FREMONT ENVIRONMENTAL INC.

October 28, 2016

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

Subject: **Site Investigation Report**
Weideman PM J28-2, 28-7
API # 05-123-14002 (J28-2)
Weld County, Colorado
Fremont Project No. C016-110
Facility #327010, Spill #447960

Dear Mr. Evans:

Enclosed please find a copy of the above referenced Site Investigation Report for the Weideman PM J28-2, 28-7 site in Weld County, Colorado. The enclosed report describes site investigation and sampling efforts to assess soil and ground water 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. Henehan, P.E.
Senior Consultant

Enclosure

1759 REDWING LANE, BROOMFIELD, CO 80020
(303) 956-8714 (DIRECT)

SITE INVESTIGATION REPORT

NOBLE ENERGY INC.

WEIDEMAN PM J28-2, 28-7

WELD COUNTY, COLORADO

FREMONT PROJECT NO. C016-110

FACILITY #327010, SPILL #447960

Prepared by:

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

October 28, 2016

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NOBLE ENERGY INC.

WEIDEMAN PM J28-2, 28-7

WELD COUNTY, COLORADO

FREMONT PROJECT NO. C016-110

FACILITY #327010, SPILL #447960

1.0 INTRODUCTION

The purpose of this document is to present soil and ground water quality data collected during a site investigation at the Weideman PM J28-2, 28-7 site in Weld County, Colorado. Impacted soil and ground water were identified at this location due to a release from the water vault. Seven monitoring wells were installed at this site on October 12, 2016 to delineate the magnitude and extent of subsurface impacts.

2.0 BACKGROUND INFORMATION

2.1 Site Location

The Weideman PM J28-2, 28-7 site is located approximately three miles southwest of Greeley, Colorado in Weld County as shown on Figure 1. The site is in a rural and agricultural area on the southeast corner of the intersection of 37th St. and 65th Ave. The location is further described as the NE ¼ of the SW ¼ of Section 28, Township 5N, Range 66W.

2.2 Site History

The site consists of the area adjacent to the former water vault for the Weideman PM J28-2, 28-7 natural gas wells. The Weideman PM J28-2 well was drilled in 1988 to a depth of 7,501 feet. Soil impacts were identified at the location during replacement of the water vault. These soil impacts initiated this site investigation effort.

During the water vault removal in September 2016, a limited excavation to remediate the source impacts was undertaken. Five soil samples were collected from the excavation sidewalls and floor and analyzed for petroleum constituents. The laboratory analyses of the soil 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 three of the 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 October 12, 2016. A total of seven soil borings were advanced utilizing a Geoprobe rig. These borings were completed as flush-mounted 1-inch diameter monitoring wells. These monitoring wells were used to delineate the extent of soil and ground water impacts at the site. The locations of the monitoring wells are illustrated on the attached figures.

Generally, the subsurface consists of roadbase which is then underlain by sand that extends to a depth of approximately 10 feet. The sand is underlain silty sand and sandy silt to a depth of at least 24 feet. The maximum depth of the borings was 24 feet. Ground water is present across the site at a depth of approximately 12 feet. Geologic cross sections illustrating the soil lithology are presented on Figure 3.

The 1-inch diameter monitoring wells were constructed with 10 feet sections of well screen that were placed at a total depth of approximately 20 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 were not observed in any of the seven borings above the COGCC's Table 910-1 limits for BTEX, naphthalene, TPH-GRO and TPH-DRO. The soil chemistry is presented on Figure 4 and summarized on Table 1. The laboratory's report is provided in Appendix C.

3.2 Ground Water Monitoring

Ground water levels were measured in the seven monitoring wells on October 12, 2016 in accordance with the Sampling Plan included in Appendix B. The data are summarized in Table 2.

Water table contours inferred from the October 2016 data are illustrated on Figure 5. Based on these data, ground water is inferred to flow to the east northeast. The water table gradient was calculated at approximately 0.013 feet per foot (ft/ft) for the October 2016 data.

3.3 Ground Water Sampling and Analysis

Ground water samples were collected from the seven monitoring wells on October 12, 2016. All ground water samples were submitted to Summit Scientific, Inc. for analyses of BTEX by EPA Method 8260C.

The ground water concentrations for five of the seven monitoring wells were below their respective COGCC Table 910-1 values. However, wells MW-2 and MW-3 had benzene concentrations of 20,000 and 260 ug/L, respectively; these concentrations are greater than the COGCC Table 910-1 limit of 5 ug/L. In addition, well MW-2 had elevated concentrations of toluene, ethylbenzene and xylenes while MW-3 had elevated concentrations of toluene and xylenes. The ground water chemistry is shown on Figure 6. The ground water analytical data are 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 Weideman PM J28-2, 28-7 location on October 12, 2016 as a result of a release from the facility's former water vault. Seven monitoring wells were installed at the site to delineate the magnitude and extent of soil and ground water impacts.

Soil impacts above the COGCC Table 910-1 limits were not observed in any of the seven soil borings/monitoring wells. Limited soil excavation and removal had been conducted during removal of the water vault.

The data collected from the monitoring wells indicates that the ground water flow direction is to the east northeast. Further, the BTEX concentrations in five of the seven monitoring wells were less than the COGCC Table 910-1 limits. As noted above, monitoring wells MW-2 and MW-3 had benzene concentrations of 20,000 and 260 ug/L, which exceed the COGCC Table 910-1 limit of 5 ug/L. The ground water data are illustrated on Figure 6.

Noble is currently evaluating remedial options to address the ground water impacts. In the interim, Noble will sample the ground water 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.**

10/28/16

_____ Date_____

Paul V. Henehan, P.E.

Senior Consultant

Reviewed by:

10/28/16

_____ Date_____

Michael R. Gerstner

Senior Geologist

TABLES

TABLE 1
SUMMARY OF SOIL CHEMISTRY DATA
NOBLE ENERGY INC.
WIEDEMAN PMJ 28-2, 28-7, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C016-110

SAMPLE LOCATION	DATE SAMPLED	DEPTH ft	BENZENE mg/kg	TOLUENE mg/kg	ETHYL BENZENE mg/kg	TOTAL XYLENES mg/kg	NAPHTH-ALENE mg/kg	TPH-GRO mg/kg	TPH-DRO mg/kg
MW-1 12 Ft	10/12/16	12	<0.002	<0.005	<0.005	<0.010	<0.010	<50	<50
MW-2 12 Ft	10/12/16	12	<0.002	<0.005	<0.005	<0.010	<0.010	<50	<50
MW-3 12 Ft	10/12/16	12	<0.002	<0.005	<0.005	<0.010	<0.010	<50	<50
MW-4 10 Ft	10/12/16	10	<0.002	<0.005	<0.005	<0.010	<0.010	<50	<50
MW-5 12 Ft	10/12/16	12	<0.002	<0.005	<0.005	<0.010	<0.010	<50	<50
MW-6 12 Ft	10/12/16	12	<0.002	<0.005	<0.005	<0.010	<0.010	<50	<50
MW-7 10 Ft	10/12/16	10	<0.002	<0.005	<0.005	<0.010	<0.010	<50	<50
COGCC Table 910-1 Concentrations			**0.17**	**85**	**100**	**175**	**23**	**500***	**500***

The TPH-GRO and TPH-DRO concentrations are added together; if the sum of the two is >500 mg/kg, this exceeds the COGCC Table 910-1 limit

TABLE 2

SUMMARY OF GROUND WATER ELEVATION DATA AND CHEMISTRY DATA

NOBLE ENERGY INC.

WIEDEMAN PMJ 28-2, WELD COUNTY, COLORADO

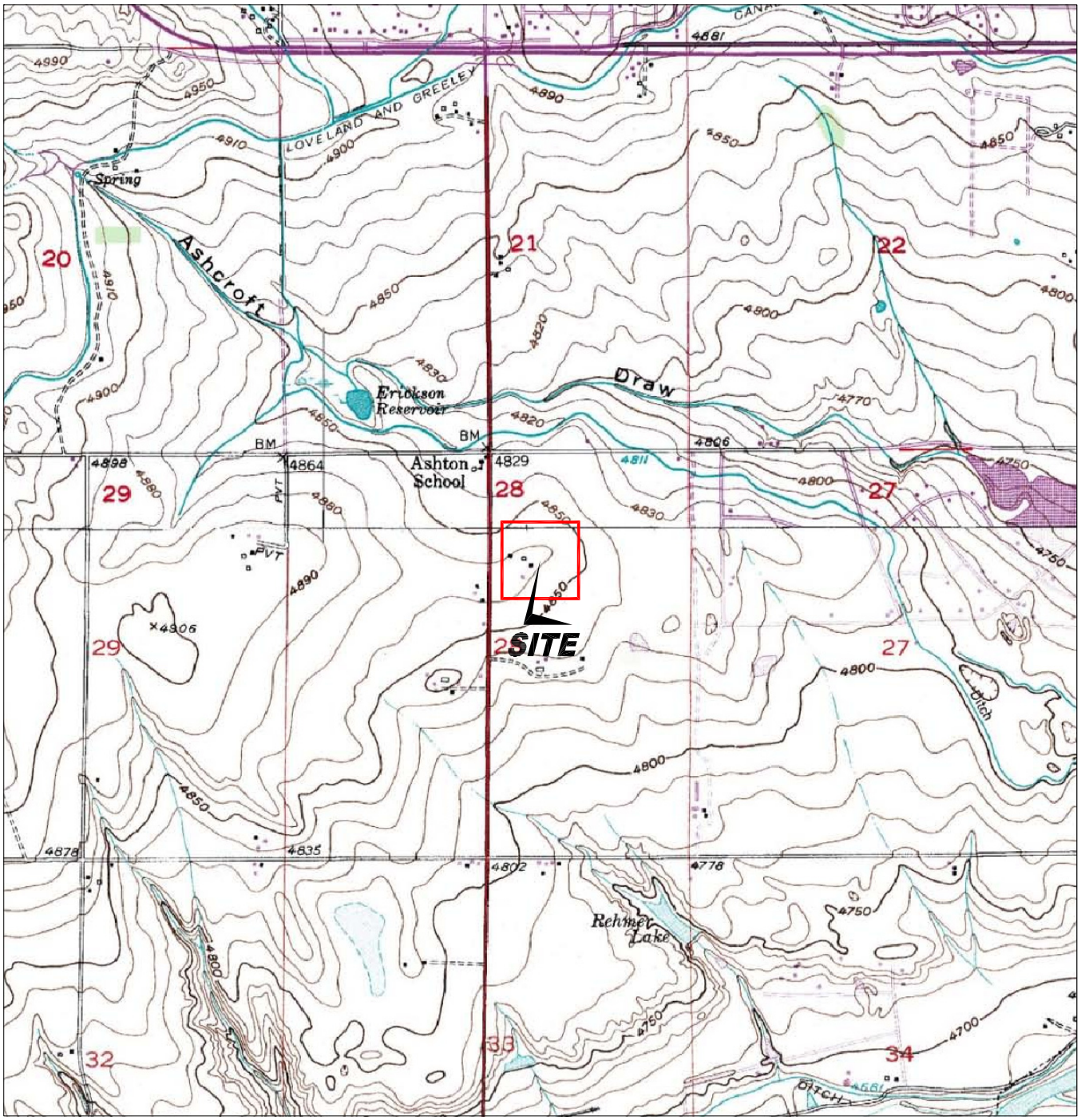
FREMONT PROJECT NO. C016-110

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	10/12/16	<1.0	1.5	<1.0	<1.0	98.19	12.67	85.52	NP
MW-2	10/12/16	**20000**	**32000**	**1400**	**19000**	97.58	12.43	85.15	NP
MW-3	10/12/16	**260**	**640**	150	**2600**	97.52	12.53	84.99	NP
MW-4	10/12/16	<1.0	<1.0	<1.0	<1.0	96.80	12.38	84.42	NP
MW-5	10/12/16	<1.0	<1.0	<1.0	2.9	95.98	11.50	84.48	NP
MW-6	10/12/16	<1.0	<1.0	<1.0	<1.0	100.00	14.63	85.37	NP
MW-7	10/12/16	<1.0	<1.0	<1.0	<1.0	97.02	11.80	85.22	NP
Table 910-1 Limits		5	560	700	1,400				

Bold face values exceed the COGCC limits

NP - No Free Product

FIGURES



N

Scale (miles)
0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1

Scale (feet)
0 1000 2000 3000 4000 5000

USGS 7.5 MINUTE SERIES (TOPOGRAPHIC)

Figure 1
SITE LOCATION MAP

Noble Wiedeman PM J28-2, 28-7
NE SW Section 28, T5N, R66W
Weld County, Colorado

Project No.	Prepared by	Drawn by	
C016-110		**JMA**	FREMONT ENVIRONMENTAL
Date	Reviewed by	Filename	
10/2/16		**16110T**	

LEGEND

MONITORING WELL
FENCE LINE
CONTAINMENT BERM
PIPELINE
ABOVE GROUND STORAGE TANK
FORMER
FORMER FACILITY

Figure 2
SITE MAP

Noble Wiedeman PM J28-2, 28-7
NE SW Section 28, T5N, R66W
Weld County, Colorado

Project No.	Prepared by	Drawn by
C016-110		JMA
Date	Reviewed by	Filename
10/20/16		16110Q

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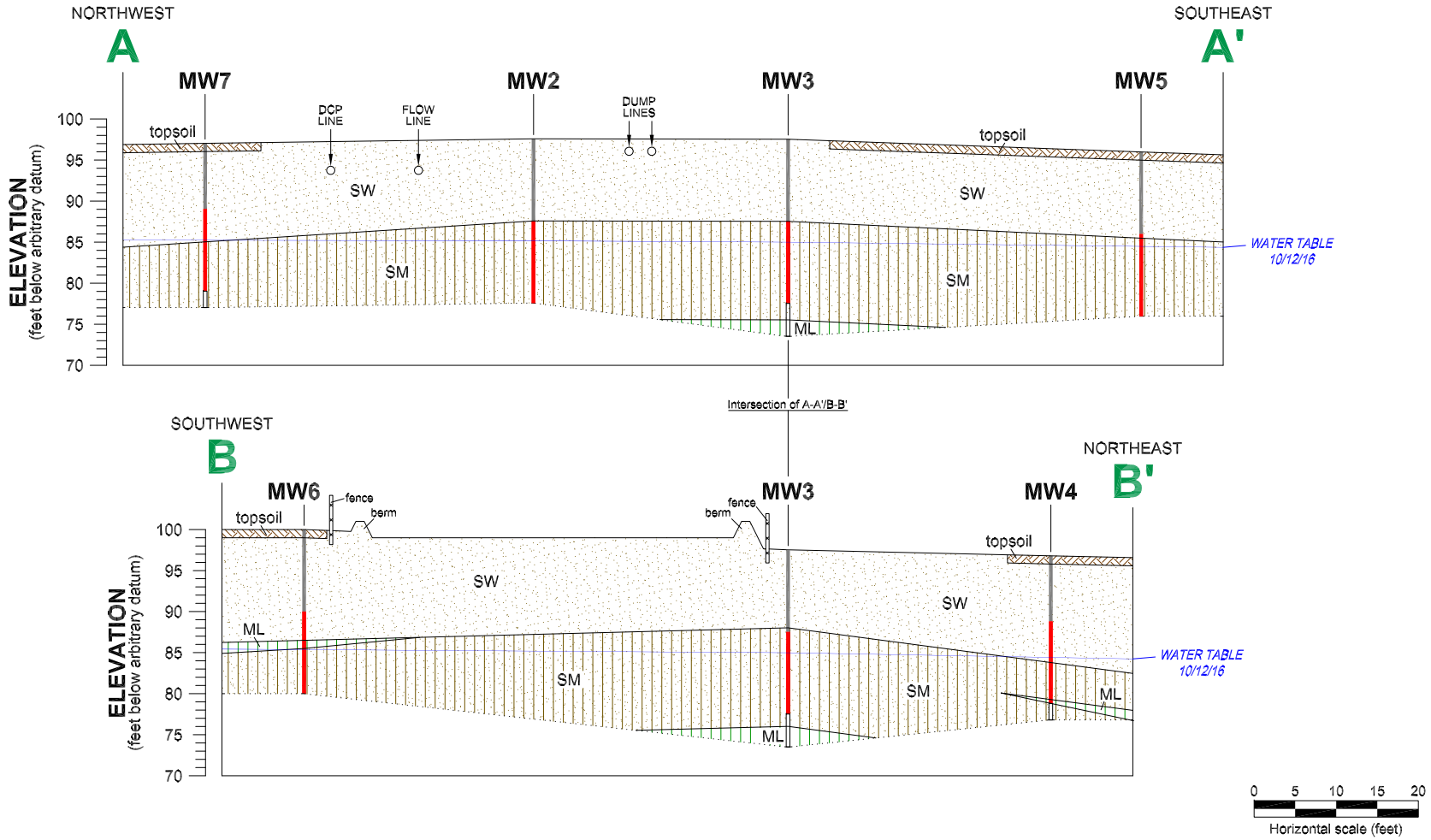


LEGEND

ML	Silt, low plasticity	SM	Sand, silty		Cased interval
SW	Sand, well-graded		Topsoil		Screened interval
					Uncased interval

Figure 3

CROSS-SECTIONS A-A', B-B' & C-C'

Noble Wiedeman PM J28-2, 28-7
NE SW Section 28, T5N, R66W
Weld County, Colorado

Project No. **C016-110**	Prepared by	Drawn by **JMA**	FREMONT ENVIRONMENTAL
Date **10/21/16**	Reviewed by	Filename **16110X**	

LEGEND

MONITORING WELL
FENCE LINE
CONTAINMENT BERM
PIPELINE
ABOVE GROUND STORAGE TANK
FORMER
FORMER FACILITY

10/12/16	
12	
B	<0.002
T	<0.005
E	<0.005
X	<0.010
G	<50
D	<50

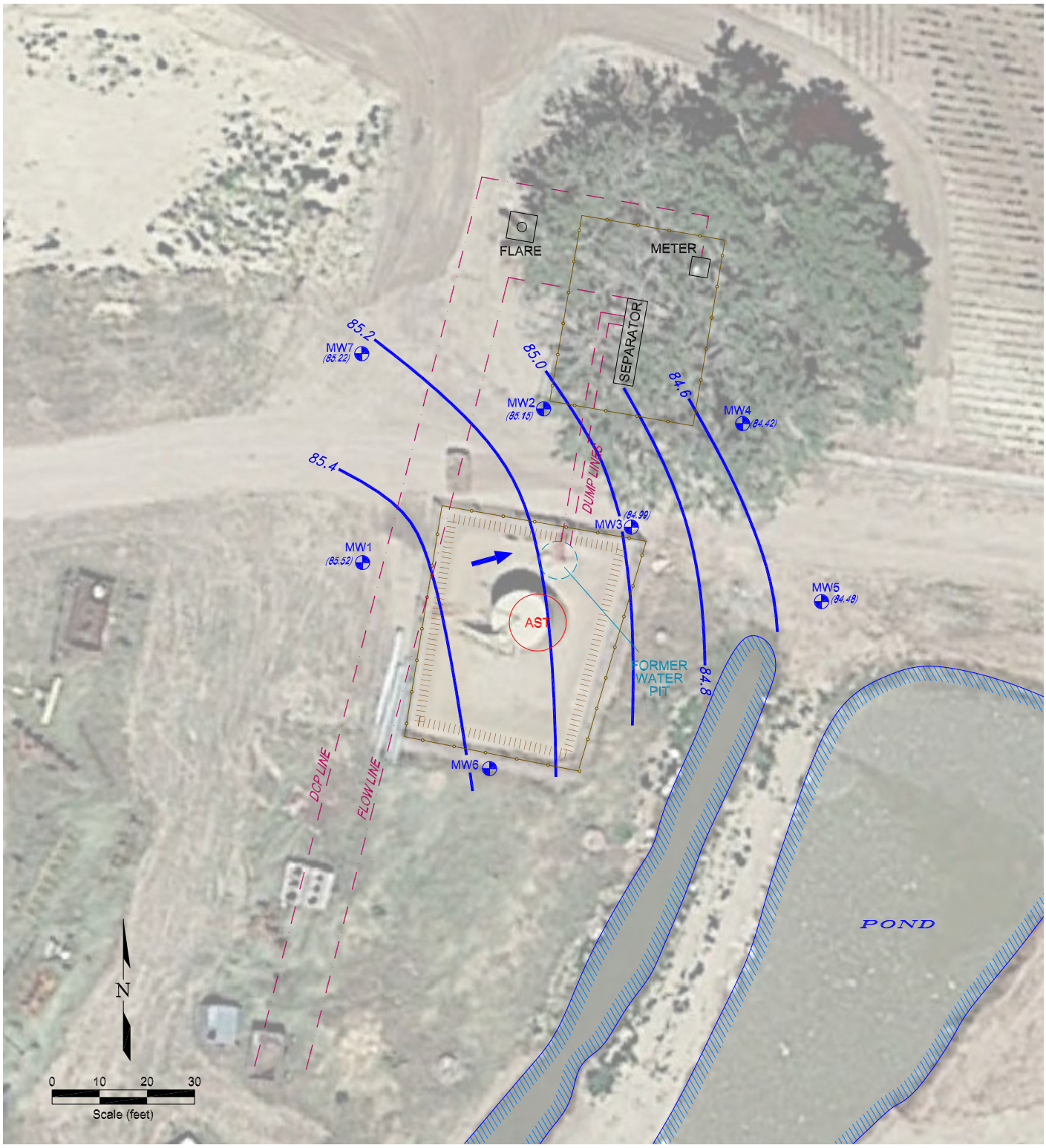
DATE SAMPLED
SAMPLE DEPTH (ft)
BENZENE (mg/kg)
TOLUENE (mg/kg)
ETHYLBENZENE (mg/kg)
TOTAL XYLENES (mg/kg)
TPH-GRO (mg/kg)
TPH-DRO (mg/kg)

Figure 4
SOIL CHEMISTRY

Noble Wiedeman PM J28-2, 28-7
NE SW Section 28, T5N, R66W
Weld County, Colorado

Project No.	Prepared by	Drawn by
C016-110		JMA
Date	Reviewed by	Filename
10/20/16		16110Q

FREMONT ENVIRONMENTAL



LEGEND

MONITORING WELL
FENCE LINE
CONTAINMENT BERM
PIPELINE
FORMER
ABOVE GROUND STORAGE TANK
FORMER FACILITY

(94.03) GROUND WATER ELEVATION (ft above arbitrary datum)

94.15 WATER TABLE CONTOUR

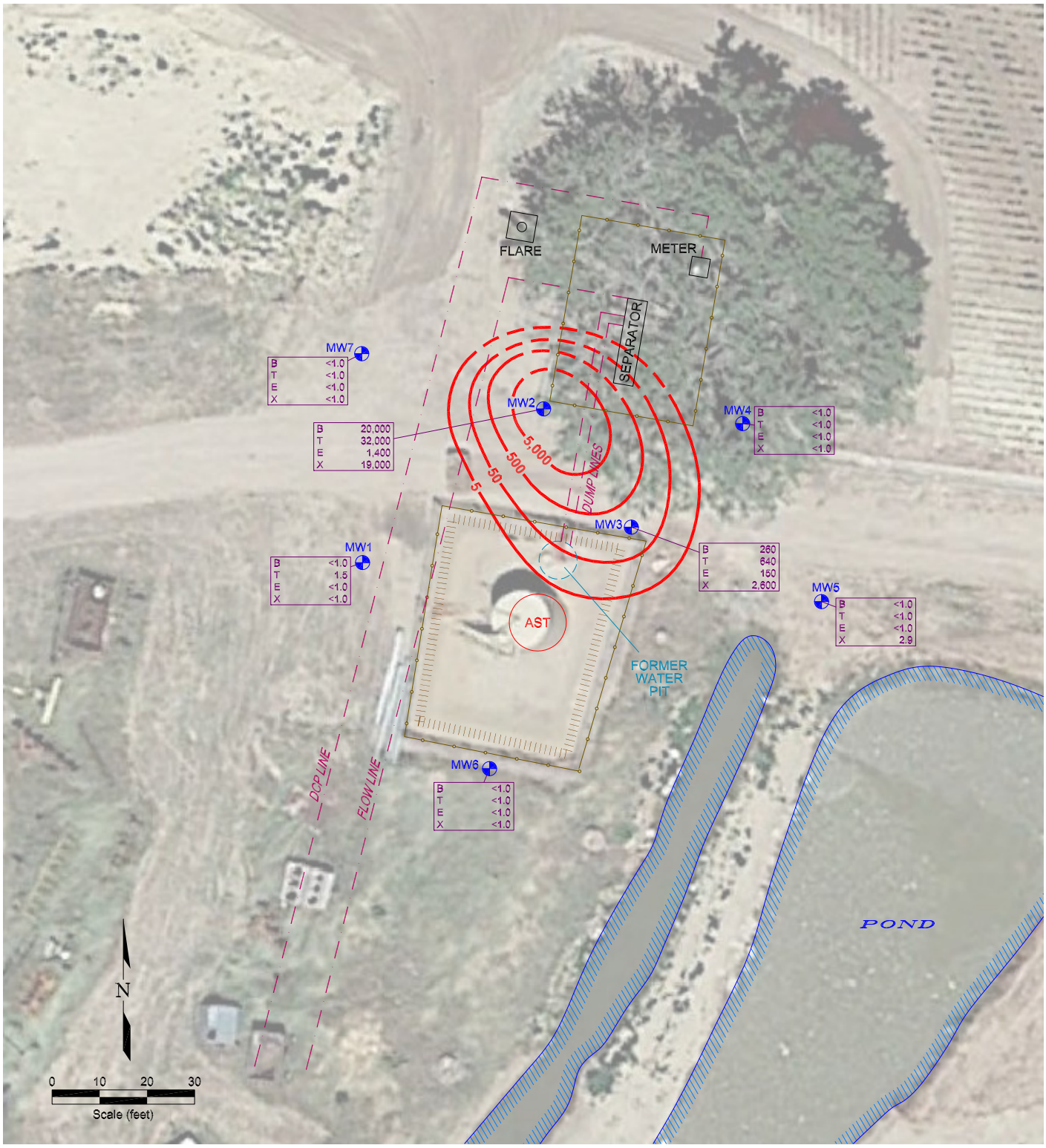
GROUND WATER FLOW DIRECTION

Figure 5
INFERRED GROUNDWATER CONTOUR
OCTOBER 12, 2016

Noble Wiedeman PM J28-2, 28-7
NE SW Section 28, T5N, R66W
Weld County, Colorado

Project No.	Prepared by	Drawn by
C016-110		JMA
Date	Reviewed by	Filename
10/20/16		16110Q

FREMONT ENVIRONMENTAL



LEGEND

MONITORING WELL
FENCE LINE
CONTAINMENT BERM
PIPELINE
FORMER
ABOVE GROUND STORAGE TANK
FORMER FACILITY

B <1.0
T <1.0
E <1.0
X <1.0

BENZENE (ug/L)
TOLUENE (ug/L)
ETHYLBENZENE (ug/L)
TOTAL XYLENES (ug/L)

5

BENZENE ISOCONCENTRATION (ug/L)
Dashed where inferred

Figure 6
GROUND WATER CHEMISTRY MAP
OCTOBER 12, 2016

Noble Wiedeman PM J28-2, 28-7
NE SW Section 28, T5N, R66W
Weld County, Colorado

Project No.	Prepared by	Drawn by
C016-110		JMA
Date	Reviewed by	Filename
10/20/16		16110Q

FREMONT ENVIRONMENTAL

APPENDIX A

BORING LOGS

FREMONT ENVIRONMENTAL

BORING/WELL CONSTRUCTION LOG

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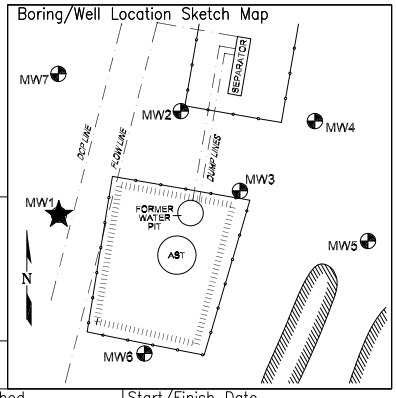


Boring/Well No.	Total Depth	Location
MW1	20'	Noble Energy Wiedeman PM J28-2, 28-7 NE SW Sec 28, T5N, R66W Weld County, Colorado

Project No./Name	
C016-110 Noble Wiedeman PM J28-2, 28-7	
Drilling Contractor/Driller	
DrillPro	
Geologist/Office	Approved By
PVH	

Drilling Equipment/Method	Size/Type of Bit	Sampling Method	Start/Finish Date
Hurricane	2.5" direct push	direct push	10/12/16

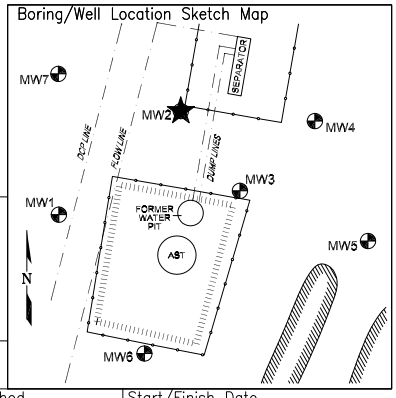
Well Installed?	Casing Mtrl./Dia.	Screen: Type	Mtrl.	Length	Dia.	Slot Size
Yes [X] No [ ]	PVC/1"	Slotted	PVC	10'	1"	0.010"

Elevation of: (ft. above datum)	Ground Surface	Top of Well Casing	Top of Screen	Bottom of Screen	Ground Water Surface/Date Measured
	.	98.19	88.19	78.19	85.52 10/12/16

DEPTH (feet)	WELL CONSTRUCTION	LITHOLOGY: GRAPHIC LOG	LITHOLOGY: VISUAL DESCRIPTION	Penetration Rate (blows/6")	Recovery (%)	Sample Interval (feet)	PID Values (ppm)
0			Topsoil				0
	Bentonite; 1" Blank		Sand, fine to medium, dry, no stain, no odor				
5		SW	fine				0
10			Sand, silty, dry, no stain, no odor				0
			Water level 12.67'				
			wet, no stain, no odor				
15		SM					0
	#10-20 Silica Sand; 1" Screen						
20			TD 20'				0

FREMONT ENVIRONMENTAL

BORING/WELL CONSTRUCTION LOG



Boring/Well No.	Total Depth	Location
MW2	20'	Noble Energy Wiedeman PM J28-2, 28-7 NE SW Sec 28, T5N, R66W Weld County, Colorado
Project No./Name: C016-110 Noble Wiedeman PM J28-2, 28-7		
Drilling Contractor/Driller: DrillPro		
Geologist/Office: PVH		Approved By
Drilling Equipment/Method: Hurricane	Size/Type of Bit: 2.5" direct push	Sampling Method: direct push
Start/Finish Date: 10/12/16		

Well Installed?	Casing Mtrl./Dia.	Screen: Type	Mtrl.	Length	Dia.	Slot Size
Yes [X] No [ ]	PVC/1"	Slotted	PVC	10'	1"	0.010"

Elevation of: (ft. above datum)	Ground Surface	Top of Well Casing	Top of Screen	Bottom of Screen	Ground Water Surface/Date Measured
	.	97.58	87.58	77.58	85.15 10/12/16

DEPTH (feet)	WELL CONSTRUCTION	LITHOLOGY: GRAPHIC LOG	LITHOLOGY: VISUAL DESCRIPTION	Penetration Rate (blows/6")	Recovery (%)	Sample Interval (feet)	PID Values (ppm)
0	Bentonite; 1" Blank	SW	Sand, fine to medium, dry, no stain, no odor				0
5							0
10		SM	Sand, silty, dry, no stain, no odor gray dark gray, moderate weathered petroleum odor Water level 12.43				221
15	#10-20 Silica Sand; 1" Screen		wet, moderate petroleum odor light gray				790
20			TD 20'				112

FREMONT ENVIRONMENTAL

BORING/WELL CONSTRUCTION LOG

Boring/Well No.	Total Depth
MW3	24'

Location: Noble Energy, Wiedeman PM J28-2, 28-7, NE SW Sec 28, T5N, R66W, Weld County, Colorado

Project No./Name: C016-110 Noble Wiedeman PM J28-2, 28-7

Drilling Contractor/Driller: DrillPro

Geologist/Office: PVH

Approved By:

Drilling Equipment/Method: Hurricane

Size/Type of Bit: 2.5" direct push

Sampling Method: direct push

Start/Finish Date: 10/12/16

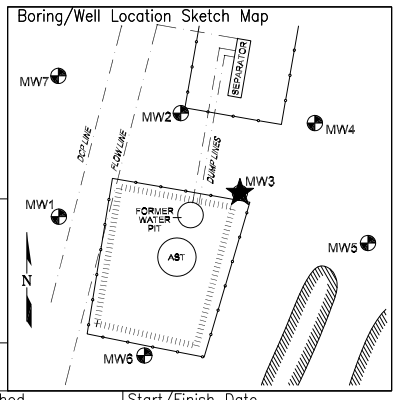
Well Installed? Yes [X] No [ ]

Casing Mtrl./Dia.: PVC/1"

Screen: Type Slotted | Mtrl. PVC | Length 10' | Dia. 1" | Slot Size 0.010"

Elevation of:	Ground Surface	Top of Well Casing	Top of Screen	Bottom of Screen	Ground Water Surface/Date Measured
(ft. above datum)	.	97.52	87.52	77.52	84.99 10/12/16

Boring/Well Location Sketch Map



DEPTH (feet)	WELL CONSTRUCTION	LITHOLOGY: GRAPHIC LOG	LITHOLOGY: VISUAL DESCRIPTION	Penetration Rate (blows/6")	Recovery (%)	Sample Interval (feet)	PID Values (ppm)
0	Bentonite; 1" Blank		Sand, fine to medium, dry, no stain, no odor				0
5		SW					0
10			Sand, silty, dry, light gray, light odor				2
			Water level 12.53				
			wet, light gray with darker streaks, light petroleum odor				
15		SM					246
			wet, light gray, moderate odor				
20	#10-20 Silica Sand; 1" Screen						17

FREMONT ENVIRONMENTAL

BORING/WELL CONSTRUCTION LOG

Boring/Well No.
MW3

Project No./Name
C016-110 Noble Wiedeman PM J28-2, 28-7

Location
Noble Energy
Wiedeman PM J28-2, 28-7
NE SW Sec 28, T5N, R66W
Weld County, Colorado

DEPTH (feet)	WELL CONSTRUCTION	LITHOLOGY: GRAPHIC LOG	LITHOLOGY: VISUAL DESCRIPTION	Penetration Rate (blows/6")	Recovery (%)	Sample Interval (feet)	PID Values (ppm)
	#10-20 Silica Sand →	SM	Sand, silty, continued				
		ML	Silt, sandy, firm, brown, wet				
			TD 24'				8
25							
30							
35							
40							
45							

FREMONT ENVIRONMENTAL

BORING/WELL CONSTRUCTION LOG

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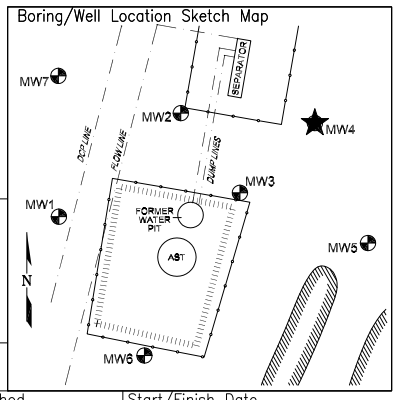


Boring/Well No.	Total Depth	Location
MW4	20'	Noble Energy Wiedeman PM J28-2, 28-7 NE SW Sec 28, T5N, R66W Weld County, Colorado

Project No./Name	Approved By
C016-110 Noble Wiedeman PM J28-2, 28-7	

Drilling Contractor/Driller	Geologist/Office
DrillPro	PVH

Drilling Equipment/Method	Size/Type of Bit	Sampling Method	Start/Finish Date
Hurricane	2.5" direct push	direct push	10/12/16

Well Installed?	Casing Mtrl./Dia.	Screen: Type	Mtrl.	Length	Dia.	Slot Size
Yes [X] No [ ]	PVC/1"	Slotted	PVC	10'	1"	0.010"

Elevation of: (ft. above datum)	Ground Surface	Top of Well Casing	Top of Screen	Bottom of Screen	Ground Water Surface/Date Measured
	.	96.80	88.80	78.80	84.42 10/12/16

DEPTH (feet)	WELL CONSTRUCTION	LITHOLOGY: GRAPHIC LOG	LITHOLOGY: VISUAL DESCRIPTION	Penetration Rate (blows/6")	Recovery (%)	Sample Interval (feet)	PID Values (ppm)
			Topsoil				
	Bentonite; 1" Blank		Sand, fine to medium, dry, no stain, n odor				0
5		SW					
							0
10			wet				
			Water level 12.38				0
			Sand, silty, no stain, no odor				
15	#10-20 Silica Sand; 1" Screen	SM	brown/gray mottled, no stain, no odor				0
		ML	Silt, sandy				
		SM	Sand, silty, wet, no stain, no odor				
20			TD 20'				0

FREMONT ENVIRONMENTAL

BORING/WELL CONSTRUCTION LOG

Boring/Well No.	Total Depth	Location
MW5	20'	Noble Energy Wiedeman PM J28-2, 28-7 NE SW Sec 28, T5N, R66W Weld County, Colorado

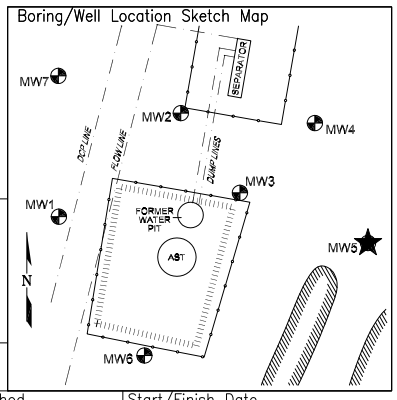
Project No./Name	C016-110 Noble Wiedeman PM J28-2, 28-7
Drilling Contractor/Driller	DrillPro
Geologist/Office	PVH
Approved By	

Drilling Equipment/Method	Size/Type of Bit	Sampling Method	Start/Finish Date
Hurricane	2.5" direct push	direct push	10/12/16

Well Installed?	Casing Mtrl./Dia.	Screen: Type	Mtrl.	Length	Dia.	Slot Size
Yes [X] No [ ]	PVC/1"	Slotted	PVC	10'	1"	0.010"

Elevation of: (ft. above datum)	Ground Surface	Top of Well Casing	Top of Screen	Bottom of Screen	Ground Water Surface/Date Measured
	.	95.98	87.98	77.98	84.48 10/12/16

Boring/Well Location Sketch Map



DEPTH (feet)	WELL CONSTRUCTION	LITHOLOGY: GRAPHIC LOG	LITHOLOGY: VISUAL DESCRIPTION	Penetration Rate (blows/6")	Recovery (%)	Sample Interval (feet)	PID Values (ppm)
0			Topsoil				
	Bentonite; 1" Blank		Sand, fine to medium, dry				0
5		SW					
							0
10							
			Sand, silty, no stain, no odor wet Water level 11.50' brown, wet, no stain, no odor				0
15	#10-20 Silica Sand; 1" Screen	SM	brown/gray mottled, no stain, no odor				0
20			TD 20'				0

FREMONT ENVIRONMENTAL

BORING/WELL CONSTRUCTION LOG

Boring/Well No.	Total Depth
MW6	20'

Location: Noble Energy, Wiedeman PM J28-2, 28-7, NE SW Sec 28, T5N, R66W, Weld County, Colorado

Project No./Name: C016-110 Noble Wiedeman PM J28-2, 28-7

Drilling Contractor/Driller: DrillPro

Geologist/Office: PVH

Approved By:

Drilling Equipment/Method: Hurricane

Size/Type of Bit: 2.5" direct push

Sampling Method: direct push

Start/Finish Date: 10/12/16

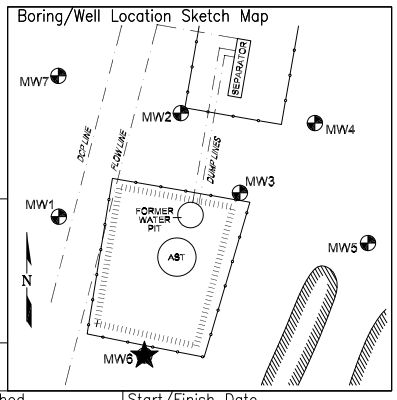
Well Installed? Yes [X] No [ ]

Casing Mtrl./Dia.: PVC/1"

Screen: Type Slotted | Mtrl. PVC | Length 10' | Dia. 1" | Slot Size 0.010"

Elevation of: (ft. above datum)	Ground Surface	Top of Well Casing	Top of Screen	Bottom of Screen	Ground Water Surface/Date Measured
	.	100.00	91.00	81.00	85.37 10/12/16

Boring/Well Location Sketch Map



DEPTH (feet)	WELL CONSTRUCTION	LITHOLOGY: GRAPHIC LOG	LITHOLOGY: VISUAL DESCRIPTION	Penetration Rate (blows/6")	Recovery (%)	Sample Interval (feet)	PID Values (ppm)
			Topsoil				
	Bentonite; 1" Blank		Sand, fine to medium, dry, no stain, no odor				0
5		SW					
							0
10							
							0
		ML	Silt, sandy, wet				
15			Sand, silty, wet, brown, no stain, no odor; Water level 14.63'				0
	#10-20 Silica Sand; 1" Screen	SM					
20			TD 20'				0

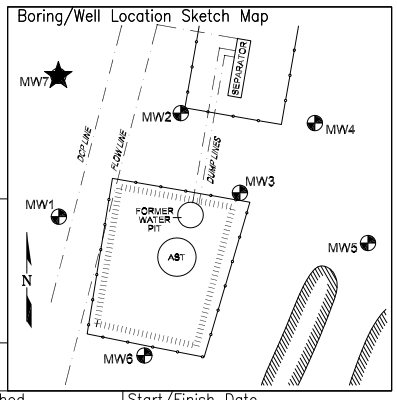
FREMONT ENVIRONMENTAL

BORING/WELL CONSTRUCTION LOG

Page 1 of 1

Boring/Well No.	Total Depth	Location
MW7	20'	Noble Energy Wiedeman PM J28-2, 28-7 NE SW Sec 28, T5N, R66W Weld County, Colorado
Project No./Name: C016-110 Noble Wiedeman PM J28-2, 28-7		
Drilling Contractor/Driller: DrillPro		
Geologist/Office: PVH		Approved By

Boring/Well Location Sketch Map



Drilling Equipment/Method	Size/Type of Bit	Sampling Method	Start/Finish Date
Hurricane	2.5" direct push	direct push	10/12/16

Well Installed?	Casing Mtrl./Dia.	Screen: Type	Mtrl.	Length	Dia.	Slot Size
Yes [X] No [ ]	PVC/1"	Slotted	PVC	10'	1"	0.010"

Elevation of: (ft. above datum)	Ground Surface	Top of Well Casing	Top of Screen	Bottom of Screen	Ground Water Surface/Date Measured
	.	97.02	89.02	79.02	85.22 10/12/16

DEPTH (feet)	WELL CONSTRUCTION	LITHOLOGY: GRAPHIC LOG	LITHOLOGY: VISUAL DESCRIPTION	Penetration Rate (blows/6")	Recovery (%)	Sample Interval (feet)	PID Values (ppm)
0			Topsoil				0
	Bentonite; 1" Blank		Sand, fine to medium, dry, no stain, no odor				
5		SW					0
10			wet Water level 11.80'				0
			Sand, silty, wet, no stain, no odor				
15	#10-20 Silica Sand; 1" Screen	SM					0
20			TD 20'				0

APPENDIX B

SAMPLING PLAN

SAMPLING METHODS AND PROCEDURES

Water Level Measurements

All ground water level measurements will be obtained using an electric measuring device, which indicates when a probe is in contact with ground water. 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 ground water 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.

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

APPENDIX C

LABORATORY DOCUMENTATION

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

October 18, 2016

Paul Henehan
Fremont Environmental
1759 Redwing Lane
Broomfield, CO 80020

RE: Noble - Wiedeman PMJ 28-2, 28-7

Enclosed are the results of analyses for samples received by Summit Scientific on 10/12/16 15:52. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Paul Shrewsbury
President

Fremont Environmental 1759 Redwing Lane Broomfield CO, 80020	Project: Noble - Wiedeman PMJ 28-2, 28-7 Project Number: [none] Project Manager: Paul Henehan	**Reported:** 10/18/16 12:40

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1 12 FT	1610098-01	Soil	10/12/16 00:00	10/12/16 15:52
MW-2 12 FT	1610098-02	Soil	10/12/16 00:00	10/12/16 15:52
MW-3 12 FT	1610098-03	Soil	10/12/16 00:00	10/12/16 15:52
MW-4 10 FT	1610098-04	Soil	10/12/16 00:00	10/12/16 15:52
MW-5 10 FT	1610098-05	Soil	10/12/16 00:00	10/12/16 15:52
MW-6 12 FT	1610098-06	Soil	10/12/16 00:00	10/12/16 15:52
MW-7 10 FT	1610098-07	Soil	10/12/16 00:00	10/12/16 15:52
MW-1	1610098-08	Water	10/12/16 00:00	10/12/16 15:52
MW-2	1610098-09	Water	10/12/16 00:00	10/12/16 15:52
MW-3	1610098-10	Water	10/12/16 00:00	10/12/16 15:52
MW-4	1610098-11	Water	10/12/16 00:00	10/12/16 15:52
MW-5	1610098-12	Water	10/12/16 00:00	10/12/16 15:52
MW-6	1610098-13	Water	10/12/16 00:00	10/12/16 15:52
MW-7	1610098-14	Water	10/12/16 00:00	10/12/16 15:52

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.

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1610098.1

S2

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Page 1 of 2

Client: Fremont Environemntal
Address: 1630 S College Ave
City/State/Zip: Fort Collins, CO 80525
Phone: (303) 956-8714 Fax:
Sampler Name: HENEHAN

Project Manager: Paul Henehan
E-Mail: paulh@fremontenv.com
Project Name: NOBLE - WIEDEMAN PMJ 28-2
Project Number:

BILL TO JACOB

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative: HCl	Preservative: HNO3	Preservative: None	Preservative: Other (Specify)	Matrix: Groundwater	Matrix: Soil	Matrix: Air - Canister Serial #	Matrix: Other (Specify)	Analyze For: DRO	Analyze For: GBTEX	Analyze For: Table 910-1 Metals	Analyze For: pH / EC	Analyze For: SAR	Analyze For: PAH SIM	Analyze For: As Total	Analyze For: NAPHTH.	Special Instructions
MW-1 12 FT	10/12/16		1			✓			✓			✓	✓						✓	
MW-2 12 FT			1																	
MW-3 12 FT			1																	
MW-4 10 FT			1																	
MW-5 10 FT			1																	
MW-6 12 FT			1																	
MW-7 10 FT			1						✓			✓	✓						✓	
MW-1			2										✓							
MW-2			2										✓							
MW-3			2										✓							NEED TO DILUTE THIS ONE

Relinquished by:	Date/Time:	Received by:	Date/Time:
[signature]	10/12/16 15:52	[signature]	10-12-16 15:52
Relinquished by:	Date/Time:	Received by:	Date/Time:
[signature]	10-12-16 17:30	[signature]	10/12/16 1730
Relinquished by:	Date/Time:	Received in Lab by:	Date/Time:

Turn Around Time (Check)
Same Day ☐ 72 Hours ☐
24 Hours ☐ Standard ☒
48 Hours ☐

Sample Integrity:
Temperature Upon Receipt: 19.3
Intact: (Yes) No

Notes:

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1610098.2

S2

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Page 2 of 2

Client: Fremont Environemntal
Address: 1630 S College Ave
City/State/Zip: Fort Collins, CO 80525
Phone: (303) 956-8714 Fax:
Sampler Name: HENEHAN

Project Manager: Paul Henehan
E-Mail: paulh@fremontenv.com
Project Name: NOBLE - WIEDERMAN PMJ 28-2
Project Number:

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative: HCl	Preservative: HNO_3	Preservative: None	Preservative: Other (Specify)	Matrix: Groundwater	Matrix: Soil	Matrix: Air - Canister Serial #	Matrix: Other (Specify)	Analyze For: DRO	Analyze For: BTEX	Analyze For: Table 910-1 Metals	Analyze For: pH / EC	Analyze For: SAR	Analyze For: PAH SIM	Analyze For: As Total	Special Instructions
MW-4	10/12/16		2					X					✓						
MW-5	"		2					X					✓						
MW-6	"		2					X					✓						
MW-7	↓		2					X					✓						

Relinquished by: Date/Time: 10/12/16 15:52
Received by: Date/Time: 10-12-16 15:52
Relinquished by: Date/Time: 10-12-16 17:30
Received by: Date/Time: 10/12/16 1730
Relinquished by: Date/Time:
Received at Lab by: Date/Time:

Turn Around Time (Check)
Same Day ☐ 72 Hours ☐
24 Hours ☐ Standard ☒
48 Hours ☐

Sample Integrity:
Temperature Upon Receipt: 19.3
Intact: (Yes) No

Notes:

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S2

Fremont Environmental 1759 Redwing Lane Broomfield CO, 80020	Project: Noble - Wiedeman PMJ 28-2, 28-7 Project Number: [none] Project Manager: Paul Henehan	**Reported:** 10/18/16 12:40

Sample Receipt Checklist

S2 Work Order: 16l0098

Client: Fremont Client Project ID: Noble - Wiederman PMJ 28-

Shipped Via: H.D. on ice (UPS, FedEx, Hand Delivered, Pick-up, etc.) Airbill #: _____

Matrix (check all that apply): ____Air __x__Soil/Solid __x__Water ____Other: _____ (Describe)

Cooler ID					
Temp (°C)	19.3				

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature just above 0°C to ≤ 6°C [(1)]? NOTE: If samples are delivered the same day of sampling, this requirement is waived provided that there is evidence that cooling has begun.			x	
Were all samples received intact [(1)]?	x			
Was adequate sample volume provided [(1)]?	x			
If custody seals are present, are they intact [(1)]?			x	
Are short holding time analytes or samples with HTs due within 48 hours present?			x	
Is a chain-of-custody (COC) form present and filled out completely [(1)]?	x			
Does the COC agree with the number and type of sample bottles received [(1)]?	x			
Do the sample IDs on the bottle labels match the COC [(1)]?	x			
Is the COC properly relinquished by the client w/ date and time recorded [(1)]?	x			
For volatiles in water – is there headspace present? **If yes, contact client and note in narrative.**		x		
Are samples preserved that require preservation **(excluding cooling)**[(1)]? Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect			x	
If samples are acid preserved for metals, is the pH ≤ 2[(1)]? Record the pH in Comments.			x	
If dissolved metals are requested, were samples field filtered?			x	
Additional Comments (if any):				

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

Muri P. — Custodian Printed Name

10-12-16 — Signature or Initials of Custodian

17:30 — Date/Time

Fremont Environmental 1759 Redwing Lane Broomfield CO, 80020	Project: Noble - Wiedeman PMJ 28-2, 28-7 Project Number: [none] Project Manager: Paul Henehan	**Reported:** 10/18/16 12:40

MW-1 12 FT
1610098-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/12/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1610141	10/13/16	10/13/16	8015M	

Date Sampled: **10/12/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		*92.8 %*	*30-150*		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/12/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1610138	10/13/16	10/14/16	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **10/12/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		*107 %*	*23-173*		"	"	"	"	
Surrogate: Toluene-d8		*99.2 %*	*20-170*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*102 %*	*21-167*		"	"	"	"	

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 1759 Redwing Lane Broomfield CO, 80020	Project: Noble - Wiedeman PMJ 28-2, 28-7 Project Number: [none] Project Manager: Paul Henehan	**Reported:** 10/18/16 12:40

MW-2 12 FT
1610098-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/12/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1610141	10/13/16	10/14/16	8015M	

Date Sampled: **10/12/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		*90.9 %*	*30-150*		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/12/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1610138	10/13/16	10/14/16	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **10/12/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		*103 %*	*23-173*		"	"	"	"	
Surrogate: Toluene-d8		*107 %*	*20-170*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*102 %*	*21-167*		"	"	"	"	

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 1759 Redwing Lane Broomfield CO, 80020	Project: Noble - Wiedeman PMJ 28-2, 28-7 Project Number: [none] Project Manager: Paul Henehan	**Reported:** 10/18/16 12:40

MW-3 12 FT
1610098-03 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/12/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1610141	10/13/16	10/14/16	8015M	

Date Sampled: **10/12/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		*90.9 %*	*30-150*		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/12/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1610138	10/13/16	10/14/16	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **10/12/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		*108 %*	*23-173*		"	"	"	"	
Surrogate: Toluene-d8		*99.5 %*	*20-170*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*103 %*	*21-167*		"	"	"	"	

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 1759 Redwing Lane Broomfield CO, 80020	Project: Noble - Wiedeman PMJ 28-2, 28-7 Project Number: [none] Project Manager: Paul Henehan	**Reported:** 10/18/16 12:40

MW-4 10 FT
1610098-04 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/12/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1610141	10/13/16	10/14/16	8015M	

Date Sampled: **10/12/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		*90.4 %*	*30-150*		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/12/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1610138	10/13/16	10/14/16	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **10/12/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		*106 %*	*23-173*		"	"	"	"	
Surrogate: Toluene-d8		*94.7 %*	*20-170*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*104 %*	*21-167*		"	"	"	"	

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 1759 Redwing Lane Broomfield CO, 80020	Project: Noble - Wiedeman PMJ 28-2, 28-7 Project Number: [none] Project Manager: Paul Henehan	**Reported:** 10/18/16 12:40

MW-5 10 FT
1610098-05 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/12/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1610141	10/13/16	10/14/16	8015M	

Date Sampled: **10/12/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		*92.4 %*	*30-150*		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/12/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1610138	10/13/16	10/14/16	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **10/12/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		*111 %*	*23-173*		"	"	"	"	
Surrogate: Toluene-d8		*97.4 %*	*20-170*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*104 %*	*21-167*		"	"	"	"	

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 1759 Redwing Lane Broomfield CO, 80020	Project: Noble - Wiedeman PMJ 28-2, 28-7 Project Number: [none] Project Manager: Paul Henehan	**Reported:** 10/18/16 12:40

MW-6 12 FT
1610098-06 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/12/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1610141	10/13/16	10/14/16	8015M	

Date Sampled: **10/12/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		*90.5 %*	*30-150*		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/12/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1610138	10/13/16	10/14/16	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **10/12/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		*106 %*	*23-173*		"	"	"	"	
Surrogate: Toluene-d8		*96.4 %*	*20-170*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*100 %*	*21-167*		"	"	"	"	

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Fremont Environmental 1759 Redwing Lane Broomfield CO, 80020	Project: Noble - Wiedeman PMJ 28-2, 28-7 Project Number: [none] Project Manager: Paul Henehan	**Reported:** 10/18/16 12:40

MW-7 10 FT
1610098-07 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/12/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1610141	10/13/16	10/14/16	8015M	

Date Sampled: **10/12/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		*91.2 %*	*30-150*		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/12/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1610138	10/13/16	10/15/16	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **10/12/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		*122 %*	*23-173*		"	"	"	"	
Surrogate: Toluene-d8		*104 %*	*20-170*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*103 %*	*21-167*		"	"	"	"	

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 1759 Redwing Lane Broomfield CO, 80020	Project: Noble - Wiedeman PMJ 28-2, 28-7 Project Number: [none] Project Manager: Paul Henehan	**Reported:** 10/18/16 12:40

MW-1
1610098-08 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/12/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1610147	10/14/16	10/14/16	EPA 8260B	
Toluene	**1.5**	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	500	"	"	"	"	"	"	

Date Sampled: **10/12/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		*95.4 %*	*37-154*		"	"	"	"	
Surrogate: Toluene-d8		*96.5 %*	*45-149*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*101 %*	*45-146*		"	"	"	"	

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 1759 Redwing Lane Broomfield CO, 80020	Project: Noble - Wiedeman PMJ 28-2, 28-7 Project Number: [none] Project Manager: Paul Henehan	**Reported:** 10/18/16 12:40

MW-2
1610098-09 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/12/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	**20000**	1000	ug/l	1000	1610147	10/14/16	10/14/16	EPA 8260B	
Toluene	**32000**	1000	"	"	"	"	"	"	
Ethylbenzene	**1400**	100	"	100	"	"	"	"	
Xylenes (total)	**19000**	100	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	**170000**	50000	"	"	"	"	"	"	

Date Sampled: **10/12/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		*102 %*	*37-154*		"	"	"	"	
Surrogate: Toluene-d8		*93.7 %*	*45-149*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*99.2 %*	*45-146*		"	"	"	"	

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 1759 Redwing Lane Broomfield CO, 80020	Project: Noble - Wiedeman PMJ 28-2, 28-7 Project Number: [none] Project Manager: Paul Henehan	**Reported:** 10/18/16 12:40

MW-3
1610098-10 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/12/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	**260**	1.0	ug/l	1	1610147	10/13/16	10/15/16	EPA 8260B	
Toluene	**640**	50	"	50	"	"	10/15/16	"	
Ethylbenzene	**150**	1.0	"	1	"	"	10/15/16	"	
Xylenes (total)	**2600**	50	"	50	"	"	10/15/16	"	
Gasoline Range Hydrocarbons	**6900**	500	"	1	"	"	10/15/16	"	

Date Sampled: **10/12/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		*108 %*	*37-154*		"	"	"	"	
Surrogate: Toluene-d8		*102 %*	*45-149*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*100 %*	*45-146*		"	"	"	"	

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 1759 Redwing Lane Broomfield CO, 80020	Project: Noble - Wiedeman PMJ 28-2, 28-7 Project Number: [none] Project Manager: Paul Henehan	**Reported:** 10/18/16 12:40

MW-4
1610098-11 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/12/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1610147	10/13/16	10/15/16	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **10/12/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		*108 %*	*37-154*		"	"	"	"	
Surrogate: Toluene-d8		*94.8 %*	*45-149*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*102 %*	*45-146*		"	"	"	"	

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 1759 Redwing Lane Broomfield CO, 80020	Project: Noble - Wiedeman PMJ 28-2, 28-7 Project Number: [none] Project Manager: Paul Henehan	**Reported:** 10/18/16 12:40

MW-5
1610098-12 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/12/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1610147	10/13/16	10/15/16	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	**2.9**	1.0	"	"	"	"	"	"	

Date Sampled: **10/12/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		*110 %*	*37-154*		"	"	"	"	
Surrogate: Toluene-d8		*97.5 %*	*45-149*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*102 %*	*45-146*		"	"	"	"	

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 1759 Redwing Lane Broomfield CO, 80020	Project: Noble - Wiedeman PMJ 28-2, 28-7 Project Number: [none] Project Manager: Paul Henehan	**Reported:** 10/18/16 12:40

MW-6
1610098-13 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/12/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1610147	10/13/16	10/15/16	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **10/12/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		*113 %*	*37-154*		"	"	"	"	
Surrogate: Toluene-d8		*96.8 %*	*45-149*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*101 %*	*45-146*		"	"	"	"	

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 1759 Redwing Lane Broomfield CO, 80020	Project: Noble - Wiedeman PMJ 28-2, 28-7 Project Number: [none] Project Manager: Paul Henehan	**Reported:** 10/18/16 12:40

MW-7
1610098-14 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/12/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	1610147	10/13/16	10/15/16	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: **10/12/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		*111 %*	*37-154*		"	"	"	"	
Surrogate: Toluene-d8		*94.9 %*	*45-149*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*101 %*	*45-146*		"	"	"	"	

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.

Extractable Petroleum Hydrocarbons by 8015 - Quality Control

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1610141 - EPA 3550A										
Blank (1610141-BLK1)				Prepared & Analyzed: 10/13/16						
C10-C28 (DRO)	ND	50	mg/kg							
Surrogate: o-Terphenyl	*12.2*		"	*12.5*		*97.5*	*30-150*			
LCS (1610141-BS1)				Prepared & Analyzed: 10/13/16						
C10-C28 (DRO)	449	50	mg/kg	499		89.9	73-134			
Surrogate: o-Terphenyl	*12.1*		"	*12.5*		*96.6*	*30-150*			
Matrix Spike (1610141-MS1)	**Source: 1610098-01**			Prepared & Analyzed: 10/13/16						
C10-C28 (DRO)	435	50	mg/kg	492	7.43	86.9	50-148			
Surrogate: o-Terphenyl	*12.3*		"	*12.3*		*99.6*	*30-150*			
Matrix Spike Dup (1610141-MSD1)	**Source: 1610098-01**			Prepared & Analyzed: 10/13/16						
C10-C28 (DRO)	430	50	mg/kg	499	7.43	84.6	50-148	1.30	20	
Surrogate: o-Terphenyl	*12.0*		"	*12.5*		*96.3*	*30-150*			

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.

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1610138 - EPA 5030 Soil MS										
Blank (1610138-BLK1)				Prepared: 10/13/16 Analyzed: 10/14/16						
Naphthalene	ND	0.010	mg/kg							
Benzene	ND	0.0020	"							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	50	"							
Surrogate: 1,2-Dichloroethane-d4	*0.0418*		"	*0.0400*		*104*	*23-173*			
Surrogate: Toluene-d8	*0.0394*		"	*0.0400*		*98.6*	*20-170*			
Surrogate: 4-Bromofluorobenzene	*0.0416*		"	*0.0400*		*104*	*21-167*			
LCS (1610138-BS1)				Prepared: 10/13/16 Analyzed: 10/14/16						
Naphthalene	0.00996	0.010	mg/kg				66-138			
Benzene	0.117	0.0020	"	0.100		117	58-130			
Toluene	0.119	0.0050	"	0.100		119	61-134			
Ethylbenzene	0.133	0.0050	"	0.0992		134	74-139			
m,p-Xylene	0.235	0.010	"	0.200		118	73-137			
o-Xylene	0.124	0.0050	"	0.0980		126	73-141			
Surrogate: 1,2-Dichloroethane-d4	*0.0416*		"	*0.0400*		*104*	*23-173*			
Surrogate: Toluene-d8	*0.0395*		"	*0.0400*		*98.8*	*20-170*			
Surrogate: 4-Bromofluorobenzene	*0.0398*		"	*0.0400*		*99.6*	*21-167*			
Matrix Spike (1610138-MS1)		**Source: 1610098-01**		Prepared: 10/13/16 Analyzed: 10/14/16						
Naphthalene	ND	0.010	mg/kg		ND		10-158			
Benzene	0.116	0.0020	"	0.0990	ND	118	30-131			
Toluene	0.123	0.0050	"	0.0990	ND	124	30-134			
Ethylbenzene	0.133	0.0050	"	0.0982	ND	135	22-153			
m,p-Xylene	0.238	0.010	"	0.198	ND	120	10-159			
o-Xylene	0.125	0.0050	"	0.0970	ND	129	31-151			
Surrogate: 1,2-Dichloroethane-d4	*0.0420*		"	*0.0396*		*106*	*23-173*			
Surrogate: Toluene-d8	*0.0400*		"	*0.0396*		*101*	*20-170*			
Surrogate: 4-Bromofluorobenzene	*0.0399*		"	*0.0396*		*101*	*21-167*			

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Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1610138 - EPA 5030 Soil MS										
Matrix Spike Dup (1610138-MSD1)		**Source: 1610098-01**		Prepared: 10/13/16 Analyzed: 10/14/16						
Naphthalene	ND	0.010	mg/kg		ND		10-158		42	
Benzene	0.111	0.0020	"	0.0988	ND	112	30-131	4.95	34	
Toluene	0.119	0.0050	"	0.0988	ND	120	30-134	3.39	30	
Ethylbenzene	0.132	0.0050	"	0.0980	ND	135	22-153	0.400	24	
m,p-Xylene	0.240	0.010	"	0.197	ND	121	10-159	0.672	68	
o-Xylene	0.124	0.0050	"	0.0968	ND	128	31-151	0.674	38	
Surrogate: 1,2-Dichloroethane-d4	*0.0410*		"	*0.0395*		*104*	*23-173*			
Surrogate: Toluene-d8	*0.0389*		"	*0.0395*		*98.5*	*20-170*			
Surrogate: 4-Bromofluorobenzene	*0.0399*		"	*0.0395*		*101*	*21-167*			
Batch 1610147 - EPA 5030 Water MS										
Blank (1610147-BLK1)				Prepared: 10/13/16 Analyzed: 10/14/16						
Benzene	ND	1.0	ug/l							
Benzene	ND	1.0	"							
Toluene	ND	1.0	"							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	1.0	"							
Xylenes (total)	ND	1.0	"							
Gasoline Range Hydrocarbons	ND	500	"							
Surrogate: 1,2-Dichloroethane-d4	*13.5*		"	*13.3*		*101*	*37-154*			
Surrogate: 1,2-Dichloroethane-d4	*13.5*		"	*13.3*		*101*	*37-154*			
Surrogate: Toluene-d8	*13.0*		"	*13.3*		*97.7*	*45-149*			
Surrogate: Toluene-d8	*13.0*		"	*13.3*		*97.7*	*45-149*			
Surrogate: 4-Bromofluorobenzene	*13.5*		"	*13.3*		*101*	*45-146*			
Surrogate: 4-Bromofluorobenzene	*13.5*		"	*13.3*		*101*	*45-146*			

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Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1610147 - EPA 5030 Water MS										
LCS (1610147-BS1)				Prepared: 10/13/16 Analyzed: 10/14/16						
Benzene	23.1	1.0	ug/l	33.3		69.3	51-132			
Benzene	23.1	1.0	"	33.3		69.3	51-132			
Toluene	28.8	1.0	"	33.3		86.5	51-138			
Toluene	28.8	1.0	"	33.3		86.5	51-138			
Ethylbenzene	31.0	1.0	"	33.1		93.8	58-146			
Ethylbenzene	31.0	1.0	"	33.1		93.8	58-146			
m,p-Xylene	66.4	2.0	"	66.5		99.9	57-144			
m,p-Xylene	66.4	2.0	"	66.5		99.9	57-144			
o-Xylene	32.7	1.0	"	32.7		100	53-146			
o-Xylene	32.7	1.0	"	32.7		100	53-146			
Surrogate: 1,2-Dichloroethane-d4	*13.7*		*"*	*13.3*		*102*	*37-154*			
Surrogate: 1,2-Dichloroethane-d4	*13.7*		*"*	*13.3*		*102*	*37-154*			
Surrogate: Toluene-d8	*13.0*		*"*	*13.3*		*97.2*	*45-149*			
Surrogate: Toluene-d8	*13.0*		*"*	*13.3*		*97.2*	*45-149*			
Surrogate: 4-Bromofluorobenzene	*13.0*		*"*	*13.3*		*97.5*	*45-146*			
Surrogate: 4-Bromofluorobenzene	*13.0*		*"*	*13.3*		*97.5*	*45-146*			
Matrix Spike (1610147-MS1)		**Source: 1610098-08**		Prepared: 10/13/16 Analyzed: 10/14/16						
Benzene	23.2	1.0	ug/l	33.3	ND	69.6	34-141			
Benzene	23.2	1.0	"	33.3	ND	69.6	34-141			
Toluene	29.0	1.0	"	33.3	1.54	82.3	27-151			
Toluene	29.0	1.0	"	33.3	1.54	82.3	27-151			
Ethylbenzene	31.8	1.0	"	33.1	ND	96.3	29-160			
Ethylbenzene	31.8	1.0	"	33.1	ND	96.3	29-160			
m,p-Xylene	69.5	2.0	"	66.5	ND	104	20-166			
m,p-Xylene	69.5	2.0	"	66.5	ND	104	20-166			
o-Xylene	33.6	1.0	"	32.7	ND	103	33-159			
o-Xylene	33.6	1.0	"	32.7	ND	103	33-159			
Surrogate: 1,2-Dichloroethane-d4	*13.3*		*"*	*13.3*		*99.8*	*37-154*			
Surrogate: Toluene-d8	*12.7*		*"*	*13.3*		*95.3*	*45-149*			
Surrogate: 1,2-Dichloroethane-d4	*13.3*		*"*	*13.3*		*99.8*	*37-154*			
Surrogate: 4-Bromofluorobenzene	*12.9*		*"*	*13.3*		*96.9*	*45-146*			
Surrogate: Toluene-d8	*12.7*		*"*	*13.3*		*95.3*	*45-149*			
Surrogate: 4-Bromofluorobenzene	*12.9*		*"*	*13.3*		*96.9*	*45-146*			

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Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1610147 - EPA 5030 Water MS										
Matrix Spike Dup (1610147-MSD1)		**Source: 1610098-08**		Prepared: 10/13/16	Analyzed: 10/14/16					
Benzene	23.0	1.0	ug/l	33.3	ND	69.2	34-141	0.649	32	
Benzene	23.0	1.0	"	33.3	ND	69.2	34-141	0.649	32	
Toluene	29.2	1.0	"	33.3	1.54	82.9	27-151	0.653	25	
Toluene	29.2	1.0	"	33.3	1.54	82.9	27-151	0.653	25	
Ethylbenzene	32.2	1.0	"	33.1	ND	97.4	29-160	1.16	50	
Ethylbenzene	32.2	1.0	"	33.1	ND	97.4	29-160	1.16	50	
m,p-Xylene	69.2	2.0	"	66.5	ND	104	20-166	0.490	36	
m,p-Xylene	69.2	2.0	"	66.5	ND	104	20-166	0.490	36	
o-Xylene	32.9	1.0	"	32.7	ND	101	33-159	2.32	26	
o-Xylene	32.9	1.0	"	32.7	ND	101	33-159	2.32	26	
Surrogate: 1,2-Dichloroethane-d4	*14.8*		"	*13.3*		*111*	*37-154*			
Surrogate: 1,2-Dichloroethane-d4	*14.8*		"	*13.3*		*111*	*37-154*			
Surrogate: Toluene-d8	*12.7*		"	*13.3*		*95.2*	*45-149*			
Surrogate: 4-Bromofluorobenzene	*13.6*		"	*13.3*		*102*	*45-146*			
Surrogate: Toluene-d8	*12.7*		"	*13.3*		*95.2*	*45-149*			
Surrogate: 4-Bromofluorobenzene	*13.6*		"	*13.3*		*102*	*45-146*			

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 1759 Redwing Lane Broomfield CO, 80020	Project: Noble - Wiedeman PMJ 28-2, 28-7 Project Number: [none] Project Manager: Paul Henehan	**Reported:** 10/18/16 12:40

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