

# **FREMONT ENVIRONMENTAL INC.**

September 29, 2021

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

Subject:       **Groundwater Data Submittal**  
McDermed 2-1  
API # 05-123-12223  
NWNE Sec 1, T4N, R64W  
Weld County, Colorado  
Fremont Project No. C020-022  
Facility #322891, Remediation #15399

Dear Mr. Evans:

Enclosed please find a copy of the above referenced Groundwater Data Submittal for the McDermed 2-1 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

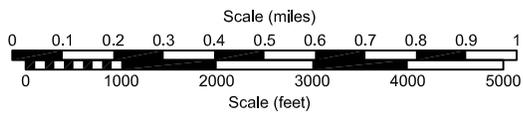
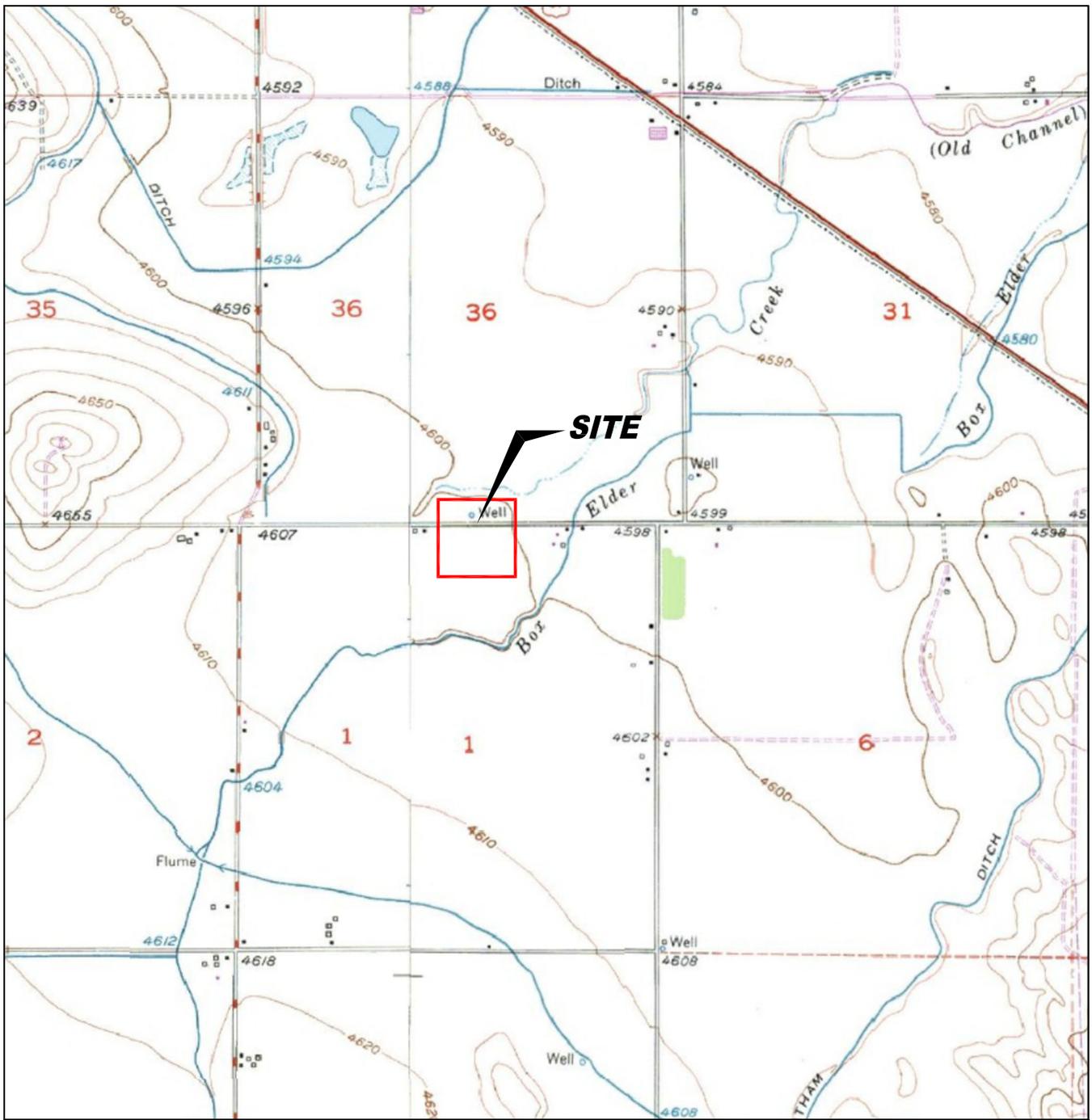
Enclosure

**TABLE 1**  
**SUMMARY OF GROUNDWATER CHEMISTRY DATA**  
**CHEVRON CORPORATION**  
**McDERMED 2-1, WELD COUNTY, COLORADO**  
**FREMONT PROJECT C020-022**

SAMPLE LOCATION	DATE	BENZENE (µg/L)	TOLUENE (µg/L)	ETHYL BENZENE (µg/L)	TOTAL XYLENES (µg/L)	1,2,4 TRIMETHYL-BENZENE (µg/L)	1,3,5 TRIMETHYL-BENZENE (µg/L)	NAPHTHALENE (µg/L)	TOC ELEVATION (feet)	DEPTH TO GROUND WATER (ft)	GROUND WATER ELEVATION (ft)	FREE PRODUCT THICKNESS (ft)
MW-1	05/27/20	29	<1.0	<1.0	<2.0	NA	NA	NA	100.00	7.89	92.11	NP
	08/09/20	<1.0	<1.0	<1.0	<2.0	NA	NA	NA		5.80	94.20	NP
	11/19/20	<1.0	<1.0	<1.0	<2.0	NA	NA	NA		6.82	93.18	NP
	02/17/21	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		8.25	91.75	NP
	05/25/21	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		7.76	92.24	NP
	08/20/21	48	<1.0	<1.0	<2.0	3.5	<1.0	<1.0		5.35	94.65	NP
MW-2	05/27/20	<1.0	<1.0	<1.0	<2.0	NA	NA	NA	100.51	8.43	92.08	NP
	08/09/20	<1.0	<1.0	<1.0	<2.0	NA	NA	NA		6.35	94.16	NP
	11/19/20	<1.0	<1.0	<1.0	<2.0	NA	NA	NA		7.32	93.19	NP
	02/17/21	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		8.76	91.75	NP
	05/25/21	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		8.26	92.25	NP
	08/20/21	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		5.88	94.63	NP
MW-3	05/27/20	<1.0	<1.0	<1.0	<2.0	NA	NA	NA	99.98	7.95	92.03	NP
	08/09/20	<1.0	<1.0	<1.0	<2.0	NA	NA	NA		5.88	94.10	NP
	11/19/20	<1.0	<1.0	<1.0	<2.0	NA	NA	NA		6.85	93.13	NP
	02/17/21	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		8.34	91.64	NP
	05/25/21	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		7.78	92.20	NP
	08/20/21	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		5.42	94.56	NP
MW-4	05/27/20	2.4	<1.0	2.2	35	NA	NA	NA	100.08	8.06	92.02	NP
	08/09/20	<1.0	<1.0	<1.0	<2.0	NA	NA	NA		5.97	94.11	NP
	11/19/20	<1.0	<1.0	<1.0	<2.0	NA	NA	NA		6.95	93.13	NP
	02/17/21	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		8.38	91.70	NP
	05/25/21	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		7.88	92.10	NP
	08/20/21	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		5.53	94.45	NP
MW-5	05/27/20	<1.0	<1.0	<1.0	<2.0	NA	NA	NA	99.58	7.65	91.93	NP
	08/09/20	<1.0	<1.0	<1.0	<2.0	NA	NA	NA		5.57	94.01	NP
	11/19/20	<1.0	<1.0	<1.0	<2.0	NA	NA	NA		6.65	92.93	NP
	02/17/21	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		7.97	91.61	NP
	05/25/21	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		7.47	92.51	NP
	08/20/21	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		5.14	94.84	NP

SAMPLE LOCATION	DATE	BENZENE (µg/L)	TOLUENE (µg/L)	ETHYL BENZENE (µg/L)	TOTAL XYLENES (µg/L)	1,2,4 TRIMETHYL-BENZENE (µg/L)	1,3,5 TRIMETHYL-BENZENE (µg/L)	NAPHTHALENE (µg/L)	TOC ELEVATION (feet)	DEPTH TO GROUND WATER (ft)	GROUND WATER ELEVATION (ft)	FREE PRODUCT THICKNESS (ft)
MW-6	05/27/20	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	99.68	7.58	92.10	NP
	08/09/20	<1.0	<1.0	<1.0	<2.0	NA	NA	NA		5.59	94.09	NP
	11/19/20	<1.0	<1.0	<1.0	<2.0	NA	NA	NA		6.13	93.55	NP
	02/17/21	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		8.07	91.61	NP
	05/25/21	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		7.33	92.65	NP
	08/20/21	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		5.13	94.85	NP
MW-7	05/27/20	<1.0	<1.0	<1.0	<2.0	NA	NA	NA	99.40	7.17	92.23	NP
	08/09/20	<1.0	<1.0	<1.0	<2.0	NA	NA	NA		5.15	94.25	NP
	11/19/20	<1.0	<1.0	<1.0	<2.0	NA	NA	NA		6.21	93.19	NP
	02/17/21	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		7.64	91.76	NP
	05/25/21	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		6.93	93.05	NP
	08/20/21	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		4.66	95.32	NP
MW-8	05/27/20	<1.0	<1.0	<1.0	<2.0	NA	NA	NA	99.66	7.31	92.35	NP
	08/09/20	<1.0	<1.0	<1.0	<2.0	NA	NA	NA		5.35	94.31	NP
	11/19/20	<1.0	<1.0	<1.0	<2.0	NA	NA	NA		6.53	93.13	NP
	02/17/21	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		7.80	91.86	NP
	05/25/21	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		7.05	92.93	NP
	08/20/21	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		4.85	95.13	NP
Table 915-1 Standards		5	560	700	1,400	67	67	140				

Bold faced values exceed the COGCC Table 915-1 concentrations



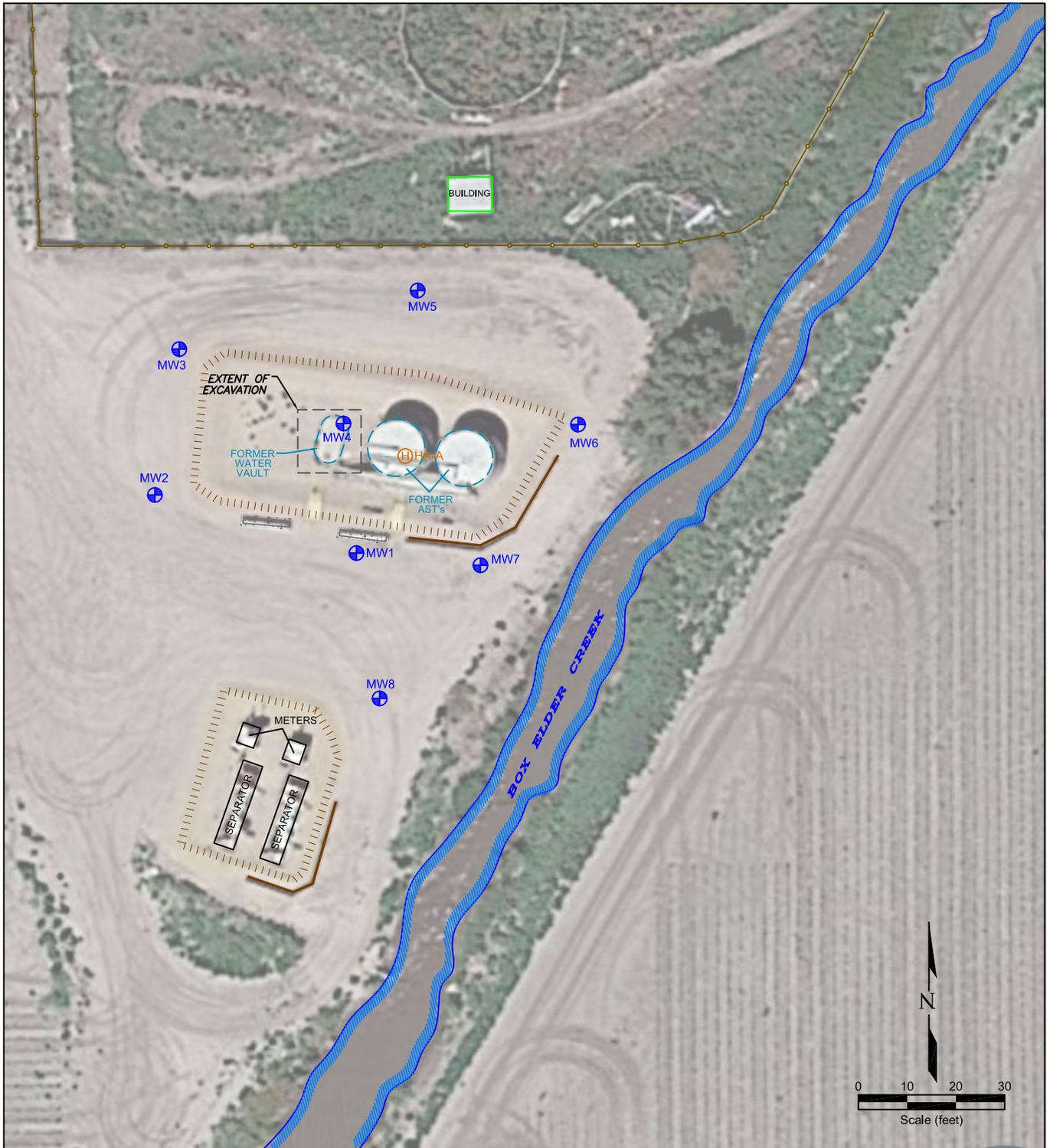
USGS 7.5 MINUTE SERIES (TOPOGRAPHIC)

Figure 1  
SITE LOCATION MAP

**CHEVRON CORP. ~ McDERMED 2-1**  
 NWNE Sec. 1, T4N, R64W ~ 40.34695°, -104.49421°  
 Weld County, Colorado

Project No. <b>CO20-022</b>	Prepared by	Drawn by <b>TA</b>
Date <b>9/17/21</b>	Reviewed by <b>EB</b>	Filename <b>20022T</b>





**LEGEND**

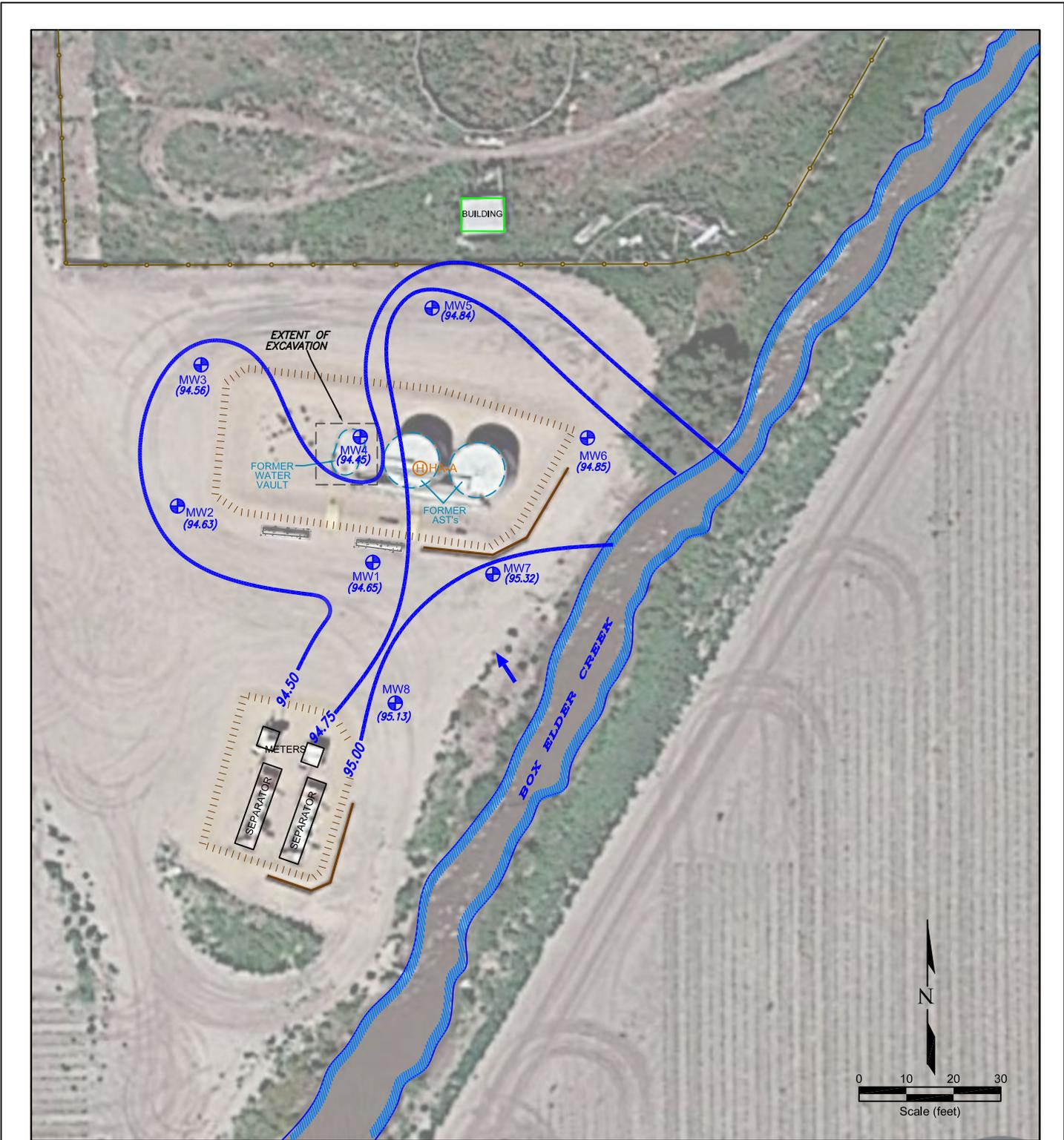
-  MONITORING WELL
-  HAND AUGURED WELL
-  ABOVE GROUND STORAGE TANK
-  CONCRETE BARRICADES
-  FORMER FACILITY
-  BUILDING
-  CONTAINMENT BERM
-  CONTAINMENT WALL
-  FENCE LINE
-  EXTENT OF EXCAVATION

**Figure 2  
SITE MAP**

**CHEVRON CORP. ~ McDERMED 2-1**  
 NWNE Sec. 1, T4N, R64W ~ 40.34695°, -104.49421°  
 Weld County, Colorado

Project No. <b>CO20-022</b>	Prepared by	Drawn by <b>TA</b>
Date <b>9/17/21</b>	Reviewed by <b>EB</b>	Filename <b>20022QQ</b>





**LEGEND**

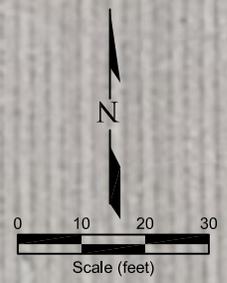
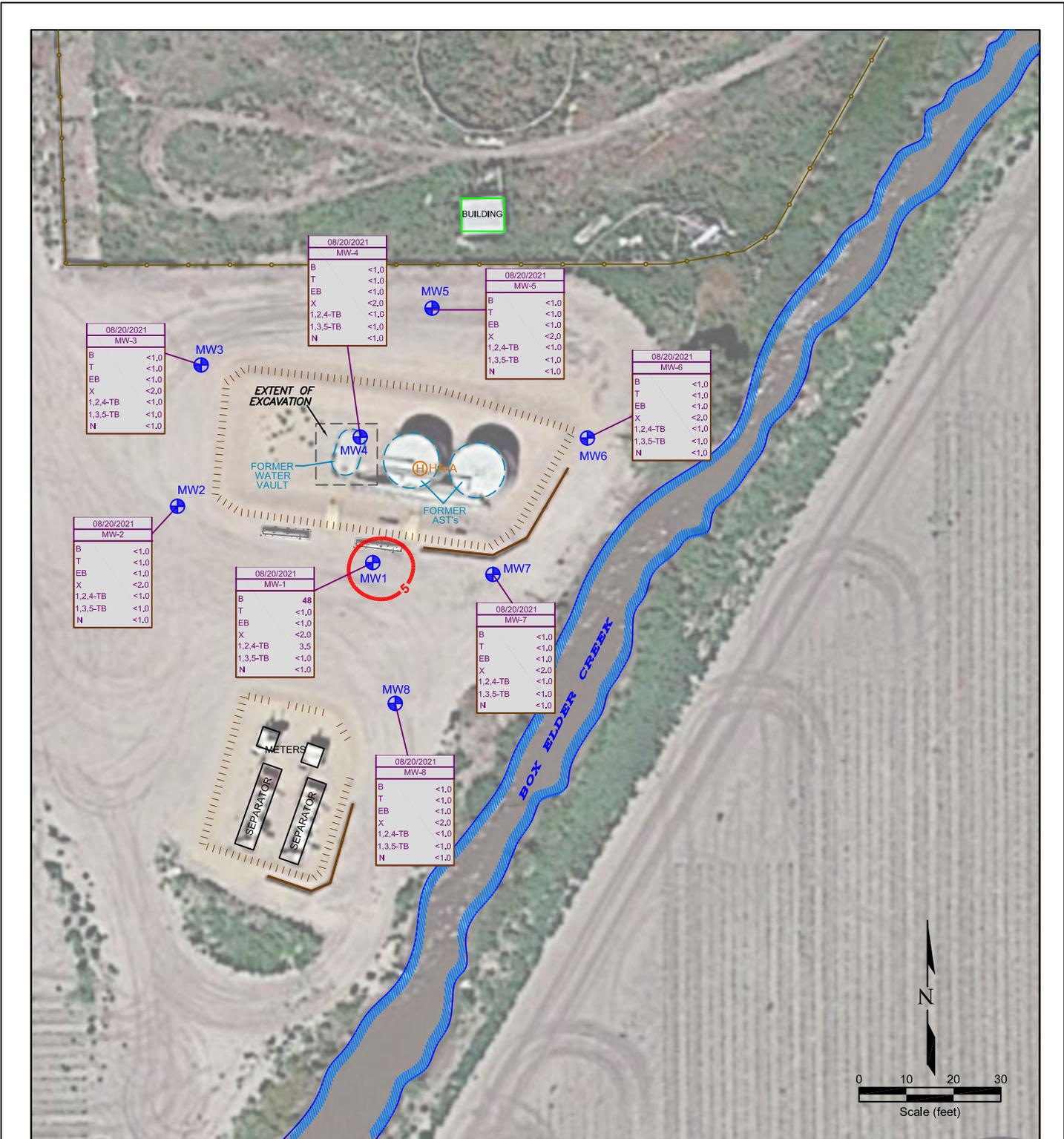
- MONITORING WELL (94.56)
- HAND AUGURED WELL
- ABOVE GROUND STORAGE TANK
- CONCRETE BARRICADES
- FORMER FACILITY
- BUILDING
- CONTAINMENT BERM
- CONTAINMENT WALL
- FENCE LINE
- EXTENT OF EXCAVATION
- GROUND WATER ELEVATION (feet above mean sea level)
- WATER TABLE CONTOUR (feet above mean sea level)
- INFERRED GROUND WATER

Figure 3  
**INFERRED GROUNDWATER CONTOUR MAP**  
 August 20, 2021

**CHEVRON CORP. ~ McDERMED 2-1**  
 NWNE Sec. 1, T4N, R64W ~ 40.34695°, -104.49421°  
 Weld County, Colorado

Project No. <b>CO20-022</b>	Prepared by	Drawn by <b>TA</b>
Date <b>9/17/21</b>	Reviewed by <b>EB</b>	Filename <b>20022QQ</b>





**LEGEND**

	MONITORING WELL	<table border="1"> <tr><th colspan="2">08/20/2021</th></tr> <tr><th colspan="2">MW-1</th></tr> <tr><td>B</td><td>48</td></tr> <tr><td>T</td><td>&lt;1.0</td></tr> <tr><td>EB</td><td>&lt;1.0</td></tr> <tr><td>X</td><td>&lt;2.0</td></tr> <tr><td>1,2,4-TB</td><td>3.5</td></tr> <tr><td>1,3,5-TB</td><td>&lt;1.0</td></tr> <tr><td>N</td><td>&lt;1.0</td></tr> </table>	08/20/2021		MW-1		B	48	T	<1.0	EB	<1.0	X	<2.0	1,2,4-TB	3.5	1,3,5-TB	<1.0	N	<1.0	DATE SAMPLED SAMPLE ID BENZENE (ug/L) TOLUENE (ug/L) ETHYLBENZENE (ug/L) TOTAL XYLENES (ug/L) 1,2,4-TRIMETHYLBENZENE (ug/L) 1,3,5-TRIMETHYLBENZENE (ug/L) NAPHTHALENE (ug/L)
08/20/2021																					
MW-1																					
B	48																				
T	<1.0																				
EB	<1.0																				
X	<2.0																				
1,2,4-TB	3.5																				
1,3,5-TB	<1.0																				
N	<1.0																				
	HAND AUGURED WELL																				
	ABOVE GROUND STORAGE TANK																				
	CONCRETE BARRICADES																				
	FORMER FACILITY																				
	BUILDING																				
	CONTAINMENT BERM																				
	CONTAINMENT WALL																				
	FENCE LINE																				
	EXTENT OF EXCAVATION																				
	BENZENE ISOCONCENTRATION (ug/L) Inferred in part from historical data																				

**Figure 4**  
**GROUNDWATER CHEMISTRY MAP**  
**August 20, 2021**  
**CHEVRON CORP. ~ McDERMED 2-1**  
 NWNE Sec. 1, T4N, R64W ~ 40.34695°, -104.49421°  
 Weld County, Colorado

Project No. <b>CO20-022</b>	Prepared by	Drawn by <b>TA</b>	
Date <b>9/17/21</b>	Reviewed by <b>EB</b>	Filename <b>20022QQ</b>	

# Summit Scientific

---

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

August 30, 2021

Paul Henchan  
Fremont Environmental  
PO Box 1289  
Wellington, CO 80549  
RE: Noble - McDermed 2-1  
Work Order #2108304

Enclosed are the results of analyses for samples received by Summit Scientific on 08/20/21 15:50. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Muri Premer". The signature is written in a cursive style with a large, stylized initial "M".

Muri Premer For Paul Shrewsbury  
President



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - McDermed 2-1

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
08/30/21 13:45

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	2108304-01	Water	08/20/21 00:00	08/20/21 15:50
MW-2	2108304-02	Water	08/20/21 00:00	08/20/21 15:50
MW-3	2108304-03	Water	08/20/21 00:00	08/20/21 15:50
MW-4	2108304-04	Water	08/20/21 00:00	08/20/21 15:50
MW-5	2108304-05	Water	08/20/21 00:00	08/20/21 15:50
MW-6	2108304-06	Water	08/20/21 00:00	08/20/21 15:50
MW-7	2108304-07	Water	08/20/21 00:00	08/20/21 15:50
MW-8	2108304-08	Water	08/20/21 00:00	08/20/21 15:50

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

S<sub>2</sub>

2108304

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  
 Phone: 303-956-8714 Project Name: Noble - Me Darned 2-1  
 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	BTEXN - 915	<del>PAHs</del>	GRO	DRO/ORO	SAR	EC		pH	Boron	PAH - 915
1	MW-1	8/20/21		3	X				X				X	X								
2	MW-2																					
3	MW-3																					
4	MW-4																					
5	MW-5																					
6	MW-6																					
7	MW-7																					
8	MW-8																					
9																						
10																						

Relinquished by: <u>Chris Black</u>	Date/Time: <u>8/20/21 1815</u>	Received by: <u>Will Dali</u>	Date/Time: <u>8/20/21 1550</u>	<b>Turn Around Time</b> (Check) Same Day _____ 72 hours _____ 24 hours _____ Standard <u>X</u> 48 hours _____ <b>Sample Integrity:</b> Temperature Upon Receipt: <u>5.5</u> Samples Intact: <u>(Yes)</u> No	<b>Notes:</b>
Relinquished by:	Date/Time:	Received by:	Date/Time:		
Relinquished by:	Date/Time:	Received by:	Date/Time:		

**Sample Receipt Checklist**

S2 Work Order 2108304

Client: Fremont Client Project ID: Noble-McDermed 2-1

Shipped Via:  H.D.  P.U.  FedEx  UPS  USPS  Other \_\_\_\_\_ Airbill #: \_\_\_\_\_

Matrix (check all that apply):  Air  Soil/Solid  Water  Other: \_\_\_\_\_  
(Describe)

Temp (°C)	<u>5.5</u>
-----------	------------

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C <sup>(1)</sup> ? NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>on ice</u>
Were all samples received intact <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact <sup>(1)</sup> ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples with holding times due within 48 hours sample due within 48 hours present?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out completely <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) <sup>(1)</sup> ? Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>HCl</u>
If samples are acid preserved for metals, is the pH ≤ 2 <sup>(1)</sup> ? Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Additional Comments (if any):

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

W6  
Custodian Printed Name or Initials

Will Galin  
Signature of Custodian

8/20/21  
Date/Time



Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - McDermed 2-1

Project Number: [none]  
 Project Manager: Paul Henchan

**Reported:**  
 08/30/21 13:45

**MW-1**  
**2108304-01 (Water)**

**Summit Scientific**

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

Date Sampled: **08/20/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>Benzene</b>	<b>48</b>	1.0		ug/l	1	BEH0411	08/24/21	08/26/21	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	
Naphthalene	ND	1.0		"	"	"	"	"	"	
<b>1,2,4-Trimethylbenzene</b>	<b>3.5</b>	1.0		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0		"	"	"	"	"	"	

Date Sampled: **08/20/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		75.2 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		90.4 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		91.1 %		21-167		"	"	"	"	

Summit Scientific

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



Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - McDermed 2-1

Project Number: [none]  
 Project Manager: Paul Henchan

**Reported:**  
 08/30/21 13:45

**MW-2**  
**2108304-02 (Water)**

**Summit Scientific**

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

Date Sampled: **08/20/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BEH0411	08/24/21	08/26/21	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	
Naphthalene	ND	1.0		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0		"	"	"	"	"	"	

Date Sampled: **08/20/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		93.2 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		91.7 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		89.8 %		21-167		"	"	"	"	

Summit Scientific

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - McDermed 2-1

Project Number: [none]  
 Project Manager: Paul Henchan

**Reported:**  
 08/30/21 13:45

**MW-3**  
**2108304-03 (Water)**

**Summit Scientific**

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

Date Sampled: **08/20/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BEH0411	08/24/21	08/26/21	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	
Naphthalene	ND	1.0		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0		"	"	"	"	"	"	

Date Sampled: **08/20/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		88.3 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		122 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		91.7 %		21-167		"	"	"	"	

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - McDermed 2-1

Project Number: [none]  
 Project Manager: Paul Henchan

**Reported:**  
 08/30/21 13:45

**MW-4**  
**2108304-04 (Water)**

**Summit Scientific**

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

Date Sampled: **08/20/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BEH0411	08/24/21	08/26/21	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	
Naphthalene	ND	1.0		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0		"	"	"	"	"	"	

Date Sampled: **08/20/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		116 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		102 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		90.3 %		21-167		"	"	"	"	

Summit Scientific

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Project: Noble - McDermed 2-1

Project Number: [none]  
 Project Manager: Paul Henchan

**Reported:**  
 08/30/21 13:45

**MW-5**  
**2108304-05 (Water)**

**Summit Scientific**

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

Date Sampled: **08/20/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BEH0411	08/24/21	08/26/21	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	
Naphthalene	ND	1.0		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0		"	"	"	"	"	"	

Date Sampled: **08/20/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		89.6 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		82.6 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		106 %		21-167		"	"	"	"	

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Project: Noble - McDermed 2-1

Project Number: [none]  
 Project Manager: Paul Henchan

**Reported:**  
 08/30/21 13:45

**MW-6**  
**2108304-06 (Water)**

**Summit Scientific**

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

Date Sampled: **08/20/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BEH0411	08/24/21	08/26/21	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	
Naphthalene	ND	1.0		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0		"	"	"	"	"	"	

Date Sampled: **08/20/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		95.0 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		92.0 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		89.7 %		21-167		"	"	"	"	

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Project: Noble - McDermed 2-1

Project Number: [none]  
 Project Manager: Paul Henchan

**Reported:**  
 08/30/21 13:45

**MW-7**  
**2108304-07 (Water)**

**Summit Scientific**

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

Date Sampled: **08/20/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BEH0411	08/24/21	08/26/21	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	
Naphthalene	ND	1.0		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0		"	"	"	"	"	"	

Date Sampled: **08/20/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		71.6 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		92.9 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		89.3 %		21-167		"	"	"	"	

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Project: Noble - McDermed 2-1

Project Number: [none]  
 Project Manager: Paul Henchan

**Reported:**  
 08/30/21 13:45

**MW-8**  
**2108304-08 (Water)**

**Summit Scientific**

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

Date Sampled: **08/20/21 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	BEH0411	08/24/21	08/26/21	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	

Date Sampled: **08/20/21 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		52.7 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		92.0 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		87.7 %	21-167		"	"	"	"	

Summit Scientific

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Wellington CO, 80549

Project: Noble - McDermed 2-1

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
08/30/21 13:45

### 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 BEH0411 - EPA 5030 Water MS

##### Blank (BEH0411-BLK1)

Prepared: 08/24/21 Analyzed: 08/25/21

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	"								
<i>Surrogate: 1,2-Dichloroethane-d4</i>	8.99		"	13.3		67.4		23-173			
<i>Surrogate: Toluene-d8</i>	11.8		"	13.3		88.4		20-170			
<i>Surrogate: 4-Bromofluorobenzene</i>	11.8		"	13.3		88.6		21-167			

##### LCS (BEH0411-BS1)

Prepared: 08/24/21 Analyzed: 08/25/21

Benzene	37.7	1.0	ug/l	33.3		113		51-132			
Toluene	37.0	1.0	"	33.3		111		51-138			
Ethylbenzene	35.8	1.0	"	33.3		108		58-146			
m,p-Xylene	69.4	2.0	"	66.7		104		57-144			
o-Xylene	34.4	1.0	"	33.3		103		53-146			
Naphthalene	33.7	1.0	"	33.3		101		70-130			
1,2,4-Trimethylbenzene	28.5	1.0	"	33.3		85.5		70-130			
1,3,5-Trimethylbenzene	34.6	1.0	"	33.3		104		70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	14.7		"	13.3		110		23-173			
<i>Surrogate: Toluene-d8</i>	14.4		"	13.3		108		20-170			
<i>Surrogate: 4-Bromofluorobenzene</i>	12.1		"	13.3		90.8		21-167			

##### Matrix Spike (BEH0411-MS1)

Source: 2108304-02

Prepared: 08/24/21 Analyzed: 08/25/21

Benzene	30.3	1.0	ug/l	33.3	ND	91.0		34-141			
Toluene	41.4	1.0	"	33.3	ND	124		27-151			
Ethylbenzene	35.8	1.0	"	33.3	ND	107		29-160			
m,p-Xylene	69.4	2.0	"	66.7	ND	104		20-166			
o-Xylene	34.0	1.0	"	33.3	ND	102		33-159			
Naphthalene	39.3	1.0	"	33.3	ND	118		70-130			
1,2,4-Trimethylbenzene	27.8	1.0	"	33.3	ND	83.5		70-130			
1,3,5-Trimethylbenzene	33.7	1.0	"	33.3	ND	101		70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	11.8		"	13.3		88.4		23-173			
<i>Surrogate: Toluene-d8</i>	15.5		"	13.3		116		20-170			
<i>Surrogate: 4-Bromofluorobenzene</i>	11.5		"	13.3		86.6		21-167			

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Project: Noble - McDermed 2-1

Project Number: [none]  
 Project Manager: Paul Henchan

**Reported:**  
 08/30/21 13:45

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**

**Summit Scientific**

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

**Batch BEH0411 - EPA 5030 Water MS**

Matrix Spike Dup (BEH0411-MSD1)	Source: 2108304-02			Prepared: 08/24/21 Analyzed: 08/25/21					
Benzene	27.2	1.0	ug/l	33.3	ND	81.7	34-141	10.8	30
Toluene	36.8	1.0	"	33.3	ND	110	27-151	11.6	30
Ethylbenzene	35.9	1.0	"	33.3	ND	108	29-160	0.223	30
m,p-Xylene	68.3	2.0	"	66.7	ND	102	20-166	1.61	30
o-Xylene	33.7	1.0	"	33.3	ND	101	33-159	0.946	30
Naphthalene	39.1	1.0	"	33.3	ND	117	70-130	0.485	30
1,2,4-Trimethylbenzene	27.6	1.0	"	33.3	ND	82.8	70-130	0.830	30
1,3,5-Trimethylbenzene	33.4	1.0	"	33.3	ND	100	70-130	0.893	30
Surrogate: 1,2-Dichloroethane-d4	11.0		"	13.3		82.3	23-173		
Surrogate: Toluene-d8	14.3		"	13.3		107	20-170		
Surrogate: 4-Bromofluorobenzene	12.1		"	13.3		90.5	21-167		

Summit Scientific

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PO Box 1289  
Wellington CO, 80549

Project: Noble - McDermed 2-1

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
08/30/21 13:45

### 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