

## **FREMONT ENVIRONMENTAL INC.**

June 8, 2016

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

Subject:     **Soil Sampling Report**  
              Former EE3/Sandridge LLC Locations  
              Jackson County, Colorado  
              Fremont Project No. C016-048

Dear Mr. Neidel:

Enclosed please find a copy of the above referenced Soil Sampling Report for the former EE3 production facilities in Jackson County, Colorado. The enclosed report describes site investigation and sampling efforts to assess soil 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.**

A handwritten signature in blue ink, appearing to read "Paul V. Henahan".

Paul V. Henahan, P.E.  
Senior Consultant

Enclosure

**SOIL SAMPLING REPORT**  
**COLORADO OIL AND GAS CONSERVATION COMMISSION**  
**FORMER EE3/SANDRIDGE LLC LOCATIONS**  
**JACKSON COUNTY, COLORADO**  
**FREMONT PROJECT NO. C016-048**

**Prepared by:**

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**June 8, 2016**

## **TABLE OF CONTENTS**

1.0 INTRODUCTION .....	1
2.0 SITE SAMPLING INFORMATION.....	1
2.1 Damfino 2-06H.....	2
2.2 Spicer 3-32H .....	3
2.3 Mutual 4-30H .....	4
2.4 Hebron 02-07H.....	5
2.5 Hebron 3-12H.....	5
2.6 Peterson Ridge 1-20H .....	6
2.7 Coalmont 3-13H.....	7
3.0 DISCUSSION .....	8
4.0 REMARKS.....	9

### **Tables**

Table 1:	Summary of Soil Chemistry (BTEX, GRO, DRO)
Table 2:	Summary of Soil Chemistry (PAHs)
Table 3:	Summary of Soil Chemistry (Inorganics)
Table 4:	GPS Data for Soil Borings

### **Figures**

Figure 1:	Site Locations Map
Figure 2a:	Site Location Map – Damfino 2-06H
Figure 2b:	Site Map – Damfino 2-06H
Figure 2c:	Soil Chemistry and PID Readings – Damfino 2-06H
Figure 3a:	Site Location Map – Spicer 3-32H
Figure 3b:	Site Map – Spicer 3-32H
Figure 3c:	Soil Chemistry and PID Readings – Spicer 3-32H
Figure 4a:	Site Location Map – Mutual 4-30H

Figure 4b: Site Map – Mutual 4-30H  
Figure 4c: Soil Chemistry and PID Readings – Mutual 4-30H  
Figure 5a: Site Location Map – Hebron 02-07H  
Figure 5b: Site Map – Hebron 02-07H  
Figure 5c: Soil Chemistry and PID Readings – Hebron 02-07H  
Figure 6a: Site Location Map – Hebron 3-12H  
Figure 6b: Site Map – Hebron 3-12H  
Figure 6c: Soil Chemistry and PID Readings – Hebron 3-12H  
Figure 7a: Site Location Map – Peterson Ridge 1-20H  
Figure 7b: Site Map – Peterson Ridge 1-20H  
Figure 7c: Soil Chemistry and PID Readings – Peterson Ridge 1-20H  
Figure 8a: Site Location Map – Coalmont 3-13H  
Figure 8b: Site Map – Coalmont 3-13H  
Figure 8c: Soil Chemistry and PID Readings – Coalmont 3-13H

### **Appendices**

Appendix A: Laboratory Documentation



**SOIL SAMPLING REPORT**  
**COLORADO OIL AND GAS CONSERVATION COMMISSION**  
**FORMER EE3/SANDRIDGE LLC LOCATIONS**  
**JACKSON COUNTY, COLORADO**  
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**1.0 INTRODUCTION**

The purpose of this document is to present soil sampling data collected during limited site investigations at the former EE3/Sandridge LLC locations in Jackson, County, Colorado. The Colorado Oil and Gas Conservation Commission (COGCC) suspected that formation drill cuttings that were contaminated with petroleum constituents had been incorporated into the backfill material at seven production locations. Fremont Environmental Inc. (Fremont) was retained by the COGCC to collect soil samples at these locations to determine if soil impacts exceeding the COGCC's Table 910-1 limits were present. Soil sampling at the locations was conducted by Fremont personnel on May 5 and 6, 2016.

**2.0 SITE SAMPLING INFORMATION**

The seven sites sampled during this investigation include the following:

1. Damfino 2-06H
2. Spicer 3-32H
3. Mutual 4-30H
4. Hebron 02-07H
5. Hebron 3-12H
6. Peterson Ridge 1-20H
7. Coalmont 3-13H

## **2.1 Damfino 2-06H**

The Damfino 2-06H site is located in a rural setting approximately 17 miles southwest of Walden, Colorado in Jackson County as shown on Figure 1. The location is further described as the SW  $\frac{1}{4}$  of the SE  $\frac{1}{4}$  of Section 6, Township 6N, Range 80W. The site consists of the production facilities for the Damfino 2-06H oil well which was drilled in 2013 to a depth of approximately 7,122 feet.

Six hand-augered borings were advanced across the facility at locations based on the apparent locations of the former pits and areas where cuttings were placed. The deepest boring was extended to a depth of seven feet. A photoionization detector (PID) was used to field screen the soil samples from the borings. The PID readings, which are shown on Figure 2c, indicated very low concentrations of organic vapors were present in the soil samples.

One soil sample (Damfino D-3) was submitted to Summit Scientific, Inc. in Golden, Colorado for the analyses of benzene, toluene, ethylbenzene and xylenes (BTEX), total petroleum hydrocarbons-gasoline range organics (TPH-GRO), TPH-diesel range organics (TPH-DRO), polycyclic aromatic hydrocarbons (PAHs), arsenic, sodium absorption ratio (SAR), electrical conductivity (EC) and pH. This analytical suite was used for the analyses of all soil sampling in this project.

The laboratory data indicate that the sample concentrations were less than the COGCC Table 910-1 limits for all constituents except for arsenic. The arsenic concentration in this soil sample was 1.31 mg/kg which exceeds the limit of 0.39 mg/kg. The laboratory data are summarized in Tables 1, 2 and 3. The GPS locations of all samples are provided in Table 4. The sample location and laboratory data are illustrated on Figures 2a, 2b and 2c.

## **2.2 Spicer 3-32H**

The Spicer 3-32H site is located in a rural setting approximately 16 miles southwest of Walden, Colorado in Jackson County as shown on Figure 1. The location is further described as the SW  $\frac{1}{4}$  of the SW  $\frac{1}{4}$  of Section 32, Township 7N, Range 80W. The site consists of the production facilities for the Spicer 3-32H oil well. The Spicer 3-32H well was drilled in 2014 to a depth of approximately 7,257 feet.

Seven hand-augered borings were advanced across the facility at locations based on the apparent areas of the former pits and where cuttings had been placed. The maximum depth of one of the borings was four feet.

A PID was used to field screen the soil samples from the borings. The PID readings (see Figure 3c) indicated low concentrations of organic vapor were present in the soil samples; the maximum PID reading was 45 parts per million (ppm).

Two soil samples (Spicer A-2' and Spicer A-3') were submitted to Summit Scientific, Inc. for the analyses of BTEX, TPH-GRO, TPH-DRO, PAHs, arsenic, SAR, EC, and pH. The laboratory data indicate that the concentrations were less than the COGCC Table 910-1 limits for all constituents except for EC and arsenic. The EC concentration for sample Spicer A-2' was 4.00 mmhos/cm which equals the COGCC Table 910-1 limit of 4.00 mmhos/cm. The arsenic concentrations in the two soil samples were 2.15 and 2.59 mg/kg which exceed the limit of 0.39 mg/kg. The laboratory data are summarized in Tables 1, 2 and 3. The sample locations and laboratory data are illustrated on Figure 3a, 3b and 3c.

### **2.3 Mutual 4-30H**

The Mutual 4-30H site is located in a rural setting approximately 15 miles southwest of Walden, Colorado in Jackson County as shown on Figure 1. The location is further described as the SW  $\frac{1}{4}$  of the SE  $\frac{1}{4}$  of Section 30, Township 7N, Range 80W. The site consists of the production facilities for the Mutual 4-30H oil well. The Mutual 4-30H well was drilled in 2014 to a depth of approximately 6,937 feet.

Eight hand-augered borings were advanced across the facility at locations based on the apparent locations of the former pits and areas where cuttings had been placed. The maximum depth explored was five feet.

A PID was used to field screen the soil samples from the borings. The PID readings indicated high concentrations of organic vapors were present in the soil samples; the maximum PID reading was 940 ppm (Mutual C-4.5').

Four soil samples (Mutual B-2', Mutual C-4.5', Mutual D-5' and Mutual F-3.5') were submitted to Summit Scientific, Inc. for the analyses of BTEX, TPH-GRO, TPH-DRO, PAHs, arsenic, SAR, EC, and pH. As shown on Table 1, the laboratory data indicate that the concentrations exceeded the COGCC Table 910-1 limits for TPH and several other petroleum constituents. Each of the samples contained detectable levels of TPH with the highest concentration of 59,000 mg/kg, which equals 5.9%, found in sample Mutual C-4.5'. The arsenic concentrations in the four soil samples also exceeded the COGCC Table 910-1 limit. The laboratory data are summarized in Tables 1, 2 and 3. The sample locations and laboratory data are illustrated on Figure 4a, 4b and 4c.

## **2.4 Hebron 02-07H**

The Hebron 02-07H site is located in a rural setting approximately 11 miles southwest of Walden, Colorado in Jackson County as shown on Figure 1. The location is further described as the NW  $\frac{1}{4}$  of the NE  $\frac{1}{4}$  of Section 7, Township 7N, Range 80W. The site consists of the production facilities for the Hebron 02-07H oil well. The Hebron 02-07H well was drilled in 2013 to a depth of approximately 7,600 feet.

Three hand-augered borings were advanced across the facility at locations based on the apparent former pit locations and areas cuttings were placed. The deepest boring extended to a depth of seven feet. A PID was used to field screen the soil samples from the borings. As shown on Figure 5c, the PID detected hydrocarbons in the soil samples from two of the borings; the maximum PID reading was 715 ppm (at Hebron B-4.5').

Two soil samples (Hebron A-6' and Hebron B-4.5') were submitted to Summit Scientific, Inc. for the analyses of BTEX, TPH-GRO, TPH-DRO, PAHs, arsenic, SAR, EC, and pH. As shown on Table 1, the laboratory data indicate that the concentrations exceeded the COGCC Table 910-1 limits for TPH. The TPH concentration in sample Hebron B-4.5' was the highest of the two samples from this facility with a concentration of 27,600 mg/kg which equals 2.76%. The arsenic concentrations in both soil samples also exceeded the COGCC Table 910-1 limit. The laboratory data are summarized in Tables 1, 2 and 3. The sample locations and laboratory data are illustrated on Figure 5a, 5b and 5c.

## **2.5 Hebron 3-12H**

The Hebron 3-12H site is located in a rural setting approximately 11 miles southwest of Walden, Colorado in Jackson County as shown on Figure 1. The location is further described as the NE  $\frac{1}{4}$  of the NE  $\frac{1}{4}$  of Section 12, Township 7N, Range 81W. The site

consists of the production facilities for the Hebron 3-12H oil well. The Hebron 3-12H well was drilled in 2013 to a depth of approximately 6,379 feet.

Four hand-augered borings were advanced across the facility at locations based on the apparent pit locations and areas where cuttings had been placed. The first boring (A) was not advanced a significant distance due to the presence of cobbles. Cobbles were also encountered at a depth of three feet in boring D, while the other two borings were advanced at least five feet in depth.

A PID was used to field screen the soil samples from the borings. As shown on Figure 6c, the PID readings indicated organic vapors were present in the soil samples from borings B, C, and D; the maximum PID reading was 270 ppm (at Hebron B-4').

Three soil samples (Hebron B-4', Hebron C-7' and Hebron D-3') were submitted to Summit Scientific, Inc. for the analyses of BTEX, TPH-GRO, TPH-DRO, PAHs, arsenic, SAR, EC, and pH. As shown on Table 1, the laboratory data indicate that the concentrations exceeded the COGCC Table 910-1 limits for benzene and benzo (a) anthracene in sample Hebron C-7' and for TPH in samples Hebron B-4' and Hebron C-7'. The TPH concentration in sample Hebron C-7' was the highest of the three samples from this facility with a value of 4,397 mg/kg. The arsenic concentrations in all three soil samples also exceeded the COGCC Table 910-1 limit. The laboratory data are summarized in Tables 1, 2 and 3. The sample locations and laboratory data are illustrated on Figure 6a, 6b and 6c.

## **2.6 Peterson Ridge 1-20H**

The Peterson Ridge 1-20H site is located in a rural setting approximately nine miles southwest of Walden, Colorado in Jackson County as shown on Figure 1. The location is

further described as the SW  $\frac{1}{4}$  of the SE  $\frac{1}{4}$  of Section 20, Township 8N, Range 80W. The site consists of the production facilities for the Peterson Ridge 1-20H oil well. The Peterson Ridge 1-20H well was drilled in 2013 to a depth of approximately 7,353 feet.

Six hand-augered borings were advanced across the facility at locations based on the apparent locations of the former pits and areas where cuttings had been placed. The deepest boring extended to a depth of 7.5 feet. A PID was used to field screen the soil samples from the borings. As shown on Figure 7c, the PID detected organic vapor in samples from three of the borings; the maximum PID reading was 220 ppm (at Peterson C-5').

Three soil samples (Peterson B-1', Peterson C-5' and Peterson D-6') were submitted to Summit Scientific, Inc. for the analyses of BTEX, TPH-GRO, TPH-DRO, PAHs, arsenic, SAR, EC, and pH. As shown on Table 1, the laboratory data indicate that the concentrations exceeded the COGCC Table 910-1 limits for TPH in sample Peterson C-5'. The TPH concentration in that sample was 3,550 mg/kg. The arsenic concentrations in all three soil samples also exceeded the COGCC Table 910-1 limit. The laboratory data are summarized in Tables 1, 2 and 3. The sample locations and laboratory data are illustrated on Figure 7a, 7b and 7c.

## **2.7 Coalmont 3-13H**

The Coalmont 3-13H site is located in a rural setting approximately 13 miles southwest of Walden, Colorado in Jackson County as shown on Figure 1. The location is further described as the SW  $\frac{1}{4}$  of the SW  $\frac{1}{4}$  of Section 13, Township 7N, Range 81W. The site consists of the production facilities for the Coalmont 3-13H oil well. The Coalmont 3-13H well was drilled in 2013 to a depth of approximately 6,492 feet.

Six hand-augered borings were advanced across the facility at locations based on the apparent locations of the former pits and areas where cuttings had been placed. A pit liner was encountered at a depth of 3.5 feet in boring D. The soil above the liner was stained a black color whereas the soil immediately below the liner was brown. That boring and two others were advanced to a depth of 4 feet while the other borings were extended to 2.5 to 3.5 feet in depth.

A PID was used to field screen the soil samples from the borings. The PID readings indicated organic vapors were present in the soil samples from two of the borings (C and D); the maximum PID reading was 340 ppm (Coalmont C-2.5').

Two soil samples (Coalmont C-2.5' and Coalmont D-3') were submitted to Summit Scientific, Inc. for the analyses of BTEX, TPH-GRO, TPH-DRO, PAHs, arsenic, SAR, EC, and pH. As shown on Table 1, the laboratory data indicate that the concentrations exceeded the COGCC Table 910-1 limits for TPH in the sample from boring C with a value of 6,378 mg/kg. The arsenic concentrations in both soil samples also exceeded the COGCC Table 910-1 limit. The laboratory data are summarized in Tables 1, 2 and 3. The sample locations and laboratory data are illustrated on Figure 8a, 8b and 8c.

### **3.0 DISCUSSION**

At the request of the COGCC, Fremont personnel collected soil samples at seven former EE3/Sandridge LLC locations in Jackson County, Colorado to determine if contaminated drill cuttings remained onsite. Based on the analytical data from the soil samples, five of the seven locations have petroleum contamination above the COGCC's Table 910-1 limits. In addition, arsenic concentrations in all of the soil samples exceeded the COGCC Table 910-1 limits. It is not clear that the arsenic values observed are related to the drilling operations at the sites or are reflective of background levels.



The table below summarizes the soil impacts at each site with the exception of arsenic which was not included:

Location	Pass or Fail COGCC Table 910-1	Most Impacted Soil Sample	Parameter Failed and Concentration
Damfino 2-06H	Pass	NA	NA
Spicer 3-32H	Pass	NA	NA
Mutual 4-30H	Fail	Mutual C-4.5'	Benzene (13 mg/kg), Toluene (89 mg/kg), Xylenes (290 mg/kg) and TPH (59,000 mg/kg)
Hebron 02-07H	Fail	Hebron B-4.5'	TPH (27,600 mg/kg)
Hebron 3-12H	Fail	Hebron C-7'	TPH (4,397 mg/kg), Benzene (0.43 mg/kg) and Benzo(a)anthracene (0.612 mg/kg)
Peterson Ridge 1-20H	Fail	Peterson C-5'	TPH (3,550 mg/kg)
Coalmont 3-13H	Fail	Coalmont C-2.5'	TPH (6,378 mg/kg)

#### **4.0 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.**



6/8/16

Date\_\_\_\_\_

\_\_\_\_\_  
Paul V. Henehan, P.E.

Senior Consultant

Reviewed by:



6/8/16

Date\_\_\_\_\_

\_\_\_\_\_  
Michael R. Gerstner

Senior Geologist

## TABLES

TABLE 1  
SUMMARY OF SOIL CHEMISTRY DATA  
COGCC/FORMER EE3/SANDRIDGE  
JACKSON COUNTY, COLORADO  
FREMONT PROJECT NO. C016-048

SAMPLE LOCATION	DATE SAMPLED	DEPTH ft	PID ppm	BENZENE mg/kg	TOLUENE mg/kg	ETHYL BENZENE mg/kg	TOTAL XYLENES mg/kg	TPH GRO mg/kg	TPH DRO mg/kg
Damfino D-3 Ft	05/05/16	3		<0.002	<0.005	<0.005	<0.010	<0.50	<50
Spicer A-2 Ft	05/05/16	2		<0.002	<0.005	<0.005	<0.010	<0.50	<50
Spicer A-3 Ft	05/05/16	3		<0.002	<0.005	0.0078	0.032	7.3	100
<b>Mutual B-2 Ft</b>	05/05/16	2		0.12	0.015	0.037	0.013	<b>12</b>	<b>2000</b>
<b>Mutual C-4.5 Ft</b>	05/05/16	4.5		<b>13</b>	<b>89</b>	61	<b>290</b>	<b>16,000</b>	<b>43,000</b>
<b>Mutual D-5 Ft</b>	05/05/16	5		<0.002	<0.005	<0.005	<0.010	<b>31</b>	<b>2200</b>
<b>Mutual F-3.5 Ft</b>	05/05/16	3.5		<0.002	<0.005	<0.005	<0.010	<b>12</b>	<b>960</b>
<b>Hebron 02-07-A-6 Ft</b>	05/05/16	6		0.003	0.017	0.016	0.63	<b>1600</b>	<b>790</b>
<b>Hebron 02-07-B-4.5 Ft</b>	05/05/16	4.5		<0.002	1.4	<0.005	0.14	<b>8,600</b>	<b>19,000</b>
<b>Hebron 3-12-B-4 Ft</b>	05/05/16	4		<0.002	<0.005	0.01	0.16	<b>1600</b>	<b>570</b>
<b>Hebron 3-12-C-7 Ft</b>	05/05/16	3		<b>0.43</b>	9.4	7.6	16	<b>4300</b>	<b>97</b>
Hebron 3-12-D-3 Ft	05/05/16	3		<0.002	<0.005	<0.005	<0.010	1	430
Peterson B-1 Ft	05/06/16	1		<0.002	<0.005	<0.005	<0.010	14	140
<b>Peterson C-5 Ft</b>	05/06/16	5		0.01	0.18	0.26	2.6	<b>3400</b>	<b>150</b>
Peterson D-6 Ft	05/06/16	6		<0.002	1.4	<0.005	0.0074	23	<50
<b>Coalmont C-2.5 Ft</b>	05/06/16	2.5		<0.002	1.4	<0.005	<0.010	<b>78</b>	<b>6300</b>
Coalmont D-3 Ft	05/06/16	3		<0.002	<0.005	<0.005	<0.010	<0.50	73
<b>COGCC Table 910-1 Limits</b>				<b>0.17</b>	<b>85</b>	<b>100</b>	<b>175</b>	<b>500*</b>	

\* - TPH limit of 500 mg/kg is a summation of TPH-GRO and TPH-DRO and is based on COGCC's Table 910-1 limits

Values in boldface exceed the COGCC limits

TABLE 2  
SUMMARY OF PAHs IN SOIL CHEMISTRY DATA  
COGCC/FORMER EE3/SANDRIDGE  
JACKSON COUNTY, COLORADO  
FREMONT PROJECT NO. C016-048

SAMPLE LOCATION	DATE	Depth (Ft)	Anthracene (mg/kg)	Benzo(a)-anthracene (mg/kg)	Benzo(b)-floranth. (mg/kg)	Benzo(k)-flouranth. (mg/kg)	Benzo(ghi)perylene (mg/kg)	Benzo(a)-pyrene (mg/kg)	Chrysene (mg/kg)	Dibenzo-anthracene (mg/kg)	Flour-anthene (mg/kg)	Flourene (mg/kg)	Indeno-pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)	Pyrene (mg/kg)
Damfino D-3 Ft	05/05/16	3	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0193	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.007
Spicer A-2 Ft	05/05/16	2	<0.005	<0.005	0.0127	<0.005	<0.005	<0.005	0.0403	<0.005	0.0079	<0.005	<0.005	0.0644	0.145	0.0374
Spicer A-3 Ft	05/05/16	3	<0.005	<0.005	0.0389	0.0392	<0.005	<0.005	0.0544	<0.005	0.0258	0.163	<0.005	0.571	0.324	0.115
Mutual B-2 Ft	05/05/16	2	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0116	0.534	<0.005	0.73	1.3	<0.005
Mutual C-4.5 Ft	05/05/16	4.5	<0.005	<0.005	0.209	<0.005	<0.005	<0.005	0.902	<0.005	0.141	2.83	<0.005	11.1	5.68	0.839
Mutual D-5 Ft	05/05/16	5	<0.005	<0.005	0.0491	0.0487	<0.005	<0.005	<0.005	<0.005	0.0186	4.14	<0.005	<0.005	1.09	<0.005
Mutual F-3.5 Ft	05/05/16	3.5	<0.005	<0.005	0.0217	<0.005	<0.005	<0.005	<0.005	<0.005	0.013	0.266	<0.005	0.128	0.664	0.152
Hebron 02-07-A-6 Ft	05/05/16	6	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.322	<0.005	0.417	0.707	0.13
Hebron 02-07-B-4.5 Ft	05/05/16	4.5	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.129	3.23	<0.005	4.12	5.37	1.18
Hebron 3-12-B-4 Ft	05/05/16	4	<0.005	<0.005	0.0479	<0.005	<0.005	<0.005	0.0622	<0.005	0.0156	0.299	<0.005	<0.005	0.719	0.204
Hebron 3-12-C-7 Ft	05/05/16	3	<0.005	<b>0.612</b>	0.152	<0.005	0.0678	<0.005	0.657	<0.005	0.17	2.18	<0.005	7.44	4.47	0.713
Hebron 3-12-D-3 Ft	05/05/16	3	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0114
Peterson B-1 Ft	05/06/16	1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0639
Peterson C-5 Ft	05/06/16	5	<0.005	<0.005	0.0581	<0.005	<0.005	<0.005	<0.005	<0.005	0.0257	0.153	<0.005	0.263	0.324	0.0211
Peterson D-6 Ft	05/06/16	6	<0.005	<0.005	0.0204	<0.005	<0.005	<0.005	<0.005	<0.005	0.007	0.0645	<0.005	0.106	0.216	0.0822
Coalmont C-2.5 Ft	05/06/16	2.5	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.251
Coalmont D-3 Ft	05/06/16	3	<0.005	<0.005	0.048	<0.005	<0.005	<0.005	0.118	<0.005	0.0102	0.0412	<0.005	0.0627	0.281	0.151
COGCC Table 910-1 Limits			1,000	0.22	0.220	2.2	none	0.022	22	0.022	1,000	1,000	0.22	23	none	1,000

TABLE 3  
SUMMARY OF SOIL CHEMISTRY DATA  
COGCC/FORMER EE3/SANDRIDGE  
JACKSON COUNTY, COLORADO  
FREMONT PROJECT NO. C016-048

SAMPLE LOCATION	DATE SAMPLED	DEPTH ft	SAR	EC mmhos/cm	pH	Arsenic mg/kg
Damfino D-3 Ft	05/05/16	3	1.21	1.03	8.29	<b>1.31</b>
Spicer A-2 Ft	05/05/16	2	4.18	<b>4.00</b>	8.25	<b>2.15</b>
Spicer A-3 Ft	05/05/16	3	5.63	2.70	8.69	<b>2.59</b>
Mutual B-2 Ft	05/05/16	2	6.89	2.90	7.66	<b>3.75</b>
Mutual C-4.5 Ft	05/05/16	4.5	6.81	<b>4.26</b>	8.33	<b>3.12</b>
Mutual D-5 Ft	05/05/16	5	6.13	2.24	8.17	<b>2.57</b>
Mutual F-3.5 Ft	05/05/16	3.5	6.27	2.07	8.42	<b>2.38</b>
Hebron 02-07-A-6 Ft	05/05/16	6	6.55	2.34	8.40	<b>1.64</b>
Hebron 02-07-B-4.5 Ft	05/05/16	4.5	5.97	2.63	7.65	<b>1.4</b>
Hebron 3-12-B-4 Ft	05/05/16	4	4.29	2.49	8.34	<b>1.99</b>
Hebron 3-12-C-7 Ft	05/05/16	3	9.47	0.68	8.71	<b>2.86</b>
Hebron 3-12-D-3 Ft	05/05/16	3	1.55	0.805	8.49	<b>1.57</b>
Peterson B-1 Ft	05/06/16	1	3.20	1.68	8.38	<b>1.22</b>
Peterson C-5 Ft	05/06/16	5	7.13	2.28	8.99	<b>2.57</b>
Peterson D-6 Ft	05/06/16	6	5.27	2.39	8.84	<b>1.68</b>
Coalmont C-2.5 Ft	05/06/16	2.5	3.04	<b>4.30</b>	7.89	<b>0.972</b>
Coalmont D-3 Ft	05/06/16	3	3.13	0.796	7.63	<b>3.75</b>
COGCC Table 910-1 Limits			<12	<4	6 to 9	0.39

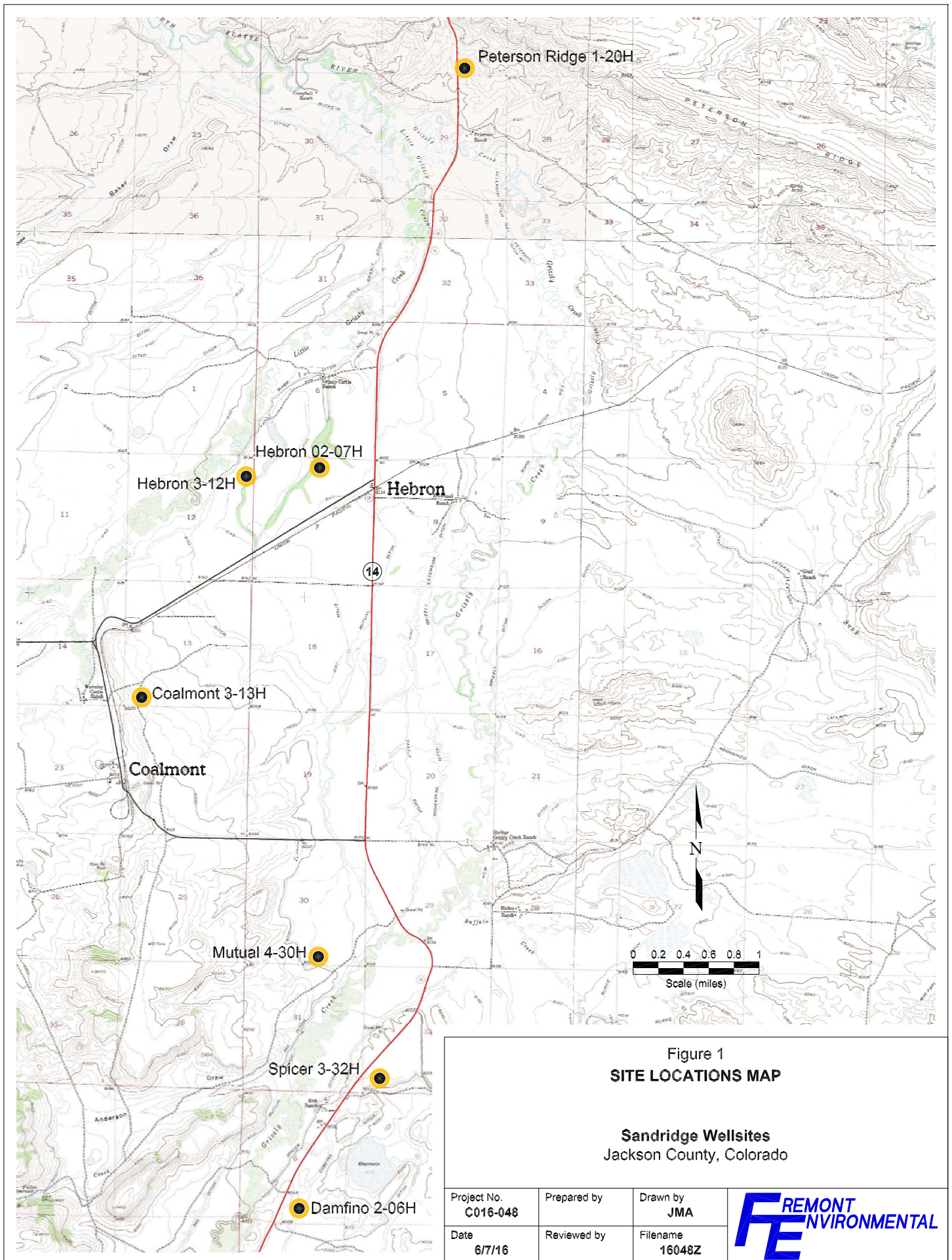
Values in boldface exceed the COGCC limits

**TABLE 4**  
**GPS DATA FOR SOIL BORINGS**  
**COGCC FORMER EE3/SANDRIDGE**  
**JACKSON COUNTY, COLORADO**  
**FREMONT PROJECT NO. C016-048**

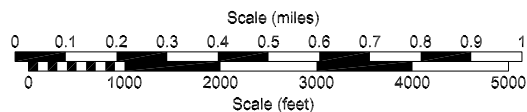
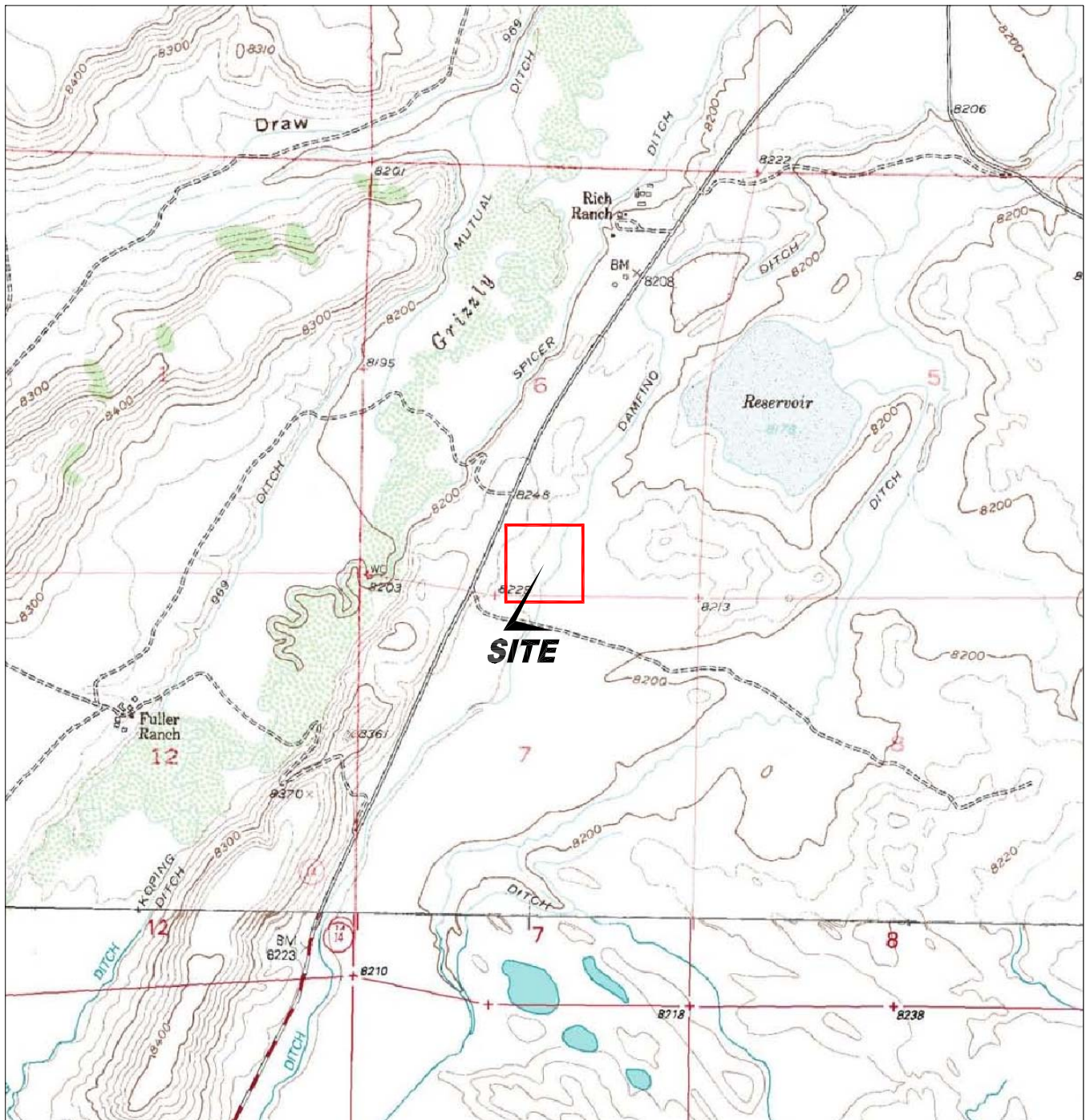
<b>SAMPLE LOCATION</b>	<b>Latitude</b>	<b>Longitude</b>
Damfino A	40.51232	106.41733
Damfino B	40.51257	106.41734
Damfino C	40.51266	106.4173
Damfino D	40.51269	106.4173
Damfino E	40.51263	106.41770
Damfino F	40.51272	106.41788
Spicer A	40.52784	106.40436
Spicer B	40.52784	106.40442
Spicer C	40.52790	106.40457
Spicer D	40.52794	106.40477
Spicer E	40.52807	106.40485
Spicer F	40.52818	106.40509
Spicer G	40.52877	106.40475
Mutual A	40.54202	106.41505
Mutual B	40.54189	106.41502
Mutual C	40.54177	106.41498
Mutual D	40.54163	106.41486
Mutual E	40.54152	106.41473
Mutual F	40.54137	106.41451
Mutual G	40.54135	106.41431
Mutual H	40.54206	106.41492
Hebron 02-07 A	40.59861	106.41484
Hebron 02-07 B	40.59837	106.41492
Hebron 02-07 C	40.59792	106.41499
Hebron 3-12 A	40.59722	106.42654
Hebron 3-12 B	40.59703	106.42684
Hebron 3-12 C	40.59686	106.42694
Hebron 3-12 D	40.59673	106.42690
Peterson A	40.64508	106.39442
Peterson B	40.64507	106.39417
Peterson C	40.64478	106.39401
Peterson D	40.64456	106.394
Peterson E	40.64484	106.39415
Peterson F	40.64471	106.39416
Coalmont A	40.57162	106.44221
Coalmont B	40.57156	106.44231
Coalmont C	40.57122	106.44223
Coalmont D	40.57105	106.44221
Coalmont E	40.57104	106.44218
Coalmont F	40.57097	106.44228

## **FIGURES**









USGS 7.5 MINUTE SERIES (TOPOGRAPHIC)

Figure 2a  
SITE LOCATION MAP

**Sandridge Damfino 2-06H**  
API 05-057-06482 - SW SE Section 6, T6N, R80W  
Jackson County, CO

Project No.  
C016-048

Prepared by

Drawn by  
JMA

Date  
6/7/16

Reviewed by

Filename  
16048TA






- WELL LOCATION
- SOIL BORING
- ABOVE GROUND STORAGE TANK

**Figure 2b**  
**SITE MAP**

**Sandridge Damfino 2-06H**  
API 05-057-06482 - SW SE Section 6, T6N, R80W  
Jackson County, CO

Project No. C016-048	Prepared by JMA	Drawn by JMA	
Date 6/7/16	Reviewed by	Filename 16048QA	

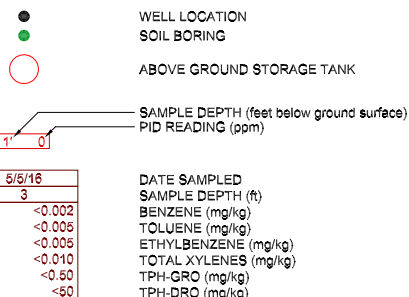


Figure 2c  
**SOIL CHEMISTRY &  
 SOIL SAMPLE PID READINGS**

**Sandridge Damfino 2-06H**  
 API 05-057-06482 - SW SE Section 6, T6N, R80W  
 Jackson County, CO

Project No.  
**C016-048**

Prepared by

Drawn by  
**JMA**

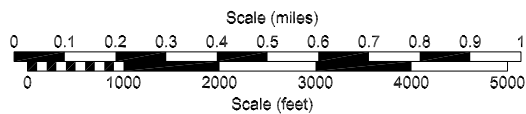
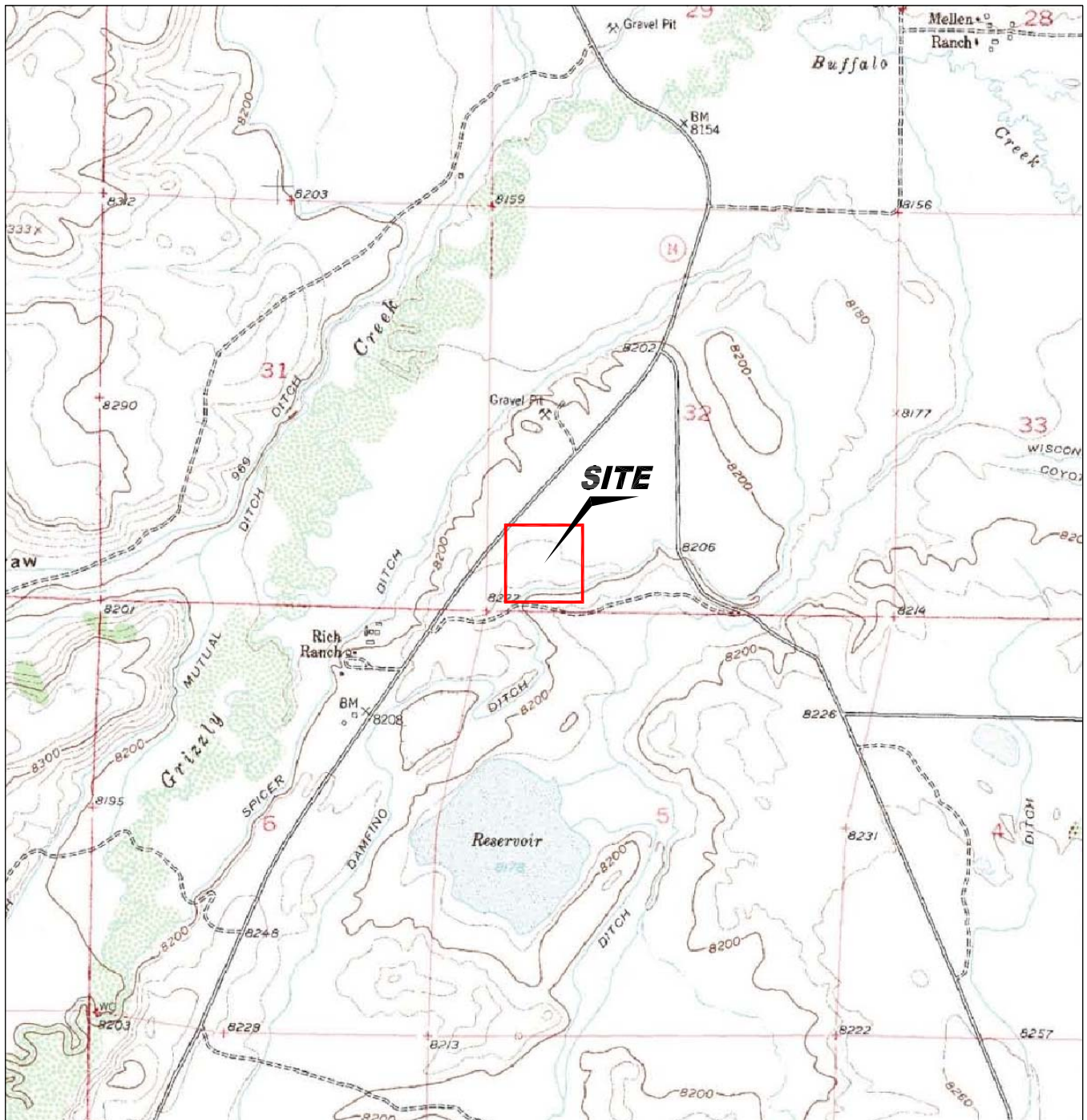
Date  
**6/7/16**

Reviewed by

Filename  
**16048QA**







USGS 7.5 MINUTE SERIES (TOPOGRAPHIC)

Figure 3a  
SITE LOCATION MAP

**Sandridge Spicer 3-32H**  
API 05-057-06469 - SW SW Section 32, T7N, R80W  
Jackson County, CO

Project No.  
C016-048

Prepared by

Drawn by  
JMA

Date  
6/7/16

Reviewed by

Filename  
16048TD





WELL LOCATION  
SOIL BORING

Figure 3b  
SITE MAP

**Sandridge Spicer 3-32H**  
API 05-057-06469 - SW SW Section 32, T7N, R80W  
Jackson County, CO

Project No.  
C016-048

Prepared by

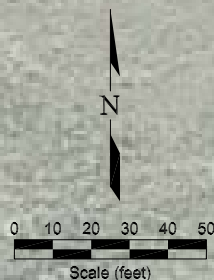
Drawn by  
JMA

Date  
6/7/16

Reviewed by

Filename  
16048QD




WELL LOCATION  
SOIL BORING

5/5/16	
2	
B	<0.002
T	<0.005
E	<0.005
X	<0.010
G	<0.50
D	<50

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

Figure 3c  
SOIL CHEMISTRY &  
SOIL SAMPLE PID READINGS

**Sandridge Spicer 3-32H**  
API 05-057-06469 - SW SW Section 32, T7N, R80W  
Jackson County, CO

Project No. <b>C016-048</b>	Prepared by	Drawn by <b>JMA</b>	
Date <b>6/7/16</b>	Reviewed by	Filename <b>16048QD</b>	









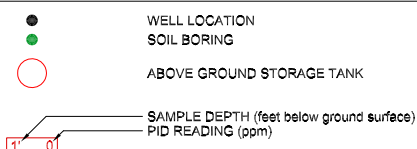
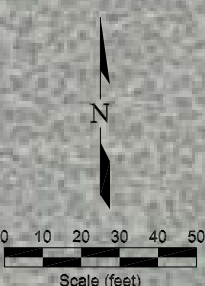
- WELL LOCATION
- SOIL BORING
- ABOVE GROUND STORAGE TANK

Figure 4b  
SITE MAP

**Sandridge Mutual 4-30H**  
API 05-057-06488 - SW SE Section 30, T7N, R80W  
Jackson County, CO

Project No. C016-048	Prepared by JMA	Drawn by JMA
Date 6/7/16	Reviewed by	Filename 16048QC





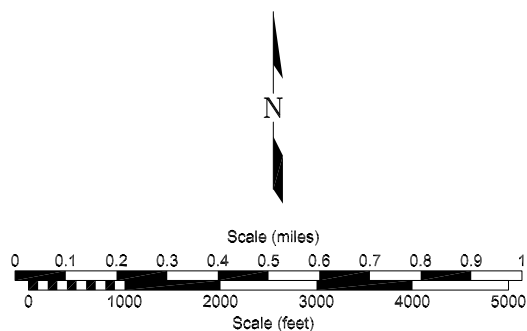
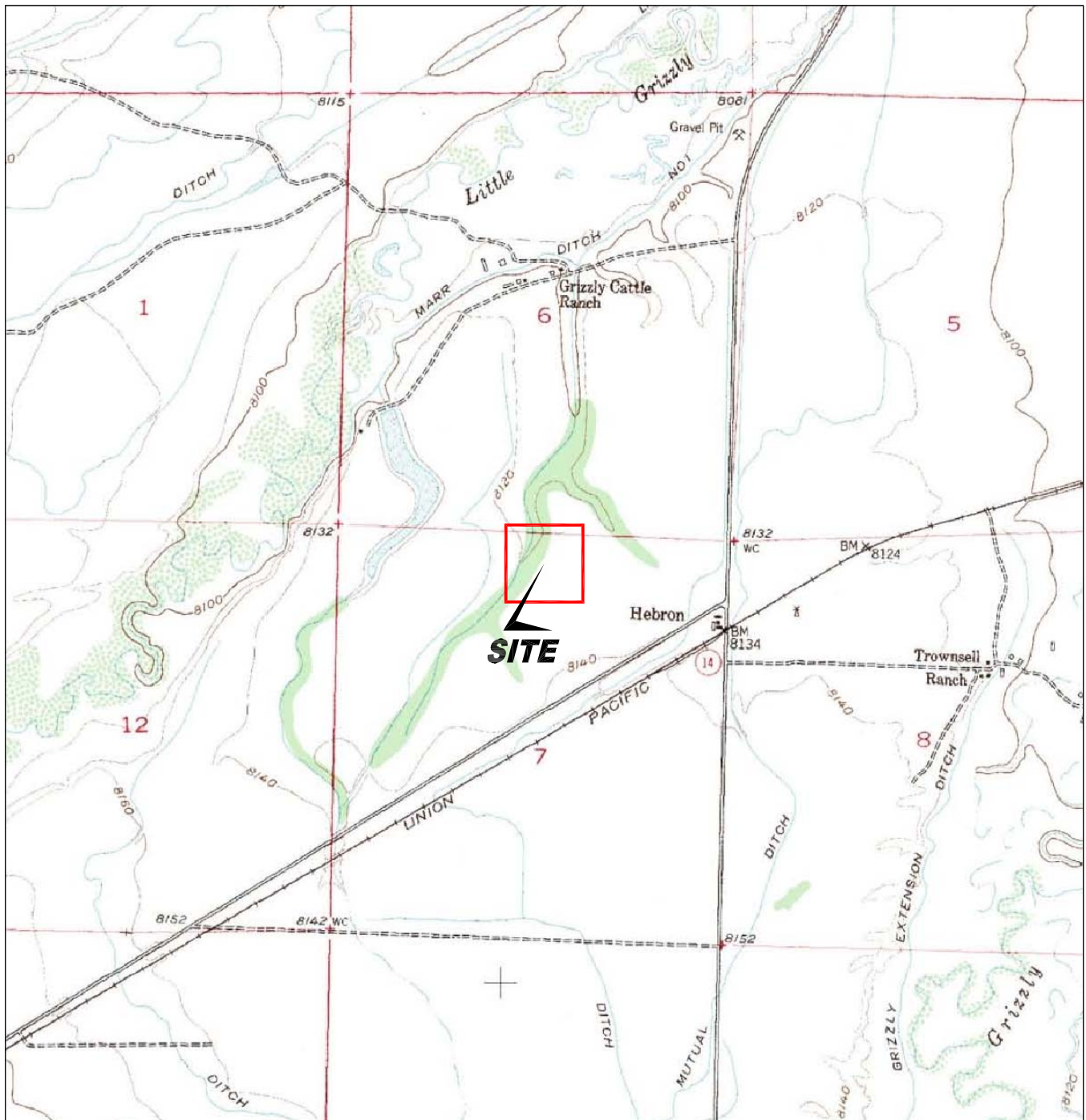
5/5/16	
2	
B	<0.002
T	<0.005
E	<0.005
X	<0.010
G	<0.50
D	<50

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

# Figure 4c SOIL CHEMISTRY & SOIL SAMPLE PID READINGS

**Sandridge Mutual 4-30H**  
API 05-057-06488 - SW SE Section 30, T7N, R80W  
Jackson County, CO

Project No. <b>C016-048</b>	Prepared by	Drawn by <b>JMA</b>	
Date <b>6/7/16</b>	Reviewed by	Filename <b>16048QC</b>	



USGS 7.5 MINUTE SERIES (TOPOGRAPHIC)

Figure 5a  
SITE LOCATION MAP

**Sandridge Hebron 02-07H**  
API 05-057-06499 - NW NE Section 7, T7N, R80W  
Jackson County, CO

Project No.  
C016-048

Prepared by

Drawn by  
JMA

Date  
6/7/16

Reviewed by

Filename  
16048TB





● WELL LOCATION  
 ● SOIL BORING

**Figure 5b**  
**SITE MAP**

**Sandridge Hebron 02-07H**  
 API 05-057-06499 - NW NE Section 7, T7N, R80W  
 Jackson County, CO

Project No. C016-048	Prepared by	Drawn by JMA
Date 6/7/16	Reviewed by	Filename 16048QB





WELL LOCATION  
SOIL BORING

SAMPLE DEPTH (feet below ground surface)  
PID READING (ppm)

1' 0

5/5/16	
6	
B	<0.002
T	<0.005
E	<0.005
X	<0.010
G	<0.50
D	<50

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

### Figure 5c SOIL CHEMISTRY & SOIL SAMPLE PID READINGS

**Sandridge Hebron 02-07H**  
API 05-057-06499 - NW NE Section 7, T7N, R80W  
Jackson County, CO

Project No.  
**C016-048**

Prepared by

Drawn by  
**JMA**

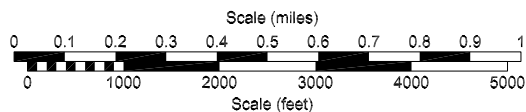
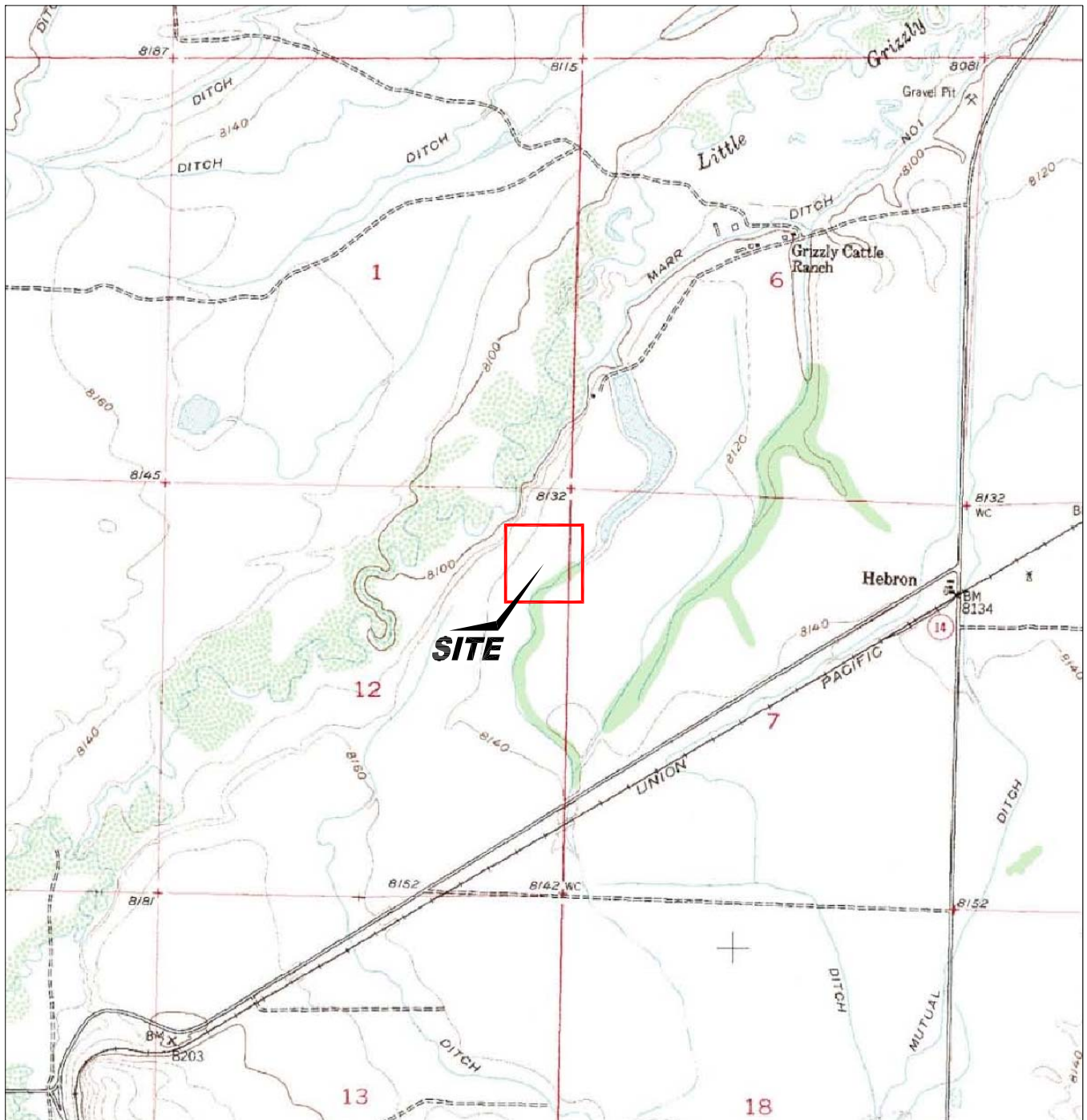
Date  
**6/7/16**

Reviewed by

Filename  
**16048QB**







USGS 7.5 MINUTE SERIES (TOPOGRAPHIC)

Figure 6a  
SITE LOCATION MAP

**Sandridge Hebron 3-12H**  
API 05-057-06498 - NE NE Section 12, T7N, R81W  
Jackson County, CO

Project No.  
C016-048

Prepared by

Drawn by  
JMA

Date  
6/7/16

Reviewed by

Filename  
16048TE





WELL LOCATION  
SOIL BORING

Figure 6b  
SITE MAP

**Sandridge Hebron 3-12H**  
API 05-057-06498 - NE NE Section 12, T7N, R81W  
Jackson County, CO

Project No.  
C016-048

Prepared by

Drawn by  
JMA

Date  
6/7/16

Reviewed by

Filename  
16048QE





Figure 6c  
SOIL CHEMISTRY &  
SOIL SAMPLE PID READINGS

Sandridge Hebron 3-12H  
API 05-057-06498 - NE NE Section 12, T7N, R81W  
Jackson County, CO

Project No.  
C016-048

Prepared by

Drawn by  
JMA

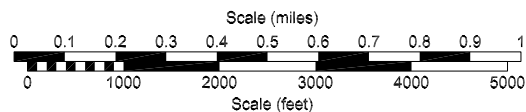
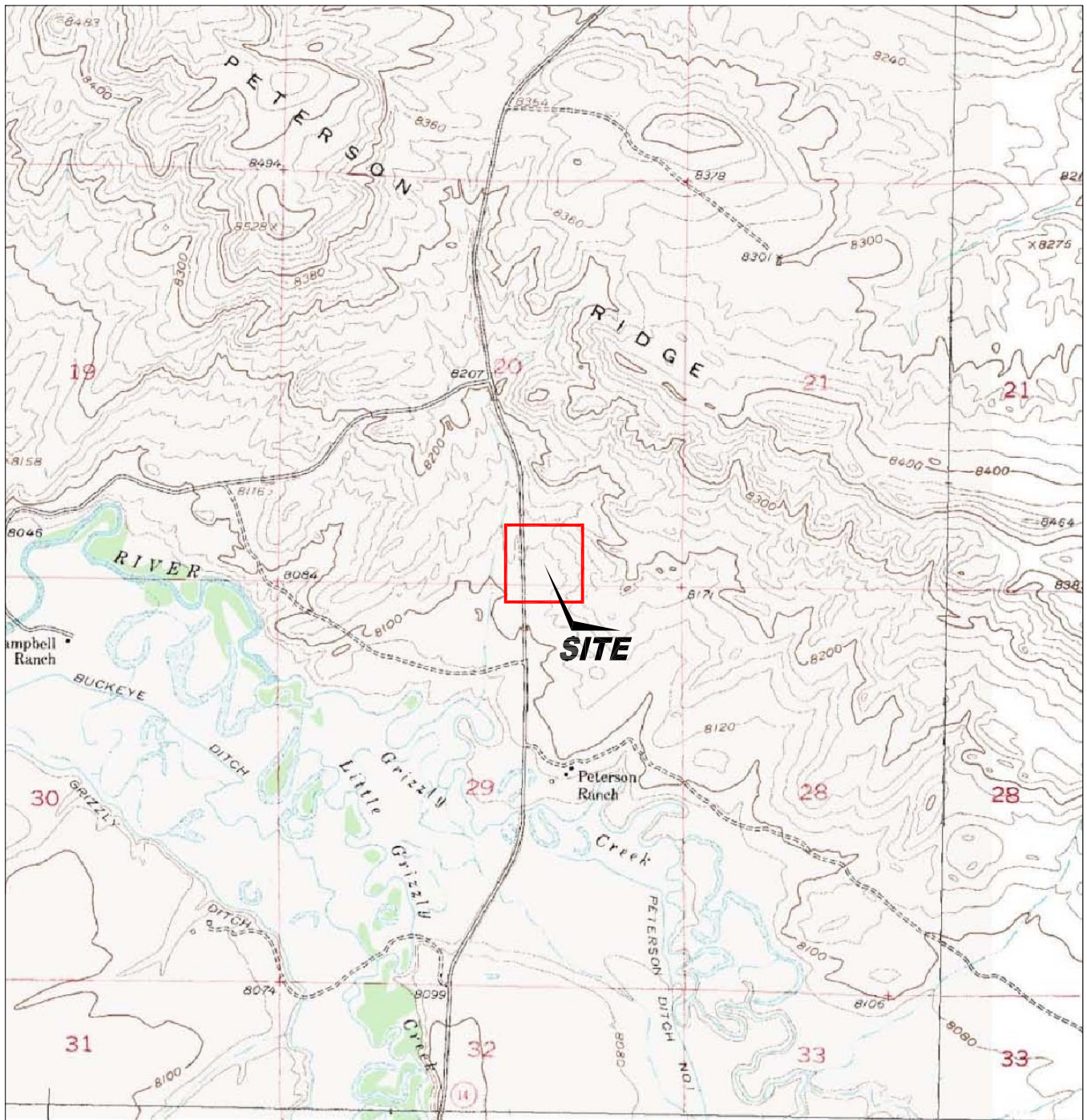
Date  
6/7/16

Reviewed by

Filename  
16048QE







USGS 7.5 MINUTE SERIES (TOPOGRAPHIC)

Figure 7a  
SITE LOCATION MAP

**Sandridge Peterson Ridge 1-20H**  
API 05-057-06515 - SW SE Section 20, T8N, R80W  
Jackson County, CO

Project No.  
C016-048

Prepared by

Drawn by  
JMA

Date  
6/7/16

Reviewed by

Filename  
16048TG





- WELL LOCATION
- SOIL BORING
- ABOVE GROUND STORAGE TANK

Figure 7b  
SITE MAP

**Sandridge Peterson Ridge 1-20H**  
API 05-057-06515 - SW SE Section 20, T8N, R80W  
Jackson County, CO

Project No.  
C016-048

Prepared by

Drawn by  
JMA

Date  
6/7/16

Reviewed by

Filename  
16048QG





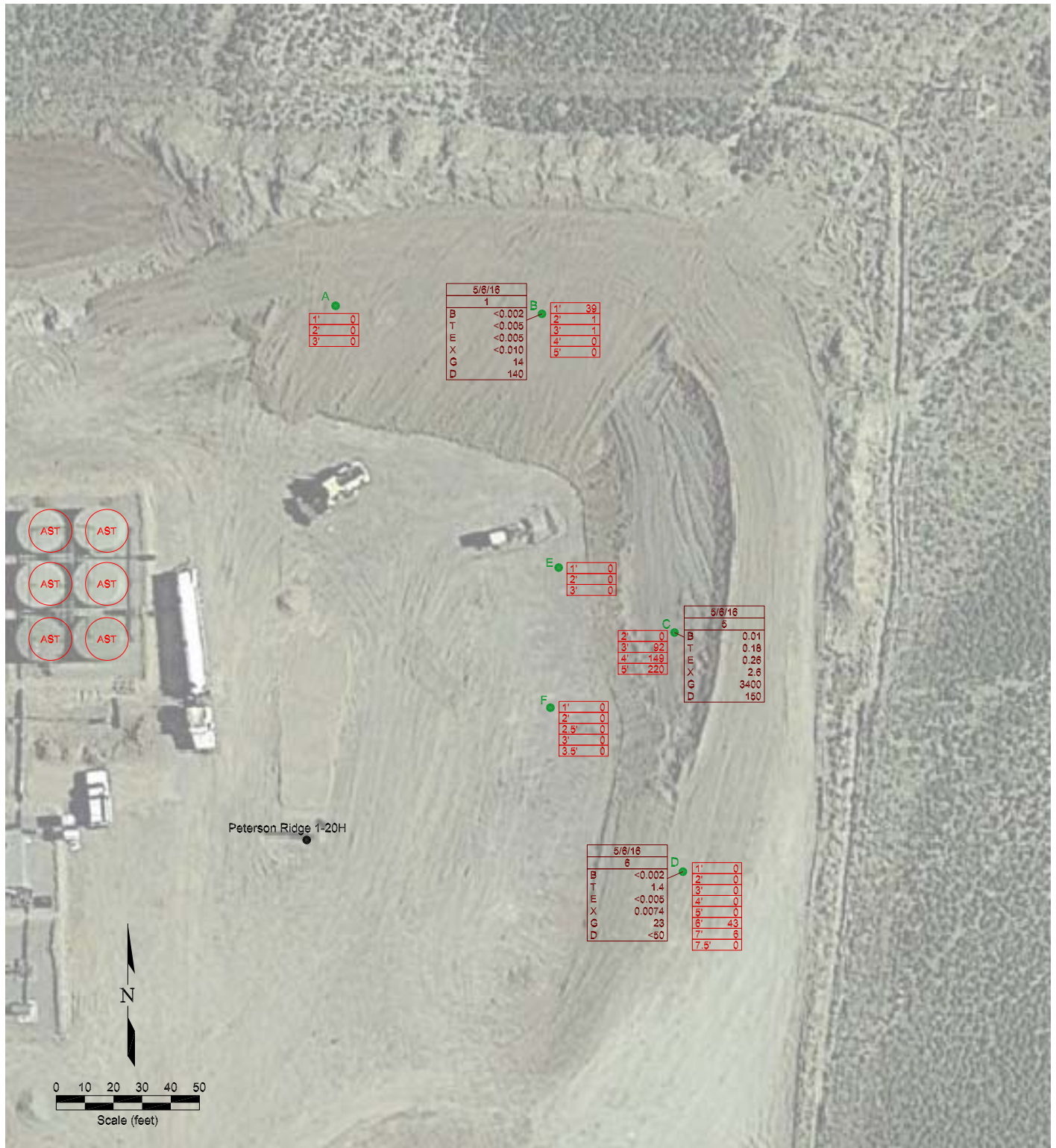


Figure 7c  
**SOIL CHEMISTRY &  
 SOIL SAMPLE PID READINGS**

**Sandridge Peterson Ridge 1-20H**  
 API 05-057-06515 - SW SE Section 20, T8N, R80W  
 Jackson County, CO

Project No.  
**C016-048**

Prepared by

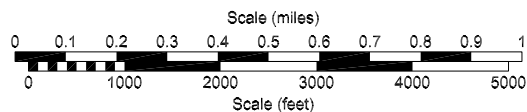
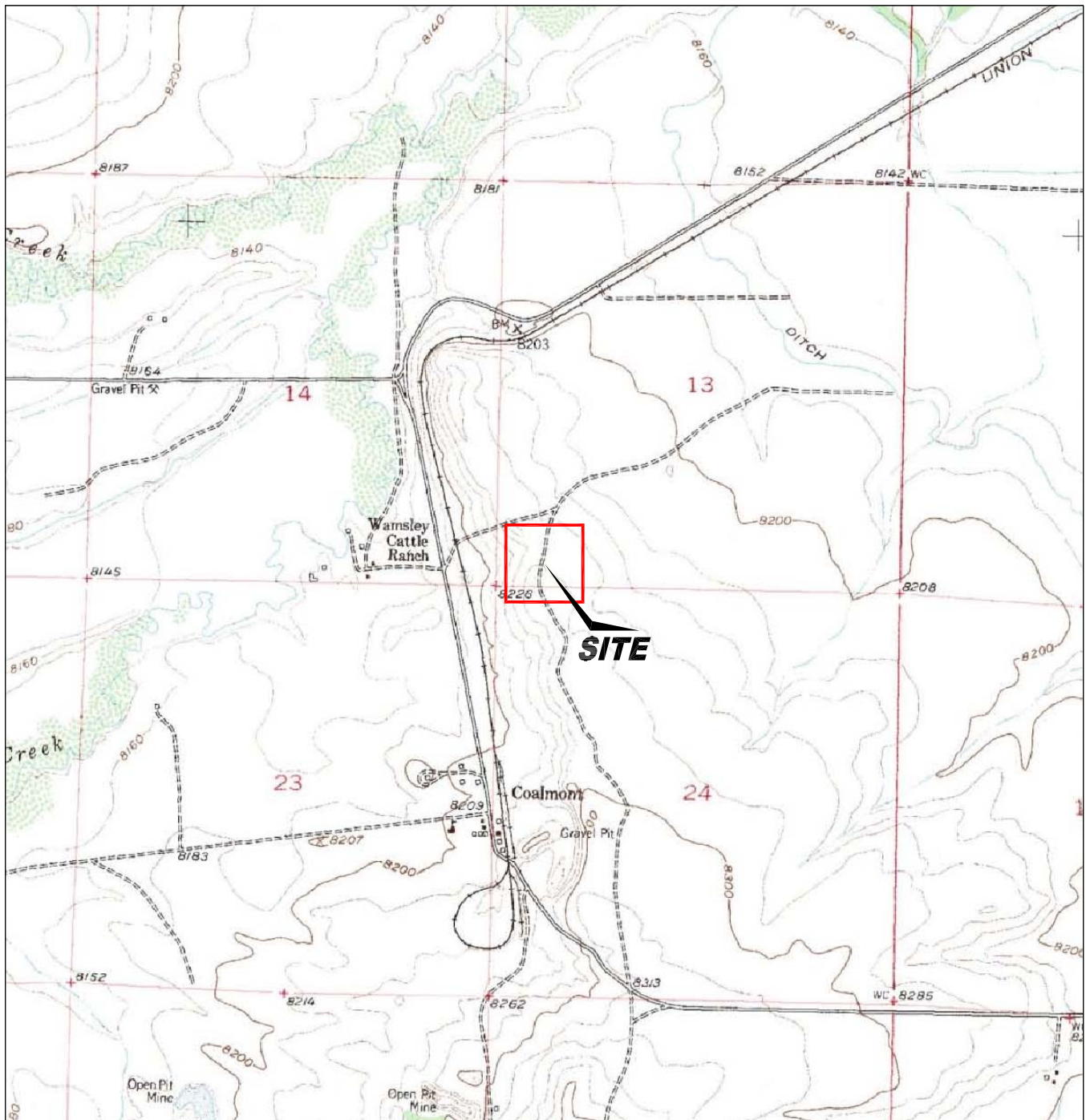
Drawn by  
**JMA**

Date  
**6/7/16**

Reviewed by

Filename  
**16048QG**





USGS 7.5 MINUTE SERIES (TOPOGRAPHIC)

Figure 8a  
SITE LOCATION MAP

**Sandridge Coalmont 3-13H**  
API 05-057-06508 - SW SW Section 13, T7N, R81W  
Jackson County, CO

Project No.  
C016-048

Prepared by

Drawn by  
JMA

Date  
6/7/16

Reviewed by

Filename  
16048TF





WELL LOCATION  
SOIL BORING

Figure 8b  
SITE MAP

**Sandridge Coalmont 3-13H**  
API 05-057-06508 - SW SW Section 13, T7N, R81W  
Jackson County, CO

Project No.  
C016-048

Prepared by

Drawn by  
JMA

Date  
6/7/16

Reviewed by

Filename  
16048QF





WELL LOCATION  
SOIL BORING



SAMPLE DEPTH (feet below ground surface)  
PID READING (ppm)

5/6/16	
3	
B	<0.002
T	<0.005
E	<0.005
X	<0.010
G	<0.50
D	<50

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

### Figure 8c SOIL CHEMISTRY & SOIL SAMPLE PID READINGS

**Sandridge Coalmont 3-13H**  
API 05-057-06508 - SW SW Section 13, T7N, R81W  
Jackson County, CO

Project No.  
**C016-048**

Prepared by

Drawn by  
**JMA**

Date  
**6/7/16**

Reviewed by

Filename  
**16048QF**



**APPENDIX A**

**LABORATORY DOCUMENTATION**



# Summit Scientific

---

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

May 16, 2016

Paul Henehan  
Fremont Environmental  
1759 Redwing Lane  
Broomfield, CO 80020  
RE: COGCC-Former EE3 Locations

Enclosed are the results of analyses for samples received by Summit Scientific on 05/09/16 13:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in dark ink, appearing to read "M. Clements", with a stylized flourish at the end.

Michelle Clements For Paul Shrewsbury  
President





Fremont Environmental  
1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
05/16/16 15:17

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Damfind D-3 Ft	1605076-01	Soil	05/05/16 00:00	05/09/16 13:30
Spicer A-2 Ft	1605076-02	Soil	05/05/16 00:00	05/09/16 13:30
Spicer A-3 Ft	1605076-03	Soil	05/05/16 00:00	05/09/16 13:30
Mutual C-4,5 Ft	1605076-04	Soil	05/05/16 00:00	05/09/16 13:30
Mutual D5 Ft	1605076-05	Soil	05/05/16 00:00	05/09/16 13:30
Mutual F 3.5 Ft	1605076-06	Soil	05/05/16 00:00	05/09/16 13:30
Hebron 2-07-A-6 Ft	1605076-07	Soil	05/05/16 00:00	05/09/16 13:30
Hebron 2-07-B 4.5 Ft	1605076-08	Soil	05/05/16 00:00	05/09/16 13:30
Hebron 3-12-B-4 Ft	1605076-09	Soil	05/05/16 00:00	05/09/16 13:30
Hebron 3-12-C-7 Ft	1605076-10	Soil	05/05/16 00:00	05/09/16 13:30
Hebron 3-12-D-3 Ft	1605076-11	Soil	05/05/16 00:00	05/09/16 13:30
Peterson B-1 Ft	1605076-12	Soil	05/06/16 00:00	05/09/16 13:30
Peterson C-5 Ft	1605076-13	Soil	05/06/16 00:00	05/09/16 13:30
Peterson D-6 Ft	1605076-14	Soil	05/06/16 00:00	05/09/16 13:30
Coalmont C-2.5 Ft	1605076-15	Soil	05/06/16 00:00	05/09/16 13:30
Coalmont D-3 Ft	1605076-16	Soil	05/06/16 00:00	05/09/16 13:30
Mutual B-2 Ft	1605076-17	Soil	05/05/16 00:00	05/09/16 13:30

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  
1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations

Project Number: [none]  
Project Manager: Paul Henehan

Reported:  
05/16/16 15:17

# Summit Scientific

1605076

S<sub>2</sub>

741 Corporate Circle, Suite J • Golden, Colorado 80401  
303-277-9310 • 303-374-5933

Client: FREMONT / COGCC

Project Manager: HENEHAN

Page 1 of 2

Address:

E-Mail:

City/State/Zip:

Phone: 303 956 8714

Fax:

Project Name: COGCC- FORMER EE3 LOCATIONS (INVOICE FREMONT)

Sampler Name: HENEHAN

Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested							Special Instructions
					HCl	HNO <sub>3</sub>	None	Other (Specify)	Groundwater	Soil	Air-Canister #	Other (Specify)	BTEX	GRD/DIO	PAHS	ARSENIC	SAR	EC	pH	
1	DAMFIND D-3 FT	5/5/16		1																
2	SPICER A-2 FT	5/5/16		1																
3	SPICER A-3 FT			1																
4	MUTUAL C-4.5 FT			1																
5	MUTUAL D-5 FT			1																
6	MUTUAL F-3.5 FT			1																
7	HEBRON 2-07-A-6 FT			1																
8	HEBRON 2-07-B-4.5 FT			1																
9	HEBRON 3-12-B-4 FT			1																
10	HEBRON 3-12-C-7 FT			1																

Relinquished by: <u>PAUL/PE</u>	Date/Time: <u>5/9/16 13:30</u>	Received by: <u>PA</u>	Date/Time: <u>5-9-16 13:30</u>	Turn Around Time (Check)	Notes:
Relinquished by: <u>PA</u>	Date/Time: <u>5-9-16 17:30</u>	Received by:	Date/Time:	Same Day <input type="checkbox"/> 72 hours	Standard <input checked="" type="checkbox"/>
Relinquished by:	Date/Time:	Received by:	Date/Time:	24 hours <input type="checkbox"/>	
Relinquished by:	Date/Time:	Received by:	Date/Time:	48 hours <input type="checkbox"/>	
Sample Integrity:				Temperature Upon Receipt: <u>24.3</u>	
Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No					

www.s2scientific.com

Summit Scientific

*Paul Clements*

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



Fremont Environmental  
1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations

Project Number: [none]  
Project Manager: Paul Henehan

Reported:  
05/16/16 15:17

# Summit Scientific

S<sub>2</sub>

741 Corporate Circle, Suite J ♦ Golden, Colorado 80401  
303-277-9310 ♦ 303-374-5933

Page 2 of 2

Client: FREMONT / COGCC

Project Manager: HENEHAN

Address:

E-Mail:

City/State/Zip:

Phone: 303 956 8714

Fax:

Project Name: COGCC - FORMER EE3 LOCATIONS

Sampler Name: HENEHAN

Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested								Special Instructions
					HCl	HNO <sub>3</sub>	None	Other (Specify)	Groundwater	Soil	Air-Canister #	Other (Specify)	BTEX	GRD/DEO	PAHs	ARSENIC	SAR	EC	PH		
1	HEBRON 3-12-D-3FT	5/5/16		1																	
2	PETERSON B-1FT	5/6/16		1																	
3	PETERSON C-5FT			1																	
4	PETERSON D-6 FT			1																	
5	COALMONT C-2.5 FT			1																	
6	COALMONT D-3 FT			1																	
7	MUTUAL B-2 FT	5/5/16		1																	
8																					
9																					
10																					

Relinquished by:	Date/Time:	Received by:	Date/Time:	Turn Around Time (Check)	Notes:
<u>PAH/FE</u>	<u>5/9/16 13:30</u>	<u>PAH</u>	<u>5-9-16 13:30</u>	Same Day <input type="checkbox"/> 72 hours	
Relinquished by:	Date/Time:	Received by:	Date/Time:	24 hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/>	
<u>PAH</u>	<u>5-9-16 17:30</u>			48 hours <input type="checkbox"/>	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Sample Integrity:	
				Temperature Upon Receipt: <u>24.3</u>	
				Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No	

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*M. Clements*

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Fremont Environmental  
1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations

Project Number: [none]  
Project Manager: Paul Henehan

Reported:  
05/16/16 15:17

### Sample Receipt Checklist

S2 Work Order: 1605076

Client: Fremont - COGCC Client Project ID: COGCC - Former EE3 Locations (Invoice Fremont)

Shipped Via: HD  
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Airbill #: \_\_\_\_\_

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

Cooler ID					
Temp (°C)	<u>24.3</u>				

Thermometer ID: 61857155-K

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

Nuri Premier  
Custodian Printed Name

SA-16  
Signature or Initials of Custodian

14:07  
Date/Time

Summit Scientific

M Clements

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Fremont Environmental  
1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations

Project Number: [none]  
Project Manager: Paul Henehan

Reported:  
05/16/16 15:17

**Damfind D-3 Ft  
1605076-01 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: 05/05/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1605095	05/10/16	05/10/16	8015M	

Date Sampled: 05/05/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		102 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: 05/05/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1605097	05/10/16	05/12/16	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: 05/05/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		121 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		103 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	21-167		"	"	"	"	

**Semivolatile Organic Compounds by EPA Method 8270D SIM**

Date Sampled: 05/05/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	1605115	05/12/16	05/13/16	EPA 8270D SIM	

Summit Scientific

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Fremont Environmental  
1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations

Project Number: [none]  
Project Manager: Paul Henehan

Reported:  
05/16/16 15:17

**Damfind D-3 Ft  
1605076-01 (Soil)**

**Summit Scientific**

**Semivolatile Organic Compounds by EPA Method 8270D SIM**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthylene	ND	0.00500	mg/kg	1	1605115	05/12/16	05/13/16	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
<b>Chrysene</b>	<b>0.0193</b>	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Naphthalene	ND	0.00500	"	"	"	"	"	"	
Phenanthrene	ND	0.00500	"	"	"	"	"	"	
<b>Pyrene</b>	<b>0.00756</b>	0.00500	"	"	"	"	"	"	

Date Sampled: 05/05/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		88.6 %	35-150		"	"	"	"	
Surrogate: Fluoranthene-d10		74.0 %	35-150		"	"	"	"	

**Total Metals by EPA Method 6020 - Dry Weight Basis**

Date Sampled: 05/05/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Arsenic</b>	<b>1.31</b>	0.106	mg/kg dry	1	1605091	05/10/16	05/10/16	EPA 6020A	

**Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis**

Date Sampled: 05/05/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Fremont Environmental  
1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
05/16/16 15:17

**Damfind D-3 Ft**  
**1605076-01 (Soil)**

**Summit Scientific**

**Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis**

Analyte	Result	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	971	11.8 mg/kg dry	1	1605094	05/10/16	05/11/16	EPA 6020/Mod. USDA60 6(2, 3A)	
Magnesium	397	5.90	"	"	"	"	"	
Sodium	177	5.90	"	"	"	"	"	

Date Sampled: 05/05/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.21		units	"	1605123	05/12/16	05/12/16	"	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: 05/05/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.03	0.0100	mmhos/cm	1	1605102	05/11/16	05/11/16	SM 2510B	

Date Sampled: 05/05/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.29	0.100	pH Units	"	1605090	05/10/16	05/11/16	EPA 9045	

Date Sampled: 05/05/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	84.8		%	"	1605088	05/10/16	05/11/16	% calculation	

Summit Scientific

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Fremont Environmental  
1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations

Project Number: [none]  
Project Manager: Paul Henehan

Reported:  
05/16/16 15:17

**Spicer A-2 Ft**  
**1605076-02 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1605095	05/10/16	05/10/16	8015M	

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		105 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1605097	05/10/16	05/12/16	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		126 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		102 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	21-167		"	"	"	"	

**Semivolatile Organic Compounds by EPA Method 8270D SIM**

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	1605115	05/12/16	05/13/16	EPA 8270D SIM	
Acenaphthylene	ND	0.00500	"	"	"	"	"	"	

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Fremont Environmental  
1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations

Project Number: [none]  
Project Manager: Paul Henehan

Reported:  
05/16/16 15:17

**Spicer A-2 Ft**  
**1605076-02 (Soil)**

**Summit Scientific**

**Semivolatile Organic Compounds by EPA Method 8270D SIM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	1605115	05/12/16	05/13/16	EPA 8270D SIM	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
<b>Benzo (b) fluoranthene</b>	<b>0.0127</b>	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
<b>Chrysene</b>	<b>0.0403</b>	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
<b>Fluoranthene</b>	<b>0.00790</b>	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
<b>Naphthalene</b>	<b>0.0644</b>	0.00500	"	"	"	"	"	"	
<b>Phenanthrene</b>	<b>0.145</b>	0.00500	"	"	"	"	"	"	
<b>Pyrene</b>	<b>0.0374</b>	0.00500	"	"	"	"	"	"	

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		70.5 %	35-150		"	"	"	"	
Surrogate: Fluoranthene-d10		66.0 %	35-150		"	"	"	"	

**Total Metals by EPA Method 6020 - Dry Weight Basis**

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Arsenic</b>	<b>2.15</b>	0.117	mg/kg dry	1	1605091	05/10/16	05/10/16	EPA 6020A	

**Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis**

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Calcium</b>	<b>2570</b>	11.7	mg/kg dry	1	1605094	05/10/16	05/11/16	EPA 6020/Mod. USDA60 6(2, 3A)	

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Fremont Environmental  
1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
05/16/16 15:17

**Spicer A-2 Ft**  
**1605076-02 (Soil)**

**Summit Scientific**

**Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis**

Magnesium	431	5.87 mg/kg dry	1	1605094	05/10/16	05/11/16	EPA 6020/Mod. USDA60 6(2, 3A)
Sodium	870	5.87	"	"	"	"	"

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	4.18		units	"	1605123	05/12/16	05/12/16	"	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	4.00	0.0100 mmhos/cm		1	1605102	05/11/16	05/11/16	SM 2510B	

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.25	0.100 pH Units		"	1605090	05/10/16	05/11/16	EPA 9045	

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	85.2		%	"	1605088	05/10/16	05/11/16	% calculation	

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Fremont Environmental  
1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
05/16/16 15:17

**Spicer A-3 Ft**  
**1605076-03 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>C10-C28 (DRO)</b>	<b>100</b>	50	mg/kg	1	1605095	05/10/16	05/10/16	8015M	

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: o-Terphenyl</i>		108 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1605097	05/10/16	05/11/16	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>0.0078</b>	0.0050	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>0.032</b>	0.0050	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>7.3</b>	0.50	"	"	"	"	"	"	

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		122 %	23-173		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		97.6 %	20-170		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		98.1 %	21-167		"	"	"	"	

**Semivolatile Organic Compounds by EPA Method 8270D SIM**

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	1605115	05/12/16	05/13/16	EPA 8270D SIM	
Acenaphthylene	ND	0.00500	"	"	"	"	"	"	

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Fremont Environmental  
1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations

Project Number: [none]  
Project Manager: Paul Henehan

Reported:  
05/16/16 15:17

**Spicer A-3 Ft**  
**1605076-03 (Soil)**

**Summit Scientific**

**Semivolatile Organic Compounds by EPA Method 8270D SIM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	1605115	05/12/16	05/13/16	EPA 8270D SIM	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
<b>Benzo (b) fluoranthene</b>	<b>0.0389</b>	0.00500	"	"	"	"	"	"	
<b>Benzo (k) fluoranthene</b>	<b>0.0392</b>	0.00500	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
<b>Chrysene</b>	<b>0.0544</b>	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
<b>Fluoranthene</b>	<b>0.0258</b>	0.00500	"	"	"	"	"	"	
<b>Fluorene</b>	<b>0.163</b>	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
<b>Naphthalene</b>	<b>0.571</b>	0.00500	"	"	"	"	"	"	
<b>Phenanthrene</b>	<b>0.324</b>	0.00500	"	"	"	"	"	"	
<b>Pyrene</b>	<b>0.115</b>	0.00500	"	"	"	"	"	"	

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		69.1 %	35-150		"	"	"	"	
Surrogate: Fluoranthene-d10		66.7 %	35-150		"	"	"	"	

**Total Metals by EPA Method 6020 - Dry Weight Basis**

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Arsenic</b>	<b>2.59</b>	0.114	mg/kg dry	1	1605091	05/10/16	05/10/16	EPA 6020A	

**Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis**

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Calcium</b>	<b>1260</b>	10.4	mg/kg dry	1	1605094	05/10/16	05/11/16	EPA 6020/Mod. USDA60 6(2, 3A)	

Summit Scientific

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Fremont Environmental  
1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
05/16/16 15:17

**Spicer A-3 Ft**  
**1605076-03 (Soil)**

**Summit Scientific**

**Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis**

Magnesium	532	5.20	mg/kg dry	1	1605094	05/10/16	05/11/16	EPA 6020/Mod. USDA60 6(2, 3A)	
Sodium	945	5.20	"	"	"	"	"	"	

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	5.63		units	"	1605123	05/12/16	05/12/16	"	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.70	0.0100	mmhos/cm	1	1605102	05/11/16	05/11/16	SM 2510B	

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.69	0.100	pH Units	"	1605090	05/10/16	05/11/16	EPA 9045	

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	87.4		%	"	1605088	05/10/16	05/11/16	% calculation	

Summit Scientific

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Fremont Environmental  
1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations

Project Number: [none]  
Project Manager: Paul Henehan

Reported:  
05/16/16 15:17

**Mutual C-4,5 Ft**  
**1605076-04 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	43000	500	mg/kg	10	1605095	05/10/16	05/13/16	8015M	

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		378 %	30-150		"	"	"	"	S-02

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	13	0.20	mg/kg	100	1605097	05/10/16	05/10/16	EPA 8260B	
Toluene	89	0.50	"	"	"	"	"	"	
Ethylbenzene	61	0.50	"	"	"	"	"	"	
Xylenes (total)	290	5.0	"	1000	"	"	05/11/16	"	
Gasoline Range Hydrocarbons	16000	500	"	"	"	"	05/10/16	"	

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		115 %	23-173		"	"	05/11/16	"	
Surrogate: Toluene-d8		103 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.2 %	21-167		"	"	"	"	

**Semivolatile Organic Compounds by EPA Method 8270D SIM**

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	1.04	0.500	mg/kg	100	1605115	05/12/16	05/12/16	EPA 8270D SIM	R-01
Acenaphthylene	ND	0.0500	"	10	"	"	05/13/16	"	R-01

Summit Scientific

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Fremont Environmental  
1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations

Project Number: [none]  
Project Manager: Paul Henehan

Reported:  
05/16/16 15:17

**Mutual C-4,5 Ft**  
**1605076-04 (Soil)**

**Summit Scientific**

**Semivolatile Organic Compounds by EPA Method 8270D SIM**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.0500	mg/kg	10	1605115	05/12/16	05/13/16	EPA 8270D SIM	R-01
Benzo (a) anthracene	ND	0.500	"	100	"	"	05/12/16	"	R-01
<b>Benzo (b) fluoranthene</b>	<b>0.209</b>	0.0500	"	10	"	"	05/13/16	"	R-01
Benzo (k) fluoranthene	ND	0.0500	"	"	"	"	"	"	R-01
Benzo (g,h,i) perylene	ND	0.0500	"	"	"	"	"	"	R-01
Benzo (a) pyrene	ND	0.0500	"	"	"	"	"	"	R-01
<b>Chrysene</b>	<b>0.902</b>	0.0500	"	"	"	"	"	"	R-01
Dibenz (a,h) anthracene	ND	0.0500	"	"	"	"	"	"	R-01
<b>Fluoranthene</b>	<b>0.141</b>	0.0500	"	"	"	"	"	"	R-01
<b>Fluorene</b>	<b>2.83</b>	0.500	"	100	"	"	05/12/16	"	R-01
Indeno (1,2,3-cd) pyrene	ND	0.0500	"	10	"	"	05/13/16	"	R-01
<b>Naphthalene</b>	<b>11.1</b>	0.500	"	100	"	"	"	"	R-01
<b>Phenanthrene</b>	<b>5.68</b>	0.500	"	"	"	"	"	"	R-01
<b>Pyrene</b>	<b>0.839</b>	0.0500	"	10	"	"	"	"	R-01

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		32.4 %	35-150		"	"	"	"	S-04
Surrogate: Fluoranthene-d10		28.5 %	35-150		"	"	"	"	S-04

**Total Metals by EPA Method 6020 - Dry Weight Basis**

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Arsenic</b>	<b>3.12</b>	0.161	mg/kg dry	1	1605091	05/10/16	05/10/16	EPA 6020A	

**Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis**

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Calcium</b>	<b>4670</b>	16.1	mg/kg dry	1	1605094	05/10/16	05/11/16	EPA 6020/Mod. USDA60 6(2, 3A)	

Summit Scientific

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Fremont Environmental  
1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
05/16/16 15:17

**Mutual C-4,5 Ft**  
**1605076-04 (Soil)**

**Summit Scientific**

**Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis**

Magnesium	241	8.06 mg/kg dry	1	1605094	05/10/16	05/11/16	EPA 6020/Mod. USDA60 6(2, 3A)
Sodium	1760	8.06	"	"	"	"	"

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	6.81		units	"	1605123	05/12/16	05/12/16	"	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	4.26	0.0100 mmhos/cm		1	1605102	05/11/16	05/11/16	SM 2510B	

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.33	0.100 pH Units		"	1605090	05/10/16	05/11/16	EPA 9045	

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	62.0		%	"	1605088	05/10/16	05/11/16	% calculation	

Summit Scientific

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Fremont Environmental  
1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations

Project Number: [none]  
Project Manager: Paul Henehan

Reported:  
05/16/16 15:17

**Mutual D5 Ft**  
**1605076-05 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	2200	50	mg/kg	1	1605095	05/10/16	05/10/16	8015M	

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		247 %	30-150		"	"	"	"	S-02

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1605097	05/10/16	05/12/16	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	31	0.50	"	"	"	"	"	"	

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		114 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		96.2 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.0 %	21-167		"	"	"	"	

**Semivolatile Organic Compounds by EPA Method 8270D SIM**

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	1605115	05/12/16	05/13/16	EPA 8270D SIM	
Acenaphthylene	ND	0.00500	"	"	"	"	"	"	

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Fremont Environmental  
1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations

Project Number: [none]  
Project Manager: Paul Henehan

Reported:  
05/16/16 15:17

**Mutual D5 Ft**  
**1605076-05 (Soil)**

**Summit Scientific**

**Semivolatile Organic Compounds by EPA Method 8270D SIM**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	1605115	05/12/16	05/13/16	EPA 8270D SIM	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
<b>Benzo (b) fluoranthene</b>	<b>0.0491</b>	0.00500	"	"	"	"	"	"	
<b>Benzo (k) fluoranthene</b>	<b>0.0487</b>	0.00500	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
<b>Fluoranthene</b>	<b>0.0186</b>	0.00500	"	"	"	"	"	"	
<b>Fluorene</b>	<b>4.14</b>	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Naphthalene	ND	0.00500	"	"	"	"	"	"	
<b>Phenanthrene</b>	<b>1.09</b>	0.500	"	100	"	"	"	"	
Pyrene	ND	0.00500	"	1	"	"	"	"	

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		103 %	35-150		"	"	"	"	
Surrogate: Fluoranthene-d10		53.3 %	35-150		"	"	"	"	

**Total Metals by EPA Method 6020 - Dry Weight Basis**

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Arsenic</b>	<b>2.57</b>	0.138	mg/kg dry	1	1605091	05/10/16	05/10/16	EPA 6020A	

**Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis**

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Calcium</b>	<b>1420</b>	12.5	mg/kg dry	1	1605094	05/10/16	05/11/16	EPA 6020/Mod. USDA60 6(2, 3A)	

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Fremont Environmental  
1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
05/16/16 15:17

**Mutual D5 Ft**  
**1605076-05 (Soil)**

**Summit Scientific**

**Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis**

Magnesium	98.9	6.27	mg/kg dry	1	1605094	05/10/16	05/11/16	EPA 6020/Mod. USDA60 6(2, 3A)	
Sodium	886	6.27	"	"	"	"	"	"	

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	6.13		units	"	1605123	05/12/16	05/12/16	"	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.24	0.0100	mmhos/cm	1	1605102	05/11/16	05/11/16	SM 2510B	

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.17	0.100	pH Units	"	1605090	05/10/16	05/11/16	EPA 9045	

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	72.5		%	"	1605088	05/10/16	05/11/16	% calculation	

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Fremont Environmental  
1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
05/16/16 15:17

**Mutual F 3.5 Ft**  
**1605076-06 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>C10-C28 (DRO)</b>	<b>960</b>	50	mg/kg	1	1605095	05/10/16	05/10/16	8015M	

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: o-Terphenyl</i>		138 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1605097	05/10/16	05/13/16	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>12</b>	0.50	"	"	"	"	"	"	

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		116 %	23-173		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		98.8 %	20-170		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		106 %	21-167		"	"	"	"	

**Semivolatile Organic Compounds by EPA Method 8270D SIM**

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Acenaphthene</b>	<b>0.0645</b>	0.00500	mg/kg	1	1605115	05/12/16	05/13/16	EPA 8270D SIM	
Acenaphthylene	ND	0.00500	"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental  
1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations

Project Number: [none]  
Project Manager: Paul Henehan

Reported:  
05/16/16 15:17

**Mutual F 3.5 Ft**  
**1605076-06 (Soil)**

**Summit Scientific**

**Semivolatile Organic Compounds by EPA Method 8270D SIM**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	1605115	05/12/16	05/13/16	EPA 8270D SIM	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
<b>Benzo (b) fluoranthene</b>	<b>0.0217</b>	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
<b>Fluoranthene</b>	<b>0.0130</b>	0.00500	"	"	"	"	"	"	
<b>Fluorene</b>	<b>0.266</b>	0.250	"	50	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	1	"	"	"	"	
<b>Naphthalene</b>	<b>0.128</b>	0.00500	"	"	"	"	"	"	
<b>Phenanthrene</b>	<b>0.664</b>	0.250	"	50	"	"	"	"	
<b>Pyrene</b>	<b>0.152</b>	0.00500	"	1	"	"	"	"	

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		112 %	35-150		"	"	"	"	
Surrogate: Fluoranthene-d10		67.7 %	35-150		"	"	"	"	

**Total Metals by EPA Method 6020 - Dry Weight Basis**

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Arsenic</b>	<b>2.38</b>	0.110	mg/kg dry	1	1605091	05/10/16	05/10/16	EPA 6020A	

**Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis**

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Calcium</b>	<b>829</b>	12.2	mg/kg dry	1	1605094	05/10/16	05/11/16	EPA 6020/Mod. USDA60 6(2, 3A)	

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Fremont Environmental  
1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
05/16/16 15:17

**Mutual F 3.5 Ft**  
**1605076-06 (Soil)**

**Summit Scientific**

**Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis**

Magnesium	204	6.12	mg/kg dry	1	1605094	05/10/16	05/11/16	EPA 6020/Mod. USDA60 6(2, 3A)	
Sodium	777	6.12	"	"	"	"	"	"	

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	6.27		units	"	1605123	05/12/16	05/12/16	"	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.07	0.0100	mmhos/cm	1	1605102	05/11/16	05/11/16	SM 2510B	

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.42	0.100	pH Units	"	1605090	05/10/16	05/11/16	EPA 9045	

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	81.7		%	"	1605088	05/10/16	05/11/16	% calculation	

Summit Scientific

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Fremont Environmental  
1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations  
Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
05/16/16 15:17

**Hebron 2-07-A-6 Ft**  
**1605076-07 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>C10-C28 (DRO)</b>	<b>790</b>	50	mg/kg	1	1605095	05/10/16	05/10/16	8015M	

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: o-Terphenyl</i>		110 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>0.0030</b>	0.0020	mg/kg	1	1605097	05/10/16	05/11/16	EPA 8260B	
<b>Toluene</b>	<b>0.017</b>	0.0050	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>0.016</b>	0.0050	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>0.63</b>	0.0050	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>1600</b>	50	"	100	"	"	05/10/16	"	

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		121 %	23-173		"	"	05/11/16	"	
<i>Surrogate: Toluene-d8</i>		77.2 %	20-170		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		183 %	21-167		"	"	"	"	S-02

**Semivolatile Organic Compounds by EPA Method 8270D SIM**

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Acenaphthene</b>	<b>0.0508</b>	0.00500	mg/kg	1	1605115	05/12/16	05/13/16	EPA 8270D SIM	
Acenaphthylene	ND	0.00500	"	"	"	"	"	"	

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Fremont Environmental  
1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations  
Project Number: [none]  
Project Manager: Paul Henehan

Reported:  
05/16/16 15:17

**Hebron 2-07-A-6 Ft**  
**1605076-07 (Soil)**

**Summit Scientific**

**Semivolatile Organic Compounds by EPA Method 8270D SIM**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	1605115	05/12/16	05/13/16	EPA 8270D SIM	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
<b>Fluorene</b>	<b>0.322</b>	0.250	"	50	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	1	"	"	"	"	
<b>Naphthalene</b>	<b>0.417</b>	0.250	"	50	"	"	"	"	
<b>Phenanthrene</b>	<b>0.707</b>	0.250	"	"	"	"	"	"	
<b>Pyrene</b>	<b>0.130</b>	0.00500	"	1	"	"	"	"	

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		97.9 %	35-150		"	"	"	"	
Surrogate: Fluoranthene-d10		57.3 %	35-150		"	"	"	"	

**Total Metals by EPA Method 6020 - Dry Weight Basis**

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Arsenic</b>	<b>1.64</b>	0.125	mg/kg dry	1	1605091	05/10/16	05/10/16	EPA 6020A	

**Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis**

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Calcium</b>	<b>1280</b>	10.9	mg/kg dry	1	1605094	05/10/16	05/11/16	EPA 6020/Mod. USDA60 6(2, 3A)	

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Fremont Environmental  
1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations  
Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
05/16/16 15:17

**Hebron 2-07-A-6 Ft**  
**1605076-07 (Soil)**

**Summit Scientific**

**Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis**

Magnesium	277	5.46 mg/kg dry	1	1605094	05/10/16	05/11/16	EPA 6020/Mod. USDA60 6(2, 3A)
Sodium	991	5.46	"	"	"	"	"

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	6.55		units	"	1605123	05/12/16	05/12/16	"	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.34	0.0100 mmhos/cm		1	1605102	05/11/16	05/11/16	SM 2510B	

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.40	0.100 pH Units		"	1605090	05/10/16	05/11/16	EPA 9045	

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	80.3		%	"	1605088	05/10/16	05/11/16	% calculation	

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Fremont Environmental  
1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations  
Project Number: [none]  
Project Manager: Paul Henehan

Reported:  
05/16/16 15:17

**Hebron 2-07-B 4.5 Ft  
1605076-08 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	19000	50	mg/kg	1	1605095	05/10/16	05/10/16	8015M	

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		2160 %	30-150		"	"	"	"	S-02

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1605097	05/10/16	05/11/16	EPA 8260B	
Toluene	1.4	0.50	"	100	"	"	05/10/16	"	
Ethylbenzene	ND	0.0050	"	1	"	"	05/11/16	"	
Xylenes (total)	0.14	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	8600	50	"	100	"	"	05/10/16	"	

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		122 %	23-173		"	"	05/11/16	"	
Surrogate: Toluene-d8		55.2 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		440 %	21-167		"	"	"	"	S-02

**Semivolatile Organic Compounds by EPA Method 8270D SIM**

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	1.50	0.746	mg/kg	100	1605115	05/12/16	05/12/16	EPA 8270D SIM	
Acenaphthylene	ND	0.0746	"	10	"	"	05/13/16	"	

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Fremont Environmental  
1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations  
Project Number: [none]  
Project Manager: Paul Henehan

Reported:  
05/16/16 15:17

**Hebron 2-07-B 4.5 Ft  
1605076-08 (Soil)**

**Summit Scientific**

**Semivolatile Organic Compounds by EPA Method 8270D SIM**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.0746	mg/kg	10	1605115	05/12/16	05/13/16	EPA 8270D SIM	
Benzo (a) anthracene	ND	0.0746	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.0746	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.0746	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.0746	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.0746	"	"	"	"	"	"	
Chrysene	ND	0.0746	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.0746	"	"	"	"	"	"	
Fluoranthene	0.129	0.0746	"	"	"	"	"	"	
Fluorene	3.23	0.746	"	100	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.0746	"	10	"	"	"	"	
Naphthalene	4.12	0.746	"	100	"	"	"	"	
Phenanthrene	5.37	0.746	"	"	"	"	"	"	
Pyrene	1.18	0.0746	"	10	"	"	"	"	

Date Sampled: 05/05/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		66.4 %	35-150		"	"	"	"	
Surrogate: Fluoranthene-d10		23.6 %	35-150		"	"	"	"	S-04

**Total Metals by EPA Method 6020 - Dry Weight Basis**

Date Sampled: 05/05/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.40	0.115	mg/kg dry	1	1605091	05/10/16	05/10/16	EPA 6020A	

**Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis**

Date Sampled: 05/05/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	672	10.3	mg/kg dry	1	1605094	05/10/16	05/11/16	EPA 6020/Mod. USDA60 6(2, 3A)	

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Fremont Environmental  
1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations  
Project Number: [none]  
Project Manager: Paul Henehan

Reported:  
05/16/16 15:17

**Hebron 2-07-B 4.5 Ft  
1605076-08 (Soil)**

**Summit Scientific**

**Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis**

Magnesium	228	5.13	mg/kg dry	1	1605094	05/10/16	05/11/16	EPA 6020/Mod. USDA60 6(2, 3A)	
Sodium	702	5.13	"	"	"	"	"	"	

Date Sampled: 05/05/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	5.97		units	"	1605123	05/12/16	05/12/16	"	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: 05/05/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.63	0.0100	mmhos/cm	1	1605102	05/11/16	05/11/16	SM 2510B	

Date Sampled: 05/05/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.65	0.100	pH Units	"	1605090	05/10/16	05/11/16	EPA 9045	

Date Sampled: 05/05/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	87.0		%	"	1605088	05/10/16	05/11/16	% calculation	

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Fremont Environmental  
1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations  
Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
05/16/16 15:17

**Hebron 3-12-B-4 Ft**  
**1605076-09 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>C10-C28 (DRO)</b>	<b>570</b>	50	mg/kg	1	1605095	05/10/16	05/13/16	8015M	

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: o-Terphenyl</i>		155 %	30-150		"	"	"	"	S-02

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1605097	05/10/16	05/11/16	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>0.010</b>	0.0050	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>0.16</b>	0.0050	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>1600</b>	50	"	100	"	"	05/10/16	"	

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		157 %	23-173		"	"	05/11/16	"	
<i>Surrogate: Toluene-d8</i>		79.7 %	20-170		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		127 %	21-167		"	"	"	"	

**Semivolatile Organic Compounds by EPA Method 8270D SIM**

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	1605115	05/12/16	05/13/16	EPA 8270D SIM	
Acenaphthylene	ND	0.00500	"	"	"	"	"	"	

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Fremont Environmental  
1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations  
Project Number: [none]  
Project Manager: Paul Henehan

Reported:  
05/16/16 15:17

**Hebron 3-12-B-4 Ft**  
**1605076-09 (Soil)**

**Summit Scientific**

**Semivolatile Organic Compounds by EPA Method 8270D SIM**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	1605115	05/12/16	05/13/16	EPA 8270D SIM	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
<b>Benzo (b) fluoranthene</b>	<b>0.0479</b>	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
<b>Chrysene</b>	<b>0.0622</b>	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
<b>Fluoranthene</b>	<b>0.0156</b>	0.00500	"	"	"	"	"	"	
<b>Fluorene</b>	<b>0.299</b>	0.250	"	50	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	1	"	"	"	"	
Naphthalene	ND	0.0500	"	10	"	"	"	"	
<b>Phenanthrene</b>	<b>0.719</b>	0.250	"	50	"	"	"	"	
<b>Pyrene</b>	<b>0.204</b>	0.0500	"	10	"	"	"	"	

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		168 %	35-150		"	"	"	"	S-02
Surrogate: Fluoranthene-d10		47.0 %	35-150		"	"	"	"	

**Total Metals by EPA Method 6020 - Dry Weight Basis**

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Arsenic</b>	<b>1.99</b>	0.115	mg/kg dry	1	1605091	05/10/16	05/10/16	EPA 6020A	

**Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis**

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Calcium</b>	<b>2620</b>	12.7	mg/kg dry	1	1605094	05/10/16	05/11/16	EPA 6020/Mod. USDA60 6(2, 3A)	

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Fremont Environmental  
1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations  
Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
05/16/16 15:17

**Hebron 3-12-B-4 Ft**  
**1605076-09 (Soil)**

**Summit Scientific**

**Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis**

Magnesium	375	6.34	mg/kg dry	1	1605094	05/10/16	05/11/16	EPA 6020/Mod. USDA60 6(2, 3A)	
Sodium	886	6.34	"	"	"	"	"	"	

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	4.29		units	"	1605123	05/12/16	05/12/16	"	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.49	0.0100	mmhos/cm	1	1605102	05/11/16	05/11/16	SM 2510B	

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.34	0.100	pH Units	"	1605090	05/10/16	05/11/16	EPA 9045	

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	78.9		%	"	1605088	05/10/16	05/11/16	% calculation	

Summit Scientific

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Fremont Environmental  
1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations  
Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
05/16/16 15:17

**Hebron 3-12-C-7 Ft**  
**1605076-10 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>C10-C28 (DRO)</b>	<b>97</b>	50	mg/kg	1	1605095	05/10/16	05/13/16	8015M	

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: o-Terphenyl</i>		109 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>0.43</b>	0.0020	mg/kg	1	1605097	05/10/16	05/11/16	EPA 8260B	
<b>Toluene</b>	<b>9.4</b>	0.50	"	100	"	"	05/10/16	"	
<b>Ethylbenzene</b>	<b>7.6</b>	0.50	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>16</b>	0.0050	"	1	"	"	05/11/16	"	
<b>Gasoline Range Hydrocarbons</b>	<b>4300</b>	50	"	100	"	"	05/10/16	"	

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		391 %	23-173		"	"	05/11/16	"	S-02
<i>Surrogate: Toluene-d8</i>		199 %	20-170		"	"	"	"	S-02
<i>Surrogate: 4-Bromofluorobenzene</i>		444 %	21-167		"	"	"	"	S-02

**Semivolatile Organic Compounds by EPA Method 8270D SIM**

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Acenaphthene</b>	<b>0.534</b>	0.500	mg/kg	100	1605115	05/12/16	05/14/16	EPA 8270D SIM	R-01
Acenaphthylene	ND	0.0500	"	10	"	"	"	"	R-01

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Fremont Environmental  
1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations  
Project Number: [none]  
Project Manager: Paul Henehan

Reported:  
05/16/16 15:17

**Hebron 3-12-C-7 Ft**  
**1605076-10 (Soil)**

**Summit Scientific**

**Semivolatile Organic Compounds by EPA Method 8270D SIM**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.0500	mg/kg	10	1605115	05/12/16	05/14/16	EPA 8270D SIM	R-01
<b>Benzo (a) anthracene</b>	<b>0.612</b>	0.0500	"	"	"	"	"	"	R-01
<b>Benzo (b) fluoranthene</b>	<b>0.152</b>	0.0500	"	"	"	"	"	"	R-01
Benzo (k) fluoranthene	ND	0.500	"	100	"	"	"	"	R-01
<b>Benzo (g,h,i) perylene</b>	<b>0.0678</b>	0.0500	"	10	"	"	"	"	R-01
Benzo (a) pyrene	ND	0.0500	"	"	"	"	"	"	R-01
<b>Chrysene</b>	<b>0.657</b>	0.0500	"	"	"	"	"	"	R-01
Dibenz (a,h) anthracene	ND	0.0500	"	"	"	"	"	"	R-01
<b>Fluoranthene</b>	<b>0.170</b>	0.0500	"	"	"	"	"	"	R-01
<b>Fluorene</b>	<b>2.18</b>	0.500	"	100	"	"	"	"	R-01
Indeno (1,2,3-cd) pyrene	ND	0.0500	"	10	"	"	"	"	R-01
<b>Naphthalene</b>	<b>7.44</b>	0.500	"	100	"	"	"	"	R-01
<b>Phenanthrene</b>	<b>4.47</b>	0.500	"	"	"	"	"	"	R-01
<b>Pyrene</b>	<b>0.713</b>	0.0500	"	10	"	"	"	"	R-01

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		44.8 %	35-150		"	"	"	"	R-01
Surrogate: Fluoranthene-d10		32.4 %	35-150		"	"	"	"	R-01, S-04

**Total Metals by EPA Method 6020 - Dry Weight Basis**

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Arsenic</b>	<b>2.86</b>	0.179	mg/kg dry	1	1605091	05/10/16	05/10/16	EPA 6020A	

**Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis**

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Calcium</b>	<b>14700</b>	17.6	mg/kg dry	1	1605094	05/10/16	05/11/16	EPA 6020/Mod. USDA60 6(2, 3A)	

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Fremont Environmental  
1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations  
Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
05/16/16 15:17

**Hebron 3-12-C-7 Ft  
1605076-10 (Soil)**

**Summit Scientific**

**Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis**

Magnesium	1230	8.82 mg/kg dry	1	1605094	05/10/16	05/11/16	EPA 6020/Mod. USDA60 6(2, 3A)
Sodium	4450	8.82	"	"	"	"	"

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	9.47		units	"	1605123	05/12/16	05/12/16	"	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.680	0.0100 mmhos/cm		1	1605102	05/11/16	05/11/16	SM 2510B	

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.71	0.100 pH Units		"	1605090	05/10/16	05/11/16	EPA 9045	

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	50.6		%	"	1605088	05/10/16	05/11/16	% calculation	

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Fremont Environmental  
1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations  
Project Number: [none]  
Project Manager: Paul Henehan

Reported:  
05/16/16 15:17

**Hebron 3-12-D-3 Ft**  
**1605076-11 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	430	50	mg/kg	1	1605095	05/10/16	05/13/16	8015M	

Date Sampled: **05/05/16 00:00**

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

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1605097	05/10/16	05/12/16	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	1.0	0.50	"	"	"	"	"	"	

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		119 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		102 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.6 %	21-167		"	"	"	"	

**Semivolatile Organic Compounds by EPA Method 8270D SIM**

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	1605115	05/12/16	05/13/16	EPA 8270D SIM	
Acenaphthylene	ND	0.00500	"	"	"	"	"	"	

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Fremont Environmental  
1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations  
Project Number: [none]  
Project Manager: Paul Henehan

Reported:  
05/16/16 15:17

**Hebron 3-12-D-3 Ft  
1605076-11 (Soil)**

**Summit Scientific**

**Semivolatile Organic Compounds by EPA Method 8270D SIM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	1605115	05/12/16	05/13/16	EPA 8270D SIM	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Naphthalene	ND	0.00500	"	"	"	"	"	"	
Phenanthrene	ND	0.00500	"	"	"	"	"	"	
<b>Pyrene</b>	<b>0.0114</b>	0.00500	"	"	"	"	"	"	

Date Sampled: 05/05/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		92.2 %	35-150		"	"	"	"	
Surrogate: Fluoranthene-d10		52.1 %	35-150		"	"	"	"	

**Total Metals by EPA Method 6020 - Dry Weight Basis**

Date Sampled: 05/05/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Arsenic</b>	<b>1.57</b>	0.112	mg/kg dry	1	1605091	05/10/16	05/10/16	EPA 6020A	

**Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis**

Date Sampled: 05/05/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Calcium</b>	<b>1850</b>	11.2	mg/kg dry	1	1605094	05/10/16	05/11/16	EPA 6020/Mod. USDA60 6(2, 3A)	

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Fremont Environmental  
1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations  
Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
05/16/16 15:17

**Hebron 3-12-D-3 Ft  
1605076-11 (Soil)**

**Summit Scientific**

**Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis**

Magnesium	317	5.60	mg/kg dry	1	1605094	05/10/16	05/11/16	EPA 6020/Mod. USDA60 6(2, 3A)	
Sodium	274	5.60	"	"	"	"	"	"	

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.55		units	"	1605123	05/12/16	05/12/16	"	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.805	0.0100	mmhos/cm	1	1605102	05/11/16	05/11/16	SM 2510B	

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.49	0.100	pH Units	"	1605090	05/10/16	05/11/16	EPA 9045	

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	89.3		%	"	1605088	05/10/16	05/11/16	% calculation	

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Fremont Environmental  
1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
05/16/16 15:17

**Peterson B-1 Ft**  
**1605076-12 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/06/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>C10-C28 (DRO)</b>	<b>140</b>	50	mg/kg	1	1605095	05/10/16	05/13/16	8015M	

Date Sampled: **05/06/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: o-Terphenyl</i>		107 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **05/06/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1605097	05/10/16	05/11/16	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>14</b>	0.50	"	"	"	"	"	"	

Date Sampled: **05/06/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		135 %	23-173		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		104 %	20-170		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		103 %	21-167		"	"	"	"	

**Semivolatile Organic Compounds by EPA Method 8270D SIM**

Date Sampled: **05/06/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	1605115	05/12/16	05/13/16	EPA 8270D SIM	
Acenaphthylene	ND	0.00500	"	"	"	"	"	"	

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Fremont Environmental  
1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations

Project Number: [none]  
Project Manager: Paul Henehan

Reported:  
05/16/16 15:17

**Peterson B-1 Ft**  
**1605076-12 (Soil)**

**Summit Scientific**

**Semivolatile Organic Compounds by EPA Method 8270D SIM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	1605115	05/12/16	05/13/16	EPA 8270D SIM	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Naphthalene	ND	0.00500	"	"	"	"	"	"	
Phenanthrene	ND	0.00500	"	"	"	"	"	"	
<b>Pyrene</b>	<b>0.0639</b>	<b>0.00500</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	

Date Sampled: 05/06/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		95.1 %	35-150		"	"	"	"	
Surrogate: Fluoranthene-d10		48.8 %	35-150		"	"	"	"	

**Total Metals by EPA Method 6020 - Dry Weight Basis**

Date Sampled: 05/06/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Arsenic</b>	<b>1.22</b>	<b>0.106</b>	<b>mg/kg dry</b>	<b>1</b>	<b>1605091</b>	<b>05/10/16</b>	<b>05/10/16</b>	<b>EPA 6020A</b>	

**Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis**

Date Sampled: 05/06/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Calcium</b>	<b>3620</b>	<b>10.6</b>	<b>mg/kg dry</b>	<b>1</b>	<b>1605094</b>	<b>05/10/16</b>	<b>05/11/16</b>	<b>EPA 6020/Mod. USDA60 6(2, 3A)</b>	

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Fremont Environmental  
1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations

Project Number: [none]  
Project Manager: Paul Henehan

Reported:  
05/16/16 15:17

**Peterson B-1 Ft**  
**1605076-12 (Soil)**

**Summit Scientific**

**Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis**

Magnesium	565	5.29	mg/kg dry	1	1605094	05/10/16	05/11/16	EPA 6020/Mod. USDA60 6(2, 3A)	
Sodium	783	5.29	"	"	"	"	"	"	

Date Sampled: 05/06/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.20		units	"	1605123	05/12/16	05/12/16	"	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: 05/06/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.68	0.0100	mmhos/cm	1	1605102	05/11/16	05/11/16	SM 2510B	

Date Sampled: 05/06/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.38	0.100	pH Units	"	1605090	05/10/16	05/11/16	EPA 9045	

Date Sampled: 05/06/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	94.6		%	"	1605088	05/10/16	05/11/16	% calculation	

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Fremont Environmental  
1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations

Project Number: [none]  
Project Manager: Paul Henehan

Reported:  
05/16/16 15:17

**Peterson C-5 Ft  
1605076-13 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/06/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	150	50	mg/kg	1	1605095	05/10/16	05/13/16	8015M	

Date Sampled: **05/06/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		113 %	30-150		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **05/06/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	0.010	0.0020	mg/kg	1	1605097	05/10/16	05/11/16	EPA 8260B	
Toluene	0.18	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.26	0.0050	"	"	"	"	"	"	
Xylenes (total)	2.6	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	3400	50	"	100	"	"	05/11/16	"	

Date Sampled: **05/06/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		126 %	23-173		"	"	05/11/16	"	
Surrogate: Toluene-d8		71.2 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		207 %	21-167		"	"	"	"	S-02

**Semivolatile Organic Compounds by EPA Method 8270D SIM**

Date Sampled: **05/06/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	0.0564	0.0500	mg/kg	10	1605115	05/12/16	05/13/16	EPA 8270D SIM	
Acenaphthylene	ND	0.00500	"	1	"	"	"	"	

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Fremont Environmental  
1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations

Project Number: [none]  
Project Manager: Paul Henehan

Reported:  
05/16/16 15:17

**Peterson C-5 Ft**  
**1605076-13 (Soil)**

**Summit Scientific**

**Semivolatile Organic Compounds by EPA Method 8270D SIM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	1605115	05/12/16	05/13/16	EPA 8270D SIM	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
<b>Benzo (b) fluoranthene</b>	<b>0.0581</b>	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
<b>Fluoranthene</b>	<b>0.0257</b>	0.00500	"	"	"	"	"	"	
<b>Fluorene</b>	<b>0.153</b>	0.0500	"	10	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	1	"	"	"	"	
<b>Naphthalene</b>	<b>0.263</b>	0.0500	"	10	"	"	"	"	
<b>Phenanthrene</b>	<b>0.324</b>	0.0500	"	"	"	"	"	"	
<b>Pyrene</b>	<b>0.0211</b>	0.00500	"	1	"	"	"	"	

Date Sampled: **05/06/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		124 %	35-150		"	"	"	"	
Surrogate: Fluoranthene-d10		58.4 %	35-150		"	"	"	"	

**Total Metals by EPA Method 6020 - Dry Weight Basis**

Date Sampled: **05/06/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Arsenic</b>	<b>2.57</b>	0.149	mg/kg dry	1	1605091	05/10/16	05/10/16	EPA 6020A	

**Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis**

Date Sampled: **05/06/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Calcium</b>	<b>3120</b>	13.5	mg/kg dry	1	1605094	05/10/16	05/11/16	EPA 6020/Mod. USDA60 6(2, 3A)	

Summit Scientific

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Fremont Environmental  
1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
05/16/16 15:17

**Peterson C-5 Ft  
1605076-13 (Soil)**

**Summit Scientific**

**Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis**

Magnesium	424	6.76 mg/kg dry	1	1605094	05/10/16	05/11/16	EPA 6020/Mod. USDA60 6(2, 3A)
Sodium	1600	6.76	"	"	"	"	"

Date Sampled: **05/06/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	7.13		units	"	1605123	05/12/16	05/12/16	"	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **05/06/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.28	0.0100 mmhos/cm		1	1605102	05/11/16	05/11/16	SM 2510B	

Date Sampled: **05/06/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.99	0.100	pH Units	"	1605090	05/10/16	05/11/16	EPA 9045	

Date Sampled: **05/06/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	67.2		%	"	1605088	05/10/16	05/11/16	% calculation	

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Fremont Environmental  
1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations

Project Number: [none]  
Project Manager: Paul Henehan

Reported:  
05/16/16 15:17

**Peterson D-6 Ft  
1605076-14 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/06/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1605095	05/10/16	05/12/16	8015M	

Date Sampled: **05/06/16 00:00**

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

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **05/06/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1605097	05/10/16	05/11/16	EPA 8260B	
Toluene	1.4	0.50	"	100	"	"	05/11/16	"	
Ethylbenzene	ND	0.0050	"	1	"	"	05/11/16	"	
Xylenes (total)	0.0074	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	23	0.50	"	"	"	"	"	"	

Date Sampled: **05/06/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		123 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		106 %	21-167		"	"	"	"	

**Semivolatile Organic Compounds by EPA Method 8270D SIM**

Date Sampled: **05/06/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	0.0335	0.00500	mg/kg	1	1605115	05/12/16	05/13/16	EPA 8270D SIM	
Acenaphthylene	ND	0.00500	"	"	"	"	"	"	

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Fremont Environmental  
1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations

Project Number: [none]  
Project Manager: Paul Henehan

Reported:  
05/16/16 15:17

**Peterson D-6 Ft  
1605076-14 (Soil)**

**Summit Scientific**

**Semivolatile Organic Compounds by EPA Method 8270D SIM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	1605115	05/12/16	05/13/16	EPA 8270D SIM	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
<b>Benzo (b) fluoranthene</b>	<b>0.0204</b>	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
<b>Fluoranthene</b>	<b>0.00704</b>	0.00500	"	"	"	"	"	"	
<b>Fluorene</b>	<b>0.0645</b>	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
<b>Naphthalene</b>	<b>0.106</b>	0.00500	"	"	"	"	"	"	
<b>Phenanthrene</b>	<b>0.216</b>	0.0500	"	10	"	"	"	"	
<b>Pyrene</b>	<b>0.0822</b>	0.00500	"	1	"	"	"	"	

Date Sampled: **05/06/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		80.8 %	35-150		"	"	"	"	
Surrogate: Fluoranthene-d10		49.0 %	35-150		"	"	"	"	

**Total Metals by EPA Method 6020 - Dry Weight Basis**

Date Sampled: **05/06/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Arsenic</b>	<b>1.68</b>	0.127	mg/kg dry	1	1605091	05/10/16	05/10/16	EPA 6020A	

**Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis**

Date Sampled: **05/06/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Calcium</b>	<b>4580</b>	12.7	mg/kg dry	1	1605094	05/10/16	05/11/16	EPA 6020/Mod. USDA60 6(2, 3A)	

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Fremont Environmental  
1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
05/16/16 15:17

**Peterson D-6 Ft  
1605076-14 (Soil)**

**Summit Scientific**

**Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis**

Magnesium	427	6.35	mg/kg dry	1	1605094	05/10/16	05/11/16	EPA 6020/Mod. USDA60 6(2, 3A)	
Sodium	1390	6.35	"	"	"	"	"	"	

Date Sampled: **05/06/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	5.27		units	"	1605123	05/12/16	05/12/16	"	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **05/06/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.39	0.0100	mmhos/cm	1	1605102	05/11/16	05/11/16	SM 2510B	

Date Sampled: **05/06/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.84	0.100	pH Units	"	1605090	05/10/16	05/11/16	EPA 9045	

Date Sampled: **05/06/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	78.7		%	"	1605088	05/10/16	05/11/16	% calculation	

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Fremont Environmental  
1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations  
Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
05/16/16 15:17

**Coalmont C-2.5 Ft  
1605076-15 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/06/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>C10-C28 (DRO)</b>	<b>6300</b>	50	mg/kg	1	1605095	05/10/16	05/11/16	8015M	

Date Sampled: **05/06/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: o-Terphenyl</i>		813 %	30-150		"	"	"	"	S-02

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **05/06/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1605097	05/10/16	05/11/16	EPA 8260B	
<b>Toluene</b>	<b>1.4</b>	0.50	"	100	"	"	05/11/16	"	
Ethylbenzene	ND	0.0050	"	1	"	"	05/11/16	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>78</b>	0.50	"	"	"	"	"	"	

Date Sampled: **05/06/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		128 %	23-173		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		99.3 %	20-170		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		157 %	21-167		"	"	"	"	

**Semivolatile Organic Compounds by EPA Method 8270D SIM**

Date Sampled: **05/06/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Acenaphthene</b>	<b>0.0694</b>	0.0500	mg/kg	10	1605115	05/12/16	05/15/16	EPA 8270D SIM	R-01
Acenaphthylene	ND	0.0500	"	"	"	"	"	"	R-01

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Fremont Environmental  
1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations

Project Number: [none]  
Project Manager: Paul Henehan

Reported:  
05/16/16 15:17

**Coalmont C-2.5 Ft  
1605076-15 (Soil)**

**Summit Scientific**

**Semivolatile Organic Compounds by EPA Method 8270D SIM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.0500	mg/kg	10	1605115	05/12/16	05/15/16	EPA 8270D SIM	R-01
Benzo (a) anthracene	ND	0.0500	"	"	"	"	"	"	R-01
Benzo (b) fluoranthene	ND	0.0500	"	"	"	"	"	"	R-01
Benzo (k) fluoranthene	ND	0.0500	"	"	"	"	"	"	R-01
Benzo (g,h,i) perylene	ND	0.0500	"	"	"	"	"	"	R-01
Benzo (a) pyrene	ND	0.0500	"	"	"	"	"	"	R-01
Chrysene	ND	0.0500	"	"	"	"	"	"	R-01
Dibenz (a,h) anthracene	ND	0.0500	"	"	"	"	"	"	R-01
Fluoranthene	ND	0.0500	"	"	"	"	"	"	R-01
Fluorene	ND	0.0500	"	"	"	"	"	"	R-01
Indeno (1,2,3-cd) pyrene	ND	0.0500	"	"	"	"	"	"	R-01
Naphthalene	ND	0.0500	"	"	"	"	"	"	R-01
Phenanthrene	ND	0.0500	"	"	"	"	"	"	R-01
<b>Pyrene</b>	<b>0.251</b>	<b>0.0500</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>R-01</b>

Date Sampled: 05/06/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		337 %	35-150		"	"	"	"	R-01, S-02
Surrogate: Fluoranthene-d10		120 %	35-150		"	"	"	"	R-01

**Total Metals by EPA Method 6020 - Dry Weight Basis**

Date Sampled: 05/06/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Arsenic</b>	<b>0.972</b>	0.113	mg/kg dry	1	1605091	05/10/16	05/10/16	EPA 6020A	

**Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis**

Date Sampled: 05/06/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Calcium</b>	<b>721</b>	10.2	mg/kg dry	1	1605094	05/10/16	05/11/16	EPA 6020/Mod. USDA60 6(2, 3A)	

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Fremont Environmental  
1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
05/16/16 15:17

**Coalmont C-2.5 Ft  
1605076-15 (Soil)**

**Summit Scientific**

**Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis**

Magnesium	216	5.12 mg/kg dry	1	1605094	05/10/16	05/11/16	EPA 6020/Mod. USDA60 6(2, 3A)
Sodium	362	5.12 "	"	"	"	"	"

Date Sampled: **05/06/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.04		units	"	1605123	05/12/16	05/12/16	"	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **05/06/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	4.30	0.0100 mmhos/cm		1	1605102	05/11/16	05/11/16	SM 2510B	

Date Sampled: **05/06/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.89	0.100 pH Units		"	1605090	05/10/16	05/11/16	EPA 9045	

Date Sampled: **05/06/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	88.8		%	"	1605088	05/10/16	05/11/16	% calculation	

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Fremont Environmental  
1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
05/16/16 15:17

**Coalmont D-3 Ft  
1605076-16 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/06/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>C10-C28 (DRO)</b>	<b>73</b>	50	mg/kg	1	1605095	05/10/16	05/13/16	8015M	

Date Sampled: **05/06/16 00:00**

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

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **05/06/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1605097	05/10/16	05/12/16	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **05/06/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		120 %	23-173		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		99.4 %	20-170		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		101 %	21-167		"	"	"	"	

**Semivolatile Organic Compounds by EPA Method 8270D SIM**

Date Sampled: **05/06/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Acenaphthene</b>	<b>0.0437</b>	0.00500	mg/kg	1	1605115	05/12/16	05/13/16	EPA 8270D SIM	
Acenaphthylene	ND	0.00500	"	"	"	"	"	"	

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Fremont Environmental  
1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations

Project Number: [none]  
Project Manager: Paul Henehan

Reported:  
05/16/16 15:17

**Coalmont D-3 Ft  
1605076-16 (Soil)**

**Summit Scientific**

**Semivolatile Organic Compounds by EPA Method 8270D SIM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	1605115	05/12/16	05/13/16	EPA 8270D SIM	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
<b>Benzo (b) fluoranthene</b>	<b>0.0480</b>	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
<b>Chrysene</b>	<b>0.118</b>	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
<b>Fluoranthene</b>	<b>0.0102</b>	0.00500	"	"	"	"	"	"	
<b>Fluorene</b>	<b>0.0412</b>	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
<b>Naphthalene</b>	<b>0.0627</b>	0.00500	"	"	"	"	"	"	
<b>Phenanthrene</b>	<b>0.281</b>	0.0500	"	10	"	"	"	"	
<b>Pyrene</b>	<b>0.151</b>	0.00500	"	1	"	"	"	"	

Date Sampled: **05/06/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		117 %	35-150		"	"	"	"	
Surrogate: Fluoranthene-d10		65.9 %	35-150		"	"	"	"	

**Total Metals by EPA Method 6020 - Dry Weight Basis**

Date Sampled: **05/06/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Arsenic</b>	<b>3.75</b>	0.132	mg/kg dry	1	1605091	05/10/16	05/10/16	EPA 6020A	

**Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis**

Date Sampled: **05/06/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Calcium</b>	<b>7450</b>	13.2	mg/kg dry	1	1605094	05/10/16	05/11/16	EPA 6020/Mod. USDA60 6(2, 3A)	

Summit Scientific

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Fremont Environmental  
1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
05/16/16 15:17

**Coalmont D-3 Ft  
1605076-16 (Soil)**

**Summit Scientific**

**Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis**

Magnesium	360	6.62 mg/kg dry	1	1605094	05/10/16	05/11/16	EPA 6020/Mod. USDA60 6(2, 3A)
Sodium	1020	6.62	"	"	"	"	"

Date Sampled: **05/06/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.13		units	"	1605123	05/12/16	05/12/16	"	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **05/06/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.796	0.0100 mmhos/cm		1	1605102	05/11/16	05/11/16	SM 2510B	

Date Sampled: **05/06/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.63	0.100 pH Units		"	1605090	05/10/16	05/11/16	EPA 9045	

Date Sampled: **05/06/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	75.5		%	"	1605088	05/10/16	05/11/16	% calculation	

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Fremont Environmental  
1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations

Project Number: [none]  
Project Manager: Paul Henehan

Reported:  
05/16/16 15:17

**Mutual B-2 Ft**  
**1605076-17 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	2000	50	mg/kg	1	1605095	05/10/16	05/11/16	8015M	

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		260 %	30-150		"	"	"	"	S-02

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	0.12	0.0020	mg/kg	1	1605097	05/10/16	05/11/16	EPA 8260B	
Toluene	0.015	0.0050	"	"	"	"	05/11/16	"	
Ethylbenzene	0.037	0.0050	"	"	"	"	05/11/16	"	
Xylenes (total)	0.013	0.0050	"	"	"	"	05/11/16	"	
Gasoline Range Hydrocarbons	12	0.50	"	"	"	"	"	"	

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		114 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		103 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		108 %	21-167		"	"	"	"	

**Semivolatile Organic Compounds by EPA Method 8270D SIM**

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	1605115	05/12/16	05/13/16	EPA 8270D SIM	
Acenaphthylene	ND	0.00500	"	"	"	"	"	"	

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Fremont Environmental  
1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations

Project Number: [none]  
Project Manager: Paul Henehan

Reported:  
05/16/16 15:17

**Mutual B-2 Ft  
1605076-17 (Soil)**

**Summit Scientific**

**Semivolatile Organic Compounds by EPA Method 8270D SIM**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Anthracene	ND	0.00500	mg/kg	1	1605115	05/12/16	05/13/16	EPA 8270D SIM	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	0.0116	0.00500	"	"	"	"	"	"	
Fluorene	0.534	0.250	"	50	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	1	"	"	"	"	
Naphthalene	0.730	0.250	"	50	"	"	"	"	
Phenanthrene	1.30	0.250	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	1	"	"	"	"	

Date Sampled: 05/05/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		42.2 %	35-150		"	"	"	"	
Surrogate: Fluoranthene-d10		33.2 %	35-150		"	"	"	"	S-04

**Total Metals by EPA Method 6020 - Dry Weight Basis**

Date Sampled: 05/05/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	3.75	0.210	mg/kg dry	1	1605091	05/10/16	05/10/16	EPA 6020A	

**Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis**

Date Sampled: 05/05/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	2190	21.0	mg/kg dry	1	1605094	05/10/16	05/11/16	EPA 6020/Mod. USDA60 6(2, 3A)	

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1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
05/16/16 15:17

**Mutual B-2 Ft**  
**1605076-17 (Soil)**

**Summit Scientific**

**Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis**

Magnesium	137	10.5 mg/kg dry	1	1605094	05/10/16	05/11/16	EPA 6020/Mod. USDA60 6(2, 3A)
Sodium	1230	10.5	"	"	"	"	"

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	6.89		units	"	1605123	05/12/16	05/12/16	"	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.90	0.0100 mmhos/cm		1	1605102	05/11/16	05/11/16	SM 2510B	

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.66	0.100 pH Units		"	1605090	05/10/16	05/11/16	EPA 9045	

Date Sampled: **05/05/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	47.7		%	"	1605088	05/10/16	05/11/16	% calculation	

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1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
05/16/16 15:17

**Extractable Petroleum Hydrocarbons by 8015 - Quality Control**  
**Summit Scientific**

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

**Batch 1605095 - EPA 3550A**

**Blank (1605095-BLK1)**

Prepared & Analyzed: 05/10/16

C10-C28 (DRO)	ND	50	mg/kg							
Surrogate: o-Terphenyl	12.6		"	12.5	101		30-150			

**LCS (1605095-BS1)**

Prepared & Analyzed: 05/10/16

C10-C28 (DRO)	552	50	mg/kg	499	111		73-134			
Surrogate: o-Terphenyl	14.1		"	12.5	113		30-150			

**Matrix Spike (1605095-MS1)**

Source: 1605084-01

Prepared & Analyzed: 05/10/16

C10-C28 (DRO)	516	50	mg/kg	499	20.3	99.3	50-148			
Surrogate: o-Terphenyl	16.5		"	12.5	132		30-150			

**Matrix Spike Dup (1605095-MSD1)**

Source: 1605084-01

Prepared & Analyzed: 05/10/16

C10-C28 (DRO)	524	50	mg/kg	499	20.3	101	50-148	1.63	13	
Surrogate: o-Terphenyl	16.7		"	12.5	133		30-150			

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1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations  
Project Number: [none]  
Project Manager: Paul Henehan

Reported:  
05/16/16 15:17

**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 1605097 - EPA 5030 Soil MS**

**Blank (1605097-BLK1)**

Prepared: 05/10/16 Analyzed: 05/12/16

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.0050	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0452		"	0.0400		113	23-173			
Surrogate: Toluene-d8	0.0405		"	0.0400		101	20-170			
Surrogate: 4-Bromofluorobenzene	0.0388		"	0.0400		96.9	21-167			

**LCS (1605097-BS1)**

Prepared: 05/10/16 Analyzed: 05/12/16

Benzene	0.0900	0.0020	mg/kg	0.100		90.0	58-130			
Toluene	0.0909	0.0050	"	0.100		90.9	61-134			
Ethylbenzene	0.130	0.0050	"	0.0992		131	74-139			
m,p-Xylene	0.246	0.010	"	0.200		123	73-137			
o-Xylene	0.118	0.0050	"	0.0980		120	73-141			
Xylenes (total)	0.364	0.0050	"				30-150			
Gasoline Range Hydrocarbons	2.90	0.50	"				30-150			
Surrogate: 1,2-Dichloroethane-d4	0.0432		"	0.0400		108	23-173			
Surrogate: Toluene-d8	0.0396		"	0.0400		99.1	20-170			
Surrogate: 4-Bromofluorobenzene	0.0397		"	0.0400		99.2	21-167			

**LCS Dup (1605097-BSD1)**

Prepared: 05/10/16 Analyzed: 05/12/16

Benzene	0.0898	0.0020	mg/kg	0.100		89.8	58-130	0.267	13	
Toluene	0.0913	0.0050	"	0.100		91.3	61-134	0.461	16	
Ethylbenzene	0.129	0.0050	"	0.0992		130	74-139	0.695	12	
m,p-Xylene	0.247	0.010	"	0.200		124	73-137	0.304	14	
o-Xylene	0.116	0.0050	"	0.0980		118	73-141	1.62	12	
Xylenes (total)	0.363	0.0050	"				30-150	0.314	20	
Gasoline Range Hydrocarbons	2.90	0.50	"				30-150	0.151	20	
Surrogate: 1,2-Dichloroethane-d4	0.0450		"	0.0400		112	23-173			
Surrogate: Toluene-d8	0.0400		"	0.0400		99.9	20-170			
Surrogate: 4-Bromofluorobenzene	0.0402		"	0.0400		100	21-167			

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Broomfield CO, 80020

Project: COGCC-Former EE3 Locations  
Project Number: [none]  
Project Manager: Paul Henehan

Reported:  
05/16/16 15:17

**Semivolatile Organic Compounds by EPA Method 8270D SIM - Quality Control**  
**Summit Scientific**

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

**Batch 1605115 - EPA 5030 Soil MS**

**Blank (1605115-BLK1)**

Prepared & Analyzed: 05/12/16

Acenaphthene	ND	0.00500	mg/kg
Acenaphthylene	ND	0.00500	"
Anthracene	ND	0.00500	"
Benzo (a) anthracene	ND	0.00500	"
Benzo (b) fluoranthene	ND	0.00500	"
Benzo (k) fluoranthene	ND	0.00500	"
Benzo (g,h,i) perylene	ND	0.00500	"
Benzo (a) pyrene	ND	0.00500	"
Chrysene	ND	0.00500	"
Dibenz (a,h) anthracene	ND	0.00500	"
Fluoranthene	ND	0.00500	"
Fluorene	ND	0.00500	"
Indeno (1,2,3-cd) pyrene	ND	0.00500	"
Naphthalene	ND	0.00500	"
Phenanthrene	ND	0.00500	"
Pyrene	ND	0.00500	"

Surrogate: 2-Methylnaphthalene-d10	0.0280		"	0.0330	84.9	35-150
Surrogate: Fluoranthene-d10	0.0312		"	0.0330	94.6	35-150

**LCS (1605115-BS1)**

Prepared & Analyzed: 05/12/16

Acenaphthene	0.0254	0.00500	mg/kg	0.0332	76.5	50-150
Acenaphthylene	0.0263	0.00500	"	0.0332	79.3	50-150
Anthracene	0.0283	0.00500	"	0.0332	85.1	50-150
Benzo (a) anthracene	0.0330	0.00500	"	0.0332	99.4	50-150
Benzo (b) fluoranthene	0.0358	0.00500	"	0.0332	108	50-150
Benzo (k) fluoranthene	0.0342	0.00500	"	0.0332	103	50-150
Benzo (g,h,i) perylene	0.0335	0.00500	"	0.0332	101	50-150
Benzo (a) pyrene	0.0335	0.00500	"	0.0332	101	50-150
Chrysene	0.0337	0.00500	"	0.0332	101	50-150
Dibenz (a,h) anthracene	0.0356	0.00500	"	0.0332	107	50-150
Fluoranthene	0.0283	0.00500	"	0.0332	85.2	50-150
Fluorene	0.0257	0.00500	"	0.0332	77.2	50-150
Indeno (1,2,3-cd) pyrene	0.0354	0.00500	"	0.0332	107	50-150
2-Methylnaphthalene	0.0273	0.00500	"	0.0332	82.3	0-200
Naphthalene	0.0248	0.00500	"	0.0332	74.8	50-150
Phenanthrene	0.0267	0.00500	"	0.0332	80.4	50-150
Pyrene	0.0323	0.00500	"	0.0332	97.3	50-150

Surrogate: 2-Methylnaphthalene-d10	0.0268		"	0.0332	80.5	35-150
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1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations  
Project Number: [none]  
Project Manager: Paul Henehan

Reported:  
05/16/16 15:17

**Semivolatile Organic Compounds by EPA Method 8270D SIM - Quality Control**  
**Summit Scientific**

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

**Batch 1605115 - EPA 5030 Soil MS**

**LCS (1605115-BS1)**

Prepared & Analyzed: 05/12/16

Surrogate: Fluoranthene-d10 0.0289 mg/kg 0.0332 86.9 35-150

**LCS Dup (1605115-BSD1)**

Prepared & Analyzed: 05/12/16

Acenaphthene	0.0276	0.00500	mg/kg	0.0330	83.6	50-150	8.24	20	
Acenaphthylene	0.0286	0.00500	"	0.0330	86.7	50-150	8.31	20	
Anthracene	0.0301	0.00500	"	0.0330	91.1	50-150	6.22	20	
Benzo (a) anthracene	0.0380	0.00500	"	0.0330	115	50-150	14.1	20	
Benzo (b) fluoranthene	0.0402	0.00500	"	0.0330	122	50-150	11.6	20	
Benzo (k) fluoranthene	0.0390	0.00500	"	0.0330	118	50-150	13.0	20	
Benzo (g,h,i) perylene	0.0318	0.00500	"	0.0330	96.3	50-150	5.34	20	
Benzo (a) pyrene	0.0385	0.00500	"	0.0330	117	50-150	14.0	20	
Chrysene	0.0385	0.00500	"	0.0330	117	50-150	13.4	20	
Dibenz (a,h) anthracene	0.0400	0.00500	"	0.0330	121	50-150	11.8	20	
Fluoranthene	0.0324	0.00500	"	0.0330	98.3	50-150	13.6	20	
Fluorene	0.0283	0.00500	"	0.0330	85.6	50-150	9.67	20	
Indeno (1,2,3-cd) pyrene	0.0397	0.00500	"	0.0330	120	50-150	11.3	20	
2-Methylnaphthalene	0.0291	0.00500	"	0.0330	88.2	0-200	6.28	200	
Naphthalene	0.0268	0.00500	"	0.0330	81.2	50-150	7.56	20	
Phenanthrene	0.0291	0.00500	"	0.0330	88.2	50-150	8.59	20	
Pyrene	0.0375	0.00500	"	0.0330	114	50-150	15.0	20	
Surrogate: 2-Methylnaphthalene-d10	0.0263		"	0.0330	79.6	35-150			
Surrogate: Fluoranthene-d10	0.0298		"	0.0330	90.3	35-150			

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1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations  
Project Number: [none]  
Project Manager: Paul Henehan

Reported:  
05/16/16 15:17

**Total Metals by EPA Method 6020 - Dry Weight Basis - Quality Control**  
**Summit Scientific**

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

**Batch 1605091 - EPA 3050B**

<b>Blank (1605091-BLK1)</b>				Prepared & Analyzed: 05/10/16						
Arsenic	ND	0.100	mg/kg wet							
<b>LCS (1605091-BS1)</b>				Prepared & Analyzed: 05/10/16						
Arsenic	39.1	0.100	mg/kg wet	40.0		97.8	59.7-113			
<b>Duplicate (1605091-DUP1)</b>				<b>Source: 1605083-01</b>		Prepared & Analyzed: 05/10/16				
Arsenic	1.21	0.123	mg/kg dry		1.33			9.46	20	
<b>Matrix Spike (1605091-MS1)</b>				<b>Source: 1605083-01</b>		Prepared & Analyzed: 05/10/16				
Arsenic	8.90	0.123	mg/kg dry	44.8	1.33	16.9	75-125			QM-07
<b>Matrix Spike Dup (1605091-MSD1)</b>				<b>Source: 1605083-01</b>		Prepared & Analyzed: 05/10/16				
Arsenic	9.54	0.123	mg/kg dry	46.5	1.33	17.7	75-125	6.99	25	QM-07
<b>Reference (1605091-SRM1)</b>				Prepared & Analyzed: 05/10/16						
Arsenic	1.07	0.100	mg/kg wet	38.5		2.78	0-200			

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Fremont Environmental  
1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations  
Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
05/16/16 15:17

**Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis - Quality Control**  
**Summit Scientific**

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

**Batch 1605094 - General Preparation**

**Blank (1605094-BLK1)**

Prepared: 05/10/16 Analyzed: 05/11/16

Calcium	ND	10.0	mg/kg wet
Magnesium	ND	5.00	"
Sodium	ND	5.00	"

**LCS (1605094-BS1)**

Prepared: 05/10/16 Analyzed: 05/11/16

Calcium	564	10.0	mg/kg wet	500	113	82.9-118
Magnesium	529	5.00	"	500	106	77.1-123
Sodium	538	5.00	"	500	108	71-129

**Duplicate (1605094-DUP1)**

Source: 1605049-04

Prepared: 05/10/16 Analyzed: 05/11/16

Calcium	990	13.4	mg/kg dry	1030	3.48	200
Magnesium	222	6.70	"	239	7.43	200
Sodium	35.4	6.70	"	46.7	27.4	200

**Matrix Spike (1605094-MS1)**

Source: 1605049-04

Prepared: 05/10/16 Analyzed: 05/11/16

Calcium	1550	13.4	mg/kg dry	621	1030	84.2	75-125
Magnesium	855	6.70	"	621	239	99.3	75-125
Sodium	703	6.70	"	621	46.7	106	75-125

**Matrix Spike Dup (1605094-MSD1)**

Source: 1605049-04

Prepared: 05/10/16 Analyzed: 05/11/16

Calcium	1580	13.4	mg/kg dry	621	1030	89.8	75-125	2.22	25
Magnesium	886	6.70	"	621	239	104	75-125	3.59	25
Sodium	707	6.70	"	621	46.7	106	75-125	0.448	25

Summit Scientific

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Fremont Environmental  
1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
05/16/16 15:17

**Physical Parameters by APHA/ASTM/EPA Methods - Quality Control**  
**Summit Scientific**

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

**Batch 1605090 - General Preparation**

**LCS (1605090-BS1)**

Prepared: 05/10/16 Analyzed: 05/11/16

pH	8.04	0.100	pH Units	8.00	100	95-105
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**Batch 1605102 - General Preparation**

**Blank (1605102-BLK1)**

Prepared & Analyzed: 05/11/16

Specific Conductance (EC)	ND	0.0100	mmhos/cm
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**LCS (1605102-BS1)**

Prepared & Analyzed: 05/11/16

Specific Conductance (EC)	0.499	0.0100	mmhos/cm	0.500	99.8	90-110
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*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*



Fremont Environmental  
1759 Redwing Lane  
Broomfield CO, 80020

Project: COGCC-Former EE3 Locations

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
05/16/16 15:17

### Notes and Definitions

S-04 A sample matrix effect prevented complete surrogate recovery.

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

R-01 The Reporting Limit for this analyte has been raised to account for matrix interference.

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

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

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