

FREMONT ENVIRONMENTAL INC.

November 7, 2021

Mr. Kris Neidel
Colorado Oil and Gas Conservation Commission
1120 Lincoln Street, Suite 801
Denver, CO 80203

Subject: **Ground Water Monitoring Report**
Margaret Spaulding Water Treatment Site
SW ¼ SE ¼ Sec 28, T9N, R81W
Jackson County, Colorado
Fremont Project No. C016-119

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Dear Mr. Neidel:

Enclosed please find a copy of the above referenced Ground Water Monitoring Report for the Margaret Spaulding site in Jackson County, Colorado. The enclosed report describes monitoring and sampling efforts to assess 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. Henahan, P.E.
Senior Consultant

Enclosure

GROUND WATER MONITORING REPORT
COLORADO OIL AND GAS CONSERVATION COMMISSION
MARGARET SPAULDING WATER TREATMENT SITE
JACKSON COUNTY, COLORADO
FREMONT PROJECT NO. C016-119

Prepared by:

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November 7, 2021

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GROUND WATER MONITORING REPORT
COLORADO OIL AND GAS CONSERVATION COMMISSION
MARGARET SPAULDING WATER TREATMENT SITE
JACKSON COUNTY, COLORADO
FREMONT PROJECT NO. C016-119

1.0 INTRODUCTION

The purpose of this document is to present ground water quality data at the out-of-service Margaret Spaulding Water Treatment site in Jackson County, Colorado. Fremont Environmental Inc. (Fremont) was retained by the Colorado Oil and Gas Conservation Commission (COGCC) to collect ground water samples and submit these samples to a third-party laboratory for analyses.

2.0 BACKGROUND INFORMATION

2.1 Site Location

The Margaret Spaulding Water Treatment site is located approximately 11 miles west of Walden, Colorado in Jackson County as shown on Figure 1. The site is located in a rural and agricultural area approximately 1.5 miles southwest of the intersection of County Road 12 and County Road 16. The location is further described as the SW $\frac{1}{4}$ of the SE $\frac{1}{4}$ of Section 28, Township 9N, Range 81W.

2.2 Site History

The site is a former water treatment and disposal facility for the Margaret Spaulding wells. The site facilities include above ground storage tanks, water treatment pits, buried and above ground piping, and various buildings. The two wells on this pad were drilled in 1972 to a depth of approximately 2,400 feet. The facilities have been previously owned and operated by Lone Pine Gas, Inc. and CM Production, LLC.

3.0 GROUND WATER MONITORING ACTIVITIES

3.1 Ground Water Level Measurements

Ground water levels were measured in the seven monitoring wells on October 20, 2021 in accordance with the Sampling Plan included in Appendix A. The data are summarized in Table 1.

Water table contours inferred from the October 2021 data are illustrated on Figure 3. Based on these data, ground water is inferred to flow to the northwest. The water table gradient was calculated at approximately 0.0051 feet per foot (ft/ft) for the October 2021 data.

3.2 Ground Water Sampling and Analysis

Ground water samples were collected from the seven monitoring wells on October 20, 2021 to monitor the magnitude and extent of ground water impacts at the site. The ground water samples were submitted to Summit Scientific Inc. in Golden, Colorado for analyses of benzene, toluene, ethylbenzene and xylenes (BTEX), 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, naphthalene, and total petroleum hydrocarbons–gasoline range organics (TPH-GRO) by EPA Method 8260B. In addition, each sample was analyzed for TPH–diesel range organics (TPH-DRO) by EPA Method 8015, sulfate and chloride by Method 300.0, and total dissolved solids (TDS) by Method SM2540C. The ground water chemistry data is illustrated on Figure 4.

The laboratory data indicate that all of the petroleum hydrocarbon constituents were below their respective COGCC Table 915-1 limits for the wells for the October 2021 sampling event. The ground water analytical data are summarized in Tables 1 and 2. A copy of the laboratory reports, quality control data, and chain-of-custody documentation are presented in Appendix C.

4.0 DISCUSSION

Ground water samples were collected from the seven monitoring wells at the subject property. As described above, all petroleum hydrocarbon constituents were less than their respective COGCC Table 915-1 limits.

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.**



Paul V. Henahan, P.E.

Senior Consultant

11/7/21
Date_____

TABLES

TABLE 1
SUMMARY OF GROUND WATER ELEVATION DATA AND CHEMISTRY DATA
COLORADO OIL AND GAS CONSERVATION COMMISSION
MARGARET SPAULDING WATER TREATMENT SITE - JACKSON COUNTY, COLORADO
FREMONT PROJECT NO. C016-119

SAMPLE LOCATION	DATE	BENZENE (µg/L)	TOLUENE (µg/L)	ETHYL BENZENE (µg/L)	TOTAL XYLENES (µg/L)	1,2,4-Trimethyl-Benzene (µg/L)	1,3,5-Trimethyl-Benzene (µg/L)	Naphthalene (µg/L)	TPH-GRO (mg/L)	TPH-DRO (mg/L)	TOC ELEVATION (feet)	DEPTH TO GROUND WATER (ft)	GROUND WATER ELEVATION (ft)	FREE PRODUCT THICKNESS (ft)
MW-1	07/07/15	2.1	<0.20	8.8	<0.46	NA	NA	NA	339	16	8227.34	20.13	8207.21	NP
	11/18/15	<1.0	<5.0	<1.0	<3.0	NA	NA	NA	<0.5	1.5		23.84	8203.50	NP
	10/17/16	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	<0.5	<5.0		23.63	8203.71	NP
	05/01/17	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	<0.5	<5.0		23.86	8203.48	NP
	10/17/17	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	<0.5	<5.0		23.60	8203.74	NP
	05/24/18	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	<0.5	<5.0		19.79	8207.55	NP
	11/01/18	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	<0.5	<5.0		23.42	8203.92	NP
	05/15/19	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	<0.5	<5.0		23.52	8203.82	NP
	10/08/19	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	<0.5	<5.0		22.67	8204.67	NP
	05/18/20	<1.0	<1.0	<1.0	<2.0	NA	NA	NA	<.5	<5.0		22.94	8204.40	NP
	10/14/20	<1.0	<1.0	<1.0	<2.0	NA	NA	NA	<.5	<5.0		23.25	8204.09	NP
	04/22/21	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<.5	<5.0		24.49	8202.85	NP
	10/20/21	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<.5	<5.0		23.16	8204.18	NP
MW-2	07/07/15	<0.20	<0.20	<0.20	<0.46	NA	NA	NA	<25	1.54	8219.87	11.16	8208.71	NP
	11/18/15	<1.0	<5.0	<1.0	<3.0	NA	NA	NA	<0.5	0.267		15.05	8204.82	NP
	10/17/16	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	<0.5	<5.0		14.85	8205.02	NP
	05/01/17	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	<0.5	<5.0		14.87	8205.00	NP
	10/17/17	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	<0.5	<5.0		14.75	8205.12	NP
	05/24/18	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	<0.5	<5.0		10.14	8209.73	NP
	11/01/18	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	<0.5	<5.0		14.58	8205.29	NP
	05/15/19	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	<0.5	<5.0		14.55	8205.32	NP
	10/08/19	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	<0.5	<5.0		13.88	8205.99	NP
	05/18/20	<1.0	<1.0	<1.0	<2.0	NA	NA	NA	<.5	<5.0		13.50	8206.37	NP
	10/14/20	<1.0	<1.0	<1.0	<2.0	NA	NA	NA	<.5	<5.0		14.14	8205.73	NP
	04/22/21	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<.5	<5.0		15.70	8204.17	NP
	10/20/21	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<.5	<5.0		14.42	8205.45	NP
MW-3	07/07/15	<0.20	<0.20	<0.20	<0.46	NA	NA	NA	<25	<0.17	8229.00	18.60	8210.40	NP
	11/18/15	<1.0	<5.0	<1.0	<3.0	NA	NA	NA	<0.5	<0.10		23.80	8205.20	NP
	10/17/16	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	<0.5	<5.0		23.63	8205.37	NP
	05/01/17	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	<0.5	<5.0		23.60	8205.40	NP
	10/17/17	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	<0.5	<5.0		23.57	8205.43	NP
	05/24/18	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	<0.5	<5.0		17.59	8211.41	NP
	11/01/18	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	<0.5	<5.0		23.27	8205.73	NP
	05/15/19	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	<0.5	<5.0		23.34	8205.66	NP
	10/08/19	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	<0.5	<5.0		22.45	8206.55	NP
	05/18/20	<1.0	<1.0	<1.0	<2.0	NA	NA	NA	<.5	<5.0		21.19	8207.81	NP
	10/14/20	<1.0	<1.0	<1.0	<2.0	NA	NA	NA	<.5	<5.0		23.13	8205.87	NP
	04/22/21	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<.5	<5.0		24.52	8204.48	NP
	10/20/21	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<.5	<5.0		23.14	8205.86	NP
MW-4	07/07/15	<0.20	<0.20	<0.20	<0.46	NA	NA	NA	<25	<0.17	8235.71	26.65	8209.06	NP
	11/18/15	<1.0	<5.0	<1.0	<3.0	NA	NA	NA	<0.5	<0.10		31.52	8204.19	NP
	10/17/16	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	<0.5	<5.0		31.34	8204.37	NP
	05/01/17	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	<0.5	<5.0		31.49	8204.22	NP
	10/17/17	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	<0.5	<5.0		31.40	8204.31	NP

SAMPLE LOCATION	DATE	BENZENE (µg/L)	TOLUENE (µg/L)	ETHYL BENZENE (µg/L)	TOTAL XYLENES (µg/L)	1,2,4-Trimethyl-Benzene (µg/L)	1,3,5-Trimethyl-Benzene (µg/L)	Naphthalene (µg/L)	TPH-GRO (mg/L)	TPH-DRO (mg/L)	TOC ELEVATION (feet)	DEPTH TO GROUND WATER (ft)	GROUND WATER ELEVATION (ft)	FREE PRODUCT THICKNESS (ft)
MW-4	05/24/18	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	<0.5	<5.0		25.90	8209.81	NP
	11/01/18	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	<0.5	<5.0		31.03	8204.68	NP
	05/15/19	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	<0.5	<5.0		31.27	8204.44	NP
	10/08/19	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	<0.5	<5.0		30.08	8205.63	NP
	05/18/20	<1.0	<1.0	<1.0	<2.0	NA	NA	NA	<.5	<5.0		29.32	8206.39	NP
	10/14/20	<1.0	<1.0	<1.0	<2.0	NA	NA	NA	<.5	<5.0		30.86	8204.85	NP
	04/22/21	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<.5	<5.0		32.28	8203.43	NP
	10/20/21	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<.5	<5.0		30.81	8204.90	NP
MW-5	07/07/15	<0.20	<0.20	<0.20	<0.46	NA	NA	NA	<25	0.909	8244.96	36.35	8208.61	NP
	11/18/15	<1.0	<5.0	<1.0	<3.0	NA	NA	NA	<0.5	0.502		41.20	8203.76	NP
	10/17/16	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	<0.5	<5.0		40.97	8203.99	NP
	05/01/17	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	<0.5	<5.0		41.25	8203.71	NP
	10/17/17	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	<0.5	<5.0		41.18	8203.78	NP
	05/24/18	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	<0.5	<5.0		35.90	8209.06	NP
	11/01/18	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	<0.5	<5.0		40.72	8204.24	NP
	05/15/19	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	<0.5	<5.0		41.37	8203.59	NP
	10/08/19	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	<0.5	<5.0		39.75	8205.21	NP
	05/18/20	<1.0	<1.0	<1.0	<2.0	NA	NA	NA	<.5	<5.0		39.64	8205.32	NP
	10/14/20	<1.0	<1.0	<1.0	<2.0	NA	NA	NA	<.5	<5.0		40.52	8204.44	NP
	04/22/21	Insufficient	Insufficient	Insufficient	Insufficient	Insufficient	Insufficient	Insufficient	Insufficient	Insufficient		41.97	8202.99	NP
	10/20/21	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<.5	<5.0		40.43	8204.53	NP
MW-6	07/07/15	<0.20	<0.20	<0.20	<0.46	NA	NA	NA	<25	0.521	8242.23	30.76	8211.47	NP
	11/18/15	<1.0	<5.0	<1.0	<3.0	NA	NA	NA	<0.5	0.146		35.75	8206.48	NP
	10/17/16	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	<0.5	<5.0		35.64	8206.59	NP
	05/01/17	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	<0.5	<5.0		35.30	8206.93	NP
	10/17/17	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	<0.5	<5.0		35.73	8206.50	NP
	05/24/18	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	<0.5	<5.0		28.66	8213.57	NP
	11/01/18	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	<0.5	<5.0		35.16	8207.07	NP
	05/15/19	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	<0.5	<5.0		35.27	8206.96	NP
	10/08/19	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	<0.5	<5.0		34.44	8207.79	NP
	05/18/20	<1.0	<1.0	<1.0	<2.0	NA	NA	NA	<.5	<5.0		31.08	8211.15	NP
	10/14/20	<1.0	<1.0	<1.0	<2.0	NA	NA	NA	<.5	<5.0		35.11	8207.12	NP
	04/22/21	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<.5	<5.0		36.33	8205.90	NP
	10/20/21	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<.5	<5.0		35.18	8207.05	NP
MW-E	05/18/20	<1.0	<1.0	<1.0	<2.0	NA	NA	NA	<.5	<5.0	8212.54	NM	NM	NP
	10/14/20	<1.0	<1.0	<1.0	<2.0	NA	NA	NA	<.5	<5.0		8.62	8203.92	NP
	04/22/21	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<.5	<5.0		10.00	8202.54	NP
	10/20/21	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<.5	<5.0		8.58	8203.96	NP
Table 915-1 Limits		5	560	700	1,400	67	67	140	None	None				

Bold face values exceed the COGCC limits

NP - No Free Product

NS - Not Sampled

BG - Background

NA - Not Analyzed

Insufficient - not enough ground water was available to collect a sample

TABLE 2
SUMMARY OF INORGANIC CHEMISTRY DATA
COLORADO OIL AND GAS CONSERVATION COMMISSION
MARGARET SPAULDING WATER TREATMENT SITE - JACKSON COUNTY, COLORADO
FREMONT PROJECT NO. C016-119

SAMPLE LOCATION	DATE	SULFATE (mg/L)	CHLORIDE (mg/L)	TDS (mg/L)
MW-1	07/07/15	1.2	2.3	316
	11/18/15	<5.0	8.29	351
	10/17/16	6.17	2.45	196
	05/01/17	3.3	<1.0	145
	10/17/17	4.71	1.43	199
	05/24/18	34.2	<1.0	175
	11/01/18	2.7	<1.0	102
	05/15/19	1.41	0.424	65.4
	10/08/19	9.28	1.81	170
	05/18/20	3.12	0.703	94.8
	10/14/20	18.9	2.38	142
	04/22/21	8.52	<0.06	140
	10/20/21	5.38	2.17	149
MW-2	07/07/15	5.6	1	183
	11/18/15	<5.0	6.37	55
	10/17/16	4.56	<1.0	91.3
	05/01/17	3.68	1.13	126
	10/17/17	3.18	0.24	114
	05/24/18	10.7	<1.0	62.1
	11/01/18	2.05	<1.0	81.2
	05/15/19	2.49	0.519	64.8
	10/08/19	8.1	1.17	83.8
	05/18/20	2.94	0.379	85.2
	10/14/20	17.2	1.96	88.5
	04/22/21	6.8	<0.06	116
	10/20/21	3.37	0.537	88.1
MW-3	07/07/15	3.6	0.61	115
	11/18/15	<5.0	7.08	120
	10/17/16	2.89	<1.0	72.2
	05/01/17	6.24	1.95	152
	10/17/17	1.29	0.47	97.5
	05/24/18	6.07	1.07	95.3
	11/01/18	2.4	2.94	7.3
	05/15/19	4.87	0.819	93.5
	10/08/19	5.65	0.323	64.3
	05/18/20	5.00	1.72	99.9
	10/14/20	16.20	2.44	83.1
	04/22/21	14.3	<0.06	170
	10/20/21	2.65	0.423	67.9
MW-4	07/07/15	5	1.20	112
	11/18/15	<5.0	1.27	88
	10/17/16	4.75	<1.0	97.5
	05/01/17	5.7	2.66	155

SAMPLE LOCATION	DATE	SULFATE (mg/L)	CHLORIDE (mg/L)	TDS (mg/L)
MW-4	10/17/17	0.11	4.07	201
	05/24/18	7.52	3.97	118
	11/01/18	2.14	<1.0	81.6
	05/15/19	5.02	1.41	112
	10/08/19	7.74	0.834	78.4
	05/18/20	3.62	1.49	132
	10/14/20	17.2	2.14	94.1
	04/22/21	8.68	0.4	158
	10/20/21	3.6	0.57	86.3
MW-5	07/07/15	11.5	1.40	228
	11/18/15	NS	NS	`
	10/17/16	17.0	1.27	131
	05/01/17	14.1	3.97	204
	10/17/17	16.0	1.16	191
	05/24/18	67	2.76	336
	11/01/18	6.74	<1.0	116
	05/15/19	16.4	5.29	164
	10/08/19	15	1.5	110
	05/18/20	11.0	2.62	173
	10/14/20	21.6	1.9	140
	04/22/21	Insufficient	Insufficient	Insufficient
	10/20/21	4.83	0.361	93.7
MW-6	07/07/15	8.4	4.70	178
	11/18/15	5.74	8.73	136
	10/17/16	6.06	1.74	110
	05/01/17	7.54	2.09	185
	10/17/17	5.18	1.43	157
	05/24/18	53.8	1.69	118
	11/01/18	5.72	2.65	128
	05/15/19	6.14	1.74	98.4
	10/08/19	11.1	4.86	109
	05/18/20	4.45	0.869	104
	10/14/20	17.4	2.6	121
	04/22/21	11.3	<1.20	153
	10/20/21	7.19	2.6	131
MW-E	05/18/20	NA	NA	NA
	10/14/20	16.9	1.84	142
	04/22/21	17.2	<0.06	220
	10/20/21	2.34	0.364	92
Table 915-1 Limits		250 or 1.25x BG	250 or 1.25x BG	<1.25 x BG

Bold face values exceed the COGCC limits

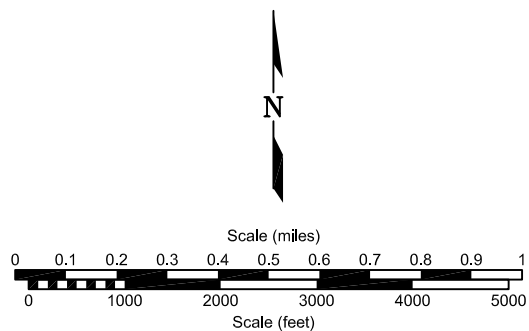
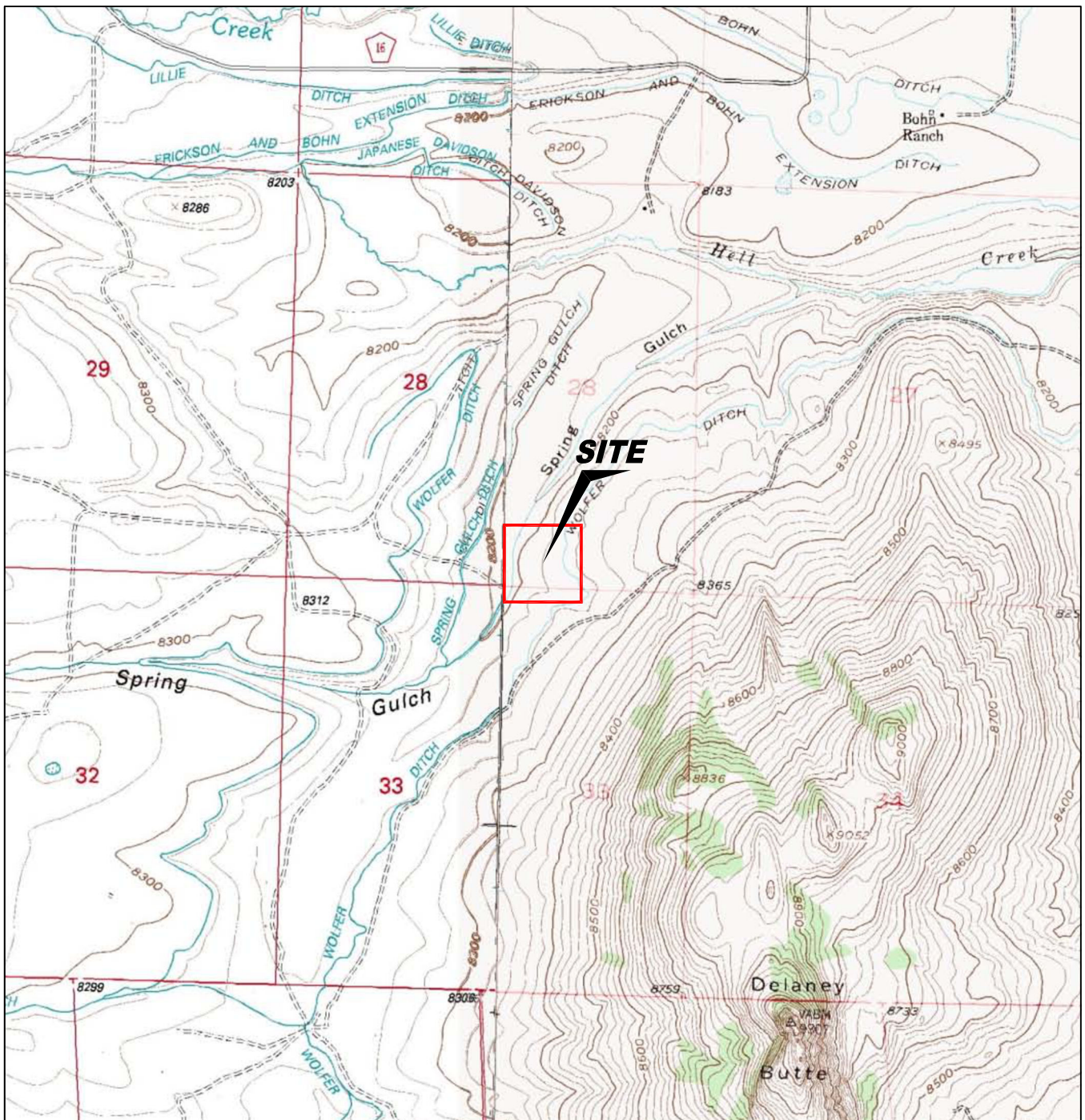
NP - No Free Product

NS - Not Sampled

BG - Background

Insufficient - not enough ground water was available to collect a sample

FIGURES



USGS 7.5 MINUTE SERIES (TOPOGRAPHIC)

Figure 1
SITE LOCATION MAP

Colorado Oil & Gas Conservation Commission
Margaret Spaulding Treatment Site
SW SE Section 28, T9N, R81W
Jackson County, Colorado

Project No.
C016-119

Prepared by

Drawn by
TA

Date
11/5/21

Reviewed by
PH

Filename
16119T





LEGEND

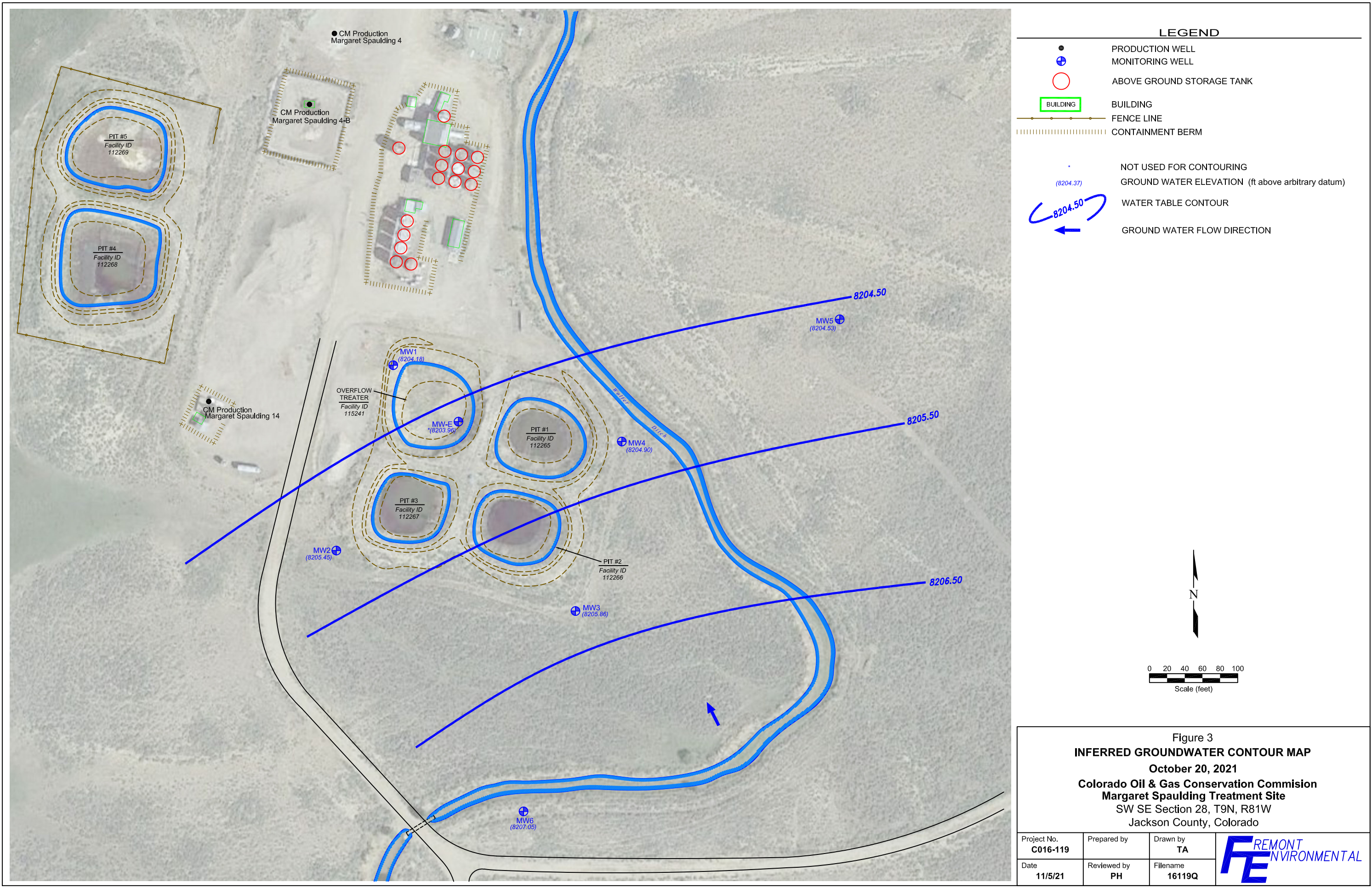
- PRODUCTION WELL
- ⊕ MONITORING WELL
- ABOVE GROUND STORAGE TANK
- BUILDING
- FENCE LINE
- - - CONTAINMENT BERM

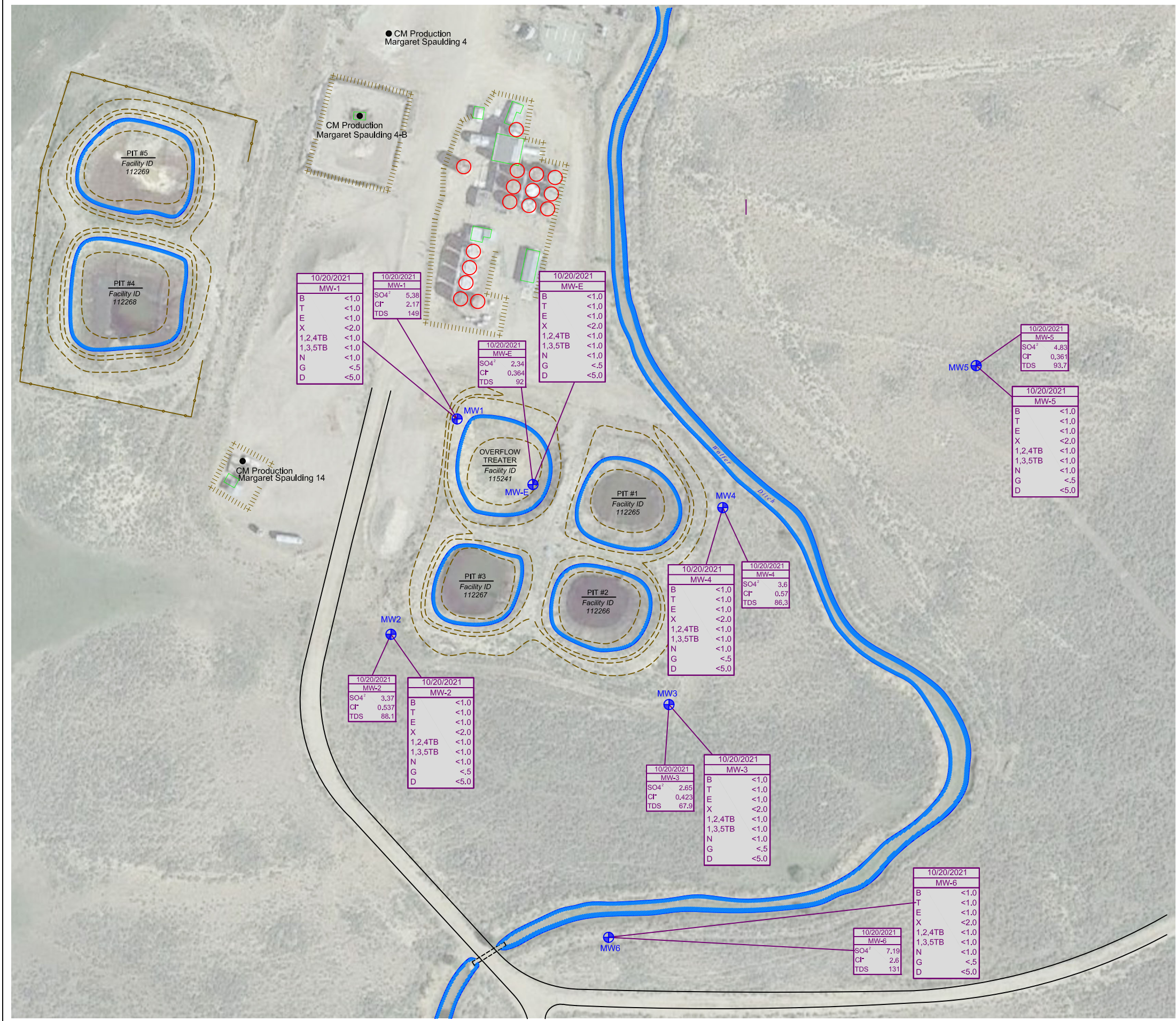
0 20 40 60 80 100
Scale (feet)

Figure 2
SITE MAP

Colorado Oil & Gas Conservation Commision
Margaret Spaulding Treatment Site
SW SE Section 28, T9N, R81W
Jackson County, Colorado

Project No. C016-119	Prepared by TA	Drawn by TA	
Date 11/5/21	Reviewed by PH	Filename 16119Q	





LEGEND

- CM Production Margaret Spaulding 4
- CM Production Margaret Spaulding 4-B
- CM Production Margaret Spaulding 14
- MONITORING WELL
- ABOVE GROUND STORAGE TANK
- BUILDING
- FENCE LINE
- CONTAINMENT BERM

10/20/2021	MW-1
B	<1.0
T	<1.0
E	<1.0
X	<2.0
1,2,4TB	<1.0
1,3,5TB	<1.0
N	<1.0
G	<.5
D	<5.0

10/20/2021	MW-1
SO ₄ ²⁻	5.38
Cl ⁻	2.17
TDS	149

DATE SAMPLED
SAMPLE IDENTIFICATION
BENZENE (ug/L)
TOLUENE (ug/L)
ETHYLBENZENE (ug/L)
TOTAL XYLENES (ug/L)
1,2,4-TRIMETHYLBENZENE (ug/L)
1,3,5-TRIMETHYLBENZENE (ug/L)
NAPHTHALENE (ug/L)
TPH-GRO as gasoline (mg/L)
TPH-DRO as diesel (mg/L)

DATE SAMPLED
SAMPLE ID
SULFATE (mg/L)
CHLORIDE (mg/L)
TOTAL DISSOLVED SOLIDS (mg/L)

Figure 4
GROUNDWATER CHEMISTRY MAP
October 20, 2021
Colorado Oil & Gas Conservation Commision
Margaret Spaulding Treatment Site
SW SE Section 28, T9N, R81W
Jackson County, Colorado

Project No. C016-119	Prepared by TA	Drawn by TA
Date 11/5/21	Reviewed by PH	Filename 16119Q

APPENDIX A

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 or 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 – 8260B

APPENDIX B

HISTORICAL GROUND WATER DATA

Appendix B - Historical Analytical Results
Groundwater Analytical Results
Summary of Volatile Organic Compounds and Total Petroleum Hydrocarbons
CM Production Inc. - Lone Pine Field Pits

Station ID#	Date Sampled	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (mg/L)	GRO (mg/L)	DRO (mg/L)
COGCC 910-1		0.005	0.56	0.7	1.4	N/A	N/A
MW-1	4/17/2012	< 0.002	< 0.002	< 0.002	< 0.004	< 0.05	4.3
	1/8/2013	< 0.001	0.0032	< 0.001	< 0.001	0.057	2.1
	9/19/2013	< 0.001	< 0.002	0.00073 J	< 0.001	NA	26.8
	11/20/2013	< 0.001	< 0.001	< 0.001	< 0.001	NA	6.5
	3/25/2014	< 0.001	< 0.001	< 0.002	< 0.001	NA	2.26
	6/26/2014	0.0029	< 0.001	0.0081	< 0.001	< 0.2	6.6
	9/22/2014	< 0.001	< 0.001	0.0089 J	< 0.001	< 0.2	8.57
	11/19/2014	< 0.001	< 0.001	< 0.001	< 0.002	< 0.050	4.1
MW-2	4/17/2012	< 0.002	< 0.002	< 0.002	< 0.004	< 0.05	1.1
	1/8/2013	< 0.001	0.0029	< 0.001	< 0.001	< 0.040	< 1.0
	9/19/2013	< 0.001	< 0.002	< 0.002	< 0.003	NA	< 0.40
	11/20/2013	< 0.001	< 0.001	< 0.001	< 0.001	NA	2.5
	3/25/2014	NS	NS	NS	NS	NS	NS
	6/26/2014	< 0.001	< 0.002	< 0.002	< 0.003	< 0.2	1.48
	9/22/2014	< 0.001	< 0.001	< 0.001	< 0.001	< 0.2	1.31
	11/19/2014	< 0.001	< 0.001	< 0.001	< 0.002	< 0.050	1.44
MW-3	4/17/2012	< 0.002	< 0.002	< 0.002	< 0.004	< 0.05	3.9
	1/8/2013	< 0.001	< 0.001	< 0.001	< 0.001	< 0.040	< 1.0
	9/19/2013	< 0.001	< 0.002	< 0.002	< 0.003	NA	NA
	11/20/2013	< 0.001	< 0.001	< 0.001	< 0.001	NA	< 1.0
	3/25/2014	< 0.001	< 0.002	< 0.002	< 0.003	NA	0.441
	6/26/2014	< 0.001	< 0.002	< 0.002	< 0.003	< 0.2	0.418
	9/22/2014	< 0.001	< 0.001	< 0.001	< 0.001	< 0.2	0.399
	11/19/2014	< 0.001	< 0.001	< 0.001	< 0.002	< 0.050	0.214
MW-4	4/17/2012	< 0.002	< 0.002	< 0.002	< 0.004	< 0.05	1.2
	1/8/2013	< 0.001	< 0.001	< 0.001	< 0.001	< 0.040	< 1.0
	9/19/2013	< 0.001	< 0.002	< 0.002	< 0.003	NA	NA
	11/20/2013	< 0.001	< 0.001	< 0.001	< 0.001	NA	1.7
	3/25/2014	< 0.001	< 0.002	< 0.002	< 0.003	< 0.2	3.12
	6/26/2014	< 0.001	< 0.002	< 0.002	< 0.003	< 0.2	1.65
	9/22/2014	< 0.001	< 0.001	< 0.001	< 0.001	< 0.2	1.21
	11/19/2014	< 0.001	< 0.001	< 0.001	< 0.002	< 0.05	1.09
MW-5	4/17/2012	NS	NS	NS	NS	NS	NS
	1/8/2013	NS	NS	NS	NS	NS	NS
	2/5/2013	< 0.001	< 0.001	< 0.001	< 0.001	< 0.040	< 1.0
	9/19/2013	< 0.001	< 0.002	< 0.002	< 0.003	NA	NA
	11/20/2013	NS	NS	NS	NS	NS	NS
	3/25/2014	NS	NS	NS	NS	NS	NS
	6/26/2014	NS	NS	NS	NS	NS	NS
	9/22/2014	< 0.001	< 0.001	< 0.001	< 0.001	< 0.2	2.63
	11/19/2014	NS	NS	NS	NS	NS	NS
MW-6	4/17/2012	NS	NS	NS	NS	NS	NS
	1/8/2013	NS	NS	NS	NS	NS	NS
	2/5/2013	< 0.001	< 0.001	< 0.001	< 0.001	< 0.040	< 1.0
	9/19/2013	< 0.001	< 0.002	< 0.002	< 0.003	NA	NA
	11/20/2013	NS	NS	NS	NS	NS	NS
	3/25/2014	NS	NS	NS	NS	NS	NS
	6/26/2014	NS	NS	NS	NS	NS	NS
	9/22/2014	< 0.001	< 0.001	< 0.001	< 0.001	< 0.2	1.57
	11/19/2014	NS	NS	NS	NS	NS	NS

COGCC 910-1 Colorado Oil and Gas Conservation Commission Table 910-1 Concentration Levels

mg/L milligrams per liter

N/A Not Applicable (COGCC has not established a Table 910-1 Concentration Level for GRO or DRO in Groundwater)

< or ND Not Detected NA Not Analyzed NS Not Sampled

Appendix B - Historical Analytical Results
Groundwater Analytical Results
Semi-Volatile Organic Compounds - Polycyclic Aromatic Hydrocarbons
CM Production Inc. - Lone Pine Field Pits

Station ID#	Date Sampled	Acenaphthene (mg/l)	Anthracene (mg/l)	Benzo(a) anthracene (mg/l)	Benzo(b) fluoranthene (mg/l)	Benzo(a) pyrene (mg/l)	Chrysene (mg/l)	Dibenzo(a,h) anthracene (mg/l)	Fluoranthene (mg/l)	Fluorene (mg/l)	Indeno (1,2,3-cd) pyrene (mg/l)	Naphthalene (mg/l)	Pyrene (mg/l)	DRO (mg/l)
COGCC 910-1		NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
CDPHE-WQCC Reg 41		0.42	2.1	0.00048	0.00048	0.00048	0.00048	0.00048	0.28	0.28	0.00048	0.14	0.21	NE
MW-1	9/19/2013	0.0003	< 0.00019	< 0.000095	< 0.000095	< 0.00019	0.00014	< 0.000095	< 0.00019	0.002	< 0.00019	0.00036	< 0.00019	26.8
	11/20/2013	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	6.5
	3/25/2014	< 0.00019	< 0.00019	< 0.000095	< 0.000095	< 0.000095	< 0.000095	< 0.000095	< 0.00019	< 0.00019	< 0.000095	< 0.00019	< 0.00019	2.26
	6/26/2014	< 0.0047	< 0.0047	< 0.0047	< 0.0047	< 0.0047	< 0.0047	< 0.0047	< 0.0047	< 0.0047	< 0.0047	< 0.0047	< 0.0047	6.6
	9/22/2014	0.00038	< 0.00019	< 0.000095	< 0.000095	< 0.000095	0.00017	< 0.000095	< 0.00019	< 0.00019	0.000071	< 0.00019	< 0.00019	8.57
	11/19/2014	< 0.0047	< 0.0047	< 0.0047	< 0.00094	< 0.00094	< 0.00094	< 0.00094	< 0.0047	< 0.0047	< 0.00094	< 0.0047	< 0.0047	4.1
MW-2	9/19/2013	< 0.00038	< 0.00038	< 0.00019	< 0.00019	< 0.00038	< 0.00019	< 0.00019	< 0.00038	< 0.00038	< 0.00039	< 0.00039	< 0.00038	< 0.40
	11/20/2013	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	2.5
	3/25/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/26/2014	< 0.0047	< 0.0047	< 0.0047	< 0.0047	< 0.0047	< 0.0047	< 0.0047	< 0.0047	< 0.0047	< 0.0047	< 0.0047	< 0.0047	1.48
	9/22/2014	< 0.00019	< 0.00019	< 0.000095	< 0.000095	< 0.000095	< 0.000095	< 0.000095	< 0.00019	< 0.00019	< 0.000095	< 0.00019	< 0.00019	1.31
	11/19/2014	< 0.0047	< 0.0047	< 0.000094	< 0.000094	< 0.00094	< 0.00094	< 0.000094	< 0.0047	< 0.0047	< 0.000094	< 0.0047	< 0.0047	1.44
MW-3	9/19/2013	< 0.00019	< 0.00019	< 0.000095	< 0.000095	< 0.00019	< 0.000095	< 0.000095	< 0.00019	< 0.00019	< 0.00019	< 0.00019	< 0.00019	NA
	11/20/2013	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.10	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 1.0
	3/25/2014	< 0.00019	< 0.00019	< 0.000095	< 0.000095	< 0.000095	< 0.000095	< 0.000095	< 0.00019	< 0.00019	< 0.000095	< 0.00019	< 0.00019	0.441
	6/26/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.418
	9/22/2014	< 0.00019	< 0.00019	< 0.000095	< 0.000095	< 0.000095	< 0.000095	< 0.000095	< 0.00019	< 0.00019	< 0.000095	< 0.00019	< 0.00019	0.399
	11/19/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.214
MW-4	9/19/2013	< 0.00019	< 0.00019	< 0.000095	< 0.000095	< 0.00019	< 0.000095	< 0.000095	< 0.00019	< 0.00019	< 0.00019	< 0.00019	< 0.00019	NA
	11/20/2013	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	1.7
	3/25/2014	< 0.00019	< 0.00019	< 0.000095	< 0.000095	< 0.000095	< 0.000095	< 0.000095	< 0.00019	< 0.00019	< 0.000095	< 0.00019	< 0.00019	3.12
	6/26/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.65
	9/22/2014	< 0.00019	< 0.00019	< 0.000095	< 0.000095	< 0.000095	< 0.000095	< 0.000095	< 0.00019	< 0.00019	< 0.000095	< 0.00019	< 0.00019	1.21
	11/19/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
MW-5	9/19/2013	< 0.00019	< 0.00019	< 0.000095	< 0.000095	< 0.00019	< 0.000095	< 0.000095	< 0.00019	< 0.00019	< 0.00019	< 0.00019	< 0.00019	NA
	11/20/2013	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/25/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/26/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/22/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2.63
	11/19/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-6	9/19/2013	< 0.00019	< 0.00019	< 0.000095	< 0.000095	< 0.00019	< 0.000095	< 0.000095	< 0.00019	< 0.00019	< 0.00019	< 0.00019	< 0.00019	NA
	11/20/2013	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	3/25/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/26/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/22/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.57
	11/19/2014	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

OGGCC 910- Colorado Oil and Gas Conservation Commission Table 910-1 Concentration Levels

mg/L milligrams per liter

N/A Not Applicable - Total PAH (polycyclic aromatic hydrocarbons)

NE None Established - the COGCC has Table 910-1 Concentration Levels for PAHs in soil, but has not established PAH concentrations in Groundwater

< Not Detected above the laboratory reporting limit

NS Not Sampled

Note: Upgradient wells MW-5 and MW-6 were not sampled.

Appendix B - Historical Analytical Results
Summary of Inorganic Compounds in Groundwater
CM Production Inc. - Lone Pine Field Pits
Groundwater Monitoring

Station ID#	Date Measured	Chloride (mg/L)	Iron (mg/L)	TDS (mg/L)	Sulfate (mg/L)
COGCC T 910-1		< 1.25 x background	NE	< 1.25 x background	< 1.25 x background
MW-1	4/17/2012	9.41		360	3.43
	9/19/2013	NS		NS	NS
	11/20/2013	NS		NS	NS
	3/25/2014	NS		NS	NS
	6/26/2014	4.6		452	2.5
	9/23/2014	2.7	30.1	470	2.6
	11/19/2014	3.9	42.1	384	4.5
MW-2	4/17/2012	1.71		120	4.48
	9/19/2013	NS		NS	NS
	11/20/2013	NS		NS	NS
	3/25/2014	NS		NS	NS
	6/26/2014	1.3		156	6.0
	9/22/2014	1.0	29.2	230	4.0
	11/19/2014	0.8	66.8	156	3.2
MW-3	4/17/2012	6.8		160	10.04
	9/19/2013	NS		NS	NS
	11/20/2013	NS		NS	NS
	3/25/2014	NS		NS	NS
	6/26/2014	0.93		133	4.9
	9/23/2014	0.51	49.1	130	2.3
	11/19/2014	1.3	71.5	100	2.6
MW-4	4/17/2012	6.34		160	4.47
	9/19/2013	NS		NS	NS
	11/20/2013	NS		NS	NS
	3/25/2014	NS		NS	NS
	6/26/2014	2.3		134	4.7
	9/22/2014	0.84	64.7	144	4.2
	11/19/2014	0.71	44.4	90.0	3.2
MW-5	4/17/2012	NS		NS	NS
	9/19/2013	NS		NS	NS
	11/20/2013	NS		NS	NS
	3/25/2014	NS		NS	NS
	6/26/2014	NS		NS	NS
	9/22/2014	1.0	27.7	150	8.8
	11/19/2014	NS	NS	NS	NS
MW-6	4/17/2012	NS		NS	NS
	9/19/2013	NS		NS	NS
	11/20/2013	NS		NS	NS
	3/25/2014	NS		NS	NS
	6/26/2014	NS		NS	NS
	9/22/2014	2.1	74.8	168	6.8
	11/19/2014	NS	NS	NS	NS

mg/L milligrams per liter

ND Not Detected

NS Not Sampled

APPENDIX C

LABORATORY DOCUMENTATION

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

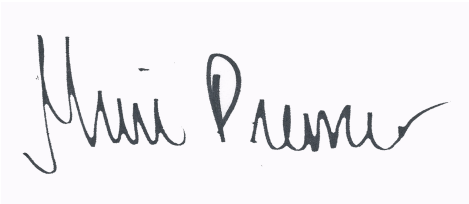
303.277.9310

November 02, 2021

Paul Henchan
Fremont Environmental
PO Box 1289
Wellington, CO 80549
RE: Spaulding Water Treatment
Work Order #2110374

Enclosed are the results of analyses for samples received by Summit Scientific on 10/21/21 11:07. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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

Muri Premier For Paul Shrewsbury
President



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Spaulding Water Treatment

Project Number: CO16-119
Project Manager: Paul Henchan

Reported:
11/02/21 11:04

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	2110374-01	Water	10/20/21 00:00	10/21/21 11:07
MW-2	2110374-02	Water	10/20/21 00:00	10/21/21 11:07
MW-3	2110374-03	Water	10/20/21 00:00	10/21/21 11:07
MW-4	2110374-04	Water	10/20/21 00:00	10/21/21 11:07
MW-5	2110374-05	Water	10/20/21 00:00	10/21/21 11:07
MW-6	2110374-06	Water	10/20/21 00:00	10/21/21 11:07
MW-E (7)	2110374-07	Water	10/20/21 00:00	10/21/21 11:07

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

2110374

4653 Table Mountain Drive ♦ Golden, Colorado 80403
303-277-9310

Page 1 of 1

Client: Fremont Environmental Inc.

Project Manager: Paul Henehan

Address:

E-Mail:

City/State/Zip:

BILL TO PAUL

Phone:

Project Name: SPAULDING WATER TREATMENT

Sampler Name:

Project Number: C016-119

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested										Special Instructions	
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	GBTEXN+TMBs	DRO,RRO	PAHs	pH, EC, SAR	Boron	915-1 metals	Arsenic	BTEXN + TMBs	TDS, Cl, Su	GRO/DRO		
1	MW-1	10/20/21		5			✓		✓											✓	✓			
2	MW-2																							
3	MW-3																							
4	MW-4																							
5	MW-5																							
6	MW-6																							
7	MW-E (7)																							
8																								
9																								
10																								

Relinquished by:	Date/Time:	Received by:	Date/Time:	Turn Around Time (Check) Same Day _____ 72 hours _____ 24 hours _____ Standard <u>✓</u> 48 hours _____ Sample Integrity: Temperature Upon Receipt: <u>6.1</u> Samples Intact: <u>Yes</u> No _____	Notes:
Relinquished by:	Date/Time:	Received by:	Date/Time:		
Relinquished by:	Date/Time:	Received by:	Date/Time:		

S₂

2110374

Sample Receipt Checklist

S2 Work Order# _____

Client: Fremont Environmental Client Project ID: Spaulding water treatment

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

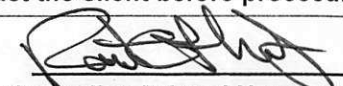
Matrix (check all that apply): ☐ Air ☐ Soil/Solid ☒ Water ☐ Other: _____
(Describe)

Temp (°C)	<u>6.1</u>
-----------	------------

Thermometer ID: G86A9201901378

	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 if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	on ICE
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples with holding times due within 48 hours sample due within 48 hours present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ? Note the type of preservative in the Comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ? Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Additional Comments (if any):

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

 Custodian Printed Name or Initials

10.21.21
 Date/Time



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Spaulding Water Treatment
Project Number: CO16-119
Project Manager: Paul Henchan

Reported:
11/02/21 11:04

MW-1
2110374-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/20/21 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	BEJ0522	10/26/21	10/27/21	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	500	"	"	"	"	"	"	

Date Sampled: **10/20/21 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		46.5 %	23-173		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		46.5 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		105 %	20-170		"	"	"	"	
Surrogate: Toluene-d8		105 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		86.6 %	21-167		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		86.6 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/20/21 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	5.0	mg/L	1	BEJ0529	10/26/21	10/27/21	EPA 8015M	

Date Sampled: **10/20/21 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		146 %	58.9-148		"	"	"	"	

Anions by EPA Method 300.0

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: Spaulding Water Treatment
Project Number: CO16-119
Project Manager: Paul Henchan

Reported:
11/02/21 11:04

MW-1
2110374-01 (Water)

Summit Scientific

Anions by EPA Method 300.0

Date Sampled: **10/20/21 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chloride	2.17	0.0600	mg/L	1	BEJ0618	10/29/21	11/01/21	EPA 300.0	
Sulfate	5.38	0.300	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **10/20/21 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Total Dissolved Solids	149	10.0	mg/L	1	BEJ0575	10/27/21	10/28/21	SM2540C	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Spaulding Water Treatment

Project Number: CO16-119
Project Manager: Paul Henchan

Reported:
11/02/21 11:04

MW-2
2110374-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/20/21 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	BEJ0522	10/26/21	10/27/21	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	500	"	"	"	"	"	"	

Date Sampled: **10/20/21 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		46.4 %	23-173		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		46.4 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		107 %	20-170		"	"	"	"	
Surrogate: Toluene-d8		107 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		86.9 %	21-167		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		86.9 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/20/21 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	5.0	mg/L	1	BEJ0529	10/26/21	10/27/21	EPA 8015M	

Date Sampled: **10/20/21 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		131 %	58.9-148		"	"	"	"	

Anions by EPA Method 300.0

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Spaulding Water Treatment
Project Number: CO16-119
Project Manager: Paul Henchan

Reported:
11/02/21 11:04

MW-2
2110374-02 (Water)

Summit Scientific

Anions by EPA Method 300.0

Date Sampled: **10/20/21 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chloride	0.537	0.0600	mg/L	1	BEJ0618	10/29/21	11/01/21	EPA 300.0	
Sulfate	3.37	0.300	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **10/20/21 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Total Dissolved Solids	88.1	10.0	mg/L	1	BEJ0575	10/27/21	10/28/21	SM2540C	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Spaulding Water Treatment

Project Number: CO16-119
Project Manager: Paul Henchan

Reported:
11/02/21 11:04

MW-3
2110374-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/20/21 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BEJ0522	10/26/21	10/27/21	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	500	"	"	"	"	"	"	

Date Sampled: **10/20/21 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		46.1 %	23-173		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		46.1 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		105 %	20-170		"	"	"	"	
Surrogate: Toluene-d8		105 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		84.8 %	21-167		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		84.8 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/20/21 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	5.0	mg/L	1	BEJ0529	10/26/21	10/27/21	EPA 8015M	

Date Sampled: **10/20/21 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		121 %	58.9-148		"	"	"	"	

Anions by EPA Method 300.0

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Spaulding Water Treatment
Project Number: CO16-119
Project Manager: Paul Henchan

Reported:
11/02/21 11:04

MW-3
2110374-03 (Water)

Summit Scientific

Anions by EPA Method 300.0

Date Sampled: **10/20/21 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chloride	0.423	0.0600	mg/L	1	BEJ0618	10/29/21	11/01/21	EPA 300.0	
Sulfate	2.65	0.300	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **10/20/21 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Total Dissolved Solids	67.9	10.0	mg/L	1	BEJ0575	10/27/21	10/28/21	SM2540C	

Summit Scientific

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



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Spaulding Water Treatment

Project Number: CO16-119
Project Manager: Paul Henchan

Reported:
11/02/21 11:04

MW-4
2110374-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/20/21 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BEJ0522	10/26/21	10/27/21	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	500	"	"	"	"	"	"	

Date Sampled: **10/20/21 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		44.8 %	23-173		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		44.8 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		108 %	20-170		"	"	"	"	
Surrogate: Toluene-d8		108 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		87.5 %	21-167		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		87.5 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/20/21 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	5.0	mg/L	1	BEJ0529	10/26/21	10/27/21	EPA 8015M	

Date Sampled: **10/20/21 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		130 %	58.9-148		"	"	"	"	

Anions by EPA Method 300.0

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Spaulding Water Treatment
Project Number: CO16-119
Project Manager: Paul Henchan

Reported:
11/02/21 11:04

MW-4
2110374-04 (Water)

Summit Scientific

Anions by EPA Method 300.0

Date Sampled: **10/20/21 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chloride	0.570	0.0600	mg/L	1	BEJ0618	10/29/21	11/01/21	EPA 300.0	
Sulfate	3.60	0.300	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **10/20/21 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Total Dissolved Solids	86.3	10.0	mg/L	1	BEJ0575	10/27/21	10/28/21	SM2540C	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Spaulding Water Treatment

Project Number: CO16-119
Project Manager: Paul Henchan

Reported:
11/02/21 11:04

MW-5
2110374-05 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/20/21 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BEJ0522	10/26/21	10/27/21	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	500	"	"	"	"	"	"	

Date Sampled: **10/20/21 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		44.9 %	23-173		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		44.9 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		105 %	20-170		"	"	"	"	
Surrogate: Toluene-d8		105 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		89.0 %	21-167		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		89.0 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/20/21 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	5.0	mg/L	1	BEJ0529	10/26/21	10/27/21	EPA 8015M	

Date Sampled: **10/20/21 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		129 %	58.9-148		"	"	"	"	

Anions by EPA Method 300.0

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Spaulding Water Treatment
Project Number: CO16-119
Project Manager: Paul Henchan

Reported:
11/02/21 11:04

MW-5
2110374-05 (Water)

Summit Scientific

Anions by EPA Method 300.0

Date Sampled: **10/20/21 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chloride	0.361	0.0600	mg/L	1	BEJ0618	10/29/21	11/01/21	EPA 300.0	
Sulfate	4.83	0.300	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **10/20/21 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Total Dissolved Solids	93.7	10.0	mg/L	1	BEJ0575	10/27/21	10/28/21	SM2540C	

Summit Scientific

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



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Spaulding Water Treatment

Project Number: CO16-119
Project Manager: Paul Henchan

Reported:
11/02/21 11:04

MW-6
2110374-06 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/20/21 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BEJ0522	10/26/21	10/28/21	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	500	"	"	"	"	"	"	

Date Sampled: **10/20/21 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		47.6 %	23-173		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		47.6 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		106 %	20-170		"	"	"	"	
Surrogate: Toluene-d8		106 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		87.8 %	21-167		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		87.8 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/20/21 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	5.0	mg/L	1	BEJ0529	10/26/21	10/27/21	EPA 8015M	

Date Sampled: **10/20/21 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		142 %	58.9-148		"	"	"	"	

Anions by EPA Method 300.0

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Spaulding Water Treatment
Project Number: CO16-119
Project Manager: Paul Henchan

Reported:
11/02/21 11:04

MW-6
2110374-06 (Water)

Summit Scientific

Anions by EPA Method 300.0

Date Sampled: **10/20/21 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chloride	2.60	0.0600	mg/L	1	BEJ0618	10/29/21	11/01/21	EPA 300.0	
Sulfate	7.19	0.300	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **10/20/21 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Total Dissolved Solids	131	10.0	mg/L	1	BEJ0575	10/27/21	10/28/21	SM2540C	

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Project: Spaulding Water Treatment

Project Number: CO16-119
Project Manager: Paul Henchan

Reported:
11/02/21 11:04

MW-E (7)
2110374-07 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/20/21 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BEJ0522	10/26/21	10/28/21	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	500	"	"	"	"	"	"	

Date Sampled: **10/20/21 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		45.8 %	23-173		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		45.8 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		107 %	20-170		"	"	"	"	
Surrogate: Toluene-d8		107 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		90.5 %	21-167		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		90.5 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/20/21 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	5.0	mg/L	1	BEJ0529	10/26/21	10/27/21	EPA 8015M	

Date Sampled: **10/20/21 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		132 %	58.9-148		"	"	"	"	

Anions by EPA Method 300.0

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Project: Spaulding Water Treatment
Project Number: CO16-119
Project Manager: Paul Henchan

Reported:
11/02/21 11:04

MW-E (7)
2110374-07 (Water)

Summit Scientific

Anions by EPA Method 300.0

Date Sampled: **10/20/21 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chloride	0.364	0.0600	mg/L	1	BEJ0618	10/29/21	11/01/21	EPA 300.0	
Sulfate	2.34	0.300	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **10/20/21 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Total Dissolved Solids	92.0	10.0	mg/L	1	BEJ0575	10/27/21	10/28/21	SM2540C	

Summit Scientific

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Project: Spaulding Water Treatment

Project Number: CO16-119
Project Manager: Paul Henchan

Reported:
11/02/21 11:04

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BEJ0522 - EPA 5030 Water MS

Blank (BEJ0522-BLK1)

Prepared: 10/26/21 Analyzed: 10/27/21

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	2.0	"							
Naphthalene	ND	1.0	"							
1,2,4-Trimethylbenzene	ND	1.0	"							
1,3,5-Trimethylbenzene	ND	1.0	"							
Gasoline Range Hydrocarbons	ND	500	"							
Surrogate: 1,2-Dichloroethane-d4	10.3		"	13.3		77.0	23-173			
Surrogate: 1,2-Dichloroethane-d4	10.3		"	13.3		77.0	23-173			
Surrogate: Toluene-d8	13.2		"	13.3		98.9	20-170			
Surrogate: Toluene-d8	13.2		"	13.3		98.9	20-170			
Surrogate: 4-Bromofluorobenzene	11.7		"	13.3		87.7	21-167			
Surrogate: 4-Bromofluorobenzene	11.7		"	13.3		87.7	21-167			

LCS (BEJ0522-BS1)

Prepared: 10/26/21 Analyzed: 10/27/21

Benzene	21.4	1.0	ug/l	25.0		85.7	51-132			
Toluene	21.0	1.0	"	25.0		83.8	51-138			
Ethylbenzene	25.5	1.0	"	25.0		102	58-146			
m,p-Xylene	48.8	2.0	"	50.0		97.5	57-144			
o-Xylene	20.6	1.0	"	25.0		82.2	53-146			
Naphthalene	21.9	1.0	"	25.0		87.6	70-130			
1,2,4-Trimethylbenzene	17.9	1.0	"	25.0		71.6	70-130			
1,3,5-Trimethylbenzene	20.0	1.0	"	25.0		79.9	70-130			
Surrogate: 1,2-Dichloroethane-d4	9.41		"	13.3		70.6	23-173			
Surrogate: 1,2-Dichloroethane-d4	9.41		"	13.3		70.6	23-173			
Surrogate: Toluene-d8	13.3		"	13.3		100	20-170			
Surrogate: Toluene-d8	13.3		"	13.3		100	20-170			
Surrogate: 4-Bromofluorobenzene	11.4		"	13.3		85.6	21-167			
Surrogate: 4-Bromofluorobenzene	11.4		"	13.3		85.6	21-167			

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PO Box 1289
Wellington CO, 80549

Project: Spaulding Water Treatment

Project Number: CO16-119
Project Manager: Paul Henchan

Reported:
11/02/21 11:04

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BEJ0522 - EPA 5030 Water MS

Matrix Spike (BEJ0522-MS1)

Source: 2110373-01

Prepared: 10/26/21 Analyzed: 10/27/21

Benzene	20.1	1.0	ug/l	25.0	ND	80.3	34-141		
Toluene	20.7	1.0	"	25.0	ND	82.8	27-151		
Ethylbenzene	27.3	1.0	"	25.0	ND	109	29-160		
m,p-Xylene	50.8	2.0	"	50.0	ND	102	20-166		
o-Xylene	21.7	1.0	"	25.0	ND	86.6	33-159		
Naphthalene	22.8	1.0	"	25.0	ND	91.2	70-130		
1,2,4-Trimethylbenzene	20.0	1.0	"	25.0	ND	79.8	70-130		
1,3,5-Trimethylbenzene	22.2	1.0	"	25.0	ND	88.9	70-130		
Surrogate: 1,2-Dichloroethane-d4	6.07		"	13.3		45.5	23-173		
Surrogate: 1,2-Dichloroethane-d4	6.07		"	13.3		45.5	23-173		
Surrogate: Toluene-d8	13.0		"	13.3		97.4	20-170		
Surrogate: Toluene-d8	13.0		"	13.3		97.4	20-170		
Surrogate: 4-Bromofluorobenzene	11.1		"	13.3		83.4	21-167		
Surrogate: 4-Bromofluorobenzene	11.1		"	13.3		83.4	21-167		

Matrix Spike Dup (BEJ0522-MSD1)

Source: 2110373-01

Prepared: 10/26/21 Analyzed: 10/27/21

Benzene	22.3	1.0	ug/l	25.0	ND	89.2	34-141	10.4	30
Toluene	22.3	1.0	"	25.0	ND	89.1	27-151	7.40	30
Ethylbenzene	26.6	1.0	"	25.0	ND	106	29-160	2.67	30
m,p-Xylene	50.2	2.0	"	50.0	ND	100	20-166	1.29	30
o-Xylene	21.7	1.0	"	25.0	ND	87.0	33-159	0.369	30
Naphthalene	21.4	1.0	"	25.0	ND	85.6	70-130	6.29	30
1,2,4-Trimethylbenzene	19.2	1.0	"	25.0	ND	76.9	70-130	3.73	30
1,3,5-Trimethylbenzene	21.7	1.0	"	25.0	ND	86.8	70-130	2.37	30
Surrogate: 1,2-Dichloroethane-d4	8.62		"	13.3		64.7	23-173		
Surrogate: 1,2-Dichloroethane-d4	8.62		"	13.3		64.7	23-173		
Surrogate: Toluene-d8	13.8		"	13.3		103	20-170		
Surrogate: Toluene-d8	13.8		"	13.3		103	20-170		
Surrogate: 4-Bromofluorobenzene	11.3		"	13.3		84.5	21-167		
Surrogate: 4-Bromofluorobenzene	11.3		"	13.3		84.5	21-167		

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Project Number: CO16-119
Project Manager: Paul Henchan

Reported:
11/02/21 11:04

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BEJ0529 - EPA 3520B

Blank (BEJ0529-BLK1)

Prepared: 10/26/21 Analyzed: 10/27/21

C10-C28 (DRO) ND 5.0 mg/L

LCS (BEJ0529-BS1)

Prepared: 10/26/21 Analyzed: 10/27/21

C10-C28 (DRO) 57.2 5.0 mg/L 50.0 114 70-130

LCS Dup (BEJ0529-BSD1)

Prepared: 10/26/21 Analyzed: 10/27/21

C10-C28 (DRO) 50.4 5.0 mg/L 50.0 101 70-130 12.5 20

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Reported:
11/02/21 11:04

Anions by EPA Method 300.0 - Quality Control

Summit Scientific

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

Batch BEJ0618 - General Preparation

Blank (BEJ0618-BLK1)

Prepared & Analyzed: 10/29/21

Chloride	ND	0.0600	mg/L
Sulfate	ND	0.300	"

LCS (BEJ0618-BS1)

Prepared & Analyzed: 10/29/21

Chloride	3.17	0.0600	mg/L	3.00	106	90-110
Sulfate	15.7	0.300	"	15.0	105	90-110

Duplicate (BEJ0618-DUP1)

Source: 2110487-01

Prepared & Analyzed: 10/29/21

Chloride	ND	0.0600	mg/L	956	200	20	QM-02
Sulfate	104	0.300	"	125	18.2	20	

Matrix Spike (BEJ0618-MS1)

Source: 2110487-01

Prepared & Analyzed: 10/29/21

Chloride	ND	0.0600	mg/L	3.00	956	NR	80-120	QM-02
Sulfate	110	0.300	"	15.0	125	NR	80-120	QM-02

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Project Manager: Paul Henchan

Reported:
11/02/21 11:04

Total Dissolved Solids by SM2540C - Quality Control
Summit Scientific

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

Batch BEJ0575 - General Preparation

Blank (BEJ0575-BLK1)

Prepared & Analyzed: 10/28/21

Total Dissolved Solids ND 10.0 mg/L

Duplicate (BEJ0575-DUP1)

Source: 2110374-01

Prepared & Analyzed: 10/28/21

Total Dissolved Solids 149 10.0 mg/L 149 0.403 20

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Project: Spaulding Water Treatment

Project Number: CO16-119
Project Manager: Paul Henchan

Reported:
11/02/21 11:04

Notes and Definitions

QM-02	The RPD and/or percent recovery for this QC sample cannot be accurately calculated due to the high concentration of analyte inherent in the sample.
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