

FREMONT ENVIRONMENTAL INC.

March 15, 2021

Mr. Jacob Evans
Noble Energy Inc.
2115 117th 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
NOBLE ENERGY INC.
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
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
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
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
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
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
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
MW-8	05/27/20	<1.0	<1.0	<1.0	<2.0	NA	NA	NA	99.66	7.31	92.35	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-8	08/09/20	<1.0	<1.0	<1.0	<2.0	NA	NA	NA	99.66	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
Table 915-1 Standards		5	560	700	1,400	67	67	140				

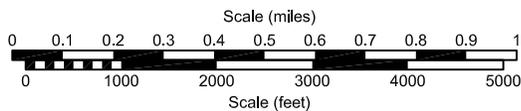
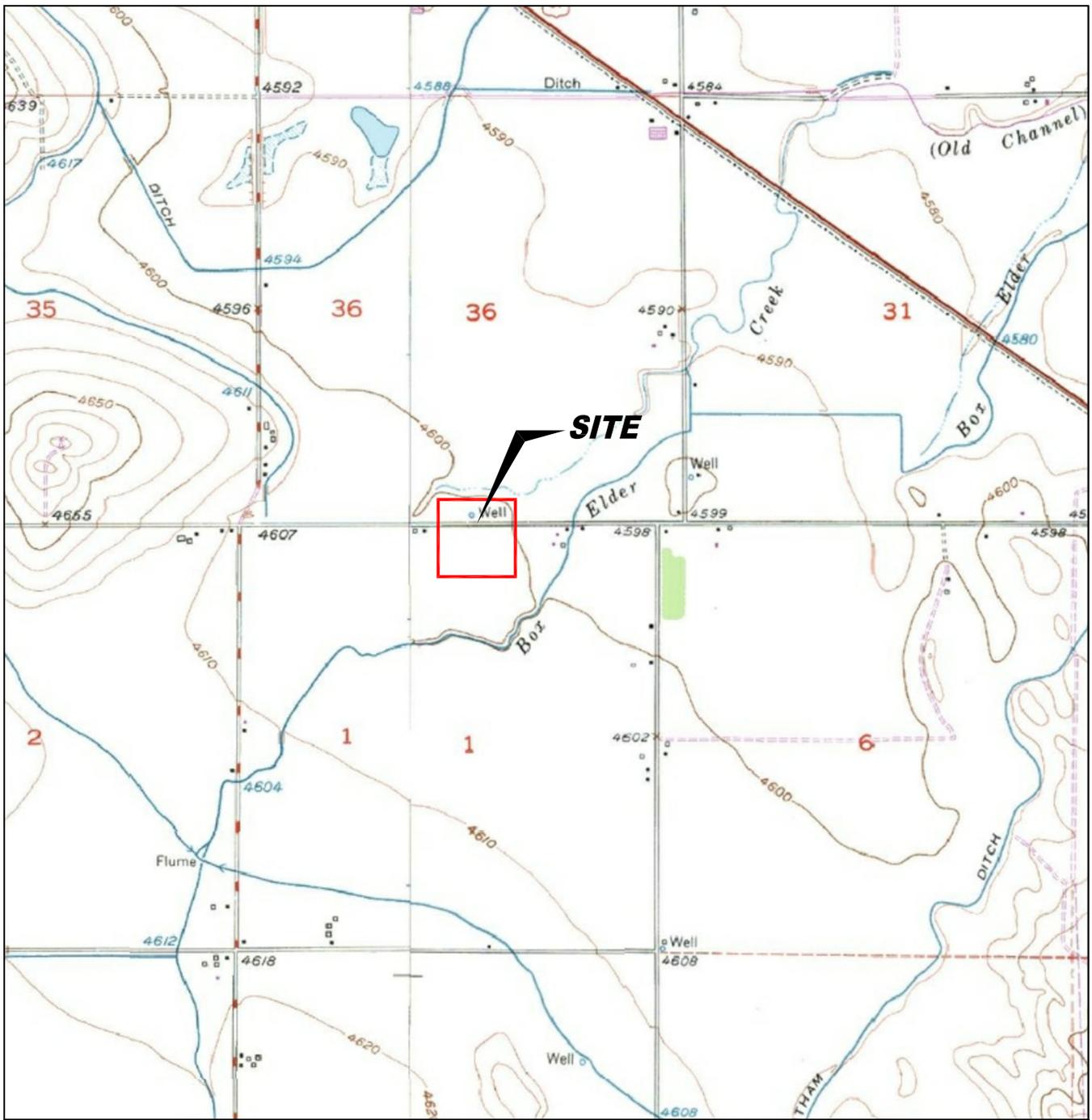
Bold faced values exceed the COGCC Table 915-1 concentrations

TABLE 2
SUMMARY OF INORGANIC GROUNDWATER CHEMISTRY DATA
NOBLE ENERGY INC.
McDERMED 2-1, WELD COUNTY, COLORADO
FREMONT PROJECT C020-022

SAMPLE LOCATION	DATE	TOTAL DISSOLVED SOLIDS (mg/L)	CHLORIDE ION (mg/L)	SULFATE ION (mg/L)
MW-1	02/17/21	650	158	366
MW-2	02/17/21	918	228	2360
MW-3	02/17/21	613	153	500
MW-4	02/17/21	886	217	5690
MW-5	02/17/21	977	310	5210
MW-6	02/17/21	964	334	1840
MW-7	02/17/21	730	234	3910
MW-8	02/17/21	666	200	428
Table 915-1 Limits		<1.25 x local background	250	250

Bold face values exceed the COGCC limits

Lowest TDS Value Used as Local Background



USGS 7.5 MINUTE SERIES (TOPOGRAPHIC)

Figure 1
SITE LOCATION MAP

NOBLE ENERGY, INC. ~ McDERMED 2-1
NWNE Sec. 1, T4N, R64W ~ 40.34695°, -104.49421°
Weld County, Colorado

Project No. CO20-022	Prepared by	Drawn by TA
Date 03/01/2021	Reviewed by EB	Filename 20022T





LEGEND

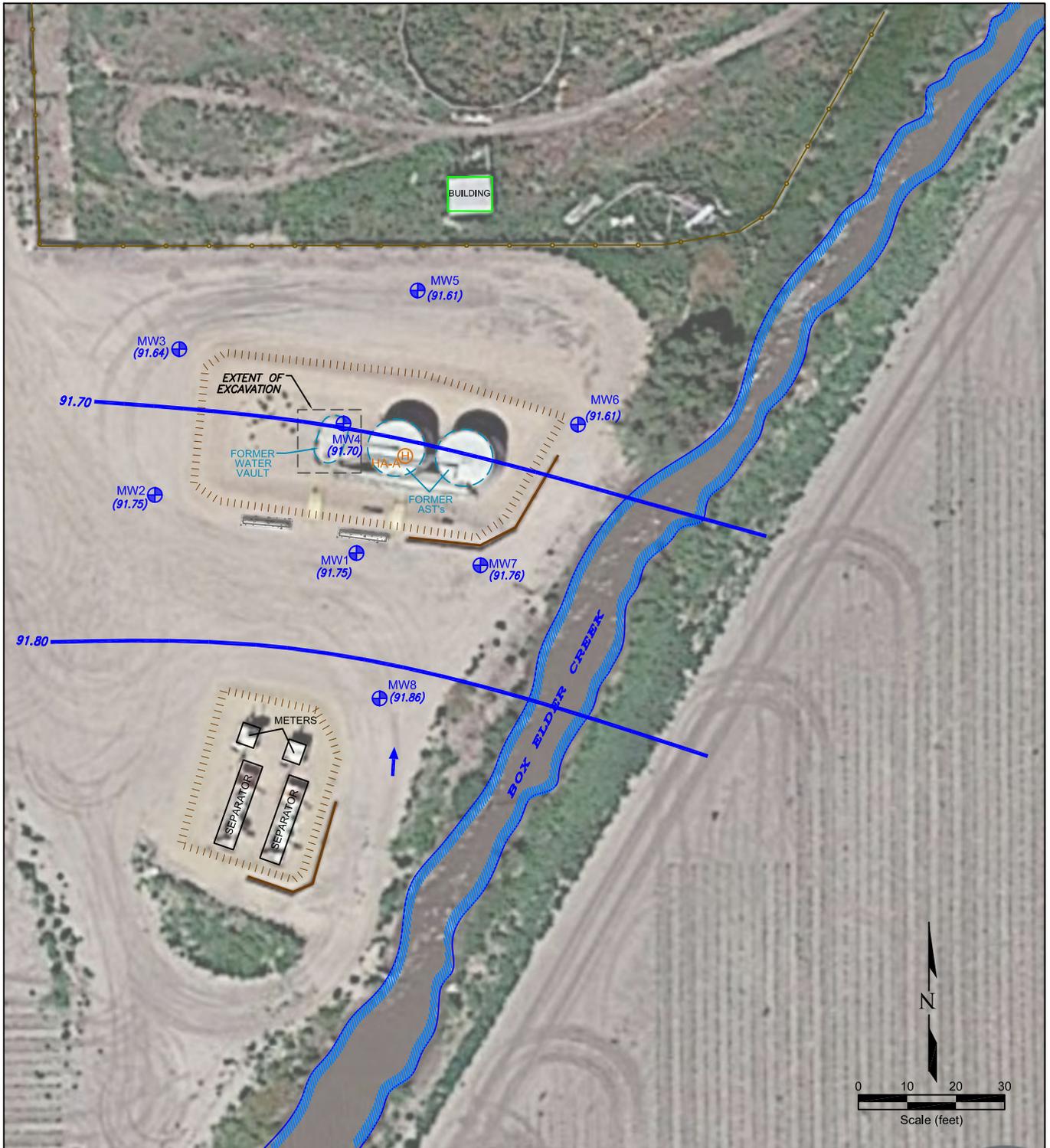
-  MONITORING WELL
-  HAND AUGURED WELL
-  ABOVE GROUND STORAGE TANK
-  CONCRETE BARRICADES
-  FORMER FACILITY
-  BUILDING
-  CONTAINMENT BERM
-  CONTAINMENT WALL
-  FENCE LINE
-  EXTENT OF EXCAVATION

**Figure 2
SITE MAP**

NOBLE ENERGY, INC. ~ McDERMED 2-1
 NWNE Sec. 1, T4N, R64W ~ 40.34695°, -104.49421°
 Weld County, Colorado

Project No. CO20-022	Prepared by	Drawn by TA
Date 03/01/2021	Reviewed by EB	Filename 20022QQ





LEGEND

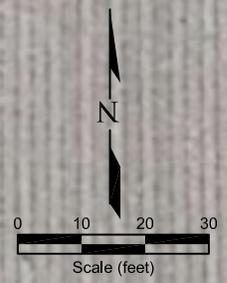
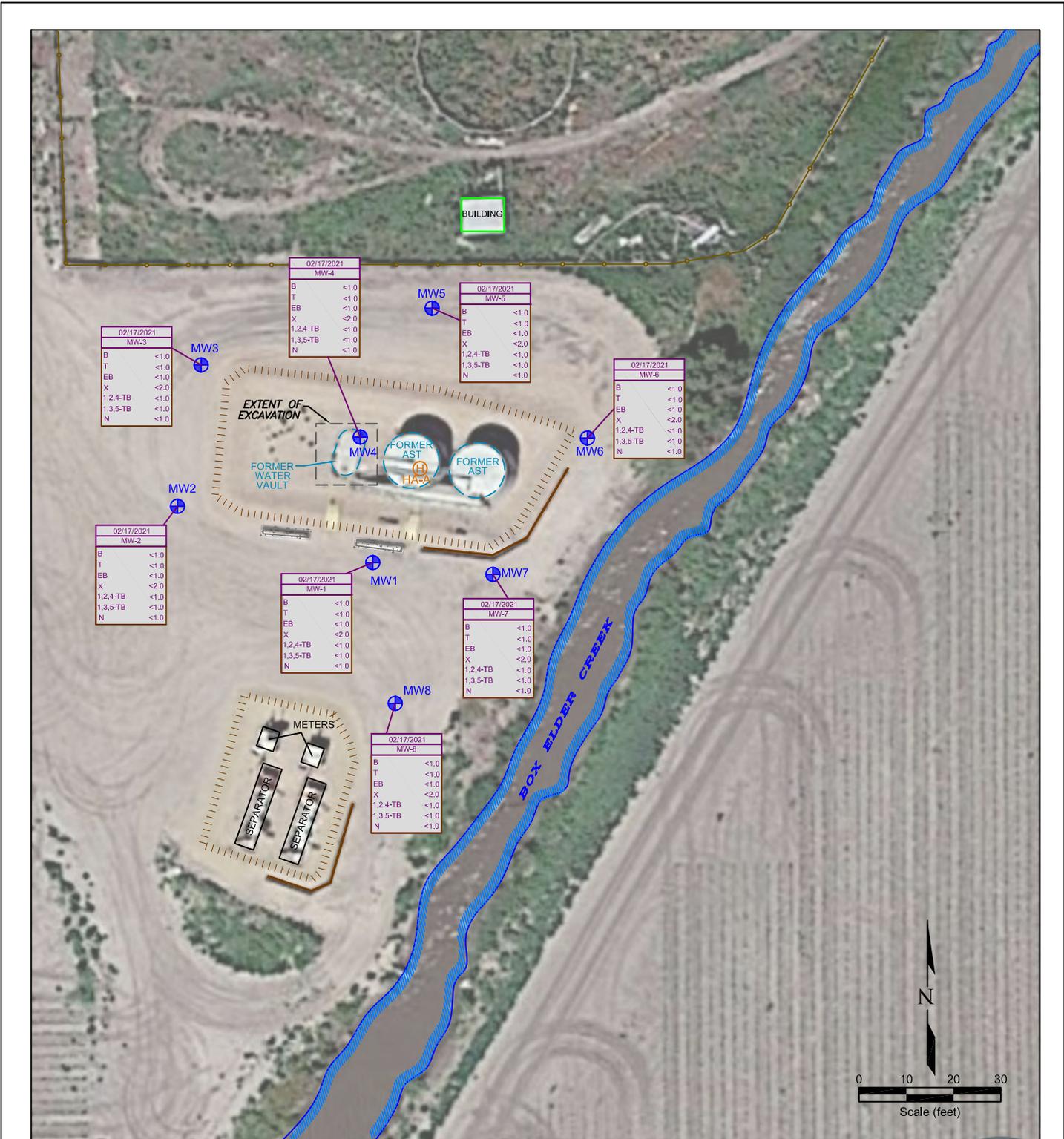
- MONITORING WELL
- HAND AUGURED WELL
- ABOVE GROUND STORAGE TANK
- CONCRETE BARRICADES
- FORMER FACILITY
- BUILDING
- CONTAINMENT BERM
- CONTAINMENT WALL
- FENCE LINE
- EXTENT OF EXCAVATION
- (91.70) GROUND WATER ELEVATION (feet above mean sea level)
- (91.80) WATER TABLE CONTOUR (feet above mean sea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

Figure 3
INFERRED GROUNDWATER CONTOUR MAP
 February 17, 2021

NOBLE ENERGY, INC. ~ McDERMED 2-1
 NWNE Sec. 1, T4N, R64W ~ 40.34695°, -104.49421°
 Weld County, Colorado

Project No. CO20-022	Prepared by	Drawn by TA
Date 03/01/2021	Reviewed by EB	Filename 20022QQ





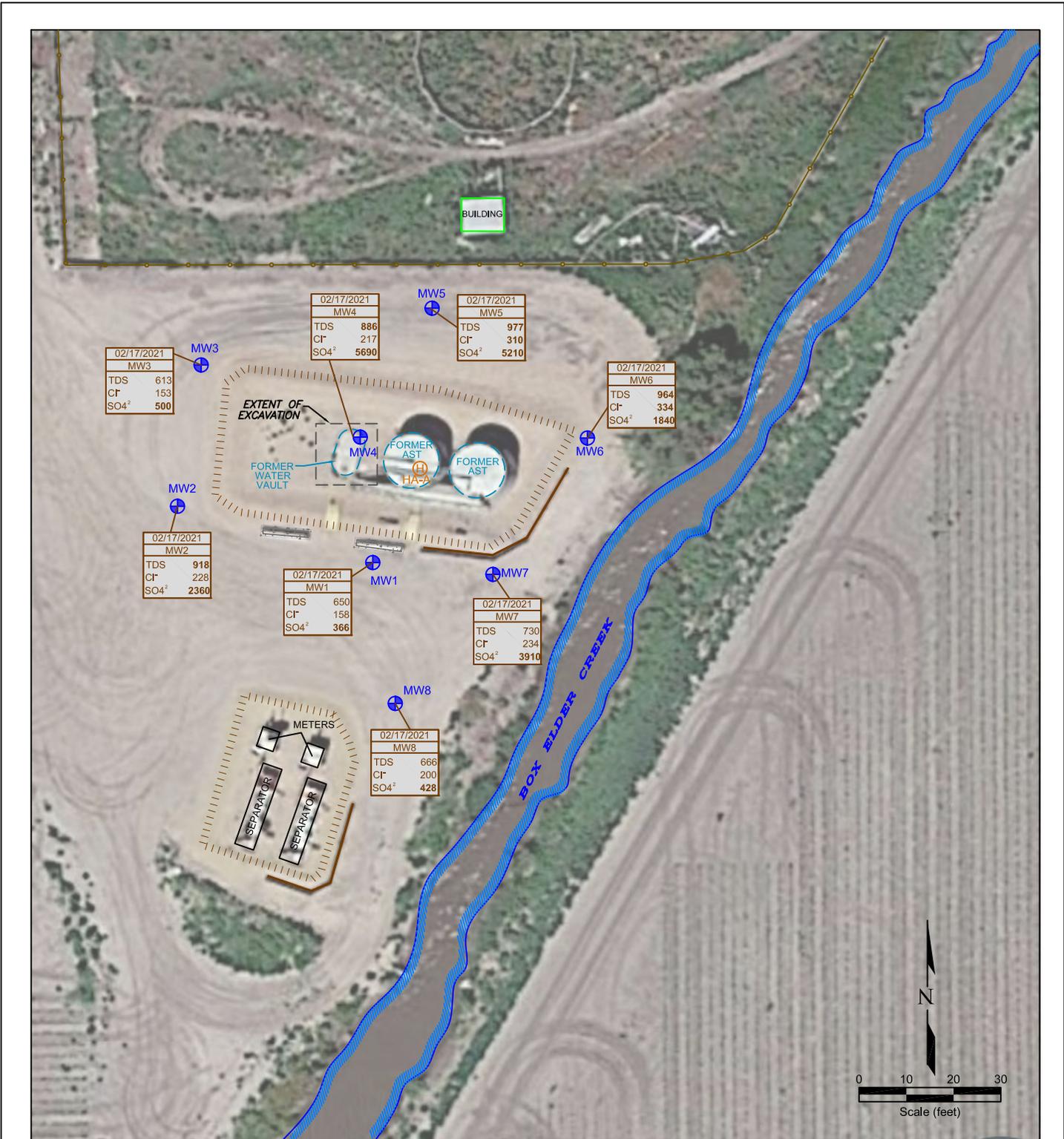
LEGEND

- MONITORING WELL
 - HAND AUGURED WELL
 - ABOVE GROUND STORAGE TANK
 - CONCRETE BARRICADES
 - FORMER FACILITY
 - BUILDING
 - CONTAINMENT BERM
 - CONTAINMENT WALL
 - FENCE LINE
 - EXTENT OF EXCAVATION
- | 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) |
|--------------|-----------|----------------|----------------|---------------------|----------------------|-------------------------------|-------------------------------|--------------------|
| 02/17/2021 | MW-1 | <1.0 | <1.0 | <1.0 | <2.0 | <1.0 | <1.0 | <1.0 |

Figure 4
GROUNDWATER CHEMISTRY MAP
 February 17, 2021

NOBLE ENERGY, INC. ~ McDERMED 2-1
 NWNE Sec. 1, T4N, R64W ~ 40.34695°, -104.49421°
 Weld County, Colorado

Project No. CO20-022	Prepared by TA	Drawn by TA	
Date 03/01/2021	Reviewed by EB	Filename 20022QQ	



LEGEND

- MONITORING WELL
 - HAND AUGURED WELL
 - ABOVE GROUND STORAGE TANK
 - CONCRETE BARRICADES
 - FORMER FACILITY
 - BUILDING
 - CONTAINMENT BERM
 - CONTAINMENT WALL
 - FENCE LINE
 - EXTENT OF EXCAVATION
- | DATE SAMPLED | SAMPLE ID | TOTAL DISSOLVED SOLIDS (mg/L) | CHLORIDE ION (mg/L) | SULFATE ION (mg/L) |
|--------------|-----------|-------------------------------|---------------------|--------------------|
| 02/17/2021 | MW1 | 650 | 158 | 366 |

Figure 5
INORGANIC GROUNDWATER CHEMISTRY MAP
 February 17, 2021

NOBLE ENERGY, INC. ~ McDERMED 2-1
 NWNE Sec. 1, T4N, R64W ~ 40.34695°, -104.49421°
 Weld County, Colorado

Project No. CO20-022	Prepared by	Drawn by TA
Date 03/01/2021	Reviewed by EB	Filename 20022QQ



Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

February 24, 2021

Paul Henchan
Fremont Environmental
PO Box 1289
Wellington, CO 80549
RE: Noble - McDermed 2-1
Work Order #2102223

Enclosed are the results of analyses for samples received by Summit Scientific on 02/17/21 16:28. 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 initial "M" and a long, sweeping underline.

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:
02/24/21 12:04

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	2102223-01	Water	02/17/21 00:00	02/17/21 16:28
MW-2	2102223-02	Water	02/17/21 00:00	02/17/21 16:28
MW-3	2102223-03	Water	02/17/21 00:00	02/17/21 16:28
MW-4	2102223-04	Water	02/17/21 00:00	02/17/21 16:28
MW-5	2102223-05	Water	02/17/21 00:00	02/17/21 16:28
MW-6	2102223-06	Water	02/17/21 00:00	02/17/21 16:28
MW-7	2102223-07	Water	02/17/21 00:00	02/17/21 16:28
MW-8	2102223-08	Water	02/17/21 00:00	02/17/21 16:28

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

2102223

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 Dorned 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	BTEX	Naphthalene	GRO	DRO	SAR	EC	pH	Full 95 H ₂ O	
1	MW-1	2/17/21		2			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>Ethan Black</u>	Date/Time: <u>2/17/21 1628</u>	Received by: <u>[Signature]</u>	Date/Time: <u>02/17/2021 1628</u>	Turn Around Time (Check) Same Day _____ 72 hours 24 hours _____ Standard <input checked="" type="checkbox"/> 48 hours _____ Sample Integrity: Temperature Upon Receipt: <u>3.4</u> Samples Intact: <input checked="" type="radio"/> Yes No	Notes:
Relinquished by:	Date/Time:	Received by:	Date/Time:		
Relinquished by:	Date/Time:	Received by:	Date/Time:		

2102223

Sample Receipt Checklist

S2 Work Order _____

Client: Framont Client Project ID: Noble-McDeemed 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)	3.4
-----------	-----

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C ⁽¹⁾ ? 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"/>	
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact ⁽¹⁾ ?	<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 checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	<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 checked="" type="checkbox"/>	TS
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ? Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ? 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):

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

Custodian Printed Name or Initials

Signature of Custodian

Date/Time

TS

[Signature]

02/17/2021



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - McDermed 2-1

Project Number: [none]
Project Manager: Paul Henchan

Reported:
02/24/21 12:04

MW-1
2102223-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/17/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BEB0271	02/18/21	02/18/21	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: **02/17/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		130 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		92.0 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %		21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **02/17/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	158	12.0		mg/L	200	BEB0313	02/22/21	02/22/21	EPA 300.0	
Sulfate	366	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **02/17/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	650	10.0		mg/L	1	BEB0290	02/19/21	02/19/21	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 - McDermed 2-1

Project Number: [none]
Project Manager: Paul Henchan

Reported:
02/24/21 12:04

MW-2
2102223-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/17/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BEB0271	02/18/21	02/18/21	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: **02/17/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		131 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		94.3 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %		21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **02/17/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Sulfate	2360	60.0		mg/L	200	BEB0313	02/22/21	02/22/21	EPA 300.0	
Chloride	228	12.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **02/17/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	918	10.0		mg/L	1	BEB0290	02/19/21	02/19/21	SM2540C	

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:
02/24/21 12:04

MW-3
2102223-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/17/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BEB0271	02/18/21	02/18/21	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: **02/17/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		133 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		91.1 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %		21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **02/17/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	153	12.0		mg/L	200	BEB0313	02/22/21	02/22/21	EPA 300.0	
Sulfate	5000	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **02/17/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	613	10.0		mg/L	1	BEB0290	02/19/21	02/19/21	SM2540C	

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:
02/24/21 12:04

MW-4
2102223-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/17/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BEB0271	02/18/21	02/18/21	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: **02/17/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		134 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		98.1 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %		21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **02/17/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Sulfate	5690	60.0		mg/L	200	BEB0313	02/22/21	02/22/21	EPA 300.0	
Chloride	217	12.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **02/17/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	886	10.0		mg/L	1	BEB0290	02/19/21	02/19/21	SM2540C	

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:
02/24/21 12:04

MW-5
2102223-05 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/17/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BEB0271	02/18/21	02/19/21	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: **02/17/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		130 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		99.0 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %		21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **02/17/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	310	12.0		mg/L	200	BEB0313	02/22/21	02/22/21	EPA 300.0	
Sulfate	5210	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **02/17/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	977	10.0		mg/L	1	BEB0290	02/19/21	02/19/21	SM2540C	

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:
02/24/21 12:04

MW-6
2102223-06 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/17/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BEB0271	02/18/21	02/19/21	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: **02/17/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		131 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		93.1 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %		21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **02/17/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Sulfate	1840	60.0		mg/L	200	BEB0313	02/22/21	02/22/21	EPA 300.0	
Chloride	334	12.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **02/17/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	964	10.0		mg/L	1	BEB0290	02/19/21	02/19/21	SM2540C	

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:
02/24/21 12:04

MW-7
2102223-07 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/17/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BEB0271	02/18/21	02/19/21	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: **02/17/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		130 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		92.1 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %		21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **02/17/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	234	12.0		mg/L	200	BEB0313	02/22/21	02/22/21	EPA 300.0	
Sulfate	3910	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **02/17/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	730	10.0		mg/L	1	BEB0290	02/19/21	02/19/21	SM2540C	

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:
02/24/21 12:04

MW-8
2102223-08 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/17/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BEB0271	02/18/21	02/19/21	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: **02/17/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		137 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		92.0 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %		21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **02/17/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Sulfate	482	60.0		mg/L	200	BEB0313	02/22/21	02/22/21	EPA 300.0	
Chloride	200	12.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **02/17/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	666	10.0		mg/L	1	BEB0290	02/19/21	02/19/21	SM2540C	

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:
02/24/21 12:04

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 BEB0271 - EPA 5030 Water MS

Blank (BEB0271-BLK1)

Prepared & Analyzed: 02/18/21

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>	16.8		"	13.3		126		23-173			
<i>Surrogate: Toluene-d8</i>	12.2		"	13.3		91.1		20-170			
<i>Surrogate: 4-Bromofluorobenzene</i>	13.8		"	13.3		103		21-167			

LCS (BEB0271-BS1)

Prepared & Analyzed: 02/18/21

Benzene	42.4	1.0	ug/l	33.3		127		51-132			
Toluene	38.0	1.0	"	33.3		114		51-138			
Ethylbenzene	39.3	1.0	"	33.3		118		58-146			
m,p-Xylene	74.2	2.0	"	66.7		111		57-144			
o-Xylene	39.2	1.0	"	33.3		118		53-146			
Naphthalene	36.1	1.0	"	33.3		108		70-130			
1,2,4-Trimethylbenzene	31.9	1.0	"	33.3		95.6		70-130			
1,3,5-Trimethylbenzene	38.4	1.0	"	33.3		115		70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	16.8		"	13.3		126		23-173			
<i>Surrogate: Toluene-d8</i>	12.7		"	13.3		95.3		20-170			
<i>Surrogate: 4-Bromofluorobenzene</i>	14.2		"	13.3		107		21-167			

Matrix Spike (BEB0271-MS1)

Source: 2102223-01

Prepared & Analyzed: 02/18/21

Benzene	42.2	1.0	ug/l	33.3	ND	127		34-141			
Toluene	37.9	1.0	"	33.3	ND	114		27-151			
Ethylbenzene	39.8	1.0	"	33.3	ND	119		29-160			
m,p-Xylene	75.3	2.0	"	66.7	ND	113		20-166			
o-Xylene	39.8	1.0	"	33.3	ND	119		33-159			
Naphthalene	34.1	1.0	"	33.3	ND	102		70-130			
1,2,4-Trimethylbenzene	32.4	1.0	"	33.3	ND	97.2		70-130			
1,3,5-Trimethylbenzene	39.0	1.0	"	33.3	ND	117		70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	16.9		"	13.3		127		23-173			
<i>Surrogate: Toluene-d8</i>	12.8		"	13.3		96.0		20-170			
<i>Surrogate: 4-Bromofluorobenzene</i>	14.1		"	13.3		106		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:
 02/24/21 12:04

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BEB0271 - EPA 5030 Water MS

Matrix Spike Dup (BEB0271-MSD1)	Source: 2102223-01			Prepared & Analyzed: 02/18/21						
Benzene	41.5	1.0	ug/l	33.3	ND	124	34-141	1.86	30	
Toluene	37.3	1.0	"	33.3	ND	112	27-151	1.81	30	
Ethylbenzene	38.6	1.0	"	33.3	ND	116	29-160	3.11	30	
m,p-Xylene	73.0	2.0	"	66.7	ND	110	20-166	3.10	30	
o-Xylene	38.7	1.0	"	33.3	ND	116	33-159	2.86	30	
Naphthalene	34.8	1.0	"	33.3	ND	104	70-130	2.00	30	
1,2,4-Trimethylbenzene	31.8	1.0	"	33.3	ND	95.3	70-130	1.93	30	
1,3,5-Trimethylbenzene	38.0	1.0	"	33.3	ND	114	70-130	2.54	30	
Surrogate: 1,2-Dichloroethane-d4	16.7		"	13.3		125	23-173			
Surrogate: Toluene-d8	12.6		"	13.3		94.4	20-170			
Surrogate: 4-Bromofluorobenzene	14.0		"	13.3		105	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:
 02/24/21 12:04

Anions by EPA Method 300.0 - Quality Control
Summit Scientific

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

Batch BEB0313 - General Preparation

Blank (BEB0313-BLK1)

Prepared & Analyzed: 02/22/21

Chloride	ND	0.0600	mg/L						
Sulfate	ND	0.300	"						

LCS (BEB0313-BS1)

Prepared & Analyzed: 02/22/21

Sulfate	14.6	0.300	mg/L	15.0	97.1	90-110		
Chloride	2.70	0.0600	"	3.00	90.0	90-110		

Duplicate (BEB0313-DUP1)

Source: 2102210-01

Prepared & Analyzed: 02/22/21

Sulfate	449	60.0	mg/L		436		2.85	20
Chloride	75.4	12.0	"		72.6		3.78	20

Matrix Spike (BEB0313-MS1)

Source: 2102210-01

Prepared & Analyzed: 02/22/21

Chloride	781	12.0	mg/L	600	72.6	118	80-120	
Sulfate	3530	60.0	"	3000	436	103	80-120	

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:
 02/24/21 12:04

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 BEB0290 - General Preparation

Blank (BEB0290-BLK1)

Prepared & Analyzed: 02/19/21

Total Dissolved Solids ND 10.0 mg/L

Duplicate (BEB0290-DUP1)

Source: 2102223-01

Prepared & Analyzed: 02/19/21

Total Dissolved Solids 649 10.0 mg/L 650 0.185 20

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:
02/24/21 12:04

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