

FREMONT ENVIRONMENTAL INC.

September 26, 2022

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

Subject: **Groundwater Data Submittal**
Harper Kona Pipeline
NESW Sec 21, T6N, R64W
Weld County, Colorado
Fremont Project No. C021-074
Facility #480529, Remediation # 20790

Dear Mr. Peterson:

Enclosed please find a copy of the above referenced Groundwater Data Submittal for the Harper Kona Pipeline site in Weld County, Colorado. The enclosed data describes the groundwater quality at the site during the recent quarterly sampling and monitoring event.

Please contact me at (303) 956-8714 if you require any additional information.

Fremont appreciates the opportunity to provide this service.

Sincerely,
FREMONT ENVIRONMENTAL INC.



Paul V. Henehan, P.E.
Senior Consultant

Enclosure

TABLE 1
SUMMARY OF ORGANIC GROUNDWATER CHEMISTRY DATA
NOBLE ENERGY INC.
HARPER KONA PIPELINE, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C021-074

SAMPLE LOCATION	DATE	BENZENE (µg/L)	TOLUENE (µg/L)	ETHYL BENZENE (µg/L)	TOTAL XYLENES (µg/L)	NAPH-THALENE (µg/L)	1,2,4 TMB (µg/L)	1,3,5 TMB (µg/L)	TOC ELEV (FT)	DTW (FT)	GW ELEV (FT)	LNAPL (FT)
MW-1	11/04/21	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	92.97	9.43	83.54	NP
	01/20/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		11.66	81.31	NP
	04/29/22	<1.0	<1.0	<1.0	3.9	<1.0	4.2	3.3		11.85	81.12	NP
	07/26/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		7.11	85.86	NP
MW-2	11/04/21	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	94.83	10.85	83.98	NP
	01/20/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		12.54	82.29	NP
	04/29/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		13.24	81.59	NP
	07/26/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		10.47	84.36	NP
MW-3	11/04/21	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	94.90	11.09	83.81	NP
	01/20/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		12.87	82.03	NP
MW-3R	04/29/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	94.70	13.39	81.31	NP
	07/26/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		10.23	84.47	NP
MW-4	11/04/21	Dry	Dry	Dry	Dry	Dry	Dry	Dry	98.26	Dry	Dry	Dry
	01/20/22	Dry	Dry	Dry	Dry	Dry	Dry	Dry		Dry	Dry	Dry
	04/29/22	Dry	Dry	Dry	Dry	Dry	Dry	Dry		Dry	Dry	Dry
	07/26/22	Dry	Dry	Dry	Dry	Dry	Dry	Dry		Dry	Dry	Dry
MW-5	11/04/21	Dry	Dry	Dry	Dry	Dry	Dry	Dry	98.39	Dry	Dry	Dry
	01/20/22	Dry	Dry	Dry	Dry	Dry	Dry	Dry		Dry	Dry	Dry
	04/29/22	Dry	Dry	Dry	Dry	Dry	Dry	Dry		Dry	Dry	Dry
	07/26/22	Dry	Dry	Dry	Dry	Dry	Dry	Dry		Dry	Dry	Dry
MW-6	11/04/21	Dry	Dry	Dry	Dry	Dry	Dry	Dry	98.38	13.78	84.60	NP
	01/20/22	Dry	Dry	Dry	Dry	Dry	Dry	Dry		Dry	Dry	Dry
MW-6R	04/29/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	98.51	15.94	82.57	NP
	07/26/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		14.84	83.67	NP
MW-7	11/04/21	Dry	Dry	Dry	Dry	Dry	Dry	Dry	100.00	Dry	Dry	Dry
	01/20/22	Dry	Dry	Dry	Dry	Dry	Dry	Dry		Dry	Dry	Dry
	04/29/22	Dry	Dry	Dry	Dry	Dry	Dry	Dry		Dry	Dry	Dry
	07/26/22	Dry	Dry	Dry	Dry	Dry	Dry	Dry		Dry	Dry	Dry
MW-8	11/04/21	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	95.00	11.04	83.96	NP

SAMPLE LOCATION	DATE	BENZENE (µg/L)	TOLUENE (µg/L)	ETHYL BENZENE (µg/L)	TOTAL XYLENES (µg/L)	NAPH-THALENE (µg/L)	1,2,4 TMB (µg/L)	1,3,5 TMB (µg/L)	TOC ELEV (FT)	DTW (FT)	GW ELEV (FT)	LNAPL (FT)
MW-8	01/20/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	95.00	12.42	82.58	NP
	04/29/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		13.24	81.76	NP
	07/26/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		10.36	84.64	NP
MW-9	11/04/21	Dry	Dry	Dry	Dry	Dry	Dry	Dry	97.91	Dry	Dry	Dry
	01/20/22	Dry	Dry	Dry	Dry	Dry	Dry	Dry		Dry	Dry	Dry
	04/29/22	Dry	Dry	Dry	Dry	Dry	Dry	Dry		Dry	Dry	Dry
	07/26/22	Dry	Dry	Dry	Dry	Dry	Dry	Dry		Dry	Dry	Dry
MW-10	11/04/21	Dry	Dry	Dry	Dry	Dry	Dry	Dry	98.66	Dry	Dry	Dry
	01/20/22	Dry	Dry	Dry	Dry	Dry	Dry	Dry		Dry	Dry	Dry
	04/29/22	Dry	Dry	Dry	Dry	Dry	Dry	Dry		Dry	Dry	Dry
	07/26/22	Dry	Dry	Dry	Dry	Dry	Dry	Dry		Dry	Dry	Dry
MW-11	04/29/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	97.48	15.31	82.17	NP
	07/26/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		13.73	83.75	NP
Table 915-1 Limits		5	560	700	1,400	140	67	67				

Bold face values exceed the COGCC limits

NP - No Free Product

TABLE 2
SUMMARY OF INORGANIC GROUNDWATER CHEMISTRY DATA
NOBLE ENERGY INC.
HARPER KONA PIPELINE, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C021-074

SAMPLE LOCATION	DATE	TDS (mg/L)	CHLORIDE ION (mg/L)	SULFATE ION (mg/L)	BARIUM (mg/L)
MW-1	11/04/21	1080	55.2	899	NA
	01/20/22	1360	35.4	499	0.0774
	04/29/22	1510	7.76	997	0.0453
	07/26/22	1620	64.0	898	0.0529
MW-2	11/04/21	2550	187	2360	NA
	01/20/22	3670	392	1360	0.116
	04/29/22	3160	314	2000	0.0609
	07/26/22	2880	105	2180	0.0561
MW-3 MW-3R	11/04/21	2420	46.6	2360	NA
	01/20/22	IW	IW	IW	IW
	04/29/22	2240	42.4	1980	0.0305
	07/26/22	2580	46.6	1990	0.0234
MW-4	11/04/21	Dry	Dry	Dry	Dry
	01/20/22	Dry	Dry	Dry	Dry
	04/29/22	Dry	Dry	Dry	Dry
	07/26/22	Dry	Dry	Dry	Dry
MW-5	11/04/21	Dry	Dry	Dry	Dry
	01/20/22	Dry	Dry	Dry	Dry
	04/29/22	Dry	Dry	Dry	Dry
	07/26/22	Dry	Dry	Dry	Dry
MW-6 MW-6R	11/04/21	Dry	Dry	Dry	Dry
	01/20/22	Dry	Dry	Dry	Dry
	04/29/22	2760	123	2550	0.0311
	07/26/22	3260	141	2800	0.0254
MW-7	11/04/21	Dry	Dry	Dry	Dry

SAMPLE LOCATION	DATE	TDS (mg/L)	CHLORIDE ION (mg/L)	SULFATE ION (mg/L)	BARIUM (mg/L)
MW-7	01/20/22	Dry	Dry	Dry	Dry
	04/29/22	Dry	Dry	Dry	Dry
	07/26/22	Dry	Dry	Dry	Dry
MW-8	11/04/21	2820	106	2620	NA
	01/20/22	2720	63.6	1580	0.0819
	04/29/22	IW	IW	IW	IW
	07/26/22	2400	89.4	1840	0.0761
MW-9	11/04/21	Dry	Dry	Dry	Dry
	01/20/22	Dry	Dry	Dry	Dry
	07/26/22	Dry	Dry	Dry	Dry
MW-10	11/04/21	Dry	Dry	Dry	Dry
	01/20/22	Dry	Dry	Dry	Dry
	07/26/22	Dry	Dry	Dry	Dry
MW-11	04/29/22	2540	80.0	2360	0.0367
	07/26/22	2970	88.8	2560	0.0310
Table 915-1 Standards		<1.25 x local background	250 or 1.25x background	250 or 1.25x background	None
Reg. 41 Drinking Water Standard					2.0

Bold face values exceed the COGCC limits

NA - Not Analyzed

NAP - Not Applicable

IW - Insufficient Water

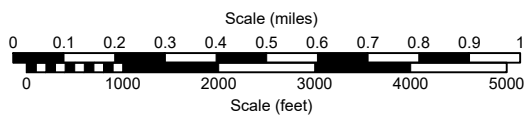
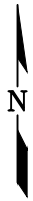
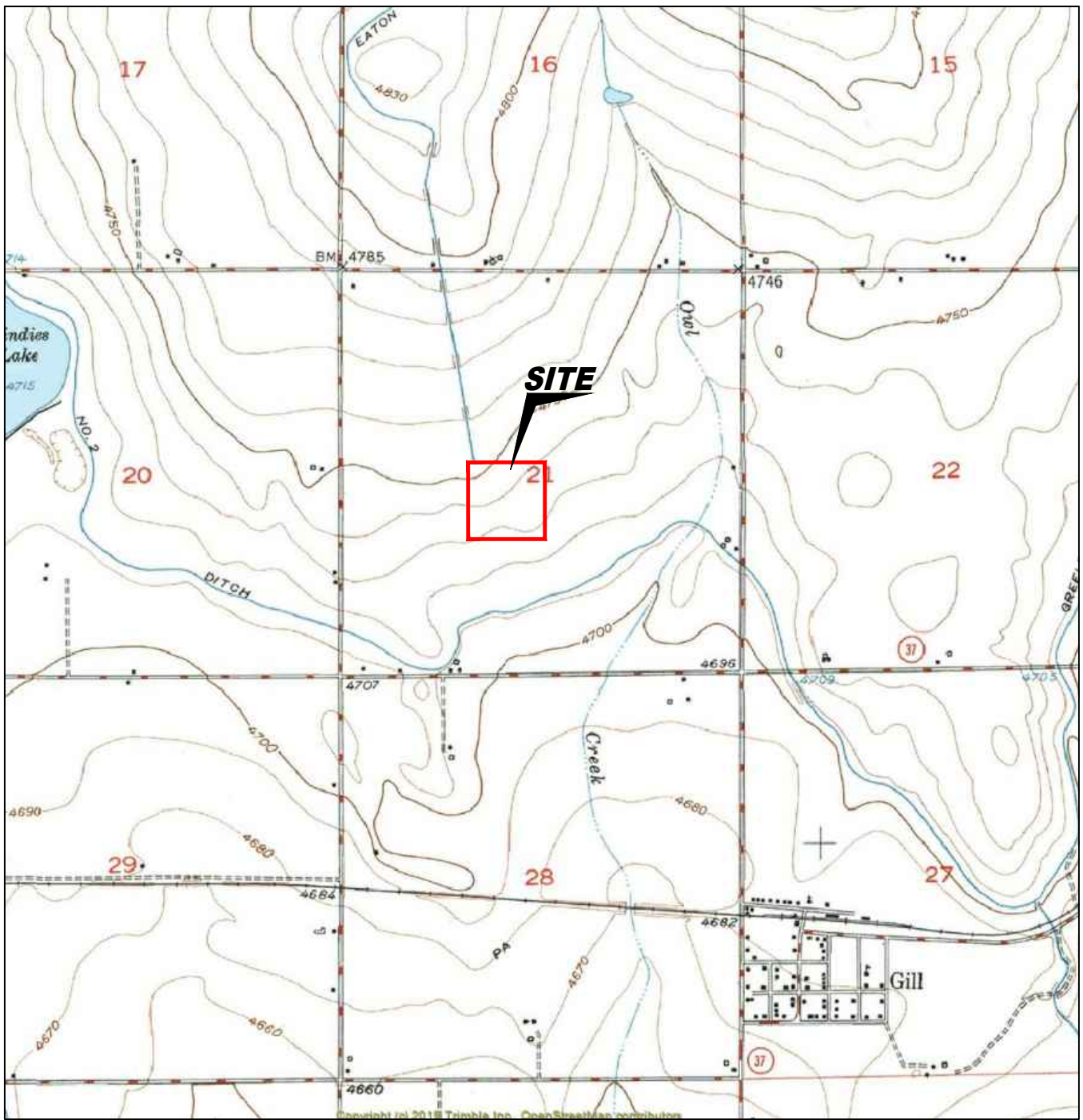
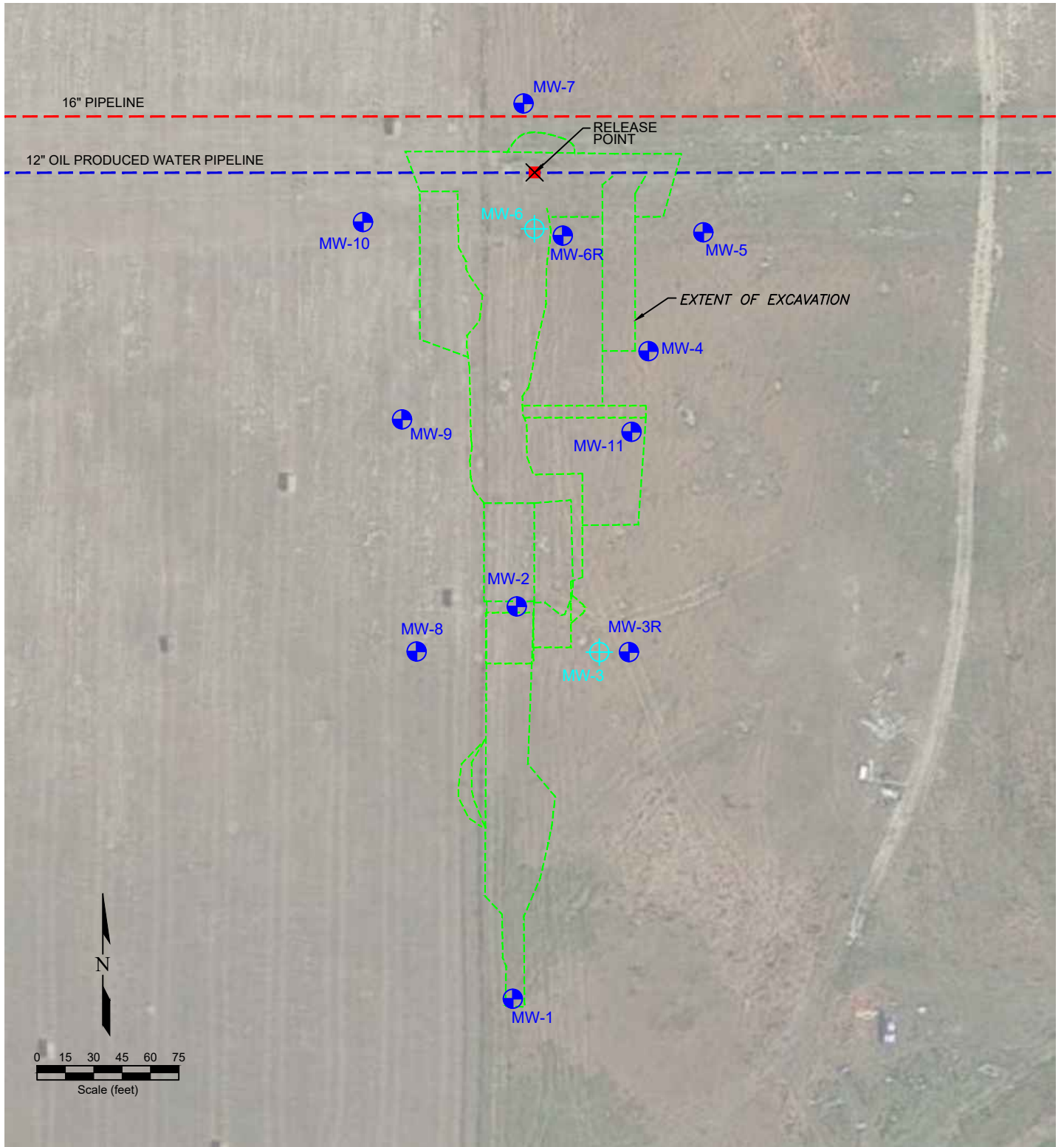


Figure 1
SITE LOCATION MAP








Noble Midstream, Inc.
Harper Pipeline Release
 NESW Sec. 21, T6N, R64W, 6th PM
 Weld County, Colorado

Project # C021-074	Prepared By	Drawn By TA
Date 9/3/22	Reviewed By EB	Filename 21074T





LEGEND

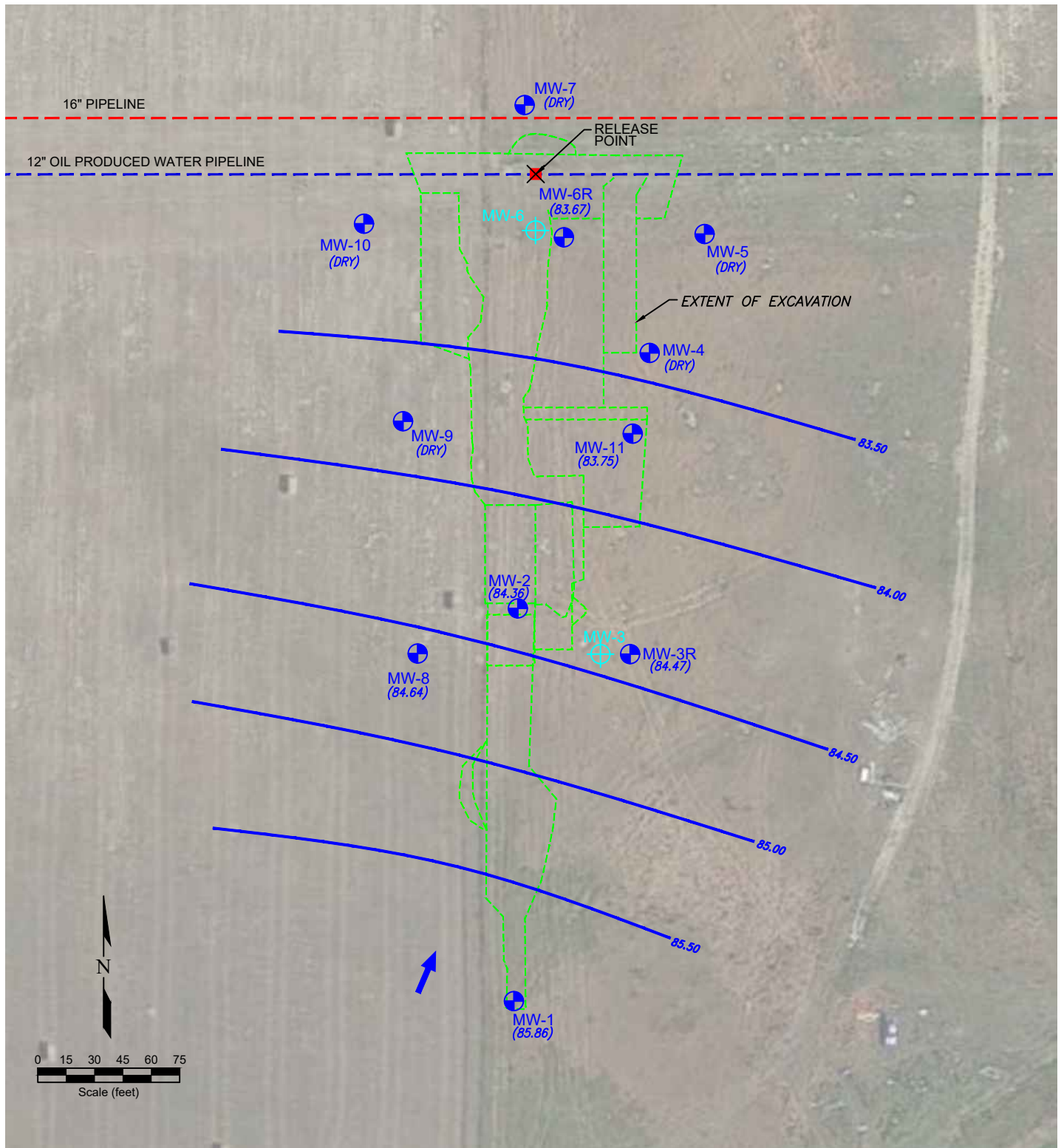
-  RELEASE POINT
-  MONITORING WELL
-  DESTROYED MONITORING WELL
-  EXTENT OF EXCAVATION
-  12" OIL PRODUCED WATER PIPELINE
-  16" PIPELINE
-  FENCE LINE

**Figure 2
SITE MAP**

Noble Midstream, Inc.
 Harper Pipeline Release
 NESW Sec. 21, T6N, R64W, 6th PM
 Weld County, Colorado

Project No. CO21-074	Prepared by	Drawn by TA
Date 9/2/22	Reviewed by EB	Filename 21074QL





LEGEND

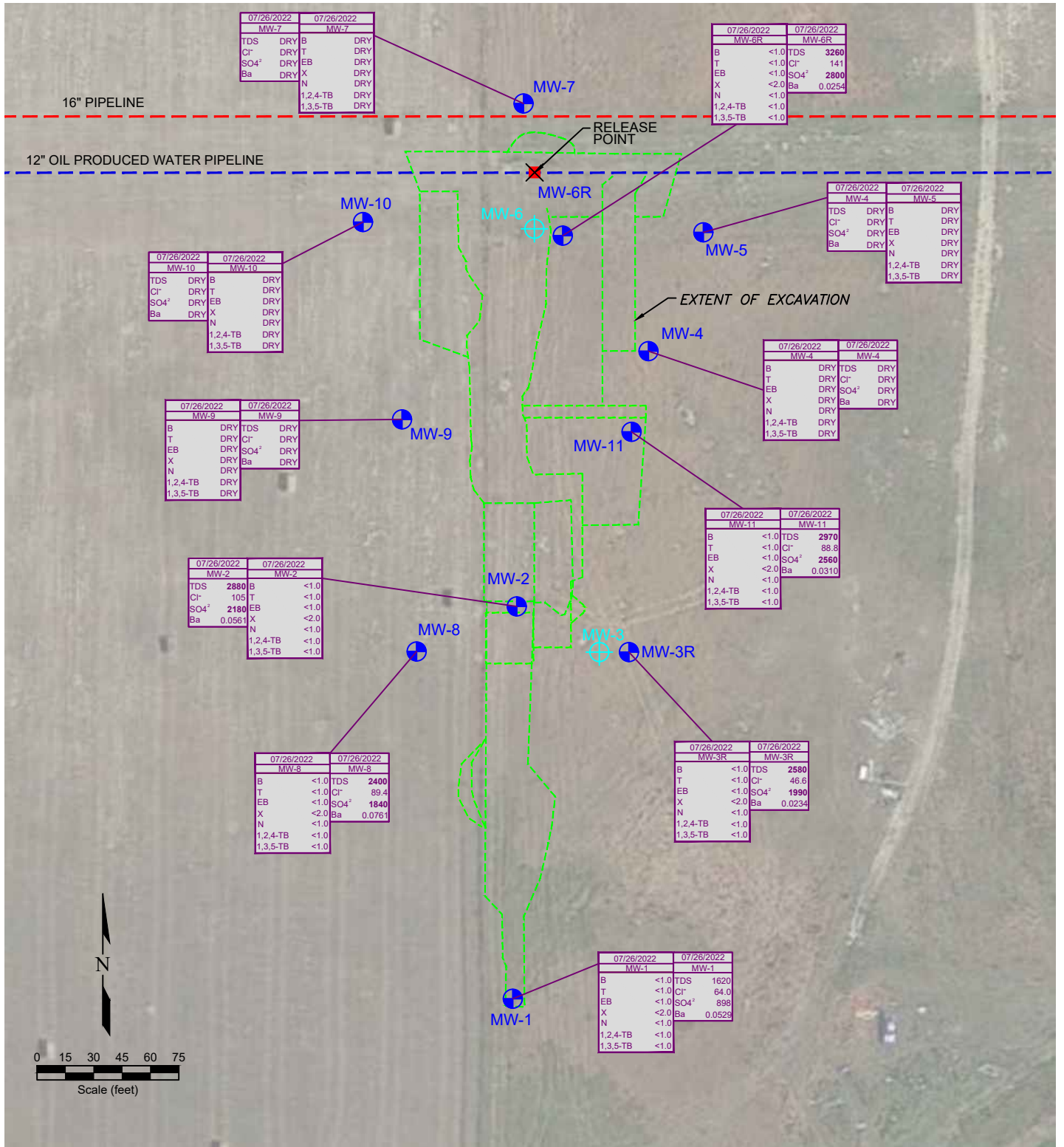
- RELEASE POINT
- MONITORING WELL
- DESTROYED MONITORING WELL
- EXTENT OF EXCAVATION
- 12" OIL PRODUCED WATER PIPELINE
- 16" PIPELINE
- FENCE LINE
- GROUND WATER ELEVATION (ft above arbitrary datum)
- WATER TABLE CONTOUR
- GROUND WATER FLOW DIRECTION
- WATER SUPPLY NOT PRESENT

Figure 3
INFERRED GROUNDWATER CONTOUR MAP
 July 26, 2022

Noble Midstream, Inc.
 Harper Pipeline Release
 NESW Sec. 21, T6N, R64W, 6th PM
 Weld County, Colorado

Project No. CO21-074	Prepared by	Drawn by TA
Date 9/2/22	Reviewed by EB	Filename 21074QL





LEGEND

- RELEASE POINT
- MONITORING WELL
- DESTROYED MONITORING WELL
- EXTENT OF EXCAVATION
- 12" OIL PRODUCED WATER PIPELINE
- 16" PIPELINE
- FENCE LINE
- INSUFFICIENT WATER SUPPLY
- WATER NOT PRESENT

DATE SAMPLED	SAMPLE ID	DATE SAMPLED	SAMPLE ID
07/26/2022	MW-1	07/26/2022	MW-1
TDS	1620	BENZENE (ug/L)	<1.0
Cl ⁻	64.0	TOLUENE (ug/L)	<1.0
SO ₄ ²⁻	898	ETHYLBENZENE (ug/L)	<1.0
Ba	0.0529	TOTAL XYLENES (ug/L)	<2.0
		NAPHTHALENE (ug/L)	<1.0
		1,2,4-TRIMETHYLBENZENE (ug/L)	<1.0
		1,3,5-TRIMETHYLBENZENE (ug/L)	<1.0

Figure 4
GROUNDWATER CHEMISTRY MAP
July 26, 2022

Noble Midstream, Inc.
Harper Pipeline Release
NESW Sec. 21, T6N, R64W, 6th PM
Weld County, Colorado

Project No. CO21-074	Prepared by EB	Drawn by TA
Date 9/2/22	Reviewed by EB	Filename 21074QL



Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

August 03, 2022

Paul Henchan
Fremont Environmental
PO Box 1289
Wellington, CO 80549
RE: Noble - Harper Kona
Work Order #2207408

Enclosed are the results of analyses for samples received by Summit Scientific on 07/28/22 16:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Mikayla Axtell For Paul Shrewsbury
President



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Harper Kona

Project Number: [none]
Project Manager: Paul Henchan

Reported:
08/03/22 14:32

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	2207408-01	Water	07/26/22 00:00	07/28/22 16:00
MW-2	2207408-02	Water	07/26/22 00:00	07/28/22 16:00
MW-3R	2207408-03	Water	07/26/22 00:00	07/28/22 16:00
MW-6R	2207408-04	Water	07/26/22 00:00	07/28/22 16:00
MW-8	2207408-05	Water	07/26/22 00:00	07/28/22 16:00
MW-11	2207408-06	Water	07/26/22 00:00	07/28/22 16:00

Summit Scientific

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

Summit Scientific

S₂

220740P

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

Page 1 of 1

Client: Fremont Env. Inc. Project Manager: Henehan
 Address: _____ E-Mail: Fremont Dist. List
 City/State/Zip: _____ Bill To: Noble
 Phone: _____ Project Name: Noble - Harper Kona
 Sampler Name: Black Project Number: _____

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested				Special Instructions			
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	VOC (915)	TDS/Cl-/SO4 ²⁻	Dissolved Ba					
1	MW-1	7/26/22		5			X		X					X	X	X				
2	MW-2																			
3	MW-3R																			
4	MW-6R																			
5	MW-8																			
6	MW-11																			
7																				
8																				
9																				
10																				

Relinquished by: <u>G. H. Clark</u>	Date/Time: <u>7/26/22</u>	Received by: <u>[Signature]</u>	Date/Time: <u>7/26/22 1600</u>	Turn Around Time (Check)	Notes:
Relinquished by: _____	Date/Time: _____	Received by: _____	Date/Time: _____	Same Day _____ 72 hours _____	Standard <input checked="" type="checkbox"/>
Temperature Upon Receipt: <u>40</u>	Corrected Temperature <u>0</u>	HNO3 lot # _____	IR gun correction: <u>0</u>	IR gun #: <u>1</u>	

S₂

2207408

S2 Work Order#

Sample Receipt Checklist

Client: Frement Client Project ID: Noble-Harper Kona

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

-

Matrix (Check all that apply) Air Soil/Solid Water Other

Temp (°C) Thermometer #

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

Additional Comments (if any):

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


Custodian Printed Name

72822
Date/Time



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Harper Kona

Project Number: [none]
Project Manager: Paul Henchan

Reported:
08/03/22 14:32

MW-1
2207408-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/26/22 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BFG0539	07/29/22	07/30/22	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	
Naphthalene	ND	1.0		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0		"	"	"	"	"	"	

Date Sampled: **07/26/22 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		90.9 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		101 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %		21-167		"	"	"	"	

Dissolved Metals by EPA Method 200.8

Date Sampled: **07/26/22 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Barium	52.9	1.00		ug/l	1	BFH0029	08/01/22	08/01/22	EPA 200.8	

Anions by EPA Method 300.0

Date Sampled: **07/26/22 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	64.0	12.0		mg/L	200	BFH0056	08/02/22	08/02/22	EPA 300.0	
Sulfate	898	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

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 - Harper Kona

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 08/03/22 14:32

MW-1
2207408-01 (Water)

Summit Scientific

Total Dissolved Solids by SM2540C

Date Sampled: **07/26/22 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	1620	10.0		mg/L	1	BFH0023	08/01/22	08/01/22	SM2540C	

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 - Harper Kona

Project Number: [none]
Project Manager: Paul Henchan

Reported:
08/03/22 14:32

MW-2
2207408-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/26/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	BFG0539	07/29/22	07/30/22	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	

Date Sampled: **07/26/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		93.5 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		100 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	21-167		"	"	"	"	

Dissolved Metals by EPA Method 200.8

Date Sampled: **07/26/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Barium	56.1	1.00	ug/l	1	BFH0029	08/01/22	08/01/22	EPA 200.8	

Anions by EPA Method 300.0

Date Sampled: **07/26/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chloride	105	12.0	mg/L	200	BFH0056	08/02/22	08/02/22	EPA 300.0	
Sulfate	2180	60.0	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Harper Kona

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 08/03/22 14:32

MW-2
2207408-02 (Water)

Summit Scientific

Total Dissolved Solids by SM2540C

Date Sampled: **07/26/22 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Total Dissolved Solids	2880	10.0	mg/L	1	BFH0023	08/01/22	08/01/22	SM2540C	

Summit Scientific



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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Harper Kona

Project Number: [none]
Project Manager: Paul Henchan

Reported:
08/03/22 14:32

MW-3R
2207408-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/26/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	BFG0539	07/29/22	07/30/22	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	

Date Sampled: **07/26/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		92.1 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		102 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	21-167		"	"	"	"	

Dissolved Metals by EPA Method 200.8

Date Sampled: **07/26/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Barium	23.4	1.00	ug/l	1	BFH0029	08/01/22	08/01/22	EPA 200.8	

Anions by EPA Method 300.0

Date Sampled: **07/26/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chloride	46.6	12.0	mg/L	200	BFH0056	08/02/22	08/02/22	EPA 300.0	
Sulfate	1990	60.0	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Harper Kona

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 08/03/22 14:32

MW-3R
2207408-03 (Water)

Summit Scientific

Total Dissolved Solids by SM2540C

Date Sampled: **07/26/22 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	2580	10.0		mg/L	1	BFH0023	08/01/22	08/01/22	SM2540C	

Summit Scientific



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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Harper Kona

Project Number: [none]
Project Manager: Paul Henchan

Reported:
08/03/22 14:32

MW-6R
2207408-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/26/22 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BFG0539	07/29/22	07/30/22	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	
Naphthalene	ND	1.0		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0		"	"	"	"	"	"	

Date Sampled: **07/26/22 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		90.1 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		100 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %		21-167		"	"	"	"	

Dissolved Metals by EPA Method 200.8

Date Sampled: **07/26/22 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Barium	25.4	1.00		ug/l	1	BFH0029	08/01/22	08/01/22	EPA 200.8	

Anions by EPA Method 300.0

Date Sampled: **07/26/22 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	141	12.0		mg/L	200	BFH0056	08/02/22	08/02/22	EPA 300.0	
Sulfate	2800	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Harper Kona

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 08/03/22 14:32

MW-6R
2207408-04 (Water)

Summit Scientific

Total Dissolved Solids by SM2540C

Date Sampled: **07/26/22 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	3260	10.0		mg/L	1	BFH0023	08/01/22	08/01/22	SM2540C	

Summit Scientific



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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Harper Kona

Project Number: [none]
Project Manager: Paul Henchan

Reported:
08/03/22 14:32

MW-8
2207408-05 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/26/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	BFG0539	07/29/22	07/30/22	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	

Date Sampled: **07/26/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		90.2 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		100 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	21-167		"	"	"	"	

Dissolved Metals by EPA Method 200.8

Date Sampled: **07/26/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Barium	76.1	1.00	ug/l	1	BFH0029	08/01/22	08/01/22	EPA 200.8	

Anions by EPA Method 300.0

Date Sampled: **07/26/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chloride	89.4	12.0	mg/L	200	BFH0056	08/02/22	08/02/22	EPA 300.0	
Sulfate	1840	60.0	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Harper Kona

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 08/03/22 14:32

MW-8
2207408-05 (Water)

Summit Scientific

Total Dissolved Solids by SM2540C

Date Sampled: **07/26/22 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	2400	10.0		mg/L	1	BFH0023	08/01/22	08/01/22	SM2540C	

Summit Scientific



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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Harper Kona

Project Number: [none]
Project Manager: Paul Henchan

Reported:
08/03/22 14:32

MW-11
2207408-06 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/26/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	BFG0539	07/29/22	07/30/22	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	

Date Sampled: **07/26/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		90.0 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		100 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	21-167		"	"	"	"	

Dissolved Metals by EPA Method 200.8

Date Sampled: **07/26/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Barium	31.0	1.00	ug/l	1	BFH0029	08/01/22	08/01/22	EPA 200.8	

Anions by EPA Method 300.0

Date Sampled: **07/26/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chloride	88.8	12.0	mg/L	200	BFH0056	08/02/22	08/02/22	EPA 300.0	
Sulfate	2560	60.0	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Harper Kona

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 08/03/22 14:32

MW-11
2207408-06 (Water)

Summit Scientific

Total Dissolved Solids by SM2540C

Date Sampled: **07/26/22 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	2970	10.0		mg/L	1	BFH0023	08/01/22	08/01/22	SM2540C	

Summit Scientific



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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Harper Kona

Project Number: [none]
Project Manager: Paul Henchan

Reported:
08/03/22 14:32

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BFG0539 - EPA 5030 Water MS

Blank (BFG0539-BLK1)

Prepared: 07/29/22 Analyzed: 07/30/22

Benzene	ND	1.0	ug/l								
Toluene	ND	1.0	"								
Ethylbenzene	ND	1.0	"								
Xylenes (total)	ND	2.0	"								
Naphthalene	ND	1.0	"								
1,2,4-Trimethylbenzene	ND	1.0	"								
1,3,5-Trimethylbenzene	ND	1.0	"								
Surrogate: 1,2-Dichloroethane-d4	12.3		"	13.3		69.4	51-132				
Surrogate: Toluene-d8	13.7		"	13.3		103	20-170				
Surrogate: 4-Bromofluorobenzene	13.7		"	13.3		103	21-167				

LCS (BFG0539-BS1)

Prepared: 07/29/22 Analyzed: 07/30/22

Benzene	28.9	1.0	ug/l	41.7		69.4	51-132				
Toluene	37.6	1.0	"	41.7		90.2	51-138				
Ethylbenzene	43.8	1.0	"	41.7		105	58-146				
m,p-Xylene	87.7	2.0	"	83.3		105	57-144				
o-Xylene	43.7	1.0	"	41.7		105	53-146				
Naphthalene	33.4	1.0	"	41.7		80.1	70-130				
1,2,4-Trimethylbenzene	50.2	1.0	"	41.7		121	70-130				
1,3,5-Trimethylbenzene	51.6	1.0	"	41.7		124	70-130				
Surrogate: 1,2-Dichloroethane-d4	12.4		"	13.3		93.2	23-173				
Surrogate: Toluene-d8	13.8		"	13.3		103	20-170				
Surrogate: 4-Bromofluorobenzene	13.3		"	13.3		100	21-167				

Matrix Spike (BFG0539-MS1)

Source: 2207408-01

Prepared: 07/29/22 Analyzed: 07/30/22

Benzene	28.8	1.0	ug/l	41.7	ND	69.1	34-141				
Toluene	37.7	1.0	"	41.7	ND	90.4	27-151				
Ethylbenzene	44.5	1.0	"	41.7	ND	107	29-160				
m,p-Xylene	88.8	2.0	"	83.3	ND	107	20-166				
o-Xylene	44.0	1.0	"	41.7	ND	106	33-159				
Naphthalene	38.3	1.0	"	41.7	ND	92.0	70-130				
1,2,4-Trimethylbenzene	51.3	1.0	"	41.7	ND	123	70-130				
1,3,5-Trimethylbenzene	52.8	1.0	"	41.7	ND	127	70-130				
Surrogate: 1,2-Dichloroethane-d4	12.2		"	13.3		91.9	23-173				
Surrogate: Toluene-d8	13.7		"	13.3		103	20-170				
Surrogate: 4-Bromofluorobenzene	13.2		"	13.3		98.7	21-167				

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Harper Kona

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 08/03/22 14:32

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BFG0539 - EPA 5030 Water MS

Matrix Spike Dup (BFG0539-MSD1)	Source: 2207408-01			Prepared: 07/29/22 Analyzed: 07/30/22					
Benzene	28.0	1.0	ug/l	41.7	ND	67.3	34-141	2.57	30
Toluene	37.2	1.0	"	41.7	ND	89.2	27-151	1.36	30
Ethylbenzene	44.4	1.0	"	41.7	ND	107	29-160	0.180	30
m,p-Xylene	88.8	2.0	"	83.3	ND	107	20-166	0.00	30
o-Xylene	44.2	1.0	"	41.7	ND	106	33-159	0.295	30
Naphthalene	42.8	1.0	"	41.7	ND	103	70-130	11.1	30
1,2,4-Trimethylbenzene	51.6	1.0	"	41.7	ND	124	70-130	0.680	30
1,3,5-Trimethylbenzene	53.4	1.0	"	41.7	ND	128	70-130	1.19	30
Surrogate: 1,2-Dichloroethane-d4	13.0		"	13.3		97.8	23-173		
Surrogate: Toluene-d8	13.6		"	13.3		102	20-170		
Surrogate: 4-Bromofluorobenzene	13.2		"	13.3		99.4	21-167		

Summit Scientific

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



Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Harper Kona

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 08/03/22 14:32

Dissolved Metals by EPA Method 200.8 - Quality Control
Summit Scientific

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

Batch BFH0029 - EPA 200.8

Blank (BFH0029-BLK1)

Prepared & Analyzed: 08/01/22

Barium ND 1.00 ug/l

LCS (BFH0029-BS1)

Prepared & Analyzed: 08/01/22

Barium 531 1.00 ug/l 500 106 85-115

Duplicate (BFH0029-DUP1)

Source: 2207374-01

Prepared & Analyzed: 08/01/22

Barium 14.8 1.00 ug/l 15.1 1.95 20

Matrix Spike (BFH0029-MS1)

Source: 2207374-01

Prepared & Analyzed: 08/01/22

Barium 556 1.00 ug/l 500 15.1 108 70-130

Matrix Spike Dup (BFH0029-MSD1)

Source: 2207374-01

Prepared & Analyzed: 08/01/22

Barium 553 1.00 ug/l 500 15.1 108 70-130 0.636 25

Summit Scientific

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



Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Harper Kona

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 08/03/22 14:32

Anions by EPA Method 300.0 - Quality Control
Summit Scientific

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

Batch BFH0056 - General Preparation

Blank (BFH0056-BLK1)

Prepared & Analyzed: 08/02/22

Chloride	ND	0.0600	mg/L						
Sulfate	ND	0.300	"						

LCS (BFH0056-BS1)

Prepared & Analyzed: 08/02/22

Chloride	3.08	0.0600	mg/L	3.00	103	90-110		
Sulfate	15.9	0.300	"	15.0	106	90-110		

Duplicate (BFH0056-DUP1)

Source: 2207391-01

Prepared & Analyzed: 08/02/22

Chloride	26.2	12.0	mg/L	25.4			3.10	20
Sulfate	177	60.0	"	152			14.8	20

Matrix Spike (BFH0056-MS1)

Source: 2207391-01

Prepared & Analyzed: 08/02/22

Chloride	680	12.0	mg/L	600	25.4	109	80-120	
Sulfate	3460	60.0	"	3000	152	110	80-120	

Summit Scientific

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



Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Harper Kona

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 08/03/22 14:32

Total Dissolved Solids by SM2540C - Quality Control

Summit Scientific

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

Batch BFH0023 - General Preparation

Blank (BFH0023-BLK1)

Prepared & Analyzed: 08/01/22

Total Dissolved Solids ND 10.0 mg/L

Duplicate (BFH0023-DUP1)

Source: 2207249-01

Prepared & Analyzed: 08/01/22

Total Dissolved Solids 936 10.0 mg/L 936 0.0855 20

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Harper Kona

Project Number: [none]
Project Manager: Paul Henchan

Reported:
08/03/22 14:32

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