

FREMONT ENVIRONMENTAL INC.

November 6, 2019

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

Subject: **Site Investigation Report**
 Weezer G3-22 (Wellhead)
 API # 05-123-25720
 Weld County, Colorado
 Fremont Project No. C019-078
 Facility #336707, Remediation # 14376

Dear Mr. Evans:

Enclosed please find a copy of the above referenced Site Investigation Report for the Weezer G3-22 wellhead 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

SITE INVESTIGATION REPORT

NOBLE ENERGY INC.

WEEZER G3-22 (WELLHEAD)

WELD COUNTY, COLORADO

FREMONT PROJECT NO. C019-078

FACILITY #336707, REMEDIATION #14376

Prepared by:

Fremont Environmental Inc.

1759 Redwing Lane

Broomfield, CO 80020

(303) 956-8714

November 5, 2019

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SITE INVESTIGATION REPORT
NOBLE ENERGY INC.
WEEZER G3-22 (WELLHEAD)
WELD COUNTY, COLORADO
FREMONT PROJECT NO. C019-078
FACILITY #336707, REMEDIATION #14376

1.0 INTRODUCTION

The purpose of this document is to present soil and ground water quality data collected during a site investigation at the Weezer G3-22 wellhead site in Weld County, Colorado. Impacted soil and ground water were identified at this location due to a release from the wellhead and associated flowline. Five monitoring wells were installed at this site on October 21, 2019 to delineate the magnitude and extent of subsurface impacts.

2.0 BACKGROUND INFORMATION

2.1 Site Location

The Weezer G3-22 wellhead site is located approximately four miles southeast of La Salle, Colorado in Weld County as shown on Figure 1. The site is in a rural and agricultural area 0.3 miles east of the intersection of Weld County Road 43 and Weld County Road 48. The location is further described as the SE $\frac{1}{4}$ of the SW $\frac{1}{4}$ of Section 3, Township 4N, Range 65W.

2.2 Site History

The site consists of the area adjacent to the former Weezer G3-22 wellhead. The Weezer G3-22 well was drilled in 2008 to a depth of 7,182 feet. On October 2, 2019, soil impacts were identified at the location while the Weezer G3-22 was being plugged and abandoned. These soil impacts initiated this site investigation effort.

During the well abandonment, a limited excavation to remediate the source impacts was undertaken. One groundwater sample and five soil samples were collected from the excavation sidewalls and floor which were analyzed for petroleum constituents. The 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 two 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 21, 2019. A total of six soil borings were advanced utilizing a Geoprobe rig. Five of the six borings were completed as flush-mounted 1-inch diameter monitoring wells; the sixth boring was abandoned after sampling. 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 road base which is then underlain by sand that extends to a depth of approximately three feet. The sand is underlain by a saturated, slightly plastic clay which extends for two feet, transitioning to a fine sand at five feet continuing to depth of at least 12 feet. The maximum depth of the borings was 12 feet. Ground water is present across the site at a depth of approximately 3.5 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 12 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 six 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 shown on Table 1. The laboratory's report is provided in Appendix C.

3.2 Ground Water Monitoring

Ground water levels were measured in the five monitoring wells on October 21, 2019 in accordance with the Sampling Plan included in Appendix B. The data are summarized in Table 2.

Water table contours inferred from the October 2019 data are illustrated on Figure 5. Based on these data, ground water is inferred to flow to the east. The water table gradient was calculated at approximately 0.001 feet per foot (ft/ft) for the October 2019 data.

3.3 Ground Water Sampling and Analysis

Ground water samples were collected from the five monitoring wells on October 21, 2019. All ground water samples were submitted to Summit Scientific, Inc. for analyses of BTEX by EPA Method 8260C.

The ground water concentrations for the five monitoring wells were below their respective COGCC Table 910-1 values. 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 Weezer G3-22 wellhead location on October 21, 2019 as a result of a release from the former wellhead and associated flowline. One soil boring and five 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 six soil borings/monitoring wells. Limited soil excavation and removal had been conducted during removal of the wellhead.

The data collected from the monitoring wells indicates that the ground water flow direction is to the east. Further, the BTEX concentrations from the five monitoring wells were less than the COGCC Table 910-1 limits. The ground water data are illustrated on Figure 6. Since there were no groundwater impacts, Noble does not propose any further groundwater sampling.

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.**



11/5/19

Date _____

Ethan D. Black

Geologist

Reviewed by:



11/5/19

Date _____

Paul V. Henehan, P.E.

Senior Consultant

TABLES

TABLE 1
SUMMARY OF SOIL CHEMISTRY DATA
NOBLE ENERGY INC.
WEEZER G3-22 (WELLHEAD), WELD COUNTY, COLORADO
FREMONT PROJECT NO. C019-078

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 3 Ft	10/21/2019	3	<0.002	<0.005	<0.005	<0.01	<0.01	<50	<50
MW-2 3 Ft	10/21/2019	3	<0.002	<0.005	<0.005	<0.01	<0.01	<50	<50
MW-3 3 Ft	10/21/2019	3	<0.002	<0.005	<0.005	<0.01	<0.01	<50	<50
MW-4 3 Ft	10/21/2019	3	<0.002	<0.005	<0.005	<0.01	<0.01	<50	<50
MW-5 3 Ft	10/21/2019	3	<0.002	<0.005	<0.005	<0.01	<0.01	<50	<50
SB-1 3 Ft	10/21/2019	3	<0.002	<0.005	<0.005	<0.01	<0.01	<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.
WEEZER G3-22 (WELLHEAD), WELD COUNTY, COLORADO
FREMONT PROJECT NO. C019-078

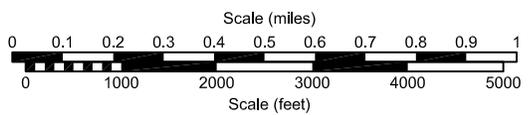
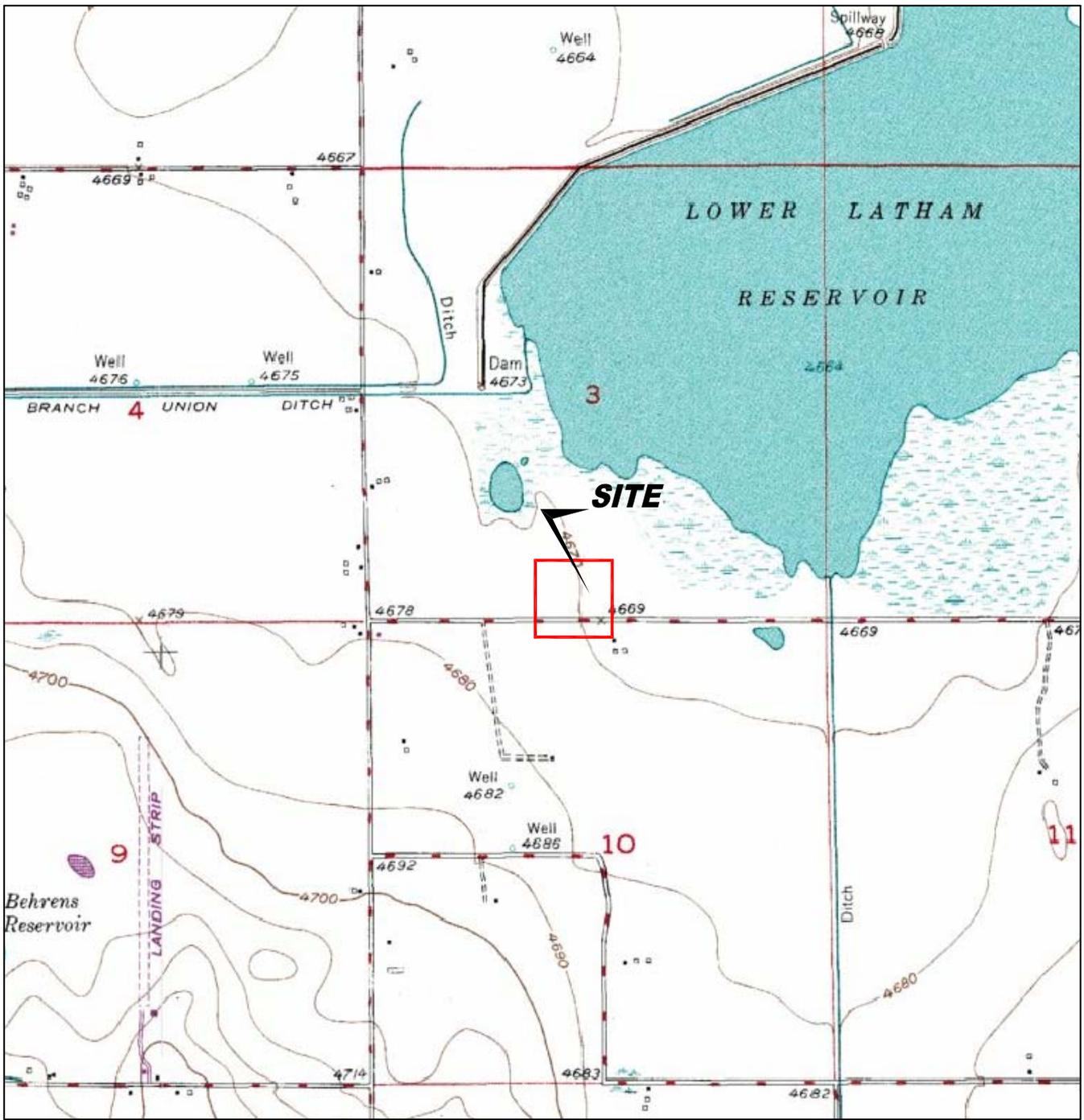
SAMPLE LOCATION	DATE	BENZENE (µg/L)	TOLUENE (µg/L)	ETHYL BENZENE (µg/L)	TOTAL XYLENES (µg/L)	TOC ELEVATION (feet)	DEPTH TO GROUND WATER (ft)	GROUND WATER ELEVATION (ft)	FREE PRODUCT THICKNESS (ft)
MW-1	10/21/19	<1.0	<1.0	<1.0	<2.0	100.00	2.98	97.02	NP
MW-2	10/21/19	<1.0	<1.0	<1.0	<2.0	100.06	3.03	97.03	NP
MW-3	10/21/19	<1.0	<1.0	<1.0	<2.0	99.80	2.83	96.97	NP
MW-4	10/21/19	<1.0	<1.0	<1.0	<2.0	99.94	2.97	96.97	NP
MW-5	10/21/19	<1.0	<1.0	<1.0	<2.0	99.87	2.88	96.99	NP
Table 910-1 Limits		5	560	700	1,400				

Bold face values exceed the COGCC limits

NP - No Free Product

NS - Not Sampled

FIGURES



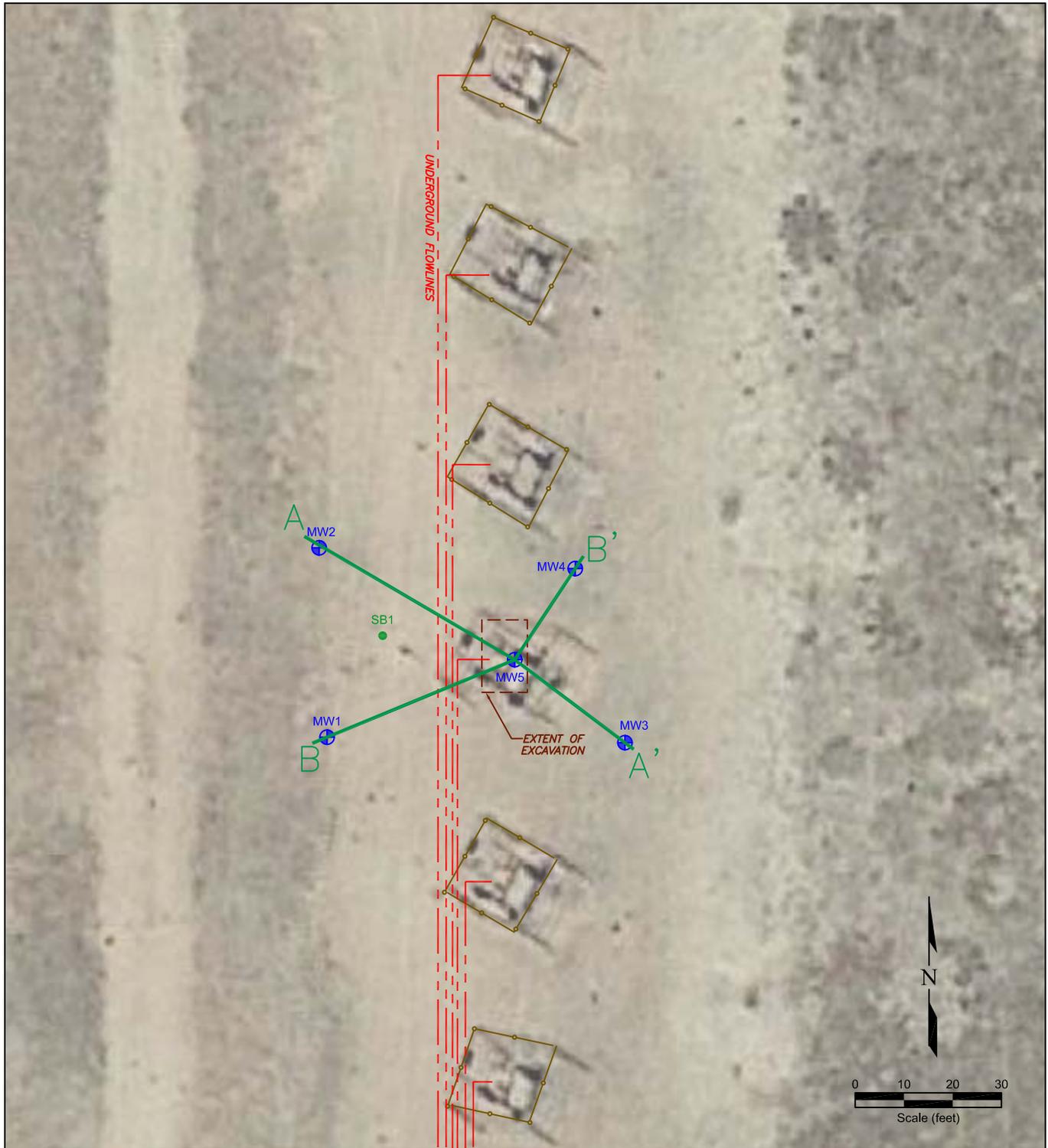
USGS 7.5 MINUTE SERIES (TOPOGRAPHIC)

Figure 1
SITE LOCATION MAP

NOBLE ENERGY, INC. ~ WEEZER G3-22 (Wellhead)
 SESW Section 3, T4N, R65W ~ 40.33602°, -104.65135°
 Weld County, Colorado

Project No. C019-078	Prepared by	Drawn by TDA
Date 11/1/19	Reviewed by EB	Filename 19078T





LEGEND

- SOIL BORING
- ⊕ MONITORING WELL
- - - EXTENT OF EXCAVATION
- - - UNDERGROUND FLOW LINE
- FENCE LINE

A A' CUT LINE FOR CROSS SECTION

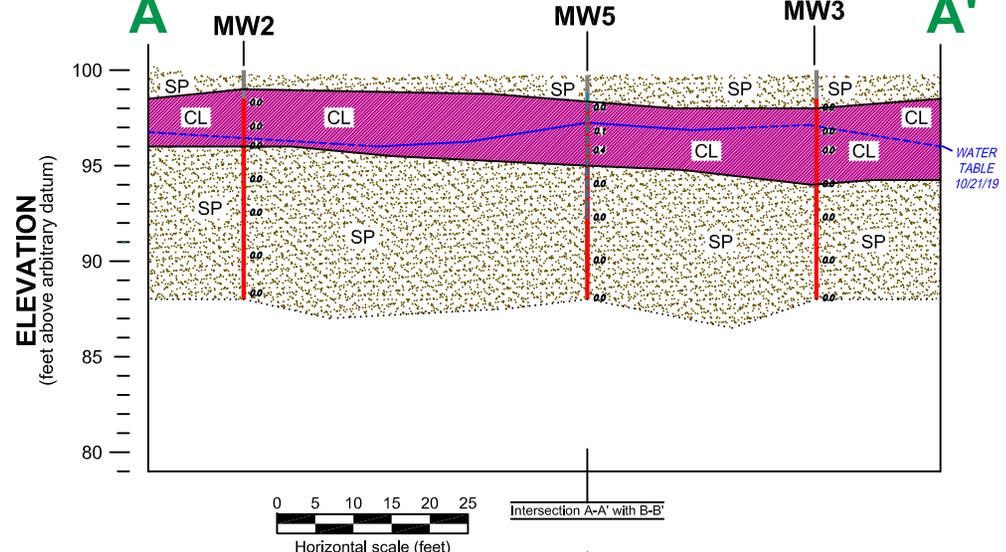
Figure 2
SITE MAP WITH CROSS SECTIONS

NOBLE ENERGY, INC. ~ WEEZER G3-22 (Wellhead)
SESW Section 3, T4N, R65W ~ 40.33602°, -104.65135°
Weld County, Colorado

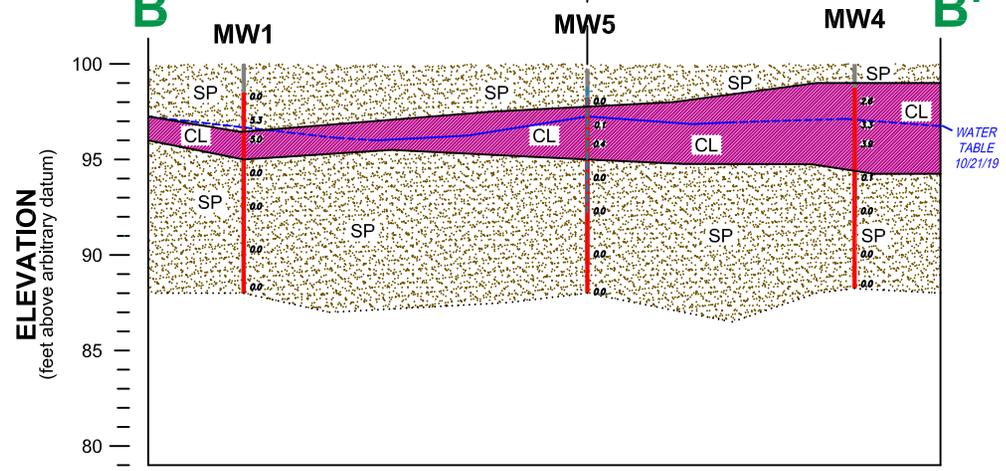
Project No. C019-078	Prepared by TDA	Drawn by TDA
Date 11/1/19	Reviewed by EB	Filename 19078Q



NORTHWEST **A** **MW2** **MW5** **MW3** **A'** SOUTHEAST



SOUTHWEST **B** **MW1** **MW5** **MW4** **B'** NORTHEAST



LEGEND

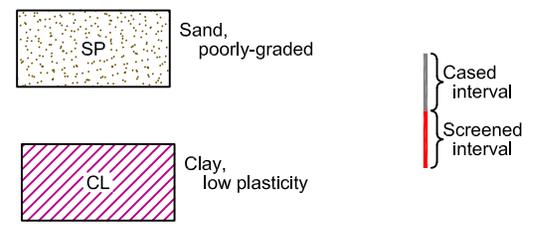
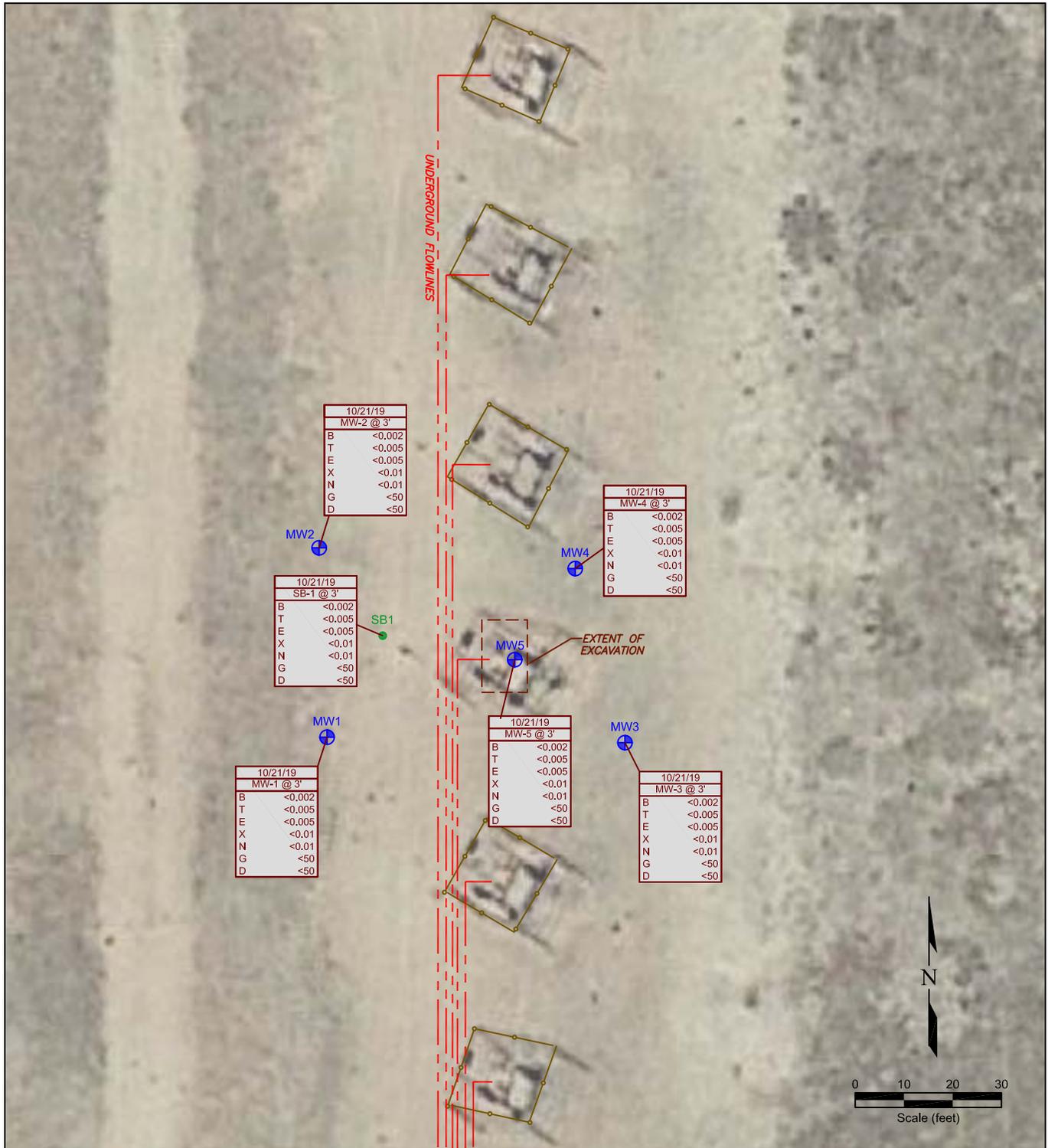


Figure 3
CROSS SECTIONS

NOBLE ENERGY, INC. ~ WEEZER G3-22 (Wellhead)
 SESW Section 3, T4N, R65W ~ 40.33602°, -104.65135°
 Weld County, Colorado

Project No. C019-078	Prepared by	Drawn by TDA
Date 11/6/19	Reviewed by EB	Filename 19078Q





LEGEND

- SOIL BORING
- ⊕ MONITORING WELL
- EXTENT OF EXCAVATION
- - - UNDERGROUND FLOW LINE
- FENCE LINE

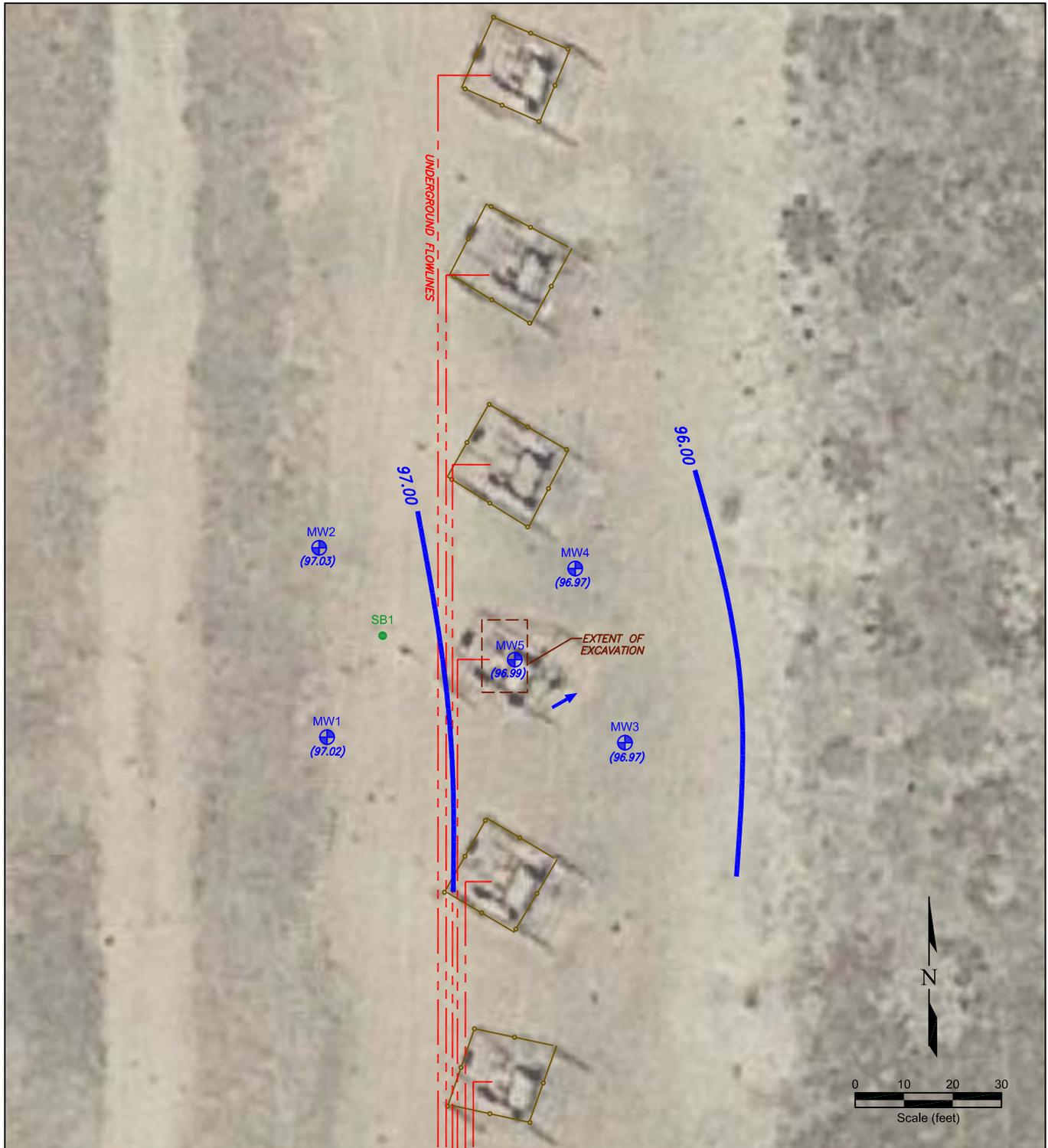
10/21/19	DATE SAMPLED
MW-1 @ 3'	DEPTH (ft) and LOCATION
B	BENZENE (mg/kg)
T	TOLUENE (mg/kg)
E	ETHYLBENZENE (mg/kg)
X	TOTAL XYLENES (mg/kg)
N	NAPHTHALENE (mg/kg)
G	TPH-GRO (mg/kg)
D	TPH-DRO (mg/kg)

Figure 4
SOIL CHEMISTRY MAP
 October 21, 2019

NOBLE ENERGY, INC. ~ WEEZER G3-22 (Wellhead)
 SESW Section 3, T4N, R65W ~ 40.33602°, -104.65135°
 Weld County, Colorado

Project No. C019-078	Prepared by TDA	Drawn by TDA
Date 11/1/19	Reviewed by EB	Filename 19078Q





LEGEND

- SOIL BORING
- ⊕ MONITORING WELL
- - - EXTENT OF EXCAVATION
- - - UNDERGROUND FLOW LINE
- FENCE LINE
- (98.22) GROUND WATER ELEVATION 6/2/08
(feet above mean sea level)
- 97.00 WATER TABLE CONTOUR
(feet above mean sea level)
- INFERRED GROUND WATER FLOW DIRECTION

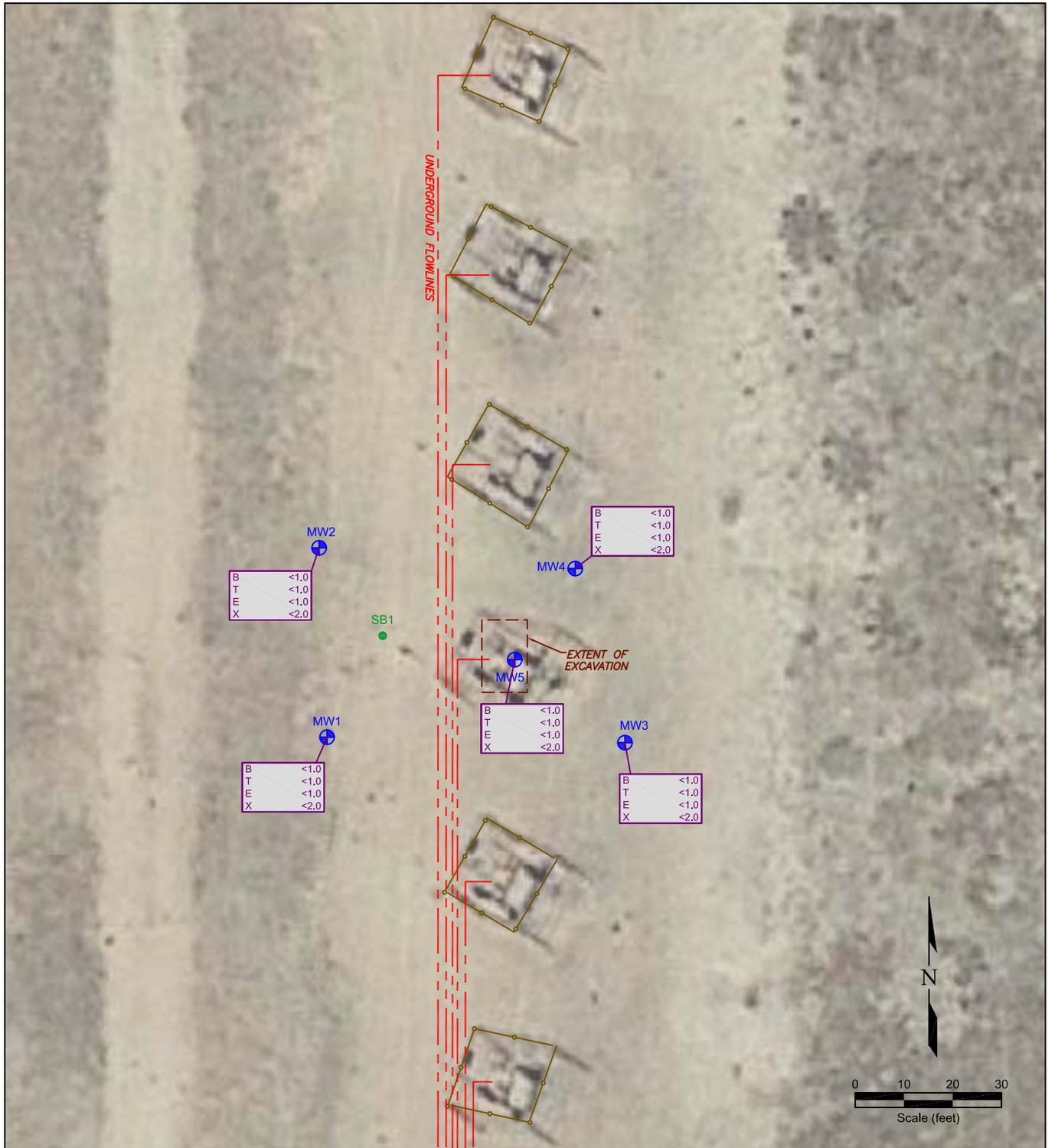
Figure 5

INFERRED GROUND WATER CONTOUR MAP
October 12, 2019

NOBLE ENERGY, INC. ~ WEEZER G3-22 (Wellhead)
SESW Section 3, T4N, R65W ~ 40.33602°, -104.65135°
Weld County, Colorado

Project No. C019-078	Prepared by TDA	Drawn by TDA
Date 11/1/19	Reviewed by EB	Filename 19078Q





LEGEND

	SOIL BORING		EXTENT OF EXCAVATION
	MONITORING WELL		UNDERGROUND FLOW LINE
			FENCE LINE

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 6
GROUND WATER CHEMISTRY MAP
 October 12, 2019

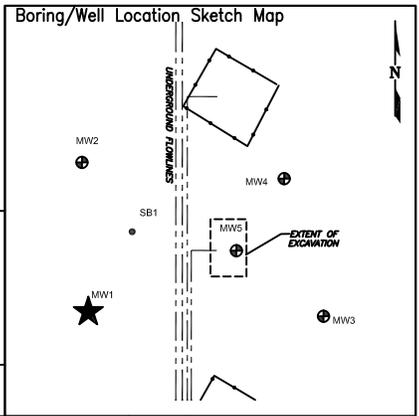
NOBLE ENERGY, INC. ~ WEEZER G3-22 (Wellhead)
 SESW Section 3, T4N, R65W ~ 40.33602°, -104.65135°
 Weld County, Colorado

Project No. C019-078	Prepared by TDA	Drawn by TDA
Date 11/6/19	Reviewed by EB	Filename 19078Q



APPENDIX A
BORING LOGS

BORING/WELL CONSTRUCTION LOG

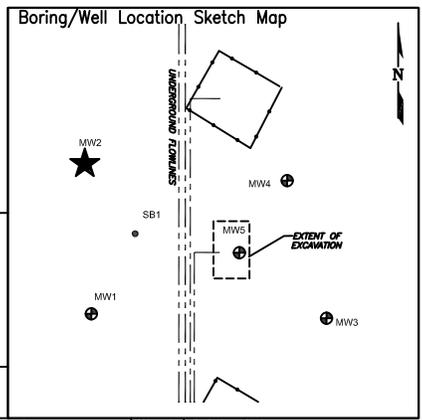


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Boring/Well No. MW-1		Total Depth 12'		Location Noble Energy Weezer G3-22 SE SW Sec 3, T4N, R65W Weld County, Colorado			
Project No./Name C019-078/Noble Weezer G3-22				Drilling Contractor/Driller DrillPro			
Geologist/Office Ethan Black/Fremont Environmental, Inc.				Approved By			
Drilling Equipment/Method Hurricane			Size/Type of Bit 2.5" direct push		Sampling Method direct push		Start/Finish Date 10/21/19
Well Installed? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		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 100.00	Top of Well Casing .	Top of Screen .	Bottom of Screen .	Ground Water Surface/Date Measured 2.98 10/21/19	

DEPTH (feet)	WELL CONSTRUCTION	GRAPHIC LOG	LITHOLOGY		Penetration Rate (blows/6")	Recovery (%)	Sample Interval (feet)	PID Values (ppm)
			VISUAL DESCRIPTION					
			Sand, brown, fine, moist					0.0
5			Clay, grayish brown, slightly plastic, moist			70%		5.3
10			Sand, brown, fine to coarse with depth, saturated, wet @ 8'			80%		0.0
15			TD 12'			90%		0.0
20								

BORING/WELL CONSTRUCTION LOG

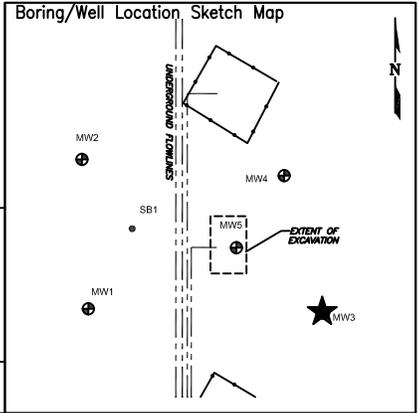


Page 1 of 1

Boring/Well No. MW-2	Total Depth 12'	Location Noble Energy Weezer G3-22 SE SW Sec 3, T4N, R65W Weld County, Colorado			
Project No./Name C019-078/Noble Weezer G3-22		Drilling Contractor/Driller DrillPro			
Geologist/Office Ethan Black/Fremont Environmental, Inc.		Approved By			
Drilling Equipment/Method Hurricane		Size/Type of Bit 2.5" direct push	Sampling Method direct push	Start/Finish Date 10/21/19	
Well Installed? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	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 100.06	Top of Well Casing .	Top of Screen .	Bottom of Screen .	Ground Water Surface/Date Measured 3.03 10/21/19

DEPTH (feet)	WELL CONSTRUCTION	LITHOLOGY		Penetration Rate (blows/6")	Recovery (%)	Sample Interval (feet)	PID Values (ppm)
		GRAPHIC LOG	VISUAL DESCRIPTION				
	Bentonite	SP	Sand, brown, fine, moist				
	1" Riser	CL	Clay, grayish brown, slightly plastic, moist				0.0
	#10-20 Silica Sand	SP	Sand, brown, fine, moist to saturated		80%		0.0
5	1" Screen	SP					0.0
10			Coarse sand lens @ 9' - 3" thick		90%		0.0
			TD 12'		90%		0.0
15							
20							

BORING/WELL CONSTRUCTION LOG

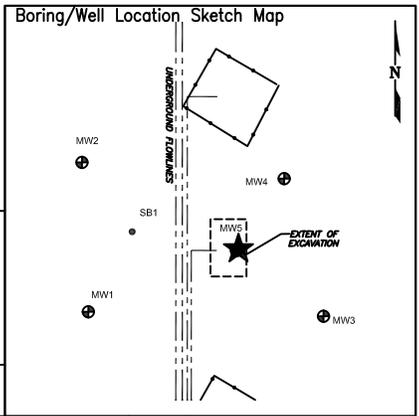


Page 1 of 1

Boring/Well No. MW-3		Total Depth 12'		Location Noble Energy Weezer G3-22 SE SW Sec 3, T4N, R65W Weld County, Colorado			
Project No./Name C019-078/Noble Weezer G3-22				Drilling Contractor/Driller DrillPro			
Geologist/Office Ethan Black/Fremont Environmental, Inc.				Approved By			
Drilling Equipment/Method Hurricane			Size/Type of Bit 2.5" direct push		Sampling Method direct push		Start/Finish Date 10/21/19
Well Installed? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		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 99.80	Top of Well Casing .	Top of Screen .	Bottom of Screen .	Ground Water Surface/Date Measured 2.83 10/21/19	

DEPTH (feet)	WELL CONSTRUCTION	LITHOLOGY		Penetration Rate (blows/6")	Recovery (%)	Sample Interval (feet)	PID Values (ppm)
		GRAPHIC LOG	VISUAL DESCRIPTION				
5			Sand, brown, fine, moist				0.0
			Clay, brown to gray, plastic, moist, saturated				
10			Sand, tan, some silt @ 6' fine grained wet @ 8'		80%		0.0
			Oxidized sand layer alternating every 4" to 12'				
15							0.0
20					100%		0.0

BORING/WELL CONSTRUCTION LOG

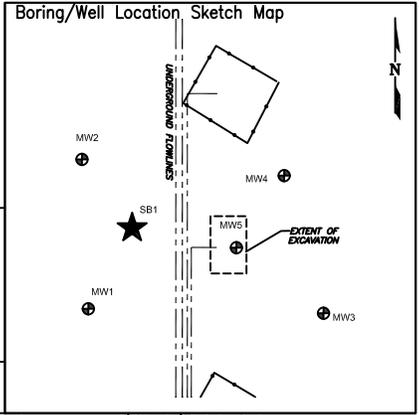


Page 1 of 1

Boring/Well No. MW-5		Total Depth 12'		Location Noble Energy Weezer G3-22 SE SW Sec 3, T4N, R65W Weld County, Colorado			
Project No./Name C019-078/Noble Weezer G3-22				Drilling Contractor/Driller DrillPro			
Geologist/Office Ethan Black/Fremont Environmental, Inc.				Approved By			
Drilling Equipment/Method Hurricane			Size/Type of Bit 2.5" direct push		Sampling Method direct push		Start/Finish Date 10/21/19
Well Installed? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		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 99.87		Top of Well Casing .		Top of Screen .	
		Bottom of Screen .		Ground Water Surface/Date Measured 2.88		10/21/19	

DEPTH (feet)	WELL CONSTRUCTION	GRAPHIC LOG	LITHOLOGY	Penetration Rate (blows/6")	Recovery (%)	Sample Interval (feet)	PID Values (ppm)
			VISUAL DESCRIPTION				
5			Sand, dark brown - black, fine, moist				0.0
			Clay, dark brown, stiff to slightly plastic, moist				75%
10			Sand, gray, fine, saturated to wet				0.4
			Oxidization				90%
15							0.0
							95%
20							

BORING/WELL CONSTRUCTION LOG



Page 1 of 1

Boring/Well No. SB-1		Total Depth 8'		Location Noble Energy Weezer G3-22 SE SW Sec 3, T4N, R65W Weld County, Colorado			
Project No./Name C019-078/Noble Weezer G3-22				Approved By			
Drilling Contractor/Driller DrillPro				Geologist/Office Ethan Black/Fremont Environmental, Inc.			
Drilling Equipment/Method Hurricane		Size/Type of Bit 2.5" direct push		Sampling Method direct push		Start/Finish Date 10/21/19	
Well Installed? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Casing Mtrl./Dia.		Screen: Type		Slot Size	
Elevation of: (ft. above datum)		Ground Surface		Top of Well Casing		Top of Screen	
						Bottom of Screen	
						Ground Water Surface/Date Measured	

DEPTH (feet)	WELL CONSTRUCTION		LITHOLOGY		Penetration Rate (blows/6")	Recovery (%)	Sample Interval (feet)	PID Values (ppm)
			GRAPHIC LOG	VISUAL DESCRIPTION				
5			SP	Sand, gray, fine, moist			0.0	
			CL	Clay, plastic, moist		100%	0.0	
10			SP	Sand, gray, fine, wet			0.0	
						100%	0.0	
15								
20								

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.

<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

October 29, 2019

Paul Henehan

Fremont Environmental

PO Box 1289

Wellington, CO 80549

RE: Noble - Weezer G 3-22

Enclosed are the results of analyses for samples received by Summit Scientific on 10/21/19 15:03. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'Paul Shrewsbury', written in a cursive style.

Paul Shrewsbury For Ben Shrewsbury

Laboratory Manager



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Weezer G 3-22

Project Number: [none]
Project Manager: Paul Henehan

Reported:
10/29/19 07:58

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1 3 Ft	1910250-01	Soil	10/21/19 00:00	10/21/19 15:03
MW-2 3 Ft	1910250-02	Soil	10/21/19 00:00	10/21/19 15:03
MW-3 3 Ft	1910250-03	Soil	10/21/19 00:00	10/21/19 15:03
MW-4 3 Ft	1910250-04	Soil	10/21/19 00:00	10/21/19 15:03
MW-5 3 Ft	1910250-05	Soil	10/21/19 00:00	10/21/19 15:03
SB-1 3 Ft	1910250-06	Soil	10/21/19 00:00	10/21/19 15:03
MW-1	1910250-07	Water	10/21/19 00:00	10/21/19 15:03
MW-2	1910250-08	Water	10/21/19 00:00	10/21/19 15:03
MW-3	1910250-09	Water	10/21/19 00:00	10/21/19 15:03
MW-4	1910250-10	Water	10/21/19 00:00	10/21/19 15:03
MW-5	1910250-11	Water	10/21/19 00:00	10/21/19 15:03

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

1910250.1

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 - Weezer G3-22

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	MW-1 3FT	10/21/19		1			X			X				X	X	X	X								
2	MW-2 3FT																								
3	MW-3 3FT																								
4	MW-4 3FT																								
5	MW-5 3FT																								
6	SB-1 3FT			1																					
7	MW-1			2					X																
8	MW-2																								
9	MW-3																								
10	MW-4																								
Relinquished by: <u>Ethan Black</u>		Date/Time: <u>10/21/19 1503</u>		Received by: <u>[Signature]</u>		Date/Time: <u>10/21/19 1503</u>		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"/>		Sample Integrity:		Temperature Upon Receipt: <u>5.2</u>		Notes:	
Relinquished by:		Date/Time:		Received by:		Date/Time:																			
Relinquished by:		Date/Time:		Received by:		Date/Time:																Samples Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			

Summit Scientific

S₂

1910250.2

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

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: ~~Mt~~ Noble - Weezer G3-22

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-5	10/21/19		2			X		X					X								
2																						
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10																						

Relinquished by: <u>Ethan Black</u>	Date/Time: <u>10/21/19 503</u>	Received by: <u>[Signature]</u>	Date/Time: <u>10/21/19 1503</u>	Turn Around Time (Check) Same Day <input type="checkbox"/> 72 hours 24 hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/> 48 hours <input type="checkbox"/> Sample Integrity: Temperature Upon Receipt: <u>5.2</u> Samples Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Notes:
Relinquished by:	Date/Time:	Received by:	Date/Time:		
Relinquished by:	Date/Time:	Received by:	Date/Time:		

1910250

Sample Receipt Checklist

S2 Work Order _____

Client: FREMONT ENVIRONMENTAL Client Project ID: Noble-Weezer G 3-22

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

Matrix (check all that apply): Air X Soil/Solid X Water Other: _____
(Describe)

Temp (°C)	<u>S.2</u>
-----------	------------

Thermometer ID: 61857155-K

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

RE
Custodian Printed Name or Initials

[Signature]
Signature of Custodian

10/21/19
Date/Time 1516



Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Weezer G 3-22

Project Number: [none]
 Project Manager: Paul Henehan

Reported:
 10/29/19 07:58

MW-1 3 Ft
1910250-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/21/19 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	1910362	10/24/19	10/26/19	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: **10/21/19 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		119 %			23-173	"	"	"	"
Surrogate: Toluene-d8		109 %			20-170	"	"	"	"
Surrogate: 4-Bromofluorobenzene		108 %			21-167	"	"	"	"

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/21/19 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	1910363	10/24/19	10/24/19	EPA 8015M	

Date Sampled: **10/21/19 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl		75.9 %			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 - Weezer G 3-22

Project Number: [none]
 Project Manager: Paul Henehan

Reported:
 10/29/19 07:58

MW-2 3 Ft
1910250-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/21/19 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	1910362	10/24/19	10/26/19	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: **10/21/19 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		128 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		111 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		107 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/21/19 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	1910363	10/24/19	10/24/19	EPA 8015M	

Date Sampled: **10/21/19 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl		79.0 %	30-150		"	"	"	"	

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Weezer G 3-22

Project Number: [none]
 Project Manager: Paul Henehan

Reported:
 10/29/19 07:58

MW-3 3 Ft
1910250-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/21/19 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1910362	10/24/19	10/26/19	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: **10/21/19 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		123 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		110 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		108 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/21/19 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1910363	10/24/19	10/24/19	EPA 8015M	

Date Sampled: **10/21/19 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		80.0 %	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 - Weezer G 3-22

Project Number: [none]
 Project Manager: Paul Henehan

Reported:
 10/29/19 07:58

MW-4 3 Ft
1910250-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/21/19 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1910362	10/24/19	10/26/19	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: **10/21/19 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		123 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		112 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/21/19 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1910363	10/24/19	10/24/19	EPA 8015M	

Date Sampled: **10/21/19 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		78.7 %	30-150		"	"	"	"	

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Weezer G 3-22

Project Number: [none]
 Project Manager: Paul Henehan

Reported:
 10/29/19 07:58

MW-5 3 Ft
1910250-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/21/19 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1910362	10/24/19	10/26/19	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: **10/21/19 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		128 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		112 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		109 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/21/19 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1910363	10/24/19	10/24/19	EPA 8015M	

Date Sampled: **10/21/19 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		75.7 %	30-150		"	"	"	"	

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Weezer G 3-22

Project Number: [none]
 Project Manager: Paul Henehan

Reported:
 10/29/19 07:58

SB-1 3 Ft
1910250-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/21/19 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1910362	10/24/19	10/26/19	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: **10/21/19 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		126 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		110 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/21/19 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1910363	10/24/19	10/24/19	EPA 8015M	

Date Sampled: **10/21/19 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		81.4 %	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 - Weezer G 3-22

Project Number: [none]
 Project Manager: Paul Henehan

Reported:
 10/29/19 07:58

MW-1
1910250-07 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/21/19 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	1910391	10/28/19	10/28/19	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	

Date Sampled: **10/21/19 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		134 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		110 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %		21-167		"	"	"	"	

Summit Scientific

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



Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Weezer G 3-22

Project Number: [none]
 Project Manager: Paul Henehan

Reported:
 10/29/19 07:58

MW-2
1910250-08 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/21/19 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	1910391	10/28/19	10/28/19	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	

Date Sampled: **10/21/19 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		132 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		102 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %		21-167		"	"	"	"	

Summit Scientific

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



Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Weezer G 3-22

Project Number: [none]
 Project Manager: Paul Henehan

Reported:
 10/29/19 07:58

MW-3
1910250-09 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/21/19 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	1910391	10/28/19	10/28/19	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	

Date Sampled: **10/21/19 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		132 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		103 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		106 %		21-167		"	"	"	"	

Summit Scientific

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



Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Weezer G 3-22

Project Number: [none]
 Project Manager: Paul Henehan

Reported:
 10/29/19 07:58

MW-4
1910250-10 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/21/19 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	1910391	10/28/19	10/28/19	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	

Date Sampled: **10/21/19 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		123 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		105 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %		21-167		"	"	"	"	

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Weezer G 3-22

Project Number: [none]
 Project Manager: Paul Henehan

Reported:
 10/29/19 07:58

MW-5
1910250-11 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/21/19 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	1910391	10/28/19	10/28/19	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	

Date Sampled: **10/21/19 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		117 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		113 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.6 %		21-167		"	"	"	"	

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PO Box 1289
Wellington CO, 80549

Project: Noble - Weezer G 3-22

Project Number: [none]
Project Manager: Paul Henehan

Reported:
10/29/19 07:58

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch 1910362 - EPA 5030 Soil MS

Blank (1910362-BLK1)

Prepared: 10/24/19 Analyzed: 10/26/19

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	0.0455		"	0.0400		114	23-173				
Surrogate: Toluene-d8	0.0421		"	0.0400		105	20-170				
Surrogate: 4-Bromofluorobenzene	0.0467		"	0.0400		117	21-167				

LCS (1910362-BS1)

Prepared: 10/24/19 Analyzed: 10/26/19

Benzene	0.0875	0.0020	mg/kg	0.100		87.5	70-130				
Toluene	0.0927	0.0050	"	0.100		92.7	70-130				
Ethylbenzene	0.0980	0.0050	"	0.100		98.0	70-130				
m,p-Xylene	0.191	0.010	"	0.200		95.3	70-130				
o-Xylene	0.0960	0.0050	"	0.100		96.0	70-130				
Surrogate: 1,2-Dichloroethane-d4	0.0507		"	0.0400		127	23-173				
Surrogate: Toluene-d8	0.0432		"	0.0400		108	20-170				
Surrogate: 4-Bromofluorobenzene	0.0489		"	0.0400		122	21-167				

Matrix Spike (1910362-MS1)

Source: 1910250-01

Prepared: 10/24/19 Analyzed: 10/26/19

Benzene	0.0840	0.0020	mg/kg	0.100	ND	84.0	70-130				
Toluene	0.0906	0.0050	"	0.100	ND	90.6	70-130				
Ethylbenzene	0.0962	0.0050	"	0.100	ND	96.2	70-130				
m,p-Xylene	0.191	0.010	"	0.200	0.00402	93.6	70-130				
o-Xylene	0.0953	0.0050	"	0.100	ND	95.3	70-130				
Surrogate: 1,2-Dichloroethane-d4	0.0515		"	0.0400		129	23-173				
Surrogate: Toluene-d8	0.0432		"	0.0400		108	20-170				
Surrogate: 4-Bromofluorobenzene	0.0476		"	0.0400		119	21-167				

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Project: Noble - Weezer G 3-22

Project Number: [none]
Project Manager: Paul Henehan

Reported:
10/29/19 07:58

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

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

Batch 1910362 - EPA 5030 Soil MS

Matrix Spike Dup (1910362-MSD1)

Source: 1910250-01

Prepared: 10/24/19 Analyzed: 10/26/19

Benzene	0.0841	0.0020	mg/kg	0.100	ND	84.1	70-130	0.143	30	
Toluene	0.0898	0.0050	"	0.100	ND	89.8	70-130	0.898	30	
Ethylbenzene	0.0954	0.0050	"	0.100	ND	95.4	70-130	0.877	30	
m,p-Xylene	0.188	0.010	"	0.200	0.00402	91.8	70-130	1.90	30	
o-Xylene	0.0953	0.0050	"	0.100	ND	95.3	70-130	0.0315	30	
Surrogate: 1,2-Dichloroethane-d4	0.0497		"	0.0400		124	23-173			
Surrogate: Toluene-d8	0.0436		"	0.0400		109	20-170			
Surrogate: 4-Bromofluorobenzene	0.0458		"	0.0400		115	21-167			

Batch 1910391 - EPA 5030 Water MS

Blank (1910391-BLK1)

Prepared: 10/25/19 Analyzed: 10/28/19

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	2.0	"							
Surrogate: 1,2-Dichloroethane-d4	13.7		"	13.3		103	23-173			
Surrogate: Toluene-d8	11.4		"	13.3		85.4	20-170			
Surrogate: 4-Bromofluorobenzene	13.2		"	13.3		98.8	21-167			

LCS (1910391-BS1)

Prepared: 10/25/19 Analyzed: 10/28/19

Benzene	39.0	1.0	ug/l	33.3		117	51-132			
Toluene	35.6	1.0	"	33.3		107	51-138			
Ethylbenzene	36.7	1.0	"	33.3		110	58-146			
m,p-Xylene	70.1	2.0	"	66.7		105	57-144			
o-Xylene	35.6	1.0	"	33.3		107	53-146			
Surrogate: 1,2-Dichloroethane-d4	15.6		"	13.3		117	23-173			
Surrogate: Toluene-d8	13.6		"	13.3		102	20-170			
Surrogate: 4-Bromofluorobenzene	13.1		"	13.3		98.2	21-167			

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Project: Noble - Weezer G 3-22

Project Number: [none]
 Project Manager: Paul Henehan

Reported:
 10/29/19 07:58

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

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

Batch 1910391 - EPA 5030 Water MS

Matrix Spike (1910391-MS1)

Source: 1910250-07

Prepared: 10/25/19 Analyzed: 10/28/19

Benzene	29.8	1.0	ug/l	33.3	ND	89.5	34-141			
Toluene	32.5	1.0	"	33.3	ND	97.4	27-151			
Ethylbenzene	35.6	1.0	"	33.3	ND	107	29-160			
m,p-Xylene	68.3	2.0	"	66.7	ND	102	20-166			
o-Xylene	34.6	1.0	"	33.3	ND	104	33-159			
Surrogate: 1,2-Dichloroethane-d4	12.9		"	13.3		96.7	23-173			
Surrogate: Toluene-d8	12.5		"	13.3		93.7	20-170			
Surrogate: 4-Bromofluorobenzene	12.8		"	13.3		96.2	21-167			

Matrix Spike Dup (1910391-MSD1)

Source: 1910250-07

Prepared: 10/25/19 Analyzed: 10/28/19

Benzene	28.8	1.0	ug/l	33.3	ND	86.5	34-141	3.41	30	
Toluene	32.6	1.0	"	33.3	ND	97.8	27-151	0.430	30	
Ethylbenzene	32.7	1.0	"	33.3	ND	98.1	29-160	8.60	30	
m,p-Xylene	62.5	2.0	"	66.7	ND	93.7	20-166	8.93	30	
o-Xylene	32.0	1.0	"	33.3	ND	96.0	33-159	7.89	30	
Surrogate: 1,2-Dichloroethane-d4	13.4		"	13.3		100	23-173			
Surrogate: Toluene-d8	13.5		"	13.3		101	20-170			
Surrogate: 4-Bromofluorobenzene	12.8		"	13.3		95.7	21-167			

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Project: Noble - Weezer G 3-22

Project Number: [none]
 Project Manager: Paul Henehan

Reported:
 10/29/19 07:58

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch 1910363 - EPA 3550A

Blank (1910363-BLK1)

Prepared & Analyzed: 10/24/19

C10-C28 (DRO) ND 50 mg/kg

LCS (1910363-BS1)

Prepared & Analyzed: 10/24/19

C10-C28 (DRO) 492 50 mg/kg 500 98.4 70-130

Matrix Spike (1910363-MS1)

Source: 1910250-01

Prepared & Analyzed: 10/24/19

C10-C28 (DRO) 479 50 mg/kg 500 ND 95.7 70-130

Matrix Spike Dup (1910363-MSD1)

Source: 1910250-01

Prepared & Analyzed: 10/24/19

C10-C28 (DRO) 487 50 mg/kg 500 ND 97.5 70-130 1.84 20

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Fremont Environmental
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Project: Noble - Weezer G 3-22

Project Number: [none]
Project Manager: Paul Henehan

Reported:
10/29/19 07:58

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