sample ID	Sample Date	Depth (ft)	Acenaphthene (mg/kg)	Anthracene (mg/kg)	Benzo (a) Anthracene (mg/kg)	Benzo (a) Pyrene (mg/kg)	Benzo (b) Fluoranthene (mg/kg)	Benzo (k) Fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo (a,h) Anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) Pyrene (mg/kg)	Pyrene (mg/kg)	1-Methyl - Naphthalene (mg/kg)	2-Methyl- Naphthalene (mg/kg)
ECMC Table 915-1 Limits (Residential SSL)			360	1800	1.1	0.11	1.1	11	110	0.11	240	240	1.1	180	18	24
ECMC Table 915-1 Limits (Protection of Groundwater SSL)			0.55	5.8	0.011	0.24	0.3	2.9	9	0.096	8.9	0.54	0.98	1.3	0.006	0.019
FL01 5'	09/14/2023	5.0 FT	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0135	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0164	<0.00500

Bold faced values exceed the COGCC Table 915-1 concentrations  
Red & blue highlighted 915-1 Limits indicate the referenced soil screening level (SSL)  
\* Indicates laboratory minimum detection limit in excess of SSL  
NA - Not analyzed

**TABLE 3**  
**SUMMARY OF SOIL SUITABILITY FOR RECLAMATION**  
**NOBLE ENERGY INC.**  
**DONALDSON USX EE29-06D, WELD COUNTY, COLORADO**  
**FREMONT PROJECT NO. C023-249**

Sample ID	Sample Date	Depth (ft)	pH	EC (mmhos/cm)	SAR	Boron (mg/L)
ECMC Table 915-1 Soil Suitability Limits			6 - 8.3	<4	<6	2
FL01 5'	09/14/2023	5.0 FT	7.80	0.312	0.241	0.117
BKG01 5'	09/14/2023	5.0 FT	8.08	1.14	2.10	0.266

Bold faced values exceed the COGCC Table 915-1 concentrations

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

NA - Not analyzed

TABLE 4  
SUMMARY OF METALS IN SOIL CHEMISTRY DATA  
NOBLE ENERGY INC.  
DONALDSON USX EE29-06D, WELD COUNTY, COLORADO  
FREMONT PROJECT NO. C023-249

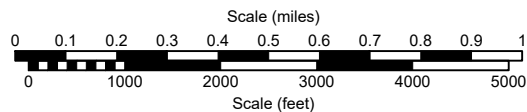
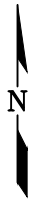
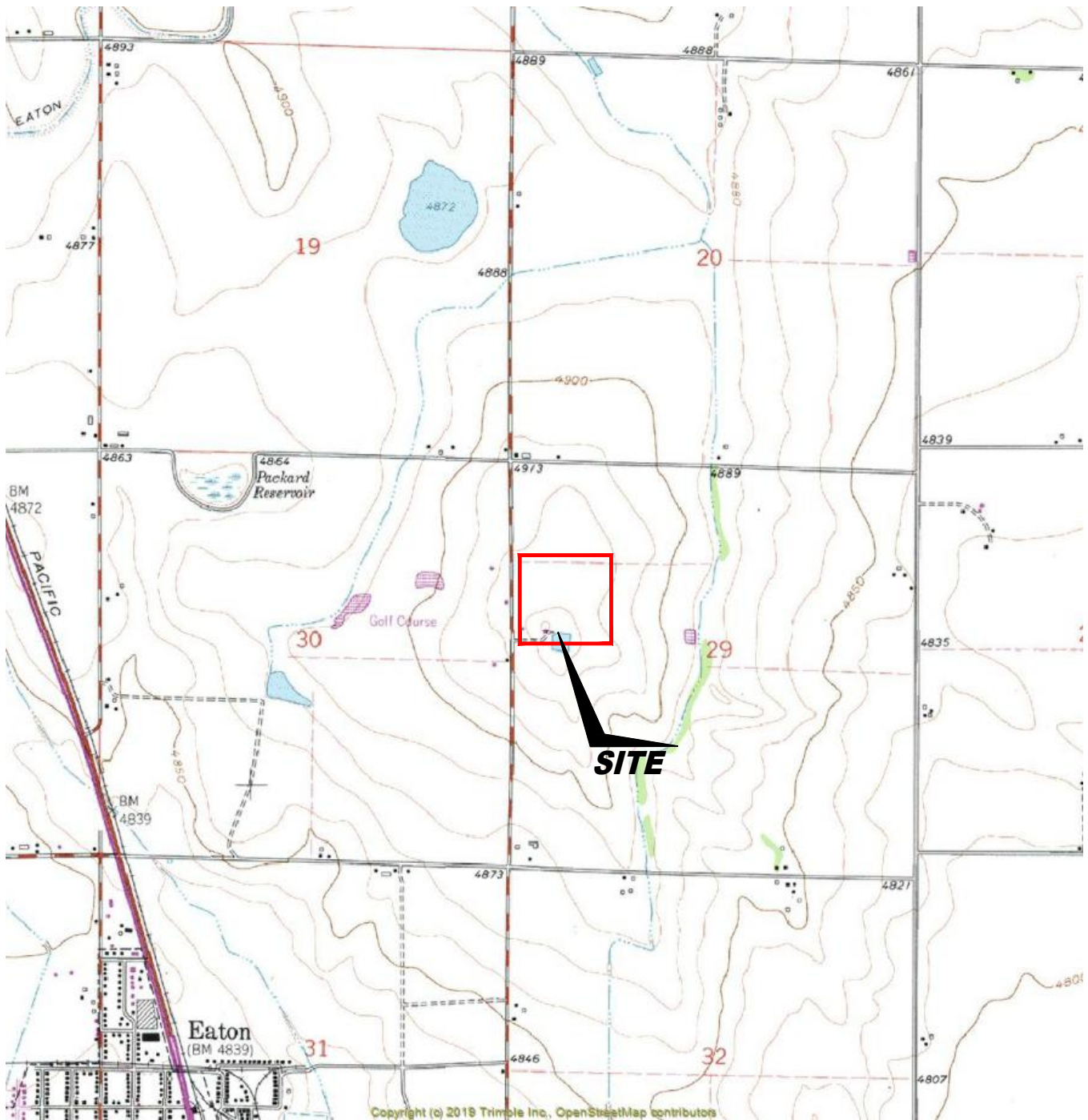
Sample ID	Sample Date	Depth (ft)	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromium (VI) (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Zinc (mg/kg)
ECMC Table 915-1 Limits (Residential SSL)			0.68	15000	71	0.3	3100	400	1500	390	390	23000
ECMC Table 915-1 Limits (Protection of Groundwater SSL)			0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370
FL01 5'	09/14/2023	5.0 FT	<b>1.83</b>	<b>109</b>	0.275	<0.30	5.87	7.03	5.12	<0.260	0.0282	21.5
BKG01 5'	09/14/2023	5.0 FT	<b>3.20</b>	<b>127</b>	<b>0.392</b>	<0.30	7.26	8.85	5.88	<0.260	0.0358	25.5

Bold faced values exceed the COGCC Table 915-1 concentrations

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

\* Indicates laboratory minimum detection limit in excess of SSL

NA - Not analyzed



USGS 7.5 MINUTE SERIES (TOPOGRAPHIC)

Figure 1

**SITE LOCATION MAP**

**DONALDSON USX EE29-06D ~ NOBLE ENERGY INC**

SWNW Sec. 29, T7N, R65W, 6th PM

Weld County, Colorado

40.549550°, -104.695090°

Project # <b>C023-249</b>	API # <b>05-123-33669</b>	Facility #
Date <b>4/9/24</b>	Remediation # <b>29728</b>	Filename <b>23249T</b>





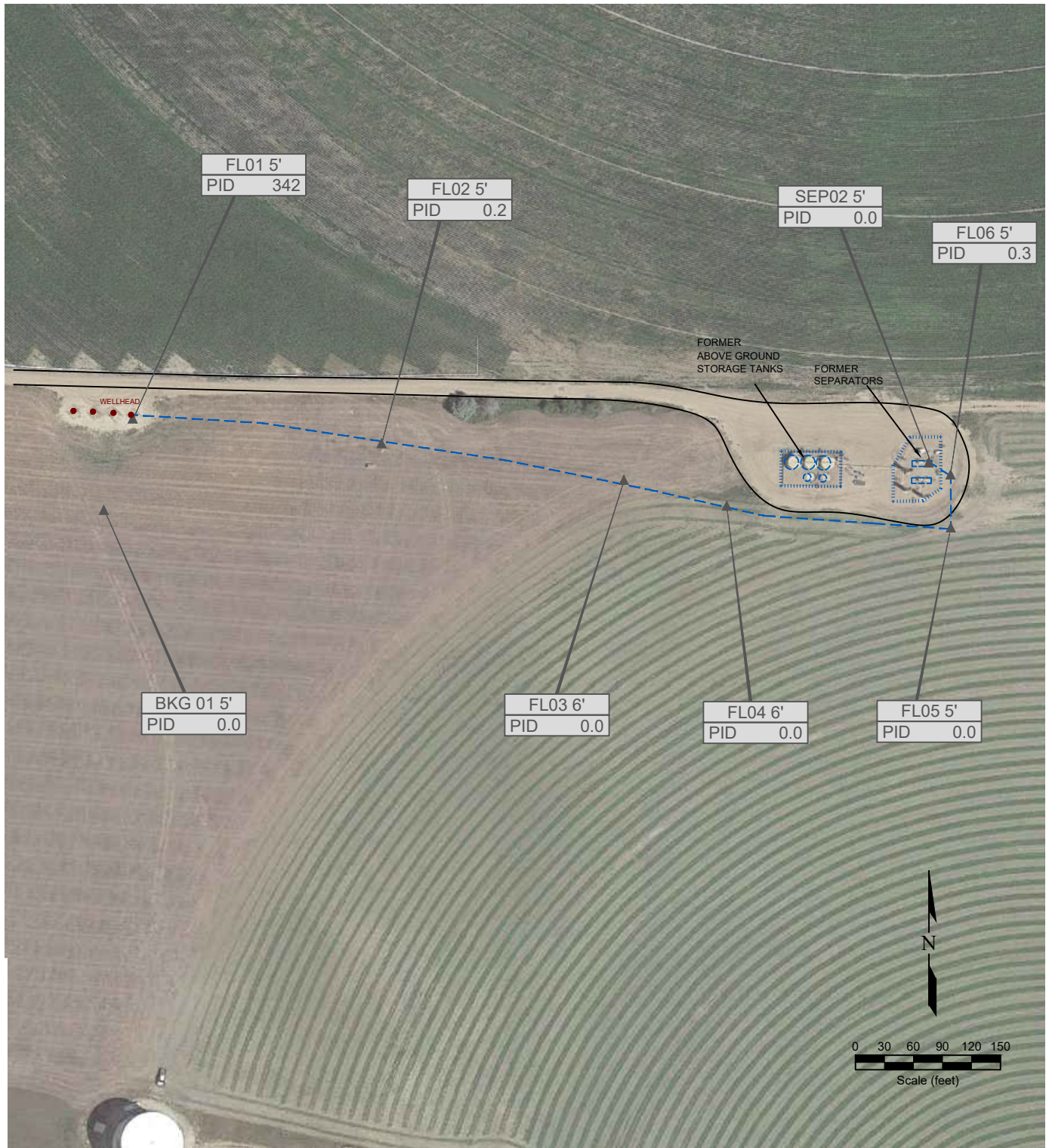


Figure 2  
SITE MAP

**DONALDSON USX EE29-06D ~ NOBLE ENERGY INC**

SWNW Sec. 29, T7N, R65W, 6th PM  
Weld County, Colorado  
40.549550°, -104.695090°

Project No. <b>C023-249</b>	API # <b>05-123-33669</b>	Facility #
Date <b>5/13/24</b>	Remediation # <b>29728</b>	Filename <b>23249Q</b>







09/14/2024		09/14/2023	
BKQ01 5'		BKQ01 5'	
As	3.20	SAR	2.10
BA	127	pH	8.08
CD	0.392	EC	1.14
CU	7.26	B	0.266
PB	8.85		
NI	5.88		
SE	<0.260		
AG	0.0358		
CR(VI)	<0.30		
Z	25.5		

09/14/2023		09/14/2023		09/14/2024		09/14/2023	
FL01 5'		FL01 5'		FL01 5'		FL01 5'	
ACE	<0.00500	B	<0.0020	As	1.83	SAR	0.241
Ant	<0.00500	T	<0.0050	BA	109	pH	7.80
BaA	<0.00500	E	<0.0050	CD	0.275	EC	0.312
BbF	<0.00500	X	<0.010	CU	5.87	B	0.117
BkF	<0.00500	124TMB	<0.0050	PB	7.03		
BaP	<0.00500	135TMB	<0.0050	NI	5.12		
Chr	0.0135	N	<0.0038	SE	<0.260		
DBahAnt	<0.00500	G	12	AG	0.0282		
FLU	<0.00500	D	670	CR(VI)	<0.30		
FL	<0.00500	O	160	Z	21.5		
1123cdPY	<0.00500						
1MN	0.0164						
2MN	<0.00500						
PY	<0.00500						

## LEGEND

03/24/2021		DATE SAMPLED		01/22/21		DATE SAMPLED		08/18/2022		DATE SAMPLED	
N Wall @ 3'		SAMPLE ID and DEPTH (ft)		N Wall @ 1'		SAMPLE ID and DEPTH (ft)		K-22-3-N-3 (3')		SAMPLE ID and DEPTH (ft)	
ACE	<0.005	ACENAPHTHENE (mg/kg)		SAR	83.78	SAR (units)		As	2.41	ARSENIC (mg/kg)	
Ant	<0.005	ANTHRACENE (mg/kg)		pH	9.4	pH (pH units)		BA	28.0	BARIUM (mg/kg)	
BaA	<0.005	BENZO (A) ANTHRACENE (mg/kg)		EC	3.34	EC (mmhos/cm)		Co	<0.0945	CADMIUM (mg/kg)	
BbF	<0.005	BENZO (B) FLUORANTHENE (mg/kg)		BORON	5.4	BORON (mg/L)		Cu	<0.45	COPPER (mg/kg)	
BkF	<0.005	BENZO (K) FLUORANTHENE (mg/kg)						Pb	150	LEAD (mg/kg)	
BaP	<0.005	BENZO (A) PYRENE (mg/kg)						NI	<0.135	NICKEL (mg/kg)	
Chr	<0.005	CHRYSENE (mg/kg)						Se	0.135	SELENIUM (mg/kg)	
DBahAnt	<0.005	DIBENZ (A,H) ANTHRACENE (mg/kg)						Ag	<0.0945	SILVER (mg/kg)	
FLU	<0.005	FLUORANTHENE (mg/kg)						Zn	<0.4	ZINC (mg/kg)	
FL	<0.005	FLUORENE (mg/kg)						Cr(VI)	<0.488	CHROMIUM (mg/kg)	
1123cdPY	<0.005	INDENO (1,2,3-CD) PYRENE (mg/kg)									
1-MN	<0.005	1-METHYLNAPHTHALENE (mg/kg)									
2-MN	<0.005	2-METHYLNAPHTHALENE (mg/kg)									
PY	<0.005	PYRENE (mg/kg)									

Figure 3

## SOIL CHEMISTRY MAP

DONALDSON USX EE29-06D ~ NOBLE ENERGY INC

SWNW Sec. 29, T7N, R65W, 6th PM  
Weld County, Colorado  
40.549550°, -104.695090°

Project No. <b>C023-249</b>	API # <b>05-123-33669</b>	Facility #
Date <b>4/9/24</b>	Remediation # <b>29728</b>	Filename <b>23249Q</b>







Figure 4  
**PROPOSED EXCAVATION MAP**  
**DONALDSON USX EE29-06D ~ NOBLE ENERGY INC**

SWNW Sec. 29, T7N, R65W, 6th PM  
 Weld County, Colorado  
 40.549550°, -104.695090°

Project No. <b>C023-249</b>	API # <b>05-123-33669</b>	Facility #
Date <b>4/9/24</b>	Remediation # <b>29728</b>	Filename <b>23249Q</b>



# Photo Log



***Description:***

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# Photo Log



***Description:***

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# Photo Log



***Description:***

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# Photo Log



***Description:***

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# Photo Log



***Description:***

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# Photo Log



***Description:***

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# Summit Scientific

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4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

September 26, 2023

Paul Henchan

Fremont Environmental

PO Box 1289

Wellington, CO 80549

RE: Noble - Donaldson USX EE 29-06D

Work Order #2309271

Enclosed are the results of analyses for samples received by Summit Scientific on 09/14/23 16:30. 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 - Donaldson USX EE 29-06D

Project Number: UWRWE-A2147-ABN  
Project Manager: Paul Henchan

**Reported:**  
09/26/23 10:21

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FL01 5'	2309271-01	Soil	09/14/23 11:28	09/14/23 16:30
BKG01 5'	2309271-02	Soil	09/14/23 11:50	09/14/23 16:30

Summit Scientific

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



4653 Table Mountain Drive  
Golden, CO 80403  
303-277-9310

Lab ID	Page 1 of 1
2309271	

Client: Fremont Environmental		Send Data To:		Send Invoice To:	
Address:		Project Manager: Paul Henchan		Company: Noble	
City/State/Zip:		E-Mail: Fremont Distribution List		Project Name/Location: Donaldson USX EE 29-06D	
Phone: 303-261-6246		Project Name: Donaldson USX EE 29-06D		AFE#:	
Sampler Name: Stanley Gilbert		Project Number:		PO/Billing Codes: UWRWE-A2147-ABN	
				Contact: Mike Montoya	

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested								Special Instructions
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEX, TMBs, Naph.	TPH	PAH (915)	EC, SAR, Ph, Boron	Metals (915)	TDS, Chloride, Sulfate	HOLD	
1	FLO1 5'	9/14/23	11:28	2			X			X			X	X	X	X	X			
2	BH601 5'	1	11:50	1			X			X			X		X	X	X			
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				
13																				
14																				
15																				

Relinquished by:	Date/Time: 9/14/23 16:00	Received by: Summit North	Date/Time: 9/14/23 16:00	TAT Business Days	Field DO	Notes:
Relinquished by:	Date/Time: 9/14/23 16:30	Received by:	Date/Time: 9/14/23 16:30	Same Day	Field EC	
Relinquished by: 32	Date/Time: 9/14/23 16:30	Received by:	Date/Time: 9/14/23 16:30	1 Day	Field ORP	
				2 Days	Field pH	
				3 Days	Field Temp.	
				Standard	Field Turb.	
Temperature Upon Receipt: 9.3	Corrected Temperature: 9	IR gun #:		HNO3 lot #:		

S<sub>2</sub>

## Sample Receipt Checklist

S2 Work Order# 2309271Client: Fremont

Client Project ID:

Donaldson USX EE29-060

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

Airbill #:

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

Matrix (Check all that apply)

Air

☐

Soil/Solid

☒

Water

☐

Other

☐

Temp (°C)

9.3

Thermometer #

1

	Yes	No	N/A	Comments (If any)
If samples require cooling, is the temperature < 6°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.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	no ice
If custody seals are present, are they intact? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples due within 48 hours present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe <sup>2+</sup> ), Hexavalent Chromium (Cr <sup>6+</sup> , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out Completely? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? <sup>(1)</sup>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	no time stamps
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling)? <sup>(1)</sup> Note the type of preservative in the comments column – HCl, H <sub>2</sub> SO <sub>4</sub> , NaOH, HNO <sub>3</sub> , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? <sup>(1)</sup> Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Comments (if any):				

<sup>(1)</sup> If NO, then contact the client before proceeding with analysis and note in case narrative.
AS  
Custodian Printed Name

9/14/23  
Date/Time

23





Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Donaldson USX EE 29-06D  
Project Number: UWRWE-A2147-ABN  
Project Manager: Paul Henchan

**Reported:**  
09/26/23 10:21

**FL01 5'**  
**2309271-01 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **09/14/23 11:28**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGI0507	09/18/23	09/20/23	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>12</b>	<b>0.50</b>		"	"	"	"	"	"	

Date Sampled: **09/14/23 11:28**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0422	106 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0401	100 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0610	153 %		50-150		"	"	"	"	S-02

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **09/14/23 11:28**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>C10-C28 (DRO)</b>	<b>670</b>	<b>50</b>		mg/kg	1	BGI0514	09/18/23	09/19/23	EPA 8015M	
<b>C28-C36 (ORO)</b>	<b>160</b>	<b>50</b>		"	"	"	"	"	"	

Date Sampled: **09/14/23 11:28**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	8.52	68.2 %		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 - Donaldson USX EE 29-06D  
Project Number: UWRWE-A2147-ABN  
Project Manager: Paul Henchan

**Reported:**  
09/26/23 10:21

**FL01 5'**  
**2309271-01 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **09/14/23 11:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGI0585	09/20/23	09/20/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
<b>Chrysene</b>	<b>0.0135</b>	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	"	"	"	"	"	"	
<b>1-Methylnaphthalene</b>	<b>0.0164</b>	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **09/14/23 11:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0290	87.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0224	67.1 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **09/14/23 11:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.117</b>	0.0100	mg/L	1	BGI0510	09/18/23	09/20/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **09/14/23 11:28**

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 - Donaldson USX EE 29-06D  
Project Number: UWRWE-A2147-ABN  
Project Manager: Paul Henchan

**Reported:**  
09/26/23 10:21

**FL01 5'**  
**2309271-01 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Arsenic	1.83	0.200	mg/kg dry	1	BGI0383	09/14/23	09/18/23	EPA 6020B
Barium	109	0.400	"	"	"	"	"	"
Cadmium	0.275	0.200	"	"	"	"	"	"
Copper	5.87	0.400	"	"	"	"	"	"
Lead	7.03	0.200	"	"	"	"	"	"
Nickel	5.12	0.400	"	"	"	"	"	"
Silver	0.0282	0.0200	"	"	"	"	"	"
Zinc	21.5	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **09/14/23 11:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGI0616	09/20/23	09/21/23	EPA 7196A	

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

Date Sampled: **09/14/23 11:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	41.8	0.0608	mg/L dry	1	BGI0578	09/20/23	09/22/23	EPA 6020B	
Magnesium	13.6	0.0608	"	"	"	"	"	"	
Sodium	7.02	0.0608	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **09/14/23 11:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.241	0.00100	units	1	BGI0681	09/22/23	09/22/23	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **09/14/23 11:28**

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 - Donaldson USX EE 29-06D  
Project Number: UWRWE-A2147-ABN  
Project Manager: Paul Henchan

**Reported:**  
09/26/23 10:21

**FL01 5'**  
**2309271-01 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

% Solids	82.3	%	1	BGI0560	09/19/23	09/19/23	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **09/14/23 11:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.312	0.0100	mmhos/cm	1	BGI0632	09/21/23	09/21/23	EPA 120.1	

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

Date Sampled: **09/14/23 11:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.80		pH Units	1	BGI0631	09/21/23	09/21/23	EPA 9045D	

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PO Box 1289  
Wellington CO, 80549

Project: Noble - Donaldson USX EE 29-06D  
Project Number: UWRWE-A2147-ABN  
Project Manager: Paul Henchan

**Reported:**  
09/26/23 10:21

**BKG01 5'**  
**2309271-02 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **09/14/23 11:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
<b>Boron</b>	<b>0.266</b>	0.0100	mg/L	1	BGI0510	09/18/23	09/20/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **09/14/23 11:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
<b>Arsenic</b>	<b>3.20</b>	0.200	mg/kg dry	1	BGI0383	09/14/23	09/18/23	EPA 6020B	
<b>Barium</b>	<b>127</b>	0.400	"	"	"	"	"	"	
<b>Cadmium</b>	<b>0.392</b>	0.200	"	"	"	"	"	"	
<b>Copper</b>	<b>7.26</b>	0.400	"	"	"	"	"	"	
<b>Lead</b>	<b>8.85</b>	0.200	"	"	"	"	"	"	
<b>Nickel</b>	<b>5.88</b>	0.400	"	"	"	"	"	"	
<b>Silver</b>	<b>0.0358</b>	0.0200	"	"	"	"	"	"	
<b>Zinc</b>	<b>25.5</b>	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **09/14/23 11:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGI0616	09/20/23	09/21/23	EPA 7196A	

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

Date Sampled: **09/14/23 11:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
<b>Calcium</b>	<b>61.9</b>	0.0613	mg/L dry	1	BGI0578	09/20/23	09/22/23	EPA 6020B	
<b>Magnesium</b>	<b>35.3</b>	0.0613	"	"	"	"	"	"	
<b>Sodium</b>	<b>83.6</b>	0.0613	"	"	"	"	"	"	

**Calculated Analysis**

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Donaldson USX EE 29-06D  
Project Number: UWRWE-A2147-ABN  
Project Manager: Paul Henchan

**Reported:**  
09/26/23 10:21

**BKG01 5'**  
**2309271-02 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **09/14/23 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.10	0.00100	units	1	BGI0681	09/22/23	09/22/23	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **09/14/23 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	81.6		%	1	BGI0560	09/19/23	09/19/23	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **09/14/23 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.14	0.0100	mmhos/cm	1	BGI0632	09/21/23	09/21/23	EPA 120.1	

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

Date Sampled: **09/14/23 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.08		pH Units	1	BGI0631	09/21/23	09/21/23	EPA 9045D	

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PO Box 1289  
Wellington CO, 80549

Project: Noble - Donaldson USX EE 29-06D  
Project Number: UWRWE-A2147-ABN  
Project Manager: Paul Henchan

**Reported:**  
09/26/23 10:21

## 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 BG10507 - EPA 5030 Soil MS

##### Blank (BG10507-BLK1)

Prepared: 09/18/23 Analyzed: 09/20/23

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0390		"	0.0400		97.6	50-150			
Surrogate: Toluene-d8	0.0398		"	0.0400		99.4	50-150			
Surrogate: 4-Bromofluorobenzene	0.0398		"	0.0400		99.5	50-150			

##### LCS (BG10507-BS1)

Prepared: 09/18/23 Analyzed: 09/20/23

Benzene	0.103	0.0020	mg/kg	0.100		103	70-130			
Toluene	0.101	0.0050	"	0.100		101	70-130			
Ethylbenzene	0.0991	0.0050	"	0.100		99.1	70-130			
m,p-Xylene	0.199	0.010	"	0.200		99.4	70-130			
o-Xylene	0.101	0.0050	"	0.100		101	70-130			
1,2,4-Trimethylbenzene	0.104	0.0050	"	0.100		104	70-130			
1,3,5-Trimethylbenzene	0.102	0.0050	"	0.100		102	70-130			
Naphthalene	0.0914	0.0038	"	0.100		91.4	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0387		"	0.0400		96.8	50-150			
Surrogate: Toluene-d8	0.0404		"	0.0400		101	50-150			
Surrogate: 4-Bromofluorobenzene	0.0408		"	0.0400		102	50-150			

##### Matrix Spike (BG10507-MS1)

Source: 2309266-01

Prepared: 09/18/23 Analyzed: 09/20/23

Benzene	0.0880	0.0020	mg/kg	0.100	ND	88.0	70-130			
Toluene	0.0800	0.0050	"	0.100	ND	80.0	70-130			
Ethylbenzene	0.0754	0.0050	"	0.100	ND	75.4	70-130			
m,p-Xylene	0.145	0.010	"	0.200	ND	72.7	70-130			
o-Xylene	0.0761	0.0050	"	0.100	ND	76.1	70-130			
1,2,4-Trimethylbenzene	0.0649	0.0050	"	0.100	ND	64.9	70-130			QM-07
1,3,5-Trimethylbenzene	0.0685	0.0050	"	0.100	ND	68.5	70-130			QM-07
Naphthalene	0.0616	0.0038	"	0.100	ND	61.6	70-130			QM-07
Surrogate: 1,2-Dichloroethane-d4	0.0403		"	0.0400		101	50-150			
Surrogate: Toluene-d8	0.0398		"	0.0400		99.4	50-150			
Surrogate: 4-Bromofluorobenzene	0.0395		"	0.0400		98.8	50-150			

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Donaldson USX EE 29-06D  
Project Number: UWRWE-A2147-ABN  
Project Manager: Paul Henchan

**Reported:**  
09/26/23 10:21

**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 BGI0507 - EPA 5030 Soil MS**

Matrix Spike Dup (BGI0507-MSD1)		Source: 2309266-01			Prepared: 09/18/23 Analyzed: 09/20/23					
Benzene	0.0830	0.0020	mg/kg	0.100	ND	83.0	70-130	5.89	30	
Toluene	0.0766	0.0050	"	0.100	ND	76.6	70-130	4.37	30	
Ethylbenzene	0.0776	0.0050	"	0.100	ND	77.6	70-130	2.78	30	
m,p-Xylene	0.152	0.010	"	0.200	ND	75.8	70-130	4.14	30	
o-Xylene	0.0779	0.0050	"	0.100	ND	77.9	70-130	2.34	30	
1,2,4-Trimethylbenzene	0.0708	0.0050	"	0.100	ND	70.8	70-130	8.66	30	
1,3,5-Trimethylbenzene	0.0732	0.0050	"	0.100	ND	73.2	70-130	6.60	30	
Naphthalene	0.0658	0.0038	"	0.100	ND	65.8	70-130	6.45	30	QM-07
Surrogate: 1,2-Dichloroethane-d4		0.0399	"	0.0400		99.8	50-150			
Surrogate: Toluene-d8		0.0395	"	0.0400		98.7	50-150			
Surrogate: 4-Bromofluorobenzene		0.0401	"	0.0400		100	50-150			

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PO Box 1289  
Wellington CO, 80549

Project: Noble - Donaldson USX EE 29-06D  
Project Number: UWRWE-A2147-ABN  
Project Manager: Paul Henchan

**Reported:**  
09/26/23 10:21

**Extractable Petroleum Hydrocarbons by 8015 - Quality Control**  
**Summit Scientific**

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

**Batch BGI0514 - EPA 3550A**

**Blank (BGI0514-BLK1)**

Prepared: 09/18/23 Analyzed: 09/19/23

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: o-Terphenyl	11.5		"	12.5		92.1	30-150			

**LCS (BGI0514-BS1)**

Prepared: 09/18/23 Analyzed: 09/19/23

C10-C28 (DRO)	440	50	mg/kg	500		88.1	70-130			
Surrogate: o-Terphenyl	11.3		"	12.5		90.2	30-150			

**Matrix Spike (BGI0514-MS1)**

Source: 2309266-01

Prepared: 09/18/23 Analyzed: 09/19/23

C10-C28 (DRO)	455	50	mg/kg	500	25.5	85.9	70-130			
Surrogate: o-Terphenyl	8.54		"	12.5		68.3	30-150			

**Matrix Spike Dup (BGI0514-MSD1)**

Source: 2309266-01

Prepared: 09/18/23 Analyzed: 09/19/23

C10-C28 (DRO)	336	50	mg/kg	500	25.5	62.0	70-130	30.2	20	QM-07
Surrogate: o-Terphenyl	7.88		"	12.5		63.0	30-150			

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Wellington CO, 80549

Project: Noble - Donaldson USX EE 29-06D  
Project Number: UWRWE-A2147-ABN  
Project Manager: Paul Henchan

**Reported:**  
09/26/23 10:21

## 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 BGI0585 - EPA 5030 Soil MS

##### Blank (BGI0585-BLK1)

Prepared & Analyzed: 09/20/23

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
Surrogate: 2-Methylnaphthalene-d10	0.0450		"	0.0333		135	40-150			
Surrogate: Fluoranthene-d10	0.0330		"	0.0333		98.9	40-150			

##### LCS (BGI0585-BS1)

Prepared & Analyzed: 09/20/23

Acenaphthene	0.0333	0.00500	mg/kg	0.0333		99.8	31-137			
Anthracene	0.0329	0.00500	"	0.0333		98.6	30-120			
Benzo (a) anthracene	0.0318	0.00500	"	0.0333		95.3	30-120			
Benzo (a) pyrene	0.0331	0.00500	"	0.0333		99.4	30-120			
Benzo (b) fluoranthene	0.0342	0.00500	"	0.0333		103	30-120			
Benzo (k) fluoranthene	0.0344	0.00500	"	0.0333		103	30-120			
Chrysene	0.0327	0.00500	"	0.0333		98.2	30-120			
Dibenz (a,h) anthracene	0.0303	0.00500	"	0.0333		91.0	30-120			
Fluoranthene	0.0353	0.00500	"	0.0333		106	30-120			
Fluorene	0.0338	0.00500	"	0.0333		101	30-120			
Indeno (1,2,3-cd) pyrene	0.0232	0.00500	"	0.0333		69.5	30-120			
Pyrene	0.0326	0.00500	"	0.0333		97.7	35-142			
1-Methylnaphthalene	0.0382	0.00500	"	0.0333		115	35-142			
2-Methylnaphthalene	0.0320	0.00500	"	0.0333		96.1	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0317		"	0.0333		95.0	40-150			
Surrogate: Fluoranthene-d10	0.0351		"	0.0333		105	40-150			

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PO Box 1289  
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Project: Noble - Donaldson USX EE 29-06D  
Project Number: UWRWE-A2147-ABN  
Project Manager: Paul Henchan

**Reported:**  
09/26/23 10:21

## PAH by EPA Method 8270D SIM - Quality Control

### Summit Scientific

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

#### Batch BGI0585 - EPA 5030 Soil MS

##### Matrix Spike (BGI0585-MS1)

Source: 2309270-01

Prepared & Analyzed: 09/20/23

Acenaphthene	0.0222	0.00500	mg/kg	0.0333	ND	66.7	31-137			
Anthracene	0.0217	0.00500	"	0.0333	ND	65.1	30-120			
Benzo (a) anthracene	0.0206	0.00500	"	0.0333	ND	61.8	30-120			
Benzo (a) pyrene	0.0217	0.00500	"	0.0333	ND	65.2	30-120			
Benzo (b) fluoranthene	0.0234	0.00500	"	0.0333	ND	70.3	30-120			
Benzo (k) fluoranthene	0.0234	0.00500	"	0.0333	ND	70.2	30-120			
Chrysene	0.0230	0.00500	"	0.0333	ND	68.9	30-120			
Dibenz (a,h) anthracene	0.0209	0.00500	"	0.0333	ND	62.6	30-120			
Fluoranthene	0.0231	0.00500	"	0.0333	ND	69.2	30-120			
Fluorene	0.0231	0.00500	"	0.0333	ND	69.3	30-120			
Indeno (1,2,3-cd) pyrene	0.0210	0.00500	"	0.0333	ND	62.9	30-120			
Pyrene	0.0238	0.00500	"	0.0333	ND	71.4	35-142			
1-Methylnaphthalene	0.0270	0.00500	"	0.0333	ND	81.0	15-130			
2-Methylnaphthalene	0.0227	0.00500	"	0.0333	ND	68.1	15-130			
Surrogate: 2-Methylnaphthalene-d10	0.0216		"	0.0333		64.8	40-150			
Surrogate: Fluoranthene-d10	0.0219		"	0.0333		65.8	40-150			

##### Matrix Spike Dup (BGI0585-MSD1)

Source: 2309270-01

Prepared & Analyzed: 09/20/23

Acenaphthene	0.0159	0.00500	mg/kg	0.0333	ND	47.8	31-137	33.0	30	QR-02
Anthracene	0.0149	0.00500	"	0.0333	ND	44.6	30-120	37.4	30	QR-02
Benzo (a) anthracene	0.0153	0.00500	"	0.0333	ND	45.9	30-120	29.5	30	
Benzo (a) pyrene	0.0146	0.00500	"	0.0333	ND	43.9	30-120	39.1	30	QR-02
Benzo (b) fluoranthene	0.0166	0.00500	"	0.0333	ND	49.9	30-120	34.0	30	QR-02
Benzo (k) fluoranthene	0.0175	0.00500	"	0.0333	ND	52.4	30-120	29.1	30	
Chrysene	0.0185	0.00500	"	0.0333	ND	55.6	30-120	21.5	30	
Dibenz (a,h) anthracene	0.0147	0.00500	"	0.0333	ND	44.1	30-120	34.7	30	QR-02
Fluoranthene	0.0156	0.00500	"	0.0333	ND	46.7	30-120	38.8	30	QR-02
Fluorene	0.0168	0.00500	"	0.0333	ND	50.5	30-120	31.4	30	QR-02
Indeno (1,2,3-cd) pyrene	0.0154	0.00500	"	0.0333	ND	46.2	30-120	30.7	30	QR-02
Pyrene	0.0193	0.00500	"	0.0333	ND	57.8	35-142	21.1	30	
1-Methylnaphthalene	0.0183	0.00500	"	0.0333	ND	55.0	15-130	38.2	50	
2-Methylnaphthalene	0.0167	0.00500	"	0.0333	ND	50.1	15-130	30.4	50	
Surrogate: 2-Methylnaphthalene-d10	0.0202		"	0.0333		60.5	40-150			
Surrogate: Fluoranthene-d10	0.0142		"	0.0333		42.5	40-150			

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Donaldson USX EE 29-06D  
Project Number: UWRWE-A2147-ABN  
Project Manager: Paul Henchan

**Reported:**  
09/26/23 10:21

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

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

**Batch BGI0510 - EPA 3050B**

**Blank (BGI0510-BLK1)**

Prepared: 09/18/23 Analyzed: 09/20/23

Boron ND 0.0100 mg/L

**LCS (BGI0510-BS1)**

Prepared: 09/18/23 Analyzed: 09/20/23

Boron 4.74 0.0100 mg/L 5.00 94.9 80-120

**Duplicate (BGI0510-DUP1)**

Source: 2309265-01

Prepared: 09/18/23 Analyzed: 09/20/23

Boron 0.137 0.0100 mg/L 0.153 10.9 20

**Matrix Spike (BGI0510-MS1)**

Source: 2309265-01

Prepared: 09/18/23 Analyzed: 09/20/23

Boron 4.35 0.0100 mg/L 5.00 0.153 84.0 75-125

**Matrix Spike Dup (BGI0510-MSD1)**

Source: 2309265-01

Prepared: 09/18/23 Analyzed: 09/20/23

Boron 4.49 0.0100 mg/L 5.00 0.153 86.7 75-125 3.04 25

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Donaldson USX EE 29-06D  
Project Number: UWRWE-A2147-ABN  
Project Manager: Paul Henchan

**Reported:**  
09/26/23 10:21

**Total Metals by EPA 6020B - Quality Control**  
**Summit Scientific**

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

**Batch BGI0383 - EPA 3050B**

**Blank (BGI0383-BLK1)**

Prepared: 09/13/23 Analyzed: 09/18/23

Arsenic	ND	0.200	mg/kg wet
Barium	ND	0.400	"
Cadmium	ND	0.200	"
Copper	ND	0.400	"
Lead	ND	0.200	"
Nickel	ND	0.400	"
Silver	ND	0.0200	"
Zinc	ND	0.400	"
Selenium	ND	0.260	"

**LCS (BGI0383-BS1)**

Prepared: 09/13/23 Analyzed: 09/18/23

Arsenic	37.8	0.200	mg/kg wet	40.0	94.6	80-120
Barium	37.5	0.400	"	40.0	93.7	80-120
Cadmium	1.90	0.200	"	2.00	95.1	80-120
Copper	37.9	0.400	"	40.0	94.7	80-120
Lead	23.0	0.200	"	20.0	115	80-120
Nickel	33.8	0.400	"	40.0	84.6	80-120
Silver	1.90	0.0200	"	2.00	95.0	80-120
Zinc	34.6	0.400	"	40.0	86.4	80-120

**Duplicate (BGI0383-DUP1)**

Source: 2308577-01

Prepared: 09/13/23 Analyzed: 09/18/23

Arsenic	1.11	0.200	mg/kg dry	1.25	12.1	20	QR-04
Barium	35.2	0.400	"	40.7	14.5	20	
Cadmium	0.116	0.200	"	0.139	17.3	20	
Copper	4.70	0.400	"	5.94	23.3	20	
Lead	5.87	0.200	"	5.88	0.238	20	
Nickel	1.75	0.400	"	1.74	0.467	20	QR-01
Silver	0.0397	0.0200	"	0.0501	23.1	20	
Zinc	15.8	0.400	"	15.5	2.26	20	
Selenium	ND	0.260	"	ND		200	

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PO Box 1289  
Wellington CO, 80549

Project: Noble - Donaldson USX EE 29-06D  
Project Number: UWRWE-A2147-ABN  
Project Manager: Paul Henchan

**Reported:**  
09/26/23 10:21

**Total Metals by EPA 6020B - Quality Control**  
**Summit Scientific**

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

**Batch BGI0383 - EPA 3050B**

**Matrix Spike (BGI0383-MS1)**

**Source: 2308577-01**

Prepared: 09/13/23 Analyzed: 09/18/23

Arsenic	27.2	0.200	mg/kg dry	45.2	1.25	57.6	75-125			QM-07
Barium	56.3	0.400	"	45.2	40.7	34.5	75-125			QM-07
Cadmium	1.47	0.200	"	2.26	0.139	59.1	75-125			QM-07
Copper	28.1	0.400	"	45.2	5.94	49.0	75-125			QM-07
Lead	18.6	0.200	"	22.6	5.88	56.4	75-125			QM-07
Nickel	25.7	0.400	"	45.2	1.74	53.1	75-125			QM-07
Silver	1.38	0.0200	"	2.26	0.0501	59.0	75-125			QM-07
Zinc	38.9	0.400	"	45.2	15.5	52.0	75-125			QM-07

**Matrix Spike Dup (BGI0383-MSD1)**

**Source: 2308577-01**

Prepared: 09/13/23 Analyzed: 09/18/23

Arsenic	34.8	0.200	mg/kg dry	45.2	1.25	74.4	75-125	24.5	25	QM-07
Barium	83.8	0.400	"	45.2	40.7	95.3	75-125	39.3	25	QM-07
Cadmium	1.85	0.200	"	2.26	0.139	75.8	75-125	22.7	25	
Copper	37.2	0.400	"	45.2	5.94	69.3	75-125	28.1	25	QM-07
Lead	23.1	0.200	"	22.6	5.88	76.4	75-125	21.7	25	
Nickel	31.7	0.400	"	45.2	1.74	66.4	75-125	20.9	25	QM-07
Silver	1.72	0.0200	"	2.26	0.0501	74.1	75-125	22.0	25	QM-07
Zinc	51.5	0.400	"	45.2	15.5	79.8	75-125	27.8	25	QM-07

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Donaldson USX EE 29-06D  
Project Number: UWRWE-A2147-ABN  
Project Manager: Paul Henchan

**Reported:**  
09/26/23 10:21

**Hexavalent Chromium by EPA Method 7196 - Quality Control**  
**Summit Scientific**

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

**Batch BGI0616 - 3060A Mod**

**Blank (BGI0616-BLK1)**

Prepared: 09/20/23 Analyzed: 09/21/23

Chromium, Hexavalent ND 0.30 mg/kg wet

**LCS (BGI0616-BS1)**

Prepared: 09/20/23 Analyzed: 09/21/23

Chromium, Hexavalent 27.0 0.30 mg/kg wet 25.0 108 80-120

**Duplicate (BGI0616-DUP1)**

**Source: 2309254-01**

Prepared: 09/20/23 Analyzed: 09/21/23

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

**Matrix Spike (BGI0616-MS1)**

**Source: 2309254-01**

Prepared: 09/20/23 Analyzed: 09/21/23

Chromium, Hexavalent 27.2 0.30 mg/kg dry 27.2 ND 100 75-125

**Matrix Spike Dup (BGI0616-MSD1)**

**Source: 2309254-01**

Prepared: 09/20/23 Analyzed: 09/21/23

Chromium, Hexavalent 27.2 0.30 mg/kg dry 27.2 ND 99.8 75-125 0.200 20

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Donaldson USX EE 29-06D  
Project Number: UWRWE-A2147-ABN  
Project Manager: Paul Henchan

**Reported:**  
09/26/23 10:21

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

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

**Batch BGI0578 - General Preparation**

**Blank (BGI0578-BLK1)**

Prepared: 09/20/23 Analyzed: 09/22/23

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

**LCS (BGI0578-BS1)**

Prepared: 09/20/23 Analyzed: 09/22/23

Calcium	5.10	0.0500	mg/L wet	5.00	102	70-130
Magnesium	5.05	0.0500	"	5.00	101	70-130
Sodium	5.22	0.0500	"	5.00	104	70-130

Summit Scientific

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Fremont Environmental	Project: Noble - Donaldson USX EE 29-06D	
PO Box 1289	Project Number: UWRWE-A2147-ABN	<b>Reported:</b>
Wellington CO, 80549	Project Manager: Paul Henchan	09/26/23 10:21

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

Summit Scientific

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

Batch BGI0560 - General Preparation

Duplicate (BGI0560-DUP1)	Source: 2309266-01			Prepared & Analyzed: 09/19/23						
% Solids	97.7		%		97.0			0.771	20	

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Donaldson USX EE 29-06D

Project Number: UWRWE-A2147-ABN

Project Manager: Paul Henchan

**Reported:**  
09/26/23 10:21

**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 BGI0632 - General Preparation**

**Blank (BGI0632-BLK1)**

Prepared & Analyzed: 09/21/23

Specific Conductance (EC) ND 0.0100 mmhos/cm

**LCS (BGI0632-BS1)**

Prepared & Analyzed: 09/21/23

Specific Conductance (EC) 0.156 0.0100 mmhos/cm 0.150 104 95-105

**Duplicate (BGI0632-DUP1)**

**Source: 2309261-01**

Prepared & Analyzed: 09/21/23

Specific Conductance (EC) 0.438 0.0100 mmhos/cm 0.438 0.00 20

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Donaldson USX EE 29-06D

Project Number: UWRWE-A2147-ABN

Project Manager: Paul Henchan

**Reported:**  
09/26/23 10:21

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

**Summit Scientific**

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

**Batch BGI0631 - General Preparation**

**LCS (BGI0631-BS1)**

Prepared & Analyzed: 09/21/23

pH	9.28	pH Units	9.18	101	95-105
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**Duplicate (BGI0631-DUP1)**

Source: 2309261-01

Prepared & Analyzed: 09/21/23

pH	8.10	pH Units	8.10	0.00	20
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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Donaldson USX EE 29-06D

Project Number: UWRWE-A2147-ABN  
Project Manager: Paul Henchan

**Reported:**  
09/26/23 10:21

### Notes and Definitions

S-02	The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.
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.
QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
QR-01	Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit. QC batch accepted based on LCS and/or LCSD QC results.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
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