

FREMONT ENVIRONMENTAL INC.

June 17, 2022

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

Subject: **Facility Closure Data Submittal**
Kummer PC LE 23-99HZ Pad
API # 05-123-32789
NWNW Sec 23, T8N, R61W
Weld County, Colorado
Fremont Project No. C022-052
Facility #421018, Remediation #22346

Dear Mr. Peterson:

As you requested, Fremont Environmental Inc. (Fremont) personnel conducted facility closure activities for the Noble Energy Inc. (Noble) Kummer PC LE 23-99HZ Pad tank battery and flowline. Impacted soil was encountered at the heater treater location during the facility and flowline abandonment. Details of the Kummer PC LE 23-99HZ Pad facility closure activities are documented in the attached Closure Report. Groundwater was not encountered.

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. Henchan, 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	X	Flowline Closure	X	Partially Buried Vault Closure
Site Name & COGCC Facility Number: Kummer PC LE 23-99HZ, 421018		Date: 5/11/2022						Remediation Project #: 22346
Associated Wells: 05-123-32789		Age of Site: 2011						Number of Photos Attached: 2
Location: (GPS coordinates of southeaster berm) 40.653807, -104.108103							Estimated Facility Size (acres): 2	
General Condition of Site: (General observations regarding housekeeping, corrosion, waste management, etc.)								
Site in good condition								
USCS Soil Type: GW, SM and CL					Estimated Depth to Groundwater: >50 feet			
Hydrocarbon Impacted Soils / Spills: (Note estimated size and if impact appears to be surficial or extends to an unknown depth)								
Impacted soils observed at the heater treater.								
Salt Crusted Soils or Impacted Vegetation: (Note estimated size and if impact appears to be surficial or extends to an unknown depth)								
None Observed								
Tanks								
Tank Contents	Crude Oil	Crude Oil	Crude Oil	Produced Water				
Size (barrels)	500	500	500	300				
Age	2011	2011	2011	2011				
Construction Material	Steel	Steel	Steel	Fiberglass				
Tank type (AST/BBV, etc.)	AST	AST	AST	AST				
Visual Integrity of Tank	Good	Good	Good	Good				
Condition of tank footings	Good	Good	Good	Good				
PID Readings	1.5 ppm	2.1 ppm	1.3 ppm	7.6 ppm				
Soil impacts present at valves or hatches?	No	No	No	No				
PID Readings	0.2 ppm	0.0 ppm	0.0 ppm	0.0 ppm				
Sample taken? Location/ Sample ID#	2205166-1	2205166-2	2205166-3	2205166-6				
Photo Number(s)	1, 2	1, 2	1, 2	1,2,5				
Other observations regarding tanks:								
High concentrations of EC observed at the N PWV location. Soils will be addressed during reclamation.								
Separators								
Separator size	~12 bbl							
Vertical or Horizontal	Vertical							
Age	2011							
Soil impacts observed? If yes, where	Yes, in the floor							
PID Readings	0.8 ppm							
Sample taken? Location/ Sample ID#	2205166-7							
Photo Number(s)	6,8							
Other observations regarding separators								
High concentrations of EC beneath the heater-treater. Soils will be address during reclamation.								
Third Party Equipment								
Type								
Age								

Third Party														
Removal Date														
Sample taken?														
PID Readings														
Photo Number(s)														
Other Facility Equipment														
Equipment type	ECD	ECD												
Equipment Condition	Removed Prior to Arrival	Removed Prior to Arrival												
Age	2011	2011												
Soil impacts observed during	No	No												
PID Readings	0.0 ppm	0.0 ppm												
Sample taken?	No	No												
Photo Number(s)	7	7												
Other observations regarding other facility or third party equipment:														
None														
Summary														
Was impacted soil identified?														
No <input checked="" type="checkbox"/> Yes - less than 10 cubic yards Yes - more than 10 cubic yards														
Total number of samples field screened: 13					Total number of samples collected: 13									
Highest PID Reading: 7.6 ppm					Total number of samples submitted to lab for analysis: 7									
If more than 10 cubic yards of impacted soil were observed: NA														
Vertical extent:					Estimated spill volume:									
Lateral extent:					Volume of soil removed:									
Is additional investigation required?														
Was groundwater encountered during the investigation?														
<input checked="" type="checkbox"/> No Yes - not impacted or in contact with impacted soils Yes - groundwater impacted and/or in contact with impacted soils														
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	X	Flowline Closure	X	Tank Battery Closure
Site Name & COGCC Facility Number: Kummer PC LE 23-99HZ, 421018		Date: 5/11/2022						Remediation Project #: 22346
Associated Wells: 05-123-32789		Age of Site: 2011						Number of Photos Attached: 2
Location: (GPS coordinates of vault or southeastern tank berm for multiple) 40.653931, -104.180129						Estimated Facility Size (acres): 2		
General Condition of Site: (General observations regarding housekeeping, corrosion, waste management, etc.)								
Site in good condition.								
USCS Soil Type: GW, SM and CL					Estimated Depth to Groundwater: >50 feet			
Hydrocarbon Impacted Soils / Spills: (Note estimated size and if impact appears to be surficial or extends to an unknown depth)								
None observed								
Salt Crusted Soils or Impacted Vegetation: (Note estimated size and if impact appears to be surficial or extends to an unknown depth)								
None observed								
Buried or Partially Buried Vessels								
Tank Contents	Produced Water							
Size (barrels)	100							
Age	2011							
Construction Material	Fiberglass							
Visual Integrity of Tank	Good							
Condition of tank	Good							
PID Readings	3.4 ppm							
Condition of	Good							
PID Readings	0.0ppm							
Sample taken?	2205166-4,5							
Location/Sample ID#								
Photo Number(s)	3,4,8,9							
Other observations regarding partially buried vessels:								
None								
Summary								
Was impacted soil identified?								
X No		Yes - less than 10 cubic yards			Yes - more than 10 cubic yards			
Total number of samples field screened: 8					Total number of samples collected: 8			
Highest PID Reading: 3.4 ppm					Total number of samples submitted to lab for analysis: 2			
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?								
X No		Yes - not impacted or in contact with impacted soils			Yes - groundwater impacted and/or in contact with impacted soils			
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:								

Flowline Closure Checklist

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

Additional Attachments:	X	Tank Battery Closure		Wellhead Closure		Pit Closure	X	Partially Buried Vault Closure
Site Name & COGCC Facility Number: Kummer PC LE 23-99HZ, 421018		Date: 5/11/2022						Remediation Project #: 22346
Associated Wells: 05-123-32789		Age of Site: 2011						Number of Photos Attached: 4
Starting point: (GPS coordinates and descriptions) 40.652987, -104.180043								
End point: (GPS coordinates and descriptions) 40.654158, -104.180126								
USCS Soil Type: SM					Estimated Depth to Groundwater: >50 feet			
Hydrocarbon Impacted Soils / Spills: (Note estimated size and if impact appears to be surficial or extends to an unknown depth) None observed								
Salt Crusted Soils or Impacted Vegetation: (Note estimated size and if impact appears to be surficial or extends to an unknown depth) None observed								
Flowlines								
Flowline type	3" combined liquid							
Depth	4 feet							
Age	2011							
Length	422 feet							
Construction Material	Steel							
Were flowlines pulled?	yes							
Visual Integrity of lines	Good							
Visual impacts if trenched	NA							
PID Readings if trenched	NA							
Sample taken? Location/Sample ID#	NA							
Photo Number(s)	8-11							
Other observations regarding on location flowlines: Flowline coated in black non asbestos containing material								
Summary								
Was impacted soil identified? X No Yes - less than 10 cubic yards Yes - more than 10 cubic yards								
Total number of samples field screened: 3					Total number of samples collected: 3			
Highest PID Reading: 0.8 ppm					Total number of samples submitted to lab for analysis: 0			
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? No Yes - not impacted or in contact with impacted soils Yes - groundwater impacted and/or in contact with impacted soils								
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.
KUMMER PC LE 23-99HZ, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C022-052

Sample	Depth (ft)	Date Sampled	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)	Naphth- alene (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)
AST-N Surface	0.1	5/11/2022	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
AST-Cen Surface	0.1	5/11/2022	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
AST-S Surface	0.1	5/11/2022	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
PWV-N Wall 4 Ft	4	5/11/2022	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
PWV-N Floor 5 Ft	5	5/11/2022	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
PWV-S Surface	0.1	5/11/2022	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
Heater Treater Surface	0.1	5/11/2022	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	510	110
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

NA - Not analyzed

TABLE 2
SUMMARY OF POLYCYCLIC AROMATIC HYDROCARBON SOIL CHEMISTRY DATA
NOBLE ENERGY INC.
KUMMER PC LE 23-99HZ, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C022-052

Sample	Depth (ft)	Date Sampled	Acenaphthene (mg/kg)	Anthracene (mg/kg)	Benzo (a) anthracene (mg/kg)	Benzo (b) fluoranthene (mg/kg)	Benzo (k) fluoranthene (mg/kg)	Benzo (a) pyrene (mg/kg)	Chrysene (mg/kg)	Dibenz (a,h) anthracene (mg/kg)	Fluor-anthene (mg/kg)	Fluorene (mg/kg)	Indeno pyrene (mg/kg)	1-Methyl - naphthalene (mg/kg)	2-Methyl- naphthalene (mg/kg)	Pyrene (mg/kg)
AST-N Surface	0.1	5/11/2022	<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
AST-Cen Surface	0.1	5/11/2022	<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
AST-S Surface	0.1	5/11/2022	<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
PWV-N Wall 4 Ft	4	5/11/2022	<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
PWV-N Floor 5 Ft	5	5/11/2022	<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
PWV-S Surface	0.1	5/11/2022	<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
Heater Treater Surface	0.1	5/11/2022	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0725	<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	1.1	11	0.11	110	0.11	240	240	1.1	18	24	180
COGCC Table 915-1 Limits (Protection of Groundwater SSL)			0.55	5.8	0.011	0.3	2.9	0.24	9	0.096	8.9	0.54	0.98	0.006	0.019	1.3

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.
KUMMER PC LE 23-99HZ, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C022-052

SAMPLE LOCATION	DATE SAMPLED	DEPTH ft	EC mmhos/cm	pH pH units	SAR units	BORON mg/L
AST-N Surface	5/11/2022	0.1	1.65	7.86	1.12	0.0965
AST-Cen Surface	5/11/2022	0.1	3.24	7.77	0.582	0.0775
AST-S Surface	5/11/2022	0.1	0.23	8.11	0.102	0.029
PWV-N Wall 4 Ft	5/11/2022	4	6.16	7.87	4.46	0.360
PWV-N Floor 5 Ft	5/11/2022	5	6.39	7.83	4.08	0.566
PWV-S Surface	5/11/2022	0.1	2.96	7.72	0.976	0.115
Heater Treater Surface	5/11/2022	0.1	4.33	7.97	1.86	0.138
Table 915-1 Limits			<4	6-8.3	<6	2

Bold face values exceed the COGCC Limits

NA - Not Analyzed

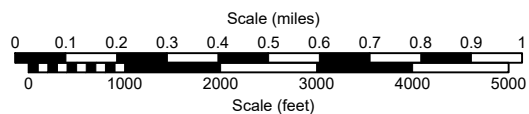
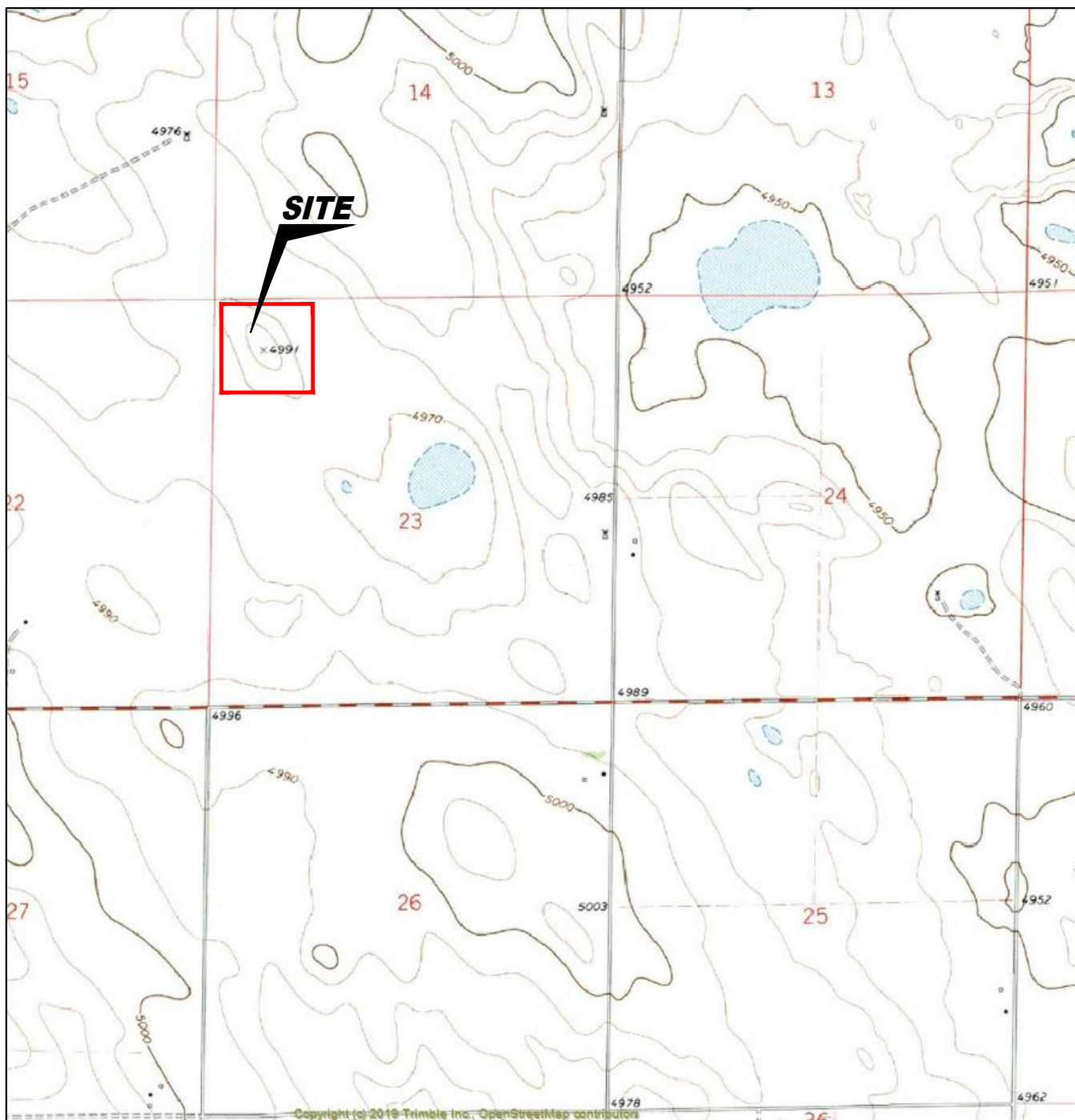
TABLE 4
SUMMARY OF POTHOLE FIELD OBSERVATIONS
NOBLE ENERGY INC.
KUMMER PC LE 23-99HZ, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C022-052

Location	Latitude	Longitude	PID Reading	Field Observations
FL A-Point	40.652987	-104.180043	0.1	No soil impacts
FL/DL Combi-Trench	40.653849	-104.180056	0.8	No soil impacts
FL B-Point	40.654158	-104.180126	0.3	No soil impacts

TABLE 5
SUMMARY OF FLOWLINE CONDITION
NOBLE ENERGY INC.
KUMMER PC LE 23-99HZ, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C022-052

START	STOP	FOOTAGE	PIPE TYPE AND CONDITION
FL A-Point	FL/DL Combi-Trench	335	3" Sch 80 welded steel pipe, black, non-acm, fiberglass coating, good condition
FL/DL Combi-Trench	FL B-Point	87	3" Sch 80 welded steel pipe, black, non-acm, fiberglass coating, good condition

422 Total Linear Feet of Flowline(s)



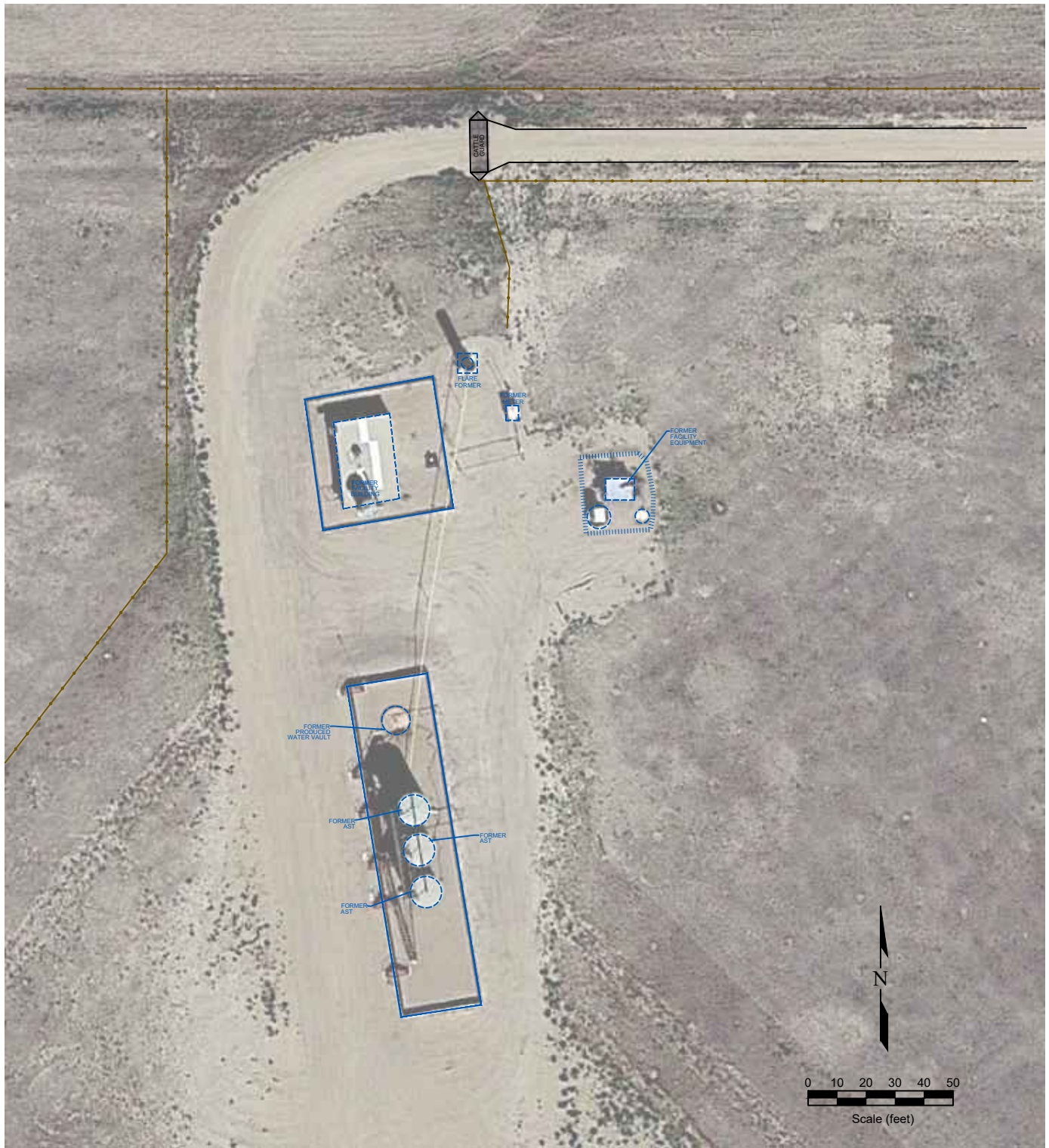
USGS 7.5 MINUTE SERIES (TOPOGRAPHIC)

Figure 1
SITE LOCATION MAP

Noble Energy, Inc.
Kummer PC LE 23-99HZ Pad
 NWNW Sec. 23, T8N, R61W, 6th PM
 Weld County, Colorado
 40.654149°, -104.180183°

Project # C022-052	API # 05-123-32789	Facility # 421018
Date 5/24/22	Remediation #	Filename 22052T





LEGEND

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

Figure 2
SITE MAP

Noble Energy, Inc.
Kummer PC LE 23-99HZ Pad
 NWNW Sec. 23, T8N, R61W, 6th PM
 Weld County, Colorado
 40.654149°, -104.180183°

Project No. C022-052	API # 05-123-32789	Facility # 421018
Date 6/28/22	Remediation #	Filename 22052Q





1 – Kummer PC LE 23-99HZ AST bases, rusted, no penetration



2 – Kummer PC LE 23-99HZ looking southwest to former tank pad



3 – Kummer PC LE 23-99HZ north fiberglass partially buried produced water vault (PWV)



4 – Kummer PC LE 23-99HZ north fiberglass partially buried PWV excavation



5 – Kummer PC LE 23-99HZ south above ground PWV crushed and removed during abandonment activities



6 – Kummer PC LE 23-99HZ flowline riser at former heater treater location



7 – Kummer PC LE 23-99HZ former ECD pad location



8 – Kummer PC LE 23-99HZ flow and dump lines in a common trench at the heater treater



9 – Kummer PC LE 23-99HZ flow and dump lines in a common trench approaching the east side of the former tank pad



10 – Kummer PC LE 23-99HZ flowline at wellhead



11 – Kummer PC LE 23-99HZ flowline section, 3" carbon steel, good condition, black non-ACM coating

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

May 23, 2022

Paul Henchan

Fremont Environmental

PO Box 1289

Wellington, CO 80549

RE: Noble - Kummer PC LD23-99HZ

Work Order #2205166

Enclosed are the results of analyses for samples received by Summit Scientific on 05/11/22 15:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Shrewsbury', with a stylized, cursive script.

Paul Shrewsbury

President



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Kummer PC LD23-99HZ

Project Number: C022-052
Project Manager: Paul Henchan

Reported:
05/23/22 14:52

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
AST-N Surface	2205166-01	Soil	05/11/22 00:00	05/11/22 15:00
AST-Cen Surface	2205166-02	Soil	05/11/22 00:00	05/11/22 15:00
AST-S Surface	2205166-03	Soil	05/11/22 00:00	05/11/22 15:00
PWV-N Wall 4ft	2205166-04	Soil	05/11/22 00:00	05/11/22 15:00
PWV-N Floor 5ft	2205166-05	Soil	05/11/22 00:00	05/11/22 15:00
PWV-S Surface	2205166-06	Soil	05/11/22 00:00	05/11/22 15:00
Heater Treater Surface	2205166-07	Soil	05/11/22 00:00	05/11/22 15:00

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

2205166

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

Page 1 of 1

Client: Fremont Environmental

Project Manager: Paul Henehan

Address: P.O Box 1289

E-Mail: paulh@fremontenv.com, ethanb@fremontenv.com

City/State/Zip: Wellington, CO 80549

Bill to: Jacob/Dan Peterson (Noble)

Phone: 303-956-8714

Project Name: Noble - Kummer PC LD 23-99H2

Sampler Name: Black

Project Number: ~~0022-052~~ 0022-052

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested										Notes:
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	GBTEXN-915	MBDS	GRO	DRO/ORO	SAR	EC	pH	Boron	PAH-915		
1	AST-N SURFACE	5/11/22		3			X			X				X	X		X	X	X	X	X		
2	AST-CEN SURFACE																						
3	AST-S SURFACE																						
4	PWV-N SURFACE																						
5	PWV-N FLOOR SFT																						
6	PWV-S SURFACE																						
7	Heater Treater SURFACE																						
8																							
9																							
10																							

Relinquished by:	Date/Time:	Received by:	Date/Time:	Turn Around Time (Check)
Ethan Black	5/12/22 1446	[Signature]	5/12/22 1500	Same Day _____ 72 hours
Relinquished by:	Date/Time:	Received by:	Date/Time:	Standard _____ 48 hours
Relinquished by:	Date/Time:	Received by:	Date/Time:	Sample Integrity:
				Temperature Upon Receipt:
				4.7 Samples Intact: Yes
				No

S₂

Sample Receipt Checklist

S2 Work Order# 2205166

Client: Fremont Client Project ID: Noble-Kummer PC LD23-99HZ

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

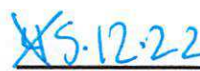
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Matrix (Check all that apply) Air ☐ Soil/Solid ☒ Water ☐ Other ☐Temp (°C) 4.7Thermometer # 1

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



Custodian Printed Name



Date/Time



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Kummer PC LD23-99HZ

Project Number: C022-052
Project Manager: Paul Henchan

Reported:
05/23/22 14:52

AST-N Surface
2205166-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BFE0275	05/13/22	05/14/22	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: **05/11/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0418	104 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0410	103 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0381	95.2 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BFE0274	05/13/22	05/14/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	12.5	99.6 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Kummer PC LD23-99HZ
Project Number: C022-052
Project Manager: Paul Henchan

Reported:
05/23/22 14:52

AST-N Surface
2205166-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFE0303	05/16/22	05/19/22	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: **05/11/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0259	77.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0249	74.7 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0965	0.0100	mg/L	1	BFE0328	05/16/22	05/22/22	EPA 6020B	

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

Date Sampled: **05/11/22 00:00**

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

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Kummer PC LD23-99HZ

Project Number: C022-052
Project Manager: Paul Henchan

Reported:
05/23/22 14:52

AST-N Surface
2205166-01 (Soil)

Summit Scientific

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

Calcium	150	0.0542	mg/L dry	1	BFE0278	05/13/22	05/21/22	EPA 6020B
Magnesium	30.1	0.0542	"	"	"	"	"	"
Sodium	57.3	0.0542	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.12	0.00100	units	1	BFE0482	05/22/22	05/22/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	92.2		%	1	BFE0259	05/12/22	05/13/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.65	0.0100	mmhos/cm	1	BFE0320	05/16/22	05/16/22	EPA 120.1	

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

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.86		pH Units	1	BFE0321	05/16/22	05/16/22	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Kummer PC LD23-99HZ

Project Number: C022-052
Project Manager: Paul Henchan

Reported:
05/23/22 14:52

AST-Cen Surface
2205166-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BFE0275	05/13/22	05/14/22	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: **05/11/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0419	105 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0405	101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0382	95.4 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BFE0274	05/13/22	05/14/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	12.0	95.6 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Kummer PC LD23-99HZ

Project Number: C022-052
Project Manager: Paul Henchan

Reported:
05/23/22 14:52

AST-Cen Surface
2205166-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFE0303	05/16/22	05/19/22	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: **05/11/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0250	75.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0218	65.4 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0775	0.0100	mg/L	1	BFE0328	05/16/22	05/22/22	EPA 6020B	

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

Date Sampled: **05/11/22 00:00**

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

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Kummer PC LD23-99HZ
Project Number: C022-052
Project Manager: Paul Henchan

Reported:
05/23/22 14:52

AST-Cen Surface
2205166-02 (Soil)

Summit Scientific

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

Calcium	346	0.0529	mg/L dry	1	BFE0278	05/13/22	05/21/22	EPA 6020B
Magnesium	56.5	0.0529	"	"	"	"	"	"
Sodium	44.3	0.0529	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.582	0.00100	units	1	BFE0482	05/22/22	05/22/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	94.5		%	1	BFE0259	05/12/22	05/13/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	3.24	0.0100	mmhos/cm	1	BFE0320	05/16/22	05/16/22	EPA 120.1	

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

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.77		pH Units	1	BFE0321	05/16/22	05/16/22	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Kummer PC LD23-99HZ

Project Number: C022-052
Project Manager: Paul Henchan

Reported:
05/23/22 14:52

AST-S Surface
2205166-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BFE0275	05/13/22	05/14/22	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: **05/11/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0421	105 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0413	103 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0385	96.2 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BFE0274	05/13/22	05/14/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	12.2	97.8 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Kummer PC LD23-99HZ

Project Number: C022-052
Project Manager: Paul Henchan

Reported:
05/23/22 14:52

AST-S Surface
2205166-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFE0303	05/16/22	05/19/22	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: **05/11/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0264	79.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0251	75.2 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0291	0.0100	mg/L	1	BFE0328	05/16/22	05/22/22	EPA 6020B	

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

Date Sampled: **05/11/22 00:00**

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

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Kummer PC LD23-99HZ

Project Number: C022-052
Project Manager: Paul Henchan

Reported:
05/23/22 14:52

AST-S Surface
2205166-03 (Soil)

Summit Scientific

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

Calcium	17.8	0.0525	mg/L dry	1	BFE0278	05/13/22	05/21/22	EPA 6020B
Magnesium	4.95	0.0525	"	"	"	"	"	"
Sodium	1.89	0.0525	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.102	0.00100	units	1	BFE0482	05/22/22	05/22/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	95.3		%	1	BFE0259	05/12/22	05/13/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.234	0.0100	mmhos/cm	1	BFE0320	05/16/22	05/16/22	EPA 120.1	

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

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.11		pH Units	1	BFE0321	05/16/22	05/16/22	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Kummer PC LD23-99HZ

Project Number: C022-052
Project Manager: Paul Henchan

Reported:
05/23/22 14:52

**PWV-N Wall 4ft
2205166-04 (Soil)**

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BFE0275	05/13/22	05/14/22	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: **05/11/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0433	108 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0410	102 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0383	95.7 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BFE0274	05/13/22	05/14/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/11/22 00:00**

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

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Kummer PC LD23-99HZ

Project Number: C022-052
Project Manager: Paul Henchan

Reported:
05/23/22 14:52

PWV-N Wall 4ft
2205166-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFE0303	05/16/22	05/19/22	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: **05/11/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0218	65.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0214	64.1 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.360	0.0100	mg/L	1	BFE0328	05/16/22	05/22/22	EPA 6020B	

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

Date Sampled: **05/11/22 00:00**

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

Project: Noble - Kummer PC LD23-99HZ
Project Number: C022-052
Project Manager: Paul Henchan

Reported:
05/23/22 14:52

PWV-N Wall 4ft
2205166-04 (Soil)

Summit Scientific

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

Calcium	304	0.0532	mg/L dry	1	BFE0278	05/13/22	05/21/22	EPA 6020B
Magnesium	163	0.0532	"	"	"	"	"	"
Sodium	388	0.0532	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	4.46	0.00100	units	1	BFE0482	05/22/22	05/22/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	94.1		%	1	BFE0259	05/12/22	05/13/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	6.16	0.0100	mmhos/cm	1	BFE0320	05/16/22	05/16/22	EPA 120.1	

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

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.87		pH Units	1	BFE0321	05/16/22	05/16/22	EPA 9045D	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Kummer PC LD23-99HZ

Project Number: C022-052
Project Manager: Paul Henchan

Reported:
05/23/22 14:52

PWV-N Floor 5ft
2205166-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BFE0275	05/13/22	05/14/22	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: **05/11/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0421	105 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0401	100 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0382	95.4 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BFE0274	05/13/22	05/14/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	11.6	93.2 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Kummer PC LD23-99HZ

Project Number: C022-052
Project Manager: Paul Henchan

Reported:
05/23/22 14:52

**PWV-N Floor 5ft
2205166-05 (Soil)**

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFE0303	05/16/22	05/19/22	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: **05/11/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0208	62.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0201	60.2 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.566	0.0100	mg/L	1	BFE0328	05/16/22	05/22/22	EPA 6020B	

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

Date Sampled: **05/11/22 00:00**

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

Project: Noble - Kummer PC LD23-99HZ

Project Number: C022-052
Project Manager: Paul Henchan

Reported:
05/23/22 14:52

PWV-N Floor 5ft
2205166-05 (Soil)

Summit Scientific

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

Calcium	413	0.0571	mg/L dry	1	BFE0278	05/13/22	05/21/22	EPA 6020B
Magnesium	194	0.0571	"	"	"	"	"	"
Sodium	401	0.0571	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	4.08	0.00100	units	1	BFE0482	05/22/22	05/22/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	87.6		%	1	BFE0259	05/12/22	05/13/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	6.39	0.0100	mmhos/cm	1	BFE0320	05/16/22	05/16/22	EPA 120.1	

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

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.83		pH Units	1	BFE0321	05/16/22	05/16/22	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Kummer PC LD23-99HZ

Project Number: C022-052
Project Manager: Paul Henchan

Reported:
05/23/22 14:52

PWV-S Surface
2205166-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BFE0275	05/13/22	05/14/22	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: **05/11/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0424	106 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0412	103 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0386	96.5 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BFE0274	05/13/22	05/14/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	11.9	95.2 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Kummer PC LD23-99HZ

Project Number: C022-052
Project Manager: Paul Henchan

Reported:
05/23/22 14:52

PWV-S Surface
2205166-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFE0303	05/16/22	05/19/22	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: **05/11/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0253	76.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0233	69.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.115	0.0100	mg/L	1	BFE0328	05/16/22	05/22/22	EPA 6020B	

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

Date Sampled: **05/11/22 00:00**

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

Project: Noble - Kummer PC LD23-99HZ

Project Number: C022-052
Project Manager: Paul Henchan

Reported:
05/23/22 14:52

PWV-S Surface
2205166-06 (Soil)

Summit Scientific

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

Calcium	286	0.0510	mg/L dry	1	BFE0278	05/13/22	05/21/22	EPA 6020B
Magnesium	56.3	0.0510	"	"	"	"	"	"
Sodium	69.0	0.0510	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.976	0.00100	units	1	BFE0482	05/22/22	05/22/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	98.1		%	1	BFE0259	05/12/22	05/13/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.96	0.0100	mmhos/cm	1	BFE0320	05/16/22	05/16/22	EPA 120.1	

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

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.72		pH Units	1	BFE0321	05/16/22	05/16/22	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Kummer PC LD23-99HZ
Project Number: C022-052
Project Manager: Paul Henchan

Reported:
05/23/22 14:52

Heater Treater Surface
2205166-07 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BFE0275	05/13/22	05/14/22	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: **05/11/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0432	108 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0410	103 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0377	94.3 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	510	50	mg/kg	1	BFE0274	05/13/22	05/14/22	EPA 8015M	
C28-C36 (ORO)	110	50	"	"	"	"	"	"	

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	13.2	105 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Kummer PC LD23-99HZ
Project Number: C022-052
Project Manager: Paul Henchan

Reported:
05/23/22 14:52

Heater Treater Surface
2205166-07 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFE0303	05/16/22	05/19/22	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	0.0725	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: **05/11/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 2-Methylnaphthalene-d10</i>	0.0232	69.6 %	40-150		"	"	"	"	
<i>Surrogate: Fluoranthene-d10</i>	0.0225	67.4 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.138	0.0100	mg/L	1	BFE0328	05/16/22	05/22/22	EPA 6020B	

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

Date Sampled: **05/11/22 00:00**

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

Project: Noble - Kummer PC LD23-99HZ
Project Number: C022-052
Project Manager: Paul Henchan

Reported:
05/23/22 14:52

Heater Treater Surface
2205166-07 (Soil)

Summit Scientific

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

Calcium	330	0.0523	mg/L dry	1	BFE0278	05/13/22	05/21/22	EPA 6020B
Magnesium	83.5	0.0523	"	"	"	"	"	"
Sodium	146	0.0523	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.86	0.00100	units	1	BFE0482	05/22/22	05/22/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	95.6		%	1	BFE0259	05/12/22	05/13/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	4.33	0.0100	mmhos/cm	1	BFE0320	05/16/22	05/16/22	EPA 120.1	

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

Date Sampled: **05/11/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.97		pH Units	1	BFE0321	05/16/22	05/16/22	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Kummer PC LD23-99HZ

Project Number: C022-052
Project Manager: Paul Henchan

Reported:
05/23/22 14:52

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 BFE0275 - EPA 5030 Soil MS

Blank (BFE0275-BLK1)

Prepared: 05/13/22 Analyzed: 05/14/22

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	0.0414		"	0.0400		104	50-150			
Surrogate: Toluene-d8	0.0410		"	0.0400		102	50-150			
Surrogate: 4-Bromofluorobenzene	0.0376		"	0.0400		94.0	50-150			

LCS (BFE0275-BS1)

Prepared: 05/13/22 Analyzed: 05/14/22

Benzene	0.0622	0.0020	mg/kg	0.0750		82.9	70-130			
Toluene	0.0648	0.0050	"	0.0750		86.4	70-130			
Ethylbenzene	0.0599	0.0050	"	0.0750		79.8	70-130			
m,p-Xylene	0.142	0.010	"	0.150		95.0	70-130			
o-Xylene	0.0674	0.0050	"	0.0750		89.8	70-130			
1,2,4-Trimethylbenzene	0.0644	0.0050	"	0.0750		85.8	70-130			
1,3,5-Trimethylbenzene	0.0621	0.0050	"	0.0750		82.8	70-130			
Naphthalene	0.0710	0.0038	"	0.0750		94.7	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0413		"	0.0400		103	50-150			
Surrogate: Toluene-d8	0.0409		"	0.0400		102	50-150			
Surrogate: 4-Bromofluorobenzene	0.0397		"	0.0400		99.3	50-150			

Matrix Spike (BFE0275-MS1)

Source: 2205166-01

Prepared: 05/13/22 Analyzed: 05/14/22

Benzene	0.0639	0.0020	mg/kg	0.0750	ND	85.2	70-130			
Toluene	0.0672	0.0050	"	0.0750	ND	89.6	70-130			
Ethylbenzene	0.0623	0.0050	"	0.0750	ND	83.1	70-130			
m,p-Xylene	0.147	0.010	"	0.150	ND	98.0	70-130			
o-Xylene	0.0694	0.0050	"	0.0750	ND	92.6	70-130			
1,2,4-Trimethylbenzene	0.0671	0.0050	"	0.0750	ND	89.5	70-130			
1,3,5-Trimethylbenzene	0.0654	0.0050	"	0.0750	ND	87.2	70-130			
Naphthalene	0.0848	0.0038	"	0.0750	ND	113	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0414		"	0.0400		104	50-150			
Surrogate: Toluene-d8	0.0406		"	0.0400		101	50-150			
Surrogate: 4-Bromofluorobenzene	0.0407		"	0.0400		102	50-150			

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Kummer PC LD23-99HZ
Project Number: C022-052
Project Manager: Paul Henchan

Reported:
05/23/22 14:52

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 BFE0275 - EPA 5030 Soil MS

Matrix Spike Dup (BFE0275-MSD1)	Source: 2205166-01			Prepared: 05/13/22 Analyzed: 05/14/22						
Benzene	0.0626	0.0020	mg/kg	0.0750	ND	83.5	70-130	1.99	30	
Toluene	0.0658	0.0050	"	0.0750	ND	87.8	70-130	2.12	30	
Ethylbenzene	0.0617	0.0050	"	0.0750	ND	82.3	70-130	0.967	30	
m,p-Xylene	0.146	0.010	"	0.150	ND	97.4	70-130	0.594	30	
o-Xylene	0.0682	0.0050	"	0.0750	ND	90.9	70-130	1.79	30	
1,2,4-Trimethylbenzene	0.0666	0.0050	"	0.0750	ND	88.8	70-130	0.763	30	
1,3,5-Trimethylbenzene	0.0640	0.0050	"	0.0750	ND	85.4	70-130	2.13	30	
Naphthalene	0.0894	0.0038	"	0.0750	ND	119	70-130	5.34	30	
Surrogate: 1,2-Dichloroethane-d4	0.0404		"	0.0400		101	50-150			
Surrogate: Toluene-d8	0.0399		"	0.0400		99.7	50-150			
Surrogate: 4-Bromofluorobenzene	0.0409		"	0.0400		102	50-150			

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Kummer PC LD23-99HZ
Project Number: C022-052
Project Manager: Paul Henchan

Reported:
05/23/22 14:52

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BFE0274 - EPA 3550A

Blank (BFE0274-BLK1)

Prepared: 05/13/22 Analyzed: 05/14/22

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

LCS (BFE0274-BS1)

Prepared: 05/13/22 Analyzed: 05/14/22

C10-C28 (DRO)	503	50	mg/kg	500	101	70-130
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Matrix Spike (BFE0274-MS1)

Source: 2205166-01

Prepared: 05/13/22 Analyzed: 05/14/22

C10-C28 (DRO)	424	50	mg/kg	500	38.6	77.0	70-130
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Matrix Spike Dup (BFE0274-MSD1)

Source: 2205166-01

Prepared: 05/13/22 Analyzed: 05/14/22

C10-C28 (DRO)	436	50	mg/kg	500	38.6	79.5	70-130	2.95	20
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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Kummer PC LD23-99HZ

Project Number: C022-052
Project Manager: Paul Henchan

Reported:
05/23/22 14:52

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 BFE0303 - EPA 5030 Soil MS

Blank (BFE0303-BLK1)

Prepared: 05/16/22 Analyzed: 05/18/22

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	0.0347	"	0.0333	104	40-150
Surrogate: Fluoranthene-d10	0.0331	"	0.0333	99.2	40-150

LCS (BFE0303-BS1)

Prepared: 05/16/22 Analyzed: 05/18/22

Acenaphthene	0.0272	0.00500	mg/kg	0.0333	81.7	31-137
Anthracene	0.0341	0.00500	"	0.0333	102	30-120
Benzo (a) anthracene	0.0305	0.00500	"	0.0333	91.5	30-120
Benzo (a) pyrene	0.0308	0.00500	"	0.0333	92.5	30-120
Benzo (b) fluoranthene	0.0340	0.00500	"	0.0333	102	30-120
Benzo (k) fluoranthene	0.0373	0.00500	"	0.0333	112	30-120
Chrysene	0.0343	0.00500	"	0.0333	103	30-120
Dibenz (a,h) anthracene	0.0264	0.00500	"	0.0333	79.3	30-120
Fluoranthene	0.0358	0.00500	"	0.0333	107	30-120
Fluorene	0.0273	0.00500	"	0.0333	81.8	30-120
Indeno (1,2,3-cd) pyrene	0.0275	0.00500	"	0.0333	82.6	30-120
Pyrene	0.0379	0.00500	"	0.0333	114	35-142
1-Methylnaphthalene	0.0309	0.00500	"	0.0333	92.6	35-142
2-Methylnaphthalene	0.0362	0.00500	"	0.0333	109	35-142

Surrogate: 2-Methylnaphthalene-d10	0.0340	"	0.0333	102	40-150
Surrogate: Fluoranthene-d10	0.0343	"	0.0333	103	40-150

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Kummer PC LD23-99HZ

Project Number: C022-052
Project Manager: Paul Henchan

Reported:
05/23/22 14:52

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 BFE0303 - EPA 5030 Soil MS

Matrix Spike (BFE0303-MS1)

Source: 2205166-01

Prepared: 05/16/22 Analyzed: 05/19/22

Acenaphthene	0.0253	0.00500	mg/kg	0.0333	ND	76.0	31-137		
Anthracene	0.0223	0.00500	"	0.0333	ND	66.8	30-120		
Benzo (a) anthracene	0.0198	0.00500	"	0.0333	ND	59.5	30-120		
Benzo (a) pyrene	0.0200	0.00500	"	0.0333	ND	59.9	30-120		
Benzo (b) fluoranthene	0.0262	0.00500	"	0.0333	ND	78.7	30-120		
Benzo (k) fluoranthene	0.0301	0.00500	"	0.0333	ND	90.2	30-120		
Chrysene	0.0227	0.00500	"	0.0333	ND	68.2	30-120		
Dibenz (a,h) anthracene	0.0211	0.00500	"	0.0333	ND	63.3	30-120		
Fluoranthene	0.0248	0.00500	"	0.0333	ND	74.4	30-120		
Fluorene	0.0234	0.00500	"	0.0333	ND	70.3	30-120		
Indeno (1,2,3-cd) pyrene	0.0214	0.00500	"	0.0333	ND	64.2	30-120		
Pyrene	0.0312	0.00500	"	0.0333	ND	93.7	35-142		
1-Methylnaphthalene	0.0210	0.00500	"	0.0333	ND	63.0	15-130		
2-Methylnaphthalene	0.0228	0.00500	"	0.0333	ND	68.5	15-130		
Surrogate: 2-Methylnaphthalene-d10	0.0212		"	0.0333		63.7	40-150		
Surrogate: Fluoranthene-d10	0.0235		"	0.0333		70.4	40-150		

Matrix Spike Dup (BFE0303-MSD1)

Source: 2205166-01

Prepared: 05/16/22 Analyzed: 05/19/22

Acenaphthene	0.0272	0.00500	mg/kg	0.0333	ND	81.8	31-137	7.34	30
Anthracene	0.0233	0.00500	"	0.0333	ND	69.9	30-120	4.58	30
Benzo (a) anthracene	0.0214	0.00500	"	0.0333	ND	64.3	30-120	7.84	30
Benzo (a) pyrene	0.0216	0.00500	"	0.0333	ND	64.8	30-120	7.94	30
Benzo (b) fluoranthene	0.0269	0.00500	"	0.0333	ND	80.6	30-120	2.44	30
Benzo (k) fluoranthene	0.0375	0.00500	"	0.0333	ND	112	30-120	21.9	30
Chrysene	0.0230	0.00500	"	0.0333	ND	69.0	30-120	1.25	30
Dibenz (a,h) anthracene	0.0239	0.00500	"	0.0333	ND	71.7	30-120	12.4	30
Fluoranthene	0.0219	0.00500	"	0.0333	ND	65.8	30-120	12.3	30
Fluorene	0.0263	0.00500	"	0.0333	ND	79.0	30-120	11.6	30
Indeno (1,2,3-cd) pyrene	0.0239	0.00500	"	0.0333	ND	71.6	30-120	10.9	30
Pyrene	0.0335	0.00500	"	0.0333	ND	101	35-142	7.05	30
1-Methylnaphthalene	0.0222	0.00500	"	0.0333	ND	66.5	15-130	5.36	50
2-Methylnaphthalene	0.0237	0.00500	"	0.0333	ND	71.2	15-130	3.89	50
Surrogate: 2-Methylnaphthalene-d10	0.0243		"	0.0333		72.9	40-150		
Surrogate: Fluoranthene-d10	0.0220		"	0.0333		65.9	40-150		

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Kummer PC LD23-99HZ

Project Number: C022-052
Project Manager: Paul Henchan

Reported:
05/23/22 14:52

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

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

Batch BFE0328 - EPA 3050B

Blank (BFE0328-BLK1)

Prepared: 05/16/22 Analyzed: 05/22/22

Boron ND 0.0100 mg/L

LCS (BFE0328-BS1)

Prepared: 05/16/22 Analyzed: 05/22/22

Boron 5.16 0.0100 mg/L 5.00 103 80-120

Duplicate (BFE0328-DUP1)

Source: 2205166-01

Prepared: 05/16/22 Analyzed: 05/22/22

Boron 0.0866 0.0100 mg/L 0.0965 10.8 20

Matrix Spike (BFE0328-MS1)

Source: 2205166-01

Prepared: 05/16/22 Analyzed: 05/22/22

Boron 5.18 0.0100 mg/L 5.00 0.0965 102 75-125

Matrix Spike Dup (BFE0328-MSD1)

Source: 2205166-01

Prepared: 05/16/22 Analyzed: 05/22/22

Boron 5.33 0.0100 mg/L 5.00 0.0965 105 75-125 2.89 25

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Kummer PC LD23-99HZ

Project Number: C022-052
Project Manager: Paul Henchan

Reported:
05/23/22 14:52

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 BFE0278 - General Preparation

Blank (BFE0278-BLK1)

Prepared: 05/13/22 Analyzed: 05/21/22

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

LCS (BFE0278-BS1)

Prepared: 05/13/22 Analyzed: 05/21/22

Calcium	5.81	0.0500	mg/L wet	5.00	116	70-130
Magnesium	5.36	0.0500	"	5.00	107	70-130
Sodium	5.09	0.0500	"	5.00	102	70-130

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Project: Noble - Kummer PC LD23-99HZ

Project Number: C022-052
Project Manager: Paul Henchan

Reported:
05/23/22 14:52

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 BFE0259 - General Preparation

Duplicate (BFE0259-DUP1)

Source: 2205156-01

Prepared: 05/12/22 Analyzed: 05/13/22

% Solids	99.2	%	99.3	0.102	20
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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Kummer PC LD23-99HZ

Project Number: C022-052
Project Manager: Paul Henchan

Reported:
05/23/22 14:52

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 BFE0320 - General Preparation

Blank (BFE0320-BLK1)

Prepared & Analyzed: 05/16/22

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BFE0320-BS1)

Prepared & Analyzed: 05/16/22

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

Duplicate (BFE0320-DUP1)

Source: 2205139-04

Prepared & Analyzed: 05/16/22

Specific Conductance (EC) 6.04 0.0100 mmhos/cm 6.15 1.85 20

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Kummer PC LD23-99HZ

Project Number: C022-052
Project Manager: Paul Henchan

Reported:
05/23/22 14:52

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 BFE0321 - General Preparation

LCS (BFE0321-BS1)

Prepared & Analyzed: 05/16/22

pH	9.13	pH Units	9.18	99.5	95-105
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Duplicate (BFE0321-DUP1)

Source: 2205139-04

Prepared & Analyzed: 05/16/22

pH	7.92	pH Units	7.87	0.633	20
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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Kummer PC LD23-99HZ

Project Number: C022-052
Project Manager: Paul Henchan

Reported:
05/23/22 14:52

Notes and Definitions

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