

FREMONT ENVIRONMENTAL INC.

June 19, 2020

Mr. Jacob Evans
Noble Energy Inc.
2115 117th Ave,
Greeley, CO 80634

Subject: **Site Investigation Report**
 McDermid 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 Site Investigation Report for the McDermid 2-1 site in Weld County, Colorado. The enclosed report describes site investigation and sampling efforts to assess soil and groundwater quality at the site.

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. Henahan, P.E.
Senior Consultant

Enclosure

SITE INVESTIGATION REPORT
NOBLE ENERGY INC.
MCDERMED 2-1
WELD COUNTY, COLORADO
FREMONT PROJECT NO. C020-022
FACILITY #322891, REMEDIATION #15399

Prepared by:

Fremont Environmental Inc.
1759 Redwing Lane
Broomfield, CO 80020
(303) 956-8714

June 19, 2020

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SITE INVESTIGATION REPORT
NOBLE ENERGY INC.
MCDERMED 2-1
WELD COUNTY, COLORADO
FREMONT PROJECT NO. C020-022
FACILITY #322891, REMEDIATION #15399

1.0 INTRODUCTION

The purpose of this document is to present information collected during a site investigation at the McDermed 2-1 release location in Weld County, Colorado. Impacted soil and groundwater were identified at the water vault location during its abandonment. Eight monitoring wells were installed at this site on May 27, 2020 to delineate the magnitude and extent of subsurface impacts.

2.0 BACKGROUND INFORMATION

2.1 Site Location

The McDermed site is located approximately four and a half miles southeast of Kersey, Colorado in Weld County as shown on Figure 1. The site is located in an agricultural area approximately 3.7 miles east of the intersection of County Road 50 and County Road 53. The location is further described as the NW $\frac{1}{4}$ of the NE $\frac{1}{4}$ of Section 1, Township 4N, Range 64W.

2.2 Site History

The site's excavation area consisted of the former McDermed 2-1 water vault. The McDermed 2-1 well was drilled in 1984 to a vertical depth of approximately 6,791 feet. Soil impacts were identified at the water vault location during its abandonment.

During the facility abandonment, a limited excavation to preliminarily delineate the source impacts was undertaken. One groundwater sample and 11 soil samples were

collected from the excavation sidewalls, floor and test pits and analyzed for petroleum constituents. Laboratory analyses of the soil and groundwater samples indicated that petroleum constituent concentrations of benzene, xylenes and total petroleum hydrocarbons (TPH) were greater than the Colorado Oil and Gas Conservation Commission's (COGCC's) Table 910-1 limits in both the soil and groundwater samples. As a result, a site investigation to determine the extent of subsurface impacts was conducted.

3.0 SITE INVESTIGATION ACTIVITIES

3.1 Soil Borings/Monitoring Wells

A site investigation was conducted at the facility on May 27, 2020. A total of eight soil borings were advanced utilizing a Geoprobe rig. In addition, one hand augered boring was advanced within the bermed area. The eight borings were completed as flush-mounted 1-inch diameter monitoring wells. These borings/monitoring wells were used to delineate the extent of soil and groundwater impacts at the site. The locations of the monitoring wells are illustrated on the attached figures.

Generally, the subsurface consists of sandy clay that extends to a depth of approximately four feet. The sandy clay is underlain by moist, sand, silty-sand and clay extending seven feet, transitioning to a coarse sand between 11 feet and 16 feet. The maximum depth of the borings was 16 feet. Groundwater is present across the site at a depth of approximately 7.5 feet. Geologic cross sections illustrating the soil lithology are presented on Figure 3.

The 1-inch diameter monitoring wells were constructed with 10 foot sections of well screen that were placed at a total depth of approximately 13 feet and completed at the

ground surface with flush-mounted vaults. Soil samples from each of the borings were evaluated in the field using a photoionization detector (PID). Logs of the monitoring wells are presented in Appendix A.

Soil samples were collected from each of the borings and sent to Summit Scientific, Inc. in Golden, Colorado for the analyses of benzene, toluene, ethylbenzene and xylenes (BTEX), naphthalene, total petroleum hydrocarbons-gasoline range organics (TPH-GRO), and TPH-diesel range organics (TPH-DRO).

Soil impacts above the COGCC's Table 910-1 limits for BTEX, naphthalene, TPH-GRO and TPH-DRO were not observed in the two of the eight borings. The soil chemistry is presented on Figure 4 and summarized on Table 1. The laboratory's report is provided in Appendix C.

3.2 Groundwater Monitoring

Groundwater levels were measured in the eight monitoring wells on May 27, 2020 in accordance with the Sampling Plan included in Appendix B. The data are summarized in Table 2.

Water table contours inferred from the May 2020 data are illustrated on Figure 5. Based on these data, groundwater is inferred to flow to the north. The water table gradient was calculated at approximately 0.004 feet per foot (ft/ft) for the May 2020 data.

3.3 Groundwater Sampling and Analysis

Groundwater samples were collected from the eight monitoring wells on May 27, 2020. All groundwater samples were submitted to Summit Scientific, Inc. for analyses of BTEX by EPA Method 8260C.

The groundwater concentrations for seven of the eight monitoring wells were below their respective COGCC Table 910-1 values. Monitoring well MW-1 had a benzene concentration of 29 ug/L which exceed the COGCC Table 910-1 limit of 5 ug/L. The groundwater chemistry is shown on Figure 6 and is summarized in Table 2. A copy of the laboratory's report is presented in Appendix C.

4.0 DISCUSSION

A site investigation was conducted at the McDermid 2-1 location on May 27, 2020 as a result of an historical release from the former water vault. Eight soil boings were advanced and completed as monitoring wells onsite to delineate the magnitude and extent of soil and groundwater impacts.

Soil and groundwater impacts above the COGCC Table 910-1 limits were observed and have been delineated during the site investigation. No additional excavation has been conducted following the facility's abandonment.

The data collected from the monitoring wells indicates that the groundwater flow direction is to the north. Further, the BTEX concentrations of seven of the eight monitoring wells were less than the COGCC Table 910-1 limits. Monitoring well MW-1 had a benzene concentration of 29 ug/L. The groundwater data are shown on Figure 6.

Noble will sample the groundwater at this site on a quarterly basis to evaluate the BTEX concentrations relative to COGCC's Table 910-1 requirements. After four consecutive quarters of COGCC-compliant BTEX concentrations, Noble will request closure of this site.

5.0 REMARKS

The discussion and conclusions contained in this report represent our professional opinions. These opinions are based on currently available information and are arrived at in accordance with currently accepted hydrogeologic and engineering practices at this time and location. Other than this, no warranty is implied or intended.

This report was prepared by **FREMONT ENVIRONMENTAL INC.**



Ethan D. Black

Geologist

Reviewed by:



Paul V. Henahan, P.E.

Senior Consultant

6/19/20
Date_____

6/19/20
Date_____

TABLES

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

Sample	Depth (ft)	Date Sampled	Location	Benzene mg/kg	Toluene mg/kg	Ethyl-Benzene mg/kg	Xylenes mg/kg	Naphthalene mg/kg	TPH GRO mg/kg	TPH DRO mg/kg
N Wall 4 Ft	4	4/7/2020	Wall	0.21	<0.005	0.57	13	2.0	810	2200
N Wall 2 Ft	2	4/7/2020	Wall	NA	NA	NA	NA	NA	NA	NA
S Wall 4 Ft	4	4/7/2020	Wall	<0.002	<0.005	<0.005	<0.01	<0.01	<50	160
E Wall 4 Ft	4	4/7/2020	Wall	0.028	<0.005	0.13	4.5	0.86	1100	2000
W Wall 4 Ft	4	4/7/2020	Wall	0.011	<0.005	0.031	0.46	0.25	89	360
Floor 5 Ft	5	4/7/2020	Floor	0.09	<0.005	0.22	0.59	0.3	220	240
Floor 7 Ft	7	4/7/2020	Floor	<0.002	<0.005	<0.005	<0.01	0.011	<50	310
Floor 10 Ft	10	4/7/2020	Floor	<0.002	<0.005	<0.005	<0.01	<0.01	<50	370
N Test Pit 6 Ft	6	4/7/2020	Floor	<0.002	<0.005	<0.005	<0.01	<0.01	<50	110
S Test Pit 6 Ft	6	4/7/2020	Floor	<0.002	<0.005	<0.005	<0.01	<0.01	<50	270
W Test Pit 7 Ft	7	4/7/2020	Floor	<0.002	<0.005	<0.005	<0.01	<0.01	<50	51
MW-1 2 Ft	2	5/27/2020	Floor	0.004	<0.005	<0.005	0.043	0.015	<50	3100
MW-1 6 Ft	6	5/27/2020	Floor	<0.002	<0.005	<0.005	<0.01	0.02	<50	<50
MW-2 6 Ft	6	5/27/2020	Floor	<0.002	<0.005	<0.005	<0.01	<0.01	<50	<50
MW-3 6 Ft	6	5/27/2020	Floor	<0.002	<0.005	<0.005	<0.01	<0.01	<50	<50
MW-4 4 Ft	4	5/27/2020	Floor	<0.002	<0.005	<0.005	<0.01	<0.01	<50	830
MW-4 6 Ft	4	5/27/2020	Floor	0.30	<0.005	0.28	2.0	0.33	200	1700
MW-5 6 Ft	6	5/27/2020	Floor	<0.002	<0.005	<0.005	<0.01	<0.01	<50	<50
MW-6 6 Ft	6	5/27/2020	Floor	<0.002	<0.005	<0.005	<0.01	<0.01	<50	<50
MW-7 6 Ft	6	5/27/2020	Floor	<0.002	<0.005	<0.005	<0.01	<0.01	<50	<50
MW-8 6 Ft	6	5/27/2020	Floor	<0.002	<0.005	<0.005	<0.01	<0.01	<50	<50
COGCC Table 910 Limits				0.17	85	100	175	23	500	500

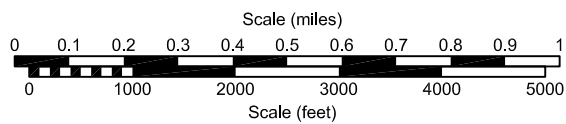
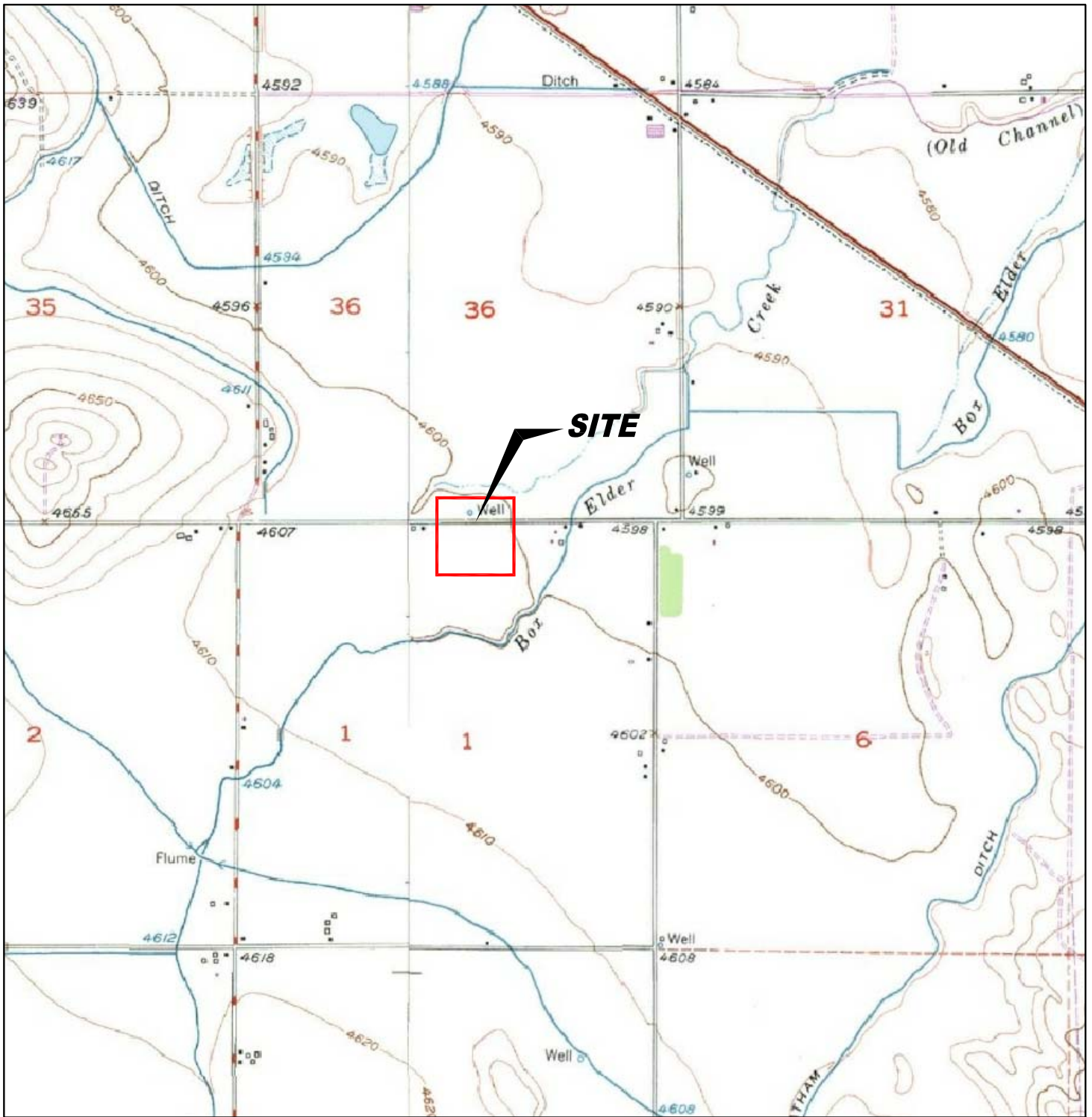
Bold faced values exceed the COGCC Table 910-1 concentrations

TABLE 2
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)	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	100.00	7.89	92.11	NP
MW-2	05/27/20	<1.0	<1.0	<1.0	<2.0	100.51	8.43	92.08	NP
MW-3	05/27/20	<1.0	<1.0	<1.0	<2.0	99.98	7.95	92.03	NP
MW-4	05/27/20	2.4	<1.0	2.2	35	100.08	8.06	92.02	NP
MW-5	05/27/20	<1.0	<1.0	<1.0	<2.0	99.58	7.65	91.93	NP
MW-6	05/27/20	<1.0	<1.0	<1.0	<1.0	99.68	7.58	92.10	NP
MW-7	05/27/20	<1.0	<1.0	<1.0	<2.0	99.40	7.17	92.23	NP
MW-8	05/27/20	<1.0	<1.0	<1.0	<2.0	99.66	7.31	92.35	NP
COGCC Table 910 Limits			5	560	700	1400			

Bold faced values exceed the COGCC Table 910-1 concentrations

FIGURES



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

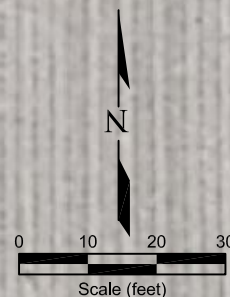
Drawn by
TA

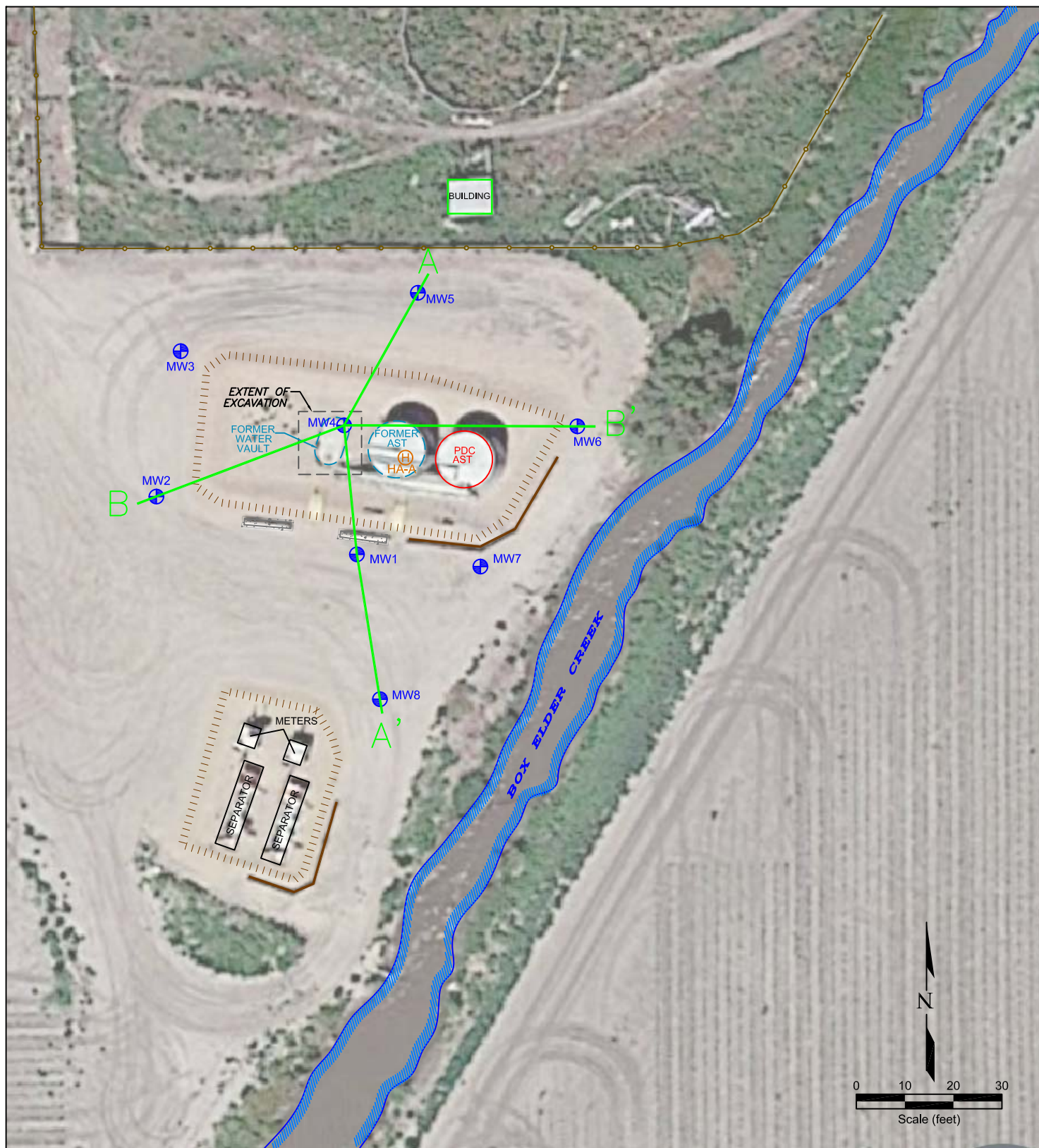
Date
7/1/20

Reviewed by
PH

Filename
20022T







LEGEND

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

Figure 3
CROSS SECTIONS

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

Project No.
CO20-022

Prepared by

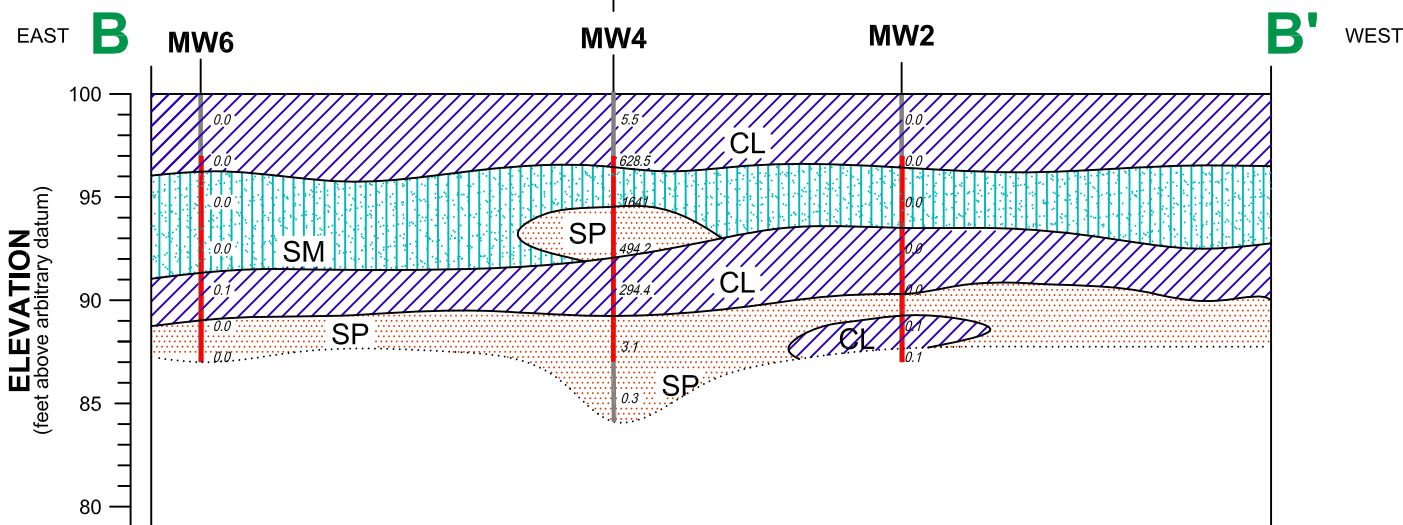
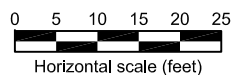
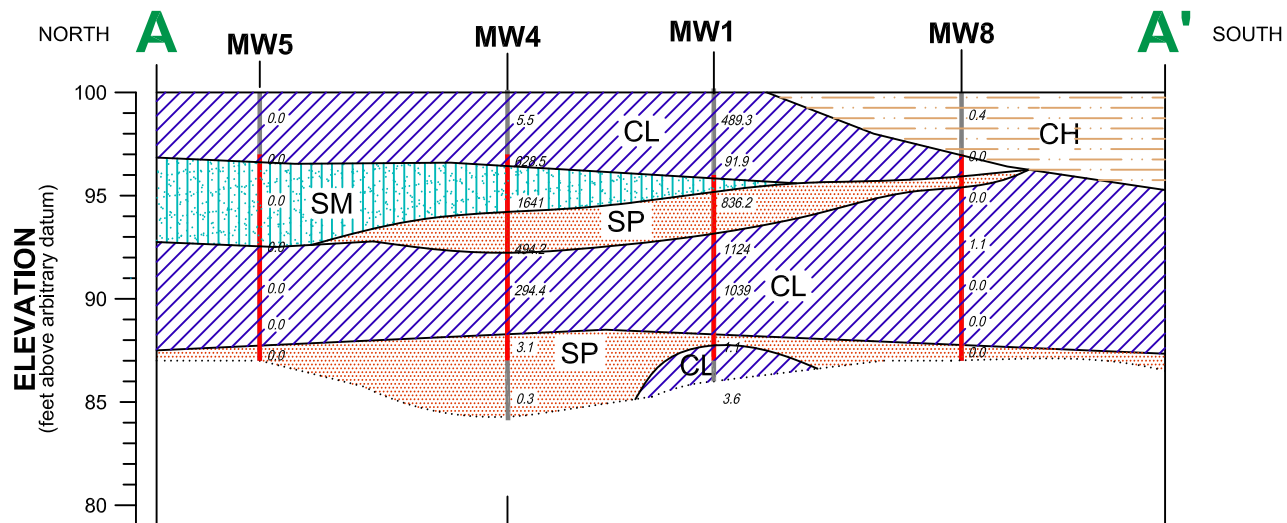
Drawn by
TA

Date
7/6/20

Reviewed by
PH

Filename
20022QQ





LEGEND

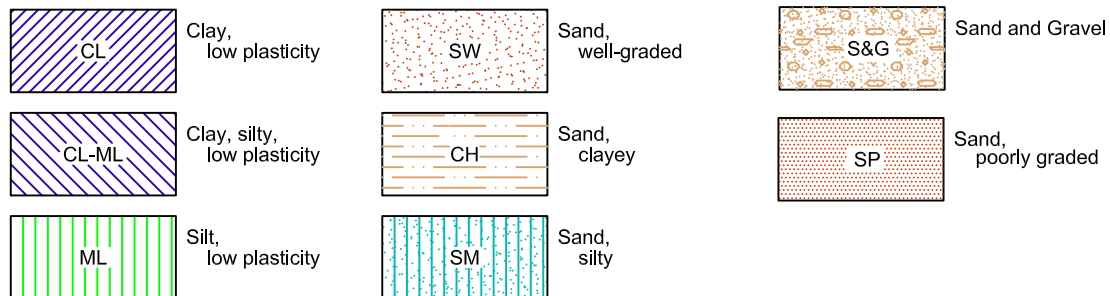


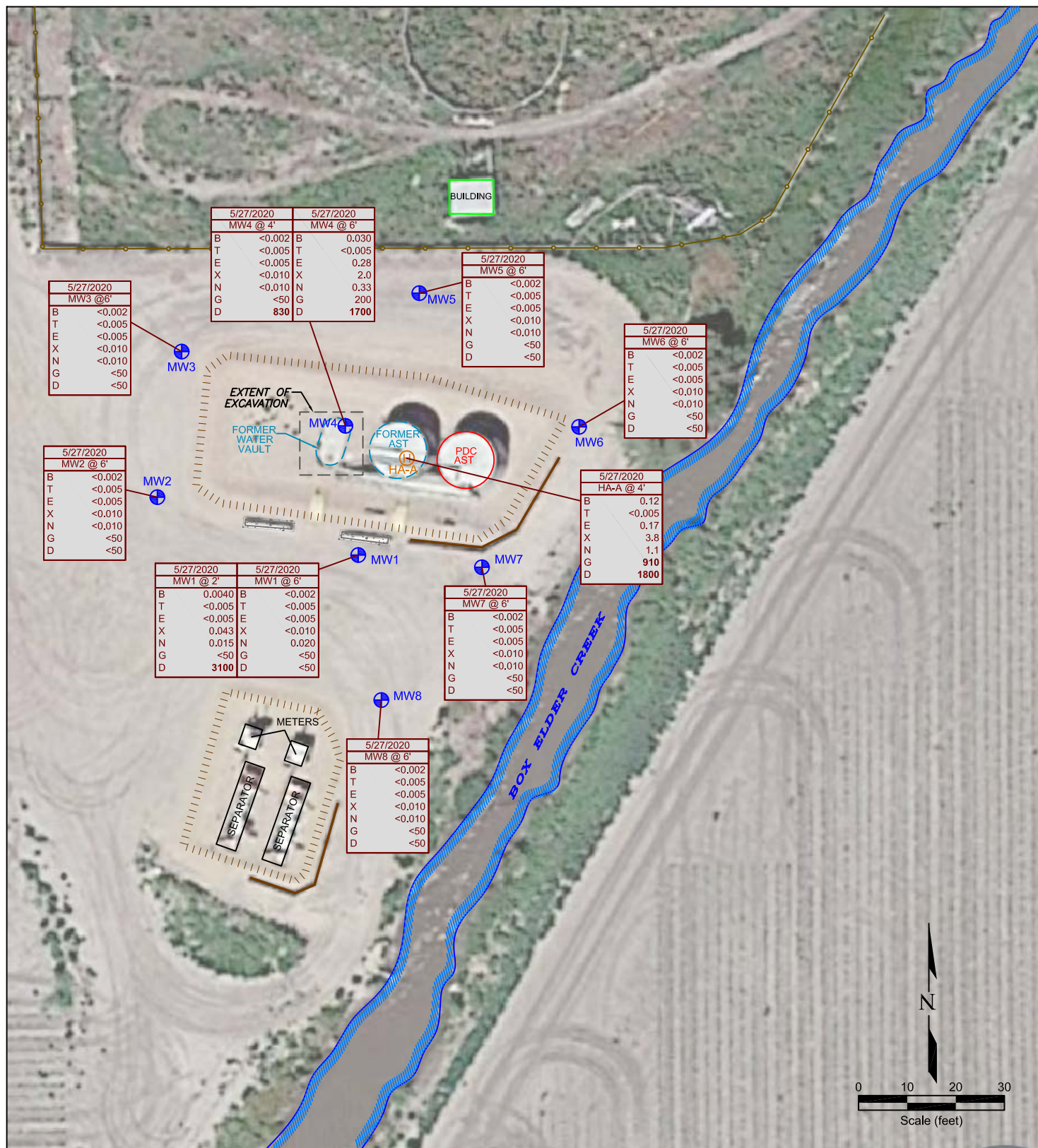
Figure 4

CROSS-SECTIONS A-A' & B-B'

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 7/1/20	Reviewed by PH	Filename 20022X





LEGEND

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

5/27/2020 HA-A @ 4"	
B	0.12
T	<0.005
E	0.17
X	3.8
N	1.1
G	910
D	1800

DATE SAMPLED
SAMPLE ID & DEPTH
BENZENE (mg/kg)
TOLUENE (mg/kg)
ETHYLBENZENE (mg/kg)
TOTAL XYLENES (mg/kg)
NAPHTHALENE (mg/kg)
TPH-GRO (mg/kg)
TPH-DRO (mg/kg)

Figure 5
SOIL CHEMISTRY MAP
May 27, 2020

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
7/6/20

Reviewed by
PH

Filename
20022QQ



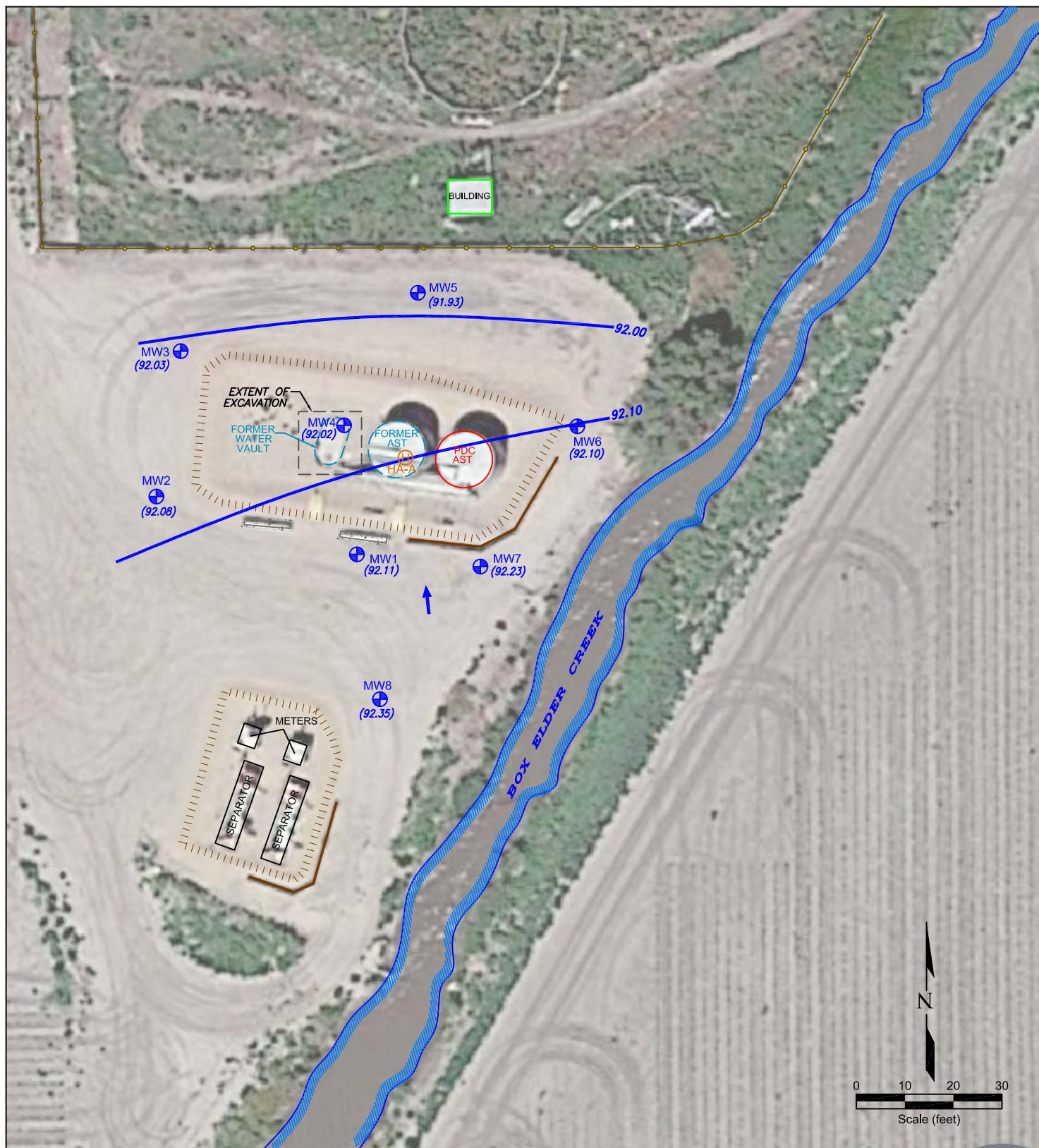


Figure 6
INFERRED GROUNDWATER CONTOUR MAP
 May 27, 2020

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

Project No.
CO20-022

Prepared by

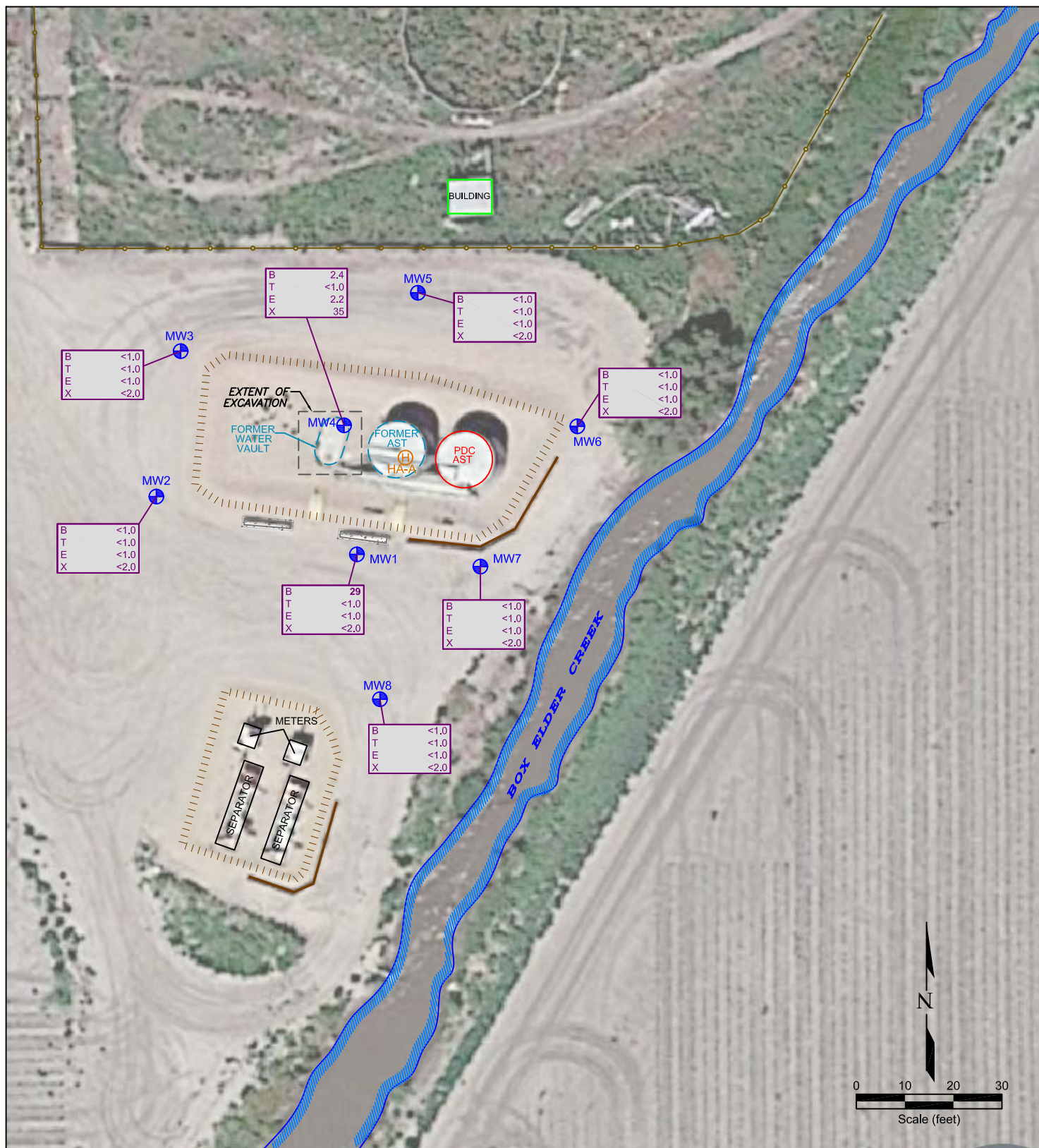
Drawn by
TA

Date
7/6/20

Reviewed by
PH

Filename
20022QQ





LEGEND

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

B	<1.0	BENZENE (ug/L)
T	<1.0	TOLUENE (ug/L)
E	<1.0	ETHYLBENZENE (ug/L)
X	<2.0	TOTAL XYLENES (ug/L)

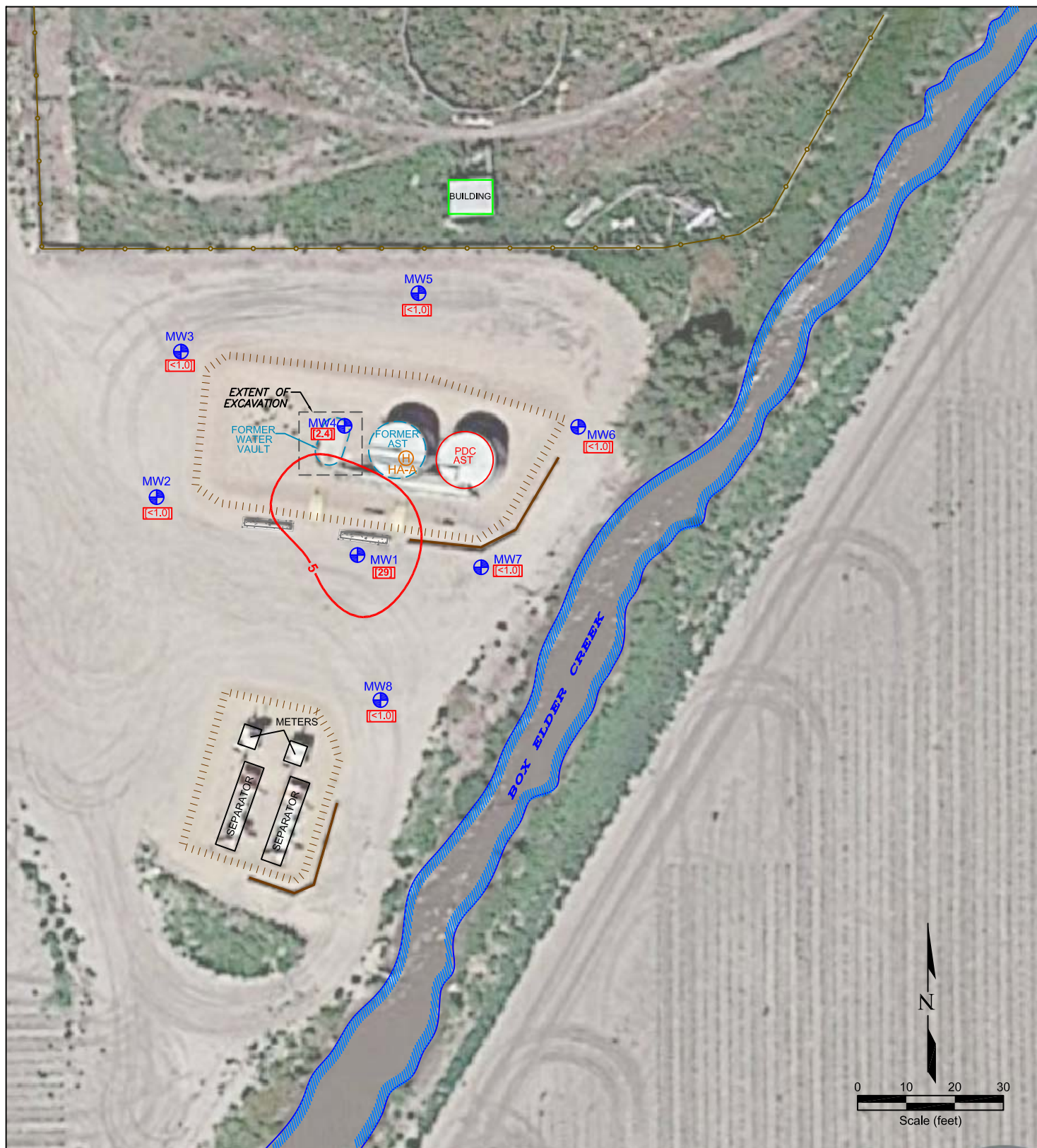
Figure 7

GROUNDWATER CHEMISTRY MAP

May 27, 2020

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 7/6/20	Reviewed by PH	Filename 20022QQ	



LEGEND

	MONITORING WELL		CONTAINMENT BERM
	HAND AUGURED WELL		CONTAINMENT WALL
	ABOVE GROUND STORAGE TANK		FENCE LINE
	CONCRETE BARRICADES		EXTENT OF EXCAVATION
	FORMER FACILITY		
	BUILDING		
	BENZENE ISOCONCENTRATION (ug/L) Inferred in part from historical data		
	BENZENE CONCENTRATION (ug/L)		

Figure 8

BENZENE ISO-CONCENTRATION MAP

May 27, 2020

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
7/6/20

Reviewed by
PH

Filename
20022QQ



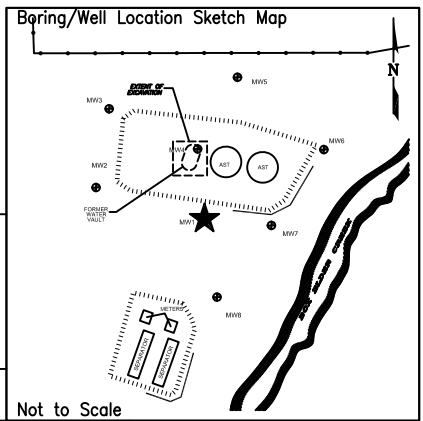
APPENDIX A

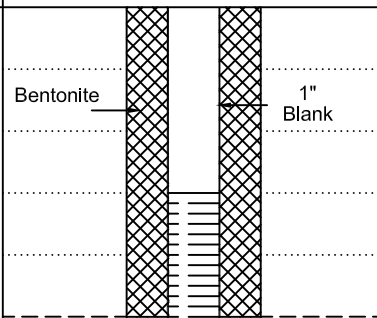

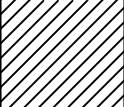
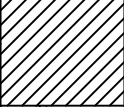
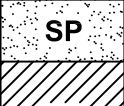

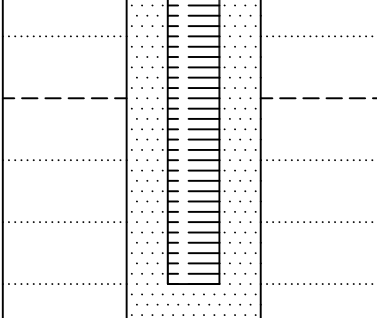
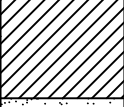
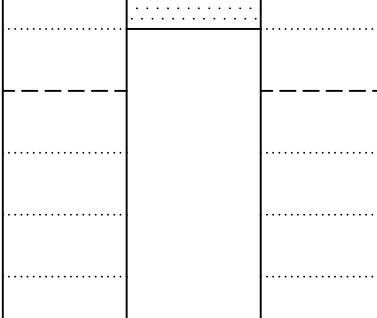

BORING LOGS

BORING/WELL CONSTRUCTION LOG

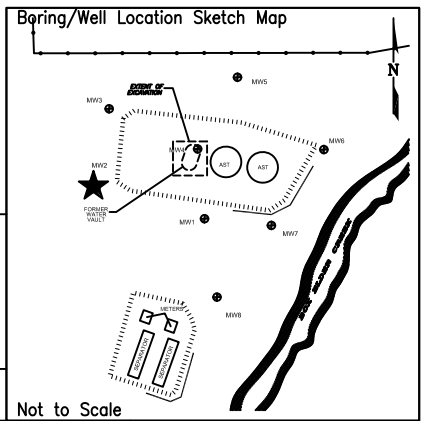
Page 1 of 1

Boring/Well No. MW-1		Total Depth 14'		Location Noble Energy, Inc. McDermid 2-1 NWNE Sec. 1, T4N, R64W Weld County, Colorado	
Project No./Name C020-022/Noble McDermid 2-1				Approved By	
Drilling Contractor/Driller DrillPro/Terrence Apodaca					
Geologist/Office Ethan Black/Fremont Environmental, Inc.				Not to Scale	
Drilling Equipment/Method Geoprobe/Direct Push				Size/Type of Bit 2" Tube	Sampling Method Continuous
Start/Finish Date 5/27/20					
Well Installed? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Casing Mtrl./Dia. Sch. 40 PVC/1"		Screen: Type Slotted Mtrl. PVC Length 10' Dia. 1" Slot Size 0.01 slot	
Elevation of: (ft. above datum)		Ground Surface .	Top of Well Casing 100.00	Top of Screen .	Bottom of Screen .
		Ground Water Surface/Date Measured 7.89 5/27/20			



DEPTH (feet)	WELL CONSTRUCTION	LITHOLOGY		Penetration Rate (blows/6")	Recovery (%)	Sample Interval (feet)	PID Values (ppm)
		GRAPHIC LOG	VISUAL DESCRIPTION				
5			Road base 6" Clay: black, slightly plastic, slightly moist				489.3
			Sand: gray, fine, moist				91.9
			Clay: gray and black, slightly plastic, slightly moist				836.2
			Sand: gray, fine, moist				1124
			transitioning to brown plus tan, fine, wet - 6" clay lens				1039
10			TD 14'				1.1
							3.6
15							
20							

BORING/WELL CONSTRUCTION LOG



Page 1 of 1

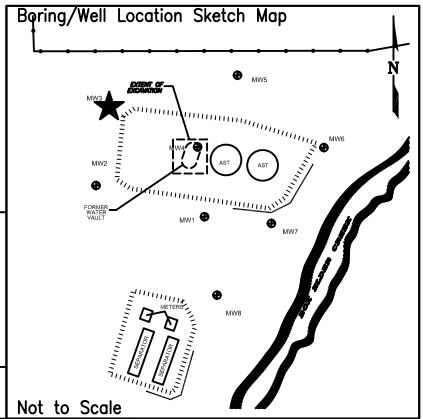
Boring/Well No. MW-2		Total Depth 13'		Location Noble Energy, Inc. McDermid 2-1 NWNE Sec. 1, T4N, R64W Weld County, Colorado			
Project No./Name C020-022/Noble McDermid 2-1				Drilling Contractor/Driller DrillPro/Terrence Apodaca			
Geologist/Office Ethan Black/Fremont Environmental, Inc.				Approved By			
Drilling Equipment/Method Geoprobe/Direct Push				Size/Type of Bit 2" Tube		Sampling Method Continuous	
Well Installed? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				Casing Mtrl./Dia. Sch. 40 PVC/1"		Screen: Type Slotted Mtrl. PVC Length 10' Dia. 1" Slot Size 0.01 slot	
Elevation of: (ft. above datum)		Ground Surface .		Top of Well Casing 100.51		Top of Screen .	
				Bottom of Screen .		Ground Water Surface/Date Measured 8.43 5/27/20	

DEPTH (feet)	WELL CONSTRUCTION		LITHOLOGY		Penetration Rate (blows/6")	Recovery (%)	Sample Interval (feet)	PID Values (ppm)
			GRAPHIC LOG	VISUAL DESCRIPTION				
				Road base 6"				
				Clay: brown, lightly plastic, slightly moist				0.0
								0.0
5				Silty Sand: brown plus tan, highly plastic, moist, laminated				0.0
								0.0
10				Clay: dark brown, plastic, slightly moist, calcareous				0.0
								0.0
				Sand: tan, fine, moist, saturated				0.1
				Clay: tan, non-plastic, saturated				0.1
				Sand: brown, fine, wet				0.1
				TD 13'				
15								
20								

BORING/WELL CONSTRUCTION LOG

Page 1 of 1

Boring/Well No. MW-3		Total Depth 13'		Location Noble Energy, Inc. McDermid 2-1 NWNE Sec. 1, T4N, R64W Weld County, Colorado	
Project No./Name C020-022/Noble McDermid 2-1				Approved By	
Drilling Contractor/Driller DrillPro/Terrence Apodaca					
Geologist/Office Ethan Black/Fremont Environmental, Inc.				Not to Scale	
Drilling Equipment/Method Geoprobe/Direct Push				Size/Type of Bit 2" Tube	Sampling Method Continuous
Start/Finish Date 5/27/20					
Well Installed? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Casing Mtrl./Dia. Sch. 40 PVC/1"		Screen: Type Slotted Mtrl. PVC Length 10' Dia. 1" Slot Size 0.01 slot	
Elevation of: (ft. above datum)		Ground Surface .	Top of Well Casing 99.98	Top of Screen .	Bottom of Screen .
				Ground Water Surface/Date Measured 7.95 5/27/20	

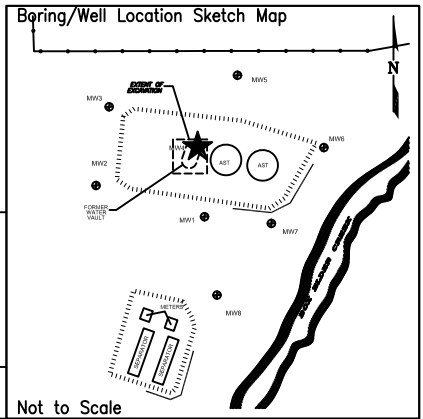


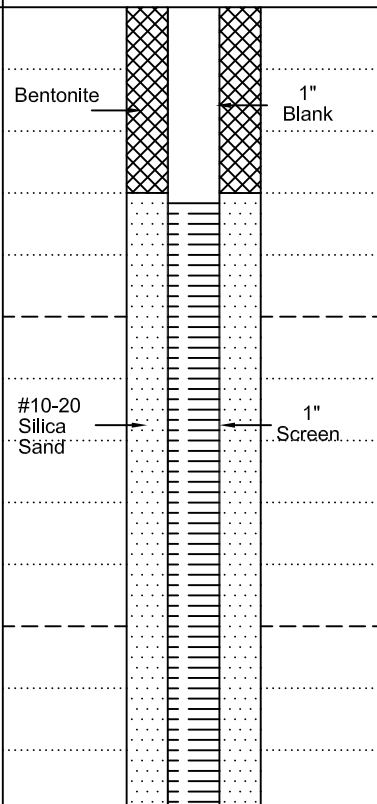
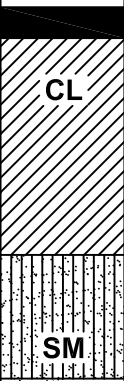
DEPTH (feet)	WELL CONSTRUCTION		LITHOLOGY		Penetration Rate (blows/6")	Recovery (%)	Sample Interval (feet)	PID Values (ppm)
			GRAPHIC LOG	VISUAL DESCRIPTION				
	Bentonite	1" Blank	CL	Road base 6" Clay: dark brown, slightly plastic, moist				0.0
								0.0
5			SM	Silty Sand: brown and tan, highly plastic, moist,				0.1
	#10-20 Silica Sand	1" Screen	CH	Clay: dark brown, plastic, slightly moist, calcareous - color change to gray, oxidized				0.3
10			SP	Sand: brown, fine, saturated				0.3
				TD 13'				0.1
15								
20								

BORING/WELL CONSTRUCTION LOG

Page 1 of 1

Boring/Well No. MW-4		Total Depth 16'		Location Noble Energy, Inc. McDermid 2-1 NWNE Sec. 1, T4N, R64W Weld County, Colorado			
Project No./Name C020-022/Noble McDermid 2-1				Drilling Contractor/Driller DrillPro/Terrence Apodaca			
Geologist/Office Ethan Black/Fremont Environmental, Inc.				Approved By			
Drilling Equipment/Method Geoprobe/Direct Push				Size/Type of Bit 2" Tube		Sampling Method Continuous	
						Start/Finish Date 5/27/20	
Well Installed? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Casing Mtrl./Dia. Sch. 40 PVC/1"		Screen: Type Slotted Mtrl. PVC		Length 10' Dia. 1" Slot Size 0.01 slot	
Elevation of: (ft. above datum)		Ground Surface 100.08		Top of Well Casing .		Bottom of Screen .	
				Ground Water Surface/Date Measured 8.06		5/27/20	

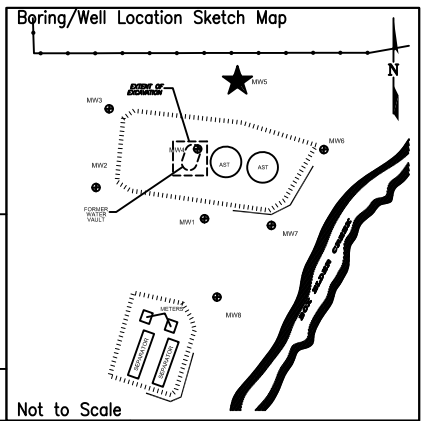


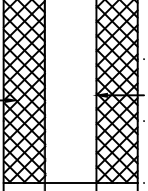
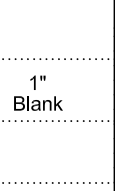


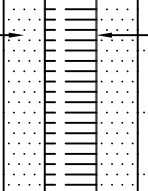
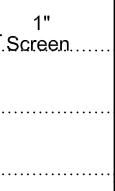
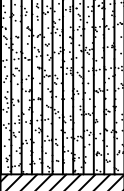
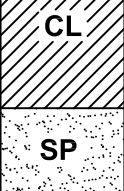
DEPTH (feet)	WELL CONSTRUCTION		LITHOLOGY		Penetration Rate (blows/6")	Recovery (%)	Sample Interval (feet)	PID Values (ppm)
			GRAPHIC LOG	VISUAL DESCRIPTION				
5			Road base 6"					5.5
			Clay: brown, slightly plastic, slightly moist					628.5
			Silty Sand: gray and brown, plastic, moist					1641
			Sand: gray and black, fine, moist					494.2
10			Clay: gray and black, non-plastic, moist					294.4
			Silty sand 6" lens, gray, moist @ 10.5' saturated					25.0
			Sand: brown to tan, fine to medium, wet, oxidized at 12.5'					3.1
15								0.3
20				TD 16'				

BORING/WELL CONSTRUCTION LOG

Page 1 of 1

Boring/Well No. MW-5		Total Depth 13'		Location Noble Energy, Inc. McDermid 2-1 NWNE Sec. 1, T4N, R64W Weld County, Colorado	
Project No./Name C020-022/Noble McDermid 2-1				Approved By	
Drilling Contractor/Driller DrillPro/Terrence Apodaca					
Geologist/Office Ethan Black/Fremont Environmental, Inc.				Not to Scale	
Drilling Equipment/Method Geoprobe/Direct Push				Size/Type of Bit 2" Tube	Sampling Method Continuous
Start/Finish Date 5/27/20					
Well Installed? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Casing Mtrl./Dia. Sch. 40 PVC/1"		Screen: Type Slotted Mtrl. PVC Length 10' Dia. 1" Slot Size 0.01 slot	
Elevation of: (ft. above datum)		Ground Surface .	Top of Well Casing 99.58	Top of Screen .	Bottom of Screen .
				Ground Water Surface/Date Measured 7.65 5/27/20	

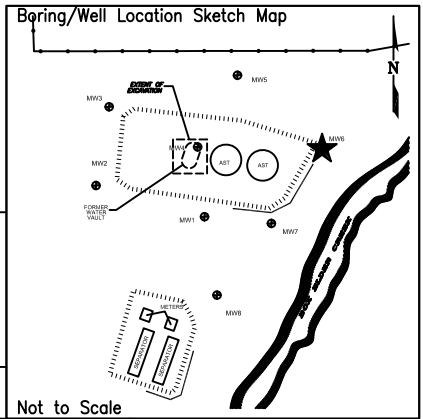


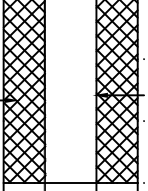
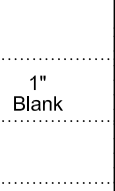


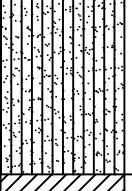
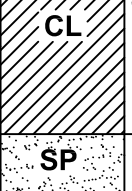
DEPTH (feet)	WELL CONSTRUCTION		LITHOLOGY		Penetration Rate (blows/6")	Recovery (%)	Sample Interval (feet)	PID Values (ppm)
			GRAPHIC LOG	VISUAL DESCRIPTION				
5				Road base 6" Clay: brown, slightly plastic, slightly moist				0.0
								0.0
				Silty Sand: brown, plastic, slightly moist				0.0
								0.0
10				Clay: tan, slightly plastic, slightly moist, oxidized				0.0
								0.0
				Sand: tan and brown, fine to medium, wet				0.0
								0.0
15				TD 13'				0.0
20								

BORING/WELL CONSTRUCTION LOG

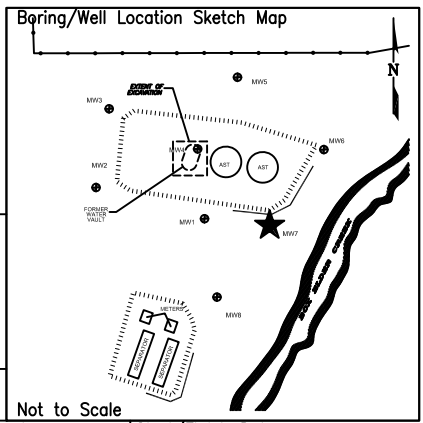
Page 1 of 1

Boring/Well No. MW-6		Total Depth 13'		Location Noble Energy, Inc. McDermid 2-1 NWNE Sec. 1, T4N, R64W Weld County, Colorado	
Project No./Name C020-022/Noble McDermid 2-1				Approved By	
Drilling Contractor/Driller DrillPro/Terrence Apodaca					
Geologist/Office Ethan Black/Fremont Environmental, Inc.				Not to Scale	
Drilling Equipment/Method Geoprobe/Direct Push				Size/Type of Bit 2" Tube	Sampling Method Continuous
Start/Finish Date 5/27/20					
Well Installed? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Casing Mtrl./Dia. Sch. 40 PVC/1"		Screen: Type Slotted Mtrl. PVC Length 10' Dia. 1" Slot Size 0.01 slot	
Elevation of: (ft. above datum)		Ground Surface .	Top of Well Casing 99.68	Top of Screen .	Bottom of Screen .
				Ground Water Surface/Date Measured 7.58 5/27/20	



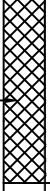






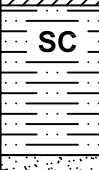
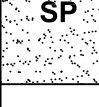
DEPTH (feet)	WELL CONSTRUCTION		LITHOLOGY		Penetration Rate (blows/6")	Recovery (%)	Sample Interval (feet)	PID Values (ppm)
			GRAPHIC LOG	VISUAL DESCRIPTION				
5				Road base 6" Clay: brown, slightly plastic, slightly moist				0.0
				Silty Sand: brown, high plasticity, moist, beige and tan, laminations				0.0
				Clay: dark brown, low plasticity, moist				0.0
				Sand: tan, fine to medium, wet				0.0
10								0.1
15								0.0
20								0.0

BORING/WELL CONSTRUCTION LOG



Page 1 of 1

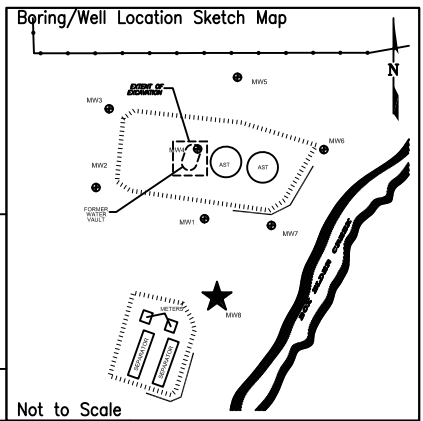
Boring/Well No. MW-7		Total Depth 13'		Location Noble Energy, Inc. McDermid 2-1 NWNE Sec. 1, T4N, R64W Weld County, Colorado			
Project No./Name C020-022/Noble McDermid 2-1				Approved By			
Drilling Contractor/Driller DrillPro/Terrence Apodaca				Geologist/Office Ethan Black/Fremont Environmental, Inc.			
Drilling Equipment/Method Geoprobe/Direct Push				Size/Type of Bit 2" Tube		Sampling Method Continuous	
Well Installed? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				Casing Mtrl./Dia. Sch. 40 PVC/1"		Screen: Type Slotted Mtrl. PVC Length 10' Dia. 1" Slot Size 0.01 slot	
Elevation of: (ft. above datum)		Ground Surface		Top of Well Casing		Top of Screen	
		.		99.40		.	
						7.17	
						5/27/20	

DEPTH (feet)	WELL CONSTRUCTION		LITHOLOGY		Penetration Rate (blows/6")	Recovery (%)	Sample Interval (feet)	PID Values (ppm)
			GRAPHIC LOG	VISUAL DESCRIPTION				
5	 Bentonite	 1" Blank	 CL	Road base 6" Clay: brown, slightly plastic, slightly moist				0.0
								0.0
			 SM	Silty Sand: brown, high plastic, moist, beige plus tan, laminations				0.0
			 CL	Clay: dark brown, low plasticity, moist				0.3
10	 #10-20 Silica Sand	 1" Screen	 SC	Sandy clay: tan plus brown, low plasticity, very moist				0.5
			 SP	Sand: tan, fine to medium, wet				0.0
				-transitioning to clay at 13'				0.0
15				TD 13'				0.0
20								

BORING/WELL CONSTRUCTION LOG

Page 1 of 1

Boring/Well No. MW-8		Total Depth 13'		Location Noble Energy, Inc. McDermid 2-1 NWNE Sec. 1, T4N, R64W Weld County, Colorado	
Project No./Name C020-022/Noble McDermid 2-1				Approved By	
Drilling Contractor/Driller DrillPro/Terrence Apodaca					
Geologist/Office Ethan Black/Fremont Environmental, Inc.				Not to Scale	
Drilling Equipment/Method Geoprobe/Direct Push				Size/Type of Bit 2" Tube	Sampling Method Continuous
Well Installed? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				Start/Finish Date 5/27/20	
Casing Mtrl./Dia. BVC/4" PVC/1"		Screen: Type Slotted Mtrl. PVC Length 10' Dia. 1" Slot Size 2001stot			
Elevation of: (ft. above datum)		Ground Surface .	Top of Well Casing 99.66	Top of Screen .	Bottom of Screen .
				Ground Water Surface/Date Measured 7.31 5/27/20	



DEPTH (feet)	WELL CONSTRUCTION		LITHOLOGY		Penetration Rate (blows/6")	Recovery (%)	Sample Interval (feet)	PID Values (ppm)
			GRAPHIC LOG	VISUAL DESCRIPTION				
5	<div> <div>Bentonite</div> <div>1" Blank</div> </div>	<div> <div>1" Screen</div> </div>	SC	Sandy clay: dark brown, plastic, moist, calcareous				0.4
								0.0
			SP	Sand: brown, fine moist				0.0
			CL	Clay: dark brown, non-plastic, slightly moist				1.1
10	<div> <div>#10-20 Silica Sand</div> </div>	<div> <div>1" Screen</div> </div>		-transitioning to beige, increased moisture				0.0
				-6" fine sand lens				0.0
				-6" fine sand lens				0.0
			SP	Sand: tan, fine, saturated to wet, oxidized at 12' -transitioning to clay at 13' TD 13'				0.0
15								
20								

APPENDIX B

SAMPLING PLAN

SAMPLING METHODS AND PROCEDURES

Water Level Measurements

All groundwater level measurements will be obtained using an electric measuring device, which indicates when a probe is in contact with groundwater. Measurements will be obtained by lowering the device into the well until the water surface had been encountered, and by measuring the distance from the top of the inside riser pipe to the probe. All of the measurements will be recorded to the nearest 0.01 ft. To minimize cross-contamination, the water level indicator will be decontaminated with isopropyl alcohol and distilled water between each well.

Monitoring Well Sampling

All monitoring wells were sampled from the “cleanest” to the “most contaminated” according to the protocols listed below.

Field Protocol

- | | |
|--------|--|
| Step 1 | Measure water level in each well. |
| Step 2 | Purge each monitoring well by evacuating a minimum of three well bore volumes using a disposable polyethylene bailer. |
| Step 3 | Collect water samples using a disposable polyethylene bailer. |
| Step 4 | Cool samples to approximately 4°C for transportation. |
| Step 5 | Store water samples and transport to a specific laboratory, following all documentation and chain-of-custody procedures. |

Upon completion of groundwater sampling, a chain-of-custody log will be completed. Chain-of-custody records include the following information: project, project number, shipped by, shipped to, suspected hazard, sampling point, location, field identification number, date collected, sample type, number of containers, analysis required, and sampler's signature.

The chain-of-custody records will be shipped with the samples to the laboratory. Upon arrival at the laboratory the samples will be checked in and signed by the appropriate laboratory personnel. Laboratory identification numbers will be noted on the chain-of-custody record. Upon completion of the laboratory analysis, the completed chain-of-custody record will be returned to the project manager.

Analytical Methods

The following list identifies the various chemical constituents and analytical methods which will be used for their quantification.

<u>Chemical Parameter</u>	<u>Method</u>
Benzene, Toluene, Ethylbenzene and Total Xylenes (BTEX)	EPA Method – 8260C

APPENDIX C

LABORATORY DOCUMENTATION

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

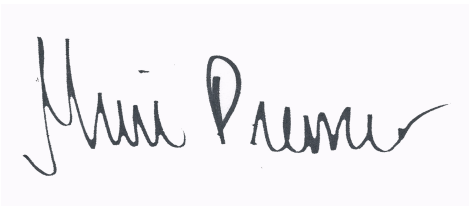
303.277.9310

June 02, 2020

Paul Henchan
Fremont Environmental
PO Box 1289
Wellington, CO 80549
RE: Noble - McDermed 2-1
Work Order #2005267

Enclosed are the results of analyses for samples received by Summit Scientific on 05/27/20 16:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, reading "Muri Premer", is displayed on a light purple rectangular background.

Muri Premer For Paul Shrewsbury
President



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - McDermid 2-1

Project Number: [none]
Project Manager: Paul Henchan

Reported:
06/02/20 11:19

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1 2FT	2005267-01	Soil	05/27/20 00:00	05/27/20 16:00
MW-1 6FT	2005267-02	Soil	05/27/20 00:00	05/27/20 16:00
MW-2 6FT	2005267-03	Soil	05/27/20 00:00	05/27/20 16:00
MW-3 6FT	2005267-04	Soil	05/27/20 00:00	05/27/20 16:00
MW-4 4FT	2005267-05	Soil	05/27/20 00:00	05/27/20 16:00
MW-4 6FT	2005267-06	Soil	05/27/20 00:00	05/27/20 16:00
MW-5 6FT	2005267-07	Soil	05/27/20 00:00	05/27/20 16:00
MW-6 6FT	2005267-08	Soil	05/27/20 00:00	05/27/20 16:00
MW-7 6FT	2005267-09	Soil	05/27/20 00:00	05/27/20 16:00
MW-8 6FT	2005267-10	Soil	05/27/20 00:00	05/27/20 16:00
HA-A 4FT	2005267-11	Soil	05/27/20 00:00	05/27/20 16:00
MW-1	2005267-12	Water	05/27/20 00:00	05/27/20 16:00
MW-2	2005267-13	Water	05/27/20 00:00	05/27/20 16:00
MW-3	2005267-14	Water	05/27/20 00:00	05/27/20 16:00
MW-4	2005267-15	Water	05/27/20 00:00	05/27/20 16:00
MW-5	2005267-16	Water	05/27/20 00:00	05/27/20 16:00
MW-6	2005267-17	Water	05/27/20 00:00	05/27/20 16:00
MW-7	2005267-18	Water	05/27/20 00:00	05/27/20 16:00
MW-8	2005267-19	Water	05/27/20 00:00	05/27/20 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

2005267.1

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

Page 1 of 2

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 - McDermed 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			
1	MW-1 2FT	5/27/20		1			X			X				X	X	X	X					
2	MW-1 6FT																					
3	MW-2 6FT																					
4	MW-3 6FT																					
5	MW-4 4FT																					
6	MW-4 6FT																					
7	MW-5 6FT																					
8	MW-6 6FT																					
9	MW-7 6FT																					
10	MW-8 6FT																					

Relinquished by: Ethan Black	Date/Time: 5/27/20 1600	Received by: [Signature]	Date/Time: 05/27/2020 1600	Turn Around Time (Check) Same Day — 72 hours 24 hours — Standard X 48 hours —	Notes:
Relinquished by:	Date/Time:	Received by:	Date/Time:	Sample Integrity: Temperature Upon Receipt: 4.5 Samples Intact: Yes No	
Relinquished by:	Date/Time:	Received by:	Date/Time:		

Summit Scientific

S₂

2005267.2

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

Page 2 of 2

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 - McDermed 2-1

Sampler Name: Black

Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested							Special Instructions		
					HCl	HNO ₃	None	Other	Water	Soil	Air-Canister #	Other	BTEX	Naphthalene	GRO	DRO	SAR	EC	pH			
1	HA-A 4FT	5/27/20		1			X			X				X	X	X	X					
2	MW-1			2					X	X				X	X	X						
3	MW-2																					
4	MW-3																					
5	MW-4																					
6	MW-5																					
7	MW-6																					
8	MW-7																					
9	MW-8																					
10																						

Relinquished by: Ethan Black	Date/Time: 5/27/20 1600	Received by: [Signature]	Date/Time: 5/27/2020 1600	Turn Around Time (Check) Same Day <input type="checkbox"/> 72 hours <input type="checkbox"/> 24 hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/> 48 hours <input type="checkbox"/>	Notes:
Relinquished by:	Date/Time:	Received by:	Date/Time:	Sample Integrity: Temperature Upon Receipt: 4.5 Samples Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No	
Relinquished by:	Date/Time:	Received by:	Date/Time:		

Sample Receipt Checklist

S2 Work Order **2005267**Client: Fremont Environmental Client Project ID: Noble-McDermid 2-1Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other Airbill #: _____
☒ ☐ ☐ ☐ ☐
Matrix (check all that apply): ☐ Air ☒ Soil/Solid ☒ Water ☐ Other: _____
(Describe)

Temp (°C)

4.5

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.				
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 type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect				
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Record the pH in Comments.				
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

05/27/2020



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - McDermid 2-1

Project Number: [none]
Project Manager: Paul Henchan

Reported:
06/02/20 11:19

MW-1 2FT
2005267-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/27/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	0.0040	0.0020	mg/kg	1	2005362	05/29/20	05/30/20	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.043	0.010	"	"	"	"	"	"	
Naphthalene	0.015	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **05/27/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		57.7 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		113 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		145 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/27/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	3100	50	mg/kg	1	2005361	"	05/29/20	EPA 8015M	

Date Sampled: **05/27/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		141 %	30-150		"	"	"	"	

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 - McDermid 2-1

Project Number: [none]
Project Manager: Paul Henchan

Reported:
06/02/20 11:19

MW-1 6FT
2005267-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/27/20 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	2005362	05/29/20	05/30/20	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	0.020	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **05/27/20 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		67.2 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		121 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		119 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/27/20 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	2005361	"	05/29/20	EPA 8015M	

Date Sampled: **05/27/20 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		120 %	30-150		"	"	"	"	

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:
06/02/20 11:19

MW-2 6FT
2005267-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/27/20 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	2005362	05/29/20	05/30/20	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **05/27/20 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		60.4 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		115 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		106 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/27/20 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	2005361	"	05/29/20	EPA 8015M	

Date Sampled: **05/27/20 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		112 %	30-150		"	"	"	"	

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 - McDermid 2-1

Project Number: [none]
Project Manager: Paul Henchan

Reported:
06/02/20 11:19

MW-3 6FT
2005267-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/27/20 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	2005362	05/29/20	05/30/20	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **05/27/20 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		61.0 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		116 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.2 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/27/20 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	2005361	"	05/29/20	EPA 8015M	

Date Sampled: **05/27/20 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		116 %	30-150		"	"	"	"	

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 - McDermid 2-1

Project Number: [none]
Project Manager: Paul Henchan

Reported:
06/02/20 11:19

MW-4 4FT
2005267-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/27/20 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	2005362	05/29/20	05/30/20	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **05/27/20 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		66.2 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		119 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		179 %	21-167		"	"	"	"	S-02

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/27/20 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	830	50	mg/kg	1	2005361	"	05/29/20	EPA 8015M	

Date Sampled: **05/27/20 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		117 %	30-150		"	"	"	"	

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 - McDermid 2-1

Project Number: [none]
Project Manager: Paul Henchan

Reported:
06/02/20 11:19

MW-4 6FT
2005267-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/27/20 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	0.030	0.0020	mg/kg	1	2005362	05/29/20	05/30/20	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.28	0.0050	"	"	"	"	"	"	
Xylenes (total)	2.0	0.10	"	10	"	"	"	"	
Naphthalene	0.33	0.010	"	1	"	"	"	"	
Gasoline Range Hydrocarbons	200	50	"	"	"	"	"	"	

Date Sampled: **05/27/20 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		98.8 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		112 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		570 %	21-167		"	"	"	"	S-02

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/27/20 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	1700	50	mg/kg	1	2005361	"	05/29/20	EPA 8015M	

Date Sampled: **05/27/20 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		120 %	30-150		"	"	"	"	

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 - McDermid 2-1

Project Number: [none]
Project Manager: Paul Henchan

Reported:
06/02/20 11:19

MW-5 6FT
2005267-07 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/27/20 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	2005362	05/29/20	05/30/20	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **05/27/20 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		66.4 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		117 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		111 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/27/20 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	2005361	"	05/29/20	EPA 8015M	

Date Sampled: **05/27/20 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		114 %	30-150		"	"	"	"	

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 - McDermid 2-1

Project Number: [none]
Project Manager: Paul Henchan

Reported:
06/02/20 11:19

MW-6 6FT
2005267-08 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/27/20 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	2005362	05/29/20	05/30/20	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **05/27/20 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		58.0 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		126 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.6 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/27/20 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	2005361	"	05/29/20	EPA 8015M	

Date Sampled: **05/27/20 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		116 %	30-150		"	"	"	"	

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 - McDermid 2-1

Project Number: [none]
Project Manager: Paul Henchan

Reported:
06/02/20 11:19

MW-7 6FT
2005267-09 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/27/20 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	2005362	05/29/20	05/30/20	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **05/27/20 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		67.6 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		130 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.9 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/27/20 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	2005361	"	05/29/20	EPA 8015M	

Date Sampled: **05/27/20 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		116 %	30-150		"	"	"	"	

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 - McDermid 2-1

Project Number: [none]
Project Manager: Paul Henchan

Reported:
06/02/20 11:19

MW-8 6FT
2005267-10 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/27/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	2005362	05/29/20	05/30/20	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **05/27/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		55.6 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		123 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.6 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/27/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	2005361	"	05/29/20	EPA 8015M	

Date Sampled: **05/27/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		116 %	30-150		"	"	"	"	

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 - McDermid 2-1

Project Number: [none]
Project Manager: Paul Henchan

Reported:
06/02/20 11:19

HA-A 4FT
2005267-11 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/27/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	0.12	0.0020	mg/kg	1	2005362	05/29/20	05/30/20	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.17	0.0050	"	"	"	"	"	"	
Xylenes (total)	3.8	0.10	"	10	"	"	"	"	
Naphthalene	1.1	0.010	"	1	"	"	"	"	
Gasoline Range Hydrocarbons	910	50	"	"	"	"	"	"	

Date Sampled: **05/27/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		445 %	23-173		"	"	"	"	S-02
Surrogate: Toluene-d8		83.3 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		1090 %	21-167		"	"	"	"	S-02

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/27/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	1800	50	mg/kg	1	2005361	"	05/29/20	EPA 8015M	

Date Sampled: **05/27/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		122 %	30-150		"	"	"	"	

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 - McDermid 2-1

Project Number: [none]
Project Manager: Paul Henchan

Reported:
06/02/20 11:19

MW-1
2005267-12 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/27/20 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	29	1.0		ug/l	1	2005344	05/28/20	05/29/20	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	

Date Sampled: **05/27/20 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		126 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		92.4 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %		21-167		"	"	"	"	

Summit Scientific

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Project: Noble - McDermed 2-1

Project Number: [none]
Project Manager: Paul Henchan

Reported:
06/02/20 11:19

MW-2
2005267-13 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/27/20 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	2005344	05/28/20	05/29/20	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **05/27/20 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		133 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		90.8 %	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:
06/02/20 11:19

MW-3
2005267-14 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/27/20 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	2005344	05/28/20	05/29/20	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **05/27/20 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		134 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		91.7 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	21-167		"	"	"	"	

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Project: Noble - McDermed 2-1

Project Number: [none]
Project Manager: Paul Henchan

Reported:
06/02/20 11:19

MW-4
2005267-15 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/27/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	2.4	1.0	ug/l	1	2005344	05/28/20	05/29/20	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	2.2	1.0	"	"	"	"	"	"	
Xylenes (total)	35	2.0	"	"	"	"	"	"	

Date Sampled: **05/27/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		131 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		86.8 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		109 %	21-167		"	"	"	"	

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PO Box 1289
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Project: Noble - McDermed 2-1

Project Number: [none]
Project Manager: Paul Henchan

Reported:
06/02/20 11:19

MW-5
2005267-16 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/27/20 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	2005344	05/28/20	05/29/20	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **05/27/20 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		133 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		90.8 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	21-167		"	"	"	"	

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PO Box 1289
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Project: Noble - McDermed 2-1

Project Number: [none]
Project Manager: Paul Henchan

Reported:
06/02/20 11:19

MW-6
2005267-17 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/27/20 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	2005344	05/28/20	05/29/20	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **05/27/20 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		136 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		91.1 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	21-167		"	"	"	"	

Summit Scientific

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PO Box 1289
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Project: Noble - McDermed 2-1

Project Number: [none]
Project Manager: Paul Henchan

Reported:
06/02/20 11:19

MW-7
2005267-18 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/27/20 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	2005344	05/28/20	05/29/20	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **05/27/20 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		134 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		91.5 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		107 %	21-167		"	"	"	"	

Summit Scientific

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PO Box 1289
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Project: Noble - McDermed 2-1

Project Number: [none]
Project Manager: Paul Henchan

Reported:
06/02/20 11:19

MW-8
2005267-19 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/27/20 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	2005344	05/28/20	05/29/20	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	

Date Sampled: **05/27/20 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		132 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		91.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	21-167		"	"	"	"	

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Fremont Environmental
PO Box 1289
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Project: Noble - McDermid 2-1

Project Number: [none]
Project Manager: Paul Henchan

Reported:
06/02/20 11:19

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 2005344 - EPA 5030 Water MS

Blank (2005344-BLK1)

Prepared & Analyzed: 05/28/20

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	2.0	"							
Surrogate: 1,2-Dichloroethane-d4	14.5		"	13.3		109	23-173			
Surrogate: Toluene-d8	12.3		"	13.3		92.0	20-170			
Surrogate: 4-Bromofluorobenzene	14.4		"	13.3		108	21-167			

LCS (2005344-BS1)

Prepared & Analyzed: 05/28/20

Benzene	46.2	1.0	ug/l	41.7		111	51-132			
Toluene	41.9	1.0	"	41.7		101	51-138			
Ethylbenzene	47.6	1.0	"	41.7		114	58-146			
m,p-Xylene	83.4	2.0	"	83.3		100	57-144			
o-Xylene	42.4	1.0	"	41.7		102	53-146			
Surrogate: 1,2-Dichloroethane-d4	14.2		"	13.3		107	23-173			
Surrogate: Toluene-d8	12.9		"	13.3		96.8	20-170			
Surrogate: 4-Bromofluorobenzene	13.4		"	13.3		100	21-167			

Matrix Spike (2005344-MS1)

Source: 2005278-01

Prepared & Analyzed: 05/28/20

Benzene	47.4	1.0	ug/l	41.7	ND	114	34-141			
Toluene	43.9	1.0	"	41.7	ND	105	27-151			
Ethylbenzene	50.9	1.0	"	41.7	ND	122	29-160			
m,p-Xylene	89.8	2.0	"	83.3	ND	108	20-166			
o-Xylene	46.0	1.0	"	41.7	ND	110	33-159			
Surrogate: 1,2-Dichloroethane-d4	14.6		"	13.3		110	23-173			
Surrogate: Toluene-d8	12.3		"	13.3		92.6	20-170			
Surrogate: 4-Bromofluorobenzene	13.7		"	13.3		103	21-167			

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - McDermid 2-1

Project Number: [none]
Project Manager: Paul Henchan

Reported:
06/02/20 11:19

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 2005344 - EPA 5030 Water MS

Matrix Spike Dup (2005344-MSD1)

Source: 2005278-01

Prepared & Analyzed: 05/28/20

Benzene	48.3	1.0	ug/l	41.7	ND	116	34-141	2.01	30	
Toluene	44.8	1.0	"	41.7	ND	108	27-151	2.07	30	
Ethylbenzene	46.0	1.0	"	41.7	ND	110	29-160	10.1	30	
m,p-Xylene	79.9	2.0	"	83.3	ND	95.9	20-166	11.6	30	
o-Xylene	41.4	1.0	"	41.7	ND	99.4	33-159	10.4	30	
Surrogate: 1,2-Dichloroethane-d4	16.0		"	13.3		120	23-173			
Surrogate: Toluene-d8	13.6		"	13.3		102	20-170			
Surrogate: 4-Bromofluorobenzene	13.5		"	13.3		101	21-167			

Batch 2005362 - EPA 5030 Soil MS

Blank (2005362-BLK1)

Prepared: 05/29/20 Analyzed: 05/30/20

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Naphthalene	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0235		"	0.0400		58.7	23-173			
Surrogate: Toluene-d8	0.0487		"	0.0400		122	20-170			
Surrogate: 4-Bromofluorobenzene	0.0353		"	0.0400		88.3	21-167			

LCS (2005362-BS1)

Prepared: 05/29/20 Analyzed: 05/30/20

Benzene	0.0892	0.0020	mg/kg	0.100		89.2	70-130			
Toluene	0.0979	0.0050	"	0.100		97.9	70-130			
Ethylbenzene	0.0904	0.0050	"	0.100		90.4	70-130			
m,p-Xylene	0.166	0.010	"	0.200		82.8	70-130			
o-Xylene	0.0816	0.0050	"	0.100		81.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0222		"	0.0400		55.4	23-173			
Surrogate: Toluene-d8	0.0464		"	0.0400		116	20-170			
Surrogate: 4-Bromofluorobenzene	0.0399		"	0.0400		99.7	21-167			

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Project: Noble - McDermid 2-1

Project Number: [none]
Project Manager: Paul Henchan

Reported:
06/02/20 11:19

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 2005362 - EPA 5030 Soil MS

Matrix Spike (2005362-MS1)		Source: 2005263-01			Prepared: 05/29/20		Analyzed: 05/30/20			
Benzene	0.0732	0.0020	mg/kg	0.100	ND	73.2	70-130			
Toluene	0.0831	0.0050	"	0.100	ND	83.1	70-130			
Ethylbenzene	0.226	0.0050	"	0.100	0.147	79.3	70-130			
m,p-Xylene	1.13	0.010	"	0.200	1.01	57.6	70-130			QM-07
o-Xylene	0.0929	0.0050	"	0.100	ND	92.9	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0286		"	0.0400		71.6	23-173			
Surrogate: Toluene-d8	0.0401		"	0.0400		100	20-170			
Surrogate: 4-Bromofluorobenzene	0.0568		"	0.0400		142	21-167			
Matrix Spike Dup (2005362-MSD1)		Source: 2005263-01			Prepared: 05/29/20		Analyzed: 05/30/20			
Benzene	0.0737	0.0020	mg/kg	0.100	ND	73.7	70-130	0.654	30	
Toluene	0.0826	0.0050	"	0.100	ND	82.6	70-130	0.580	30	
Ethylbenzene	0.250	0.0050	"	0.100	0.147	103	70-130	10.1	30	
m,p-Xylene	1.26	0.010	"	0.200	1.01	122	70-130	10.9	30	
o-Xylene	0.0958	0.0050	"	0.100	ND	95.8	70-130	3.12	30	
Surrogate: 1,2-Dichloroethane-d4	0.0311		"	0.0400		77.7	23-173			
Surrogate: Toluene-d8	0.0391		"	0.0400		97.6	20-170			
Surrogate: 4-Bromofluorobenzene	0.0563		"	0.0400		141	21-167			

Summit Scientific

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Fremont Environmental
PO Box 1289
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Project: Noble - McDermid 2-1

Project Number: [none]
Project Manager: Paul Henchan

Reported:
06/02/20 11:19

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 2005361 - EPA 3550A

Blank (2005361-BLK1)

Prepared & Analyzed: 05/29/20

C10-C28 (DRO) ND 50 mg/kg

LCS (2005361-BS1)

Prepared & Analyzed: 05/29/20

C10-C28 (DRO) 572 50 mg/kg 500 114 70-130

Matrix Spike (2005361-MS1)

Source: 2005267-01

Prepared & Analyzed: 05/29/20

C10-C28 (DRO) 3420 50 mg/kg 500 3050 73.8 70-130

Matrix Spike Dup (2005361-MSD1)

Source: 2005267-01

Prepared & Analyzed: 05/29/20

C10-C28 (DRO) 2470 50 mg/kg 500 3050 NR 70-130 32.3 20 QM-07

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - McDermid 2-1

Project Number: [none]
Project Manager: Paul Henchan

Reported:
06/02/20 11:19

Notes and Definitions

S-02 The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference