



**LEGEND**

-  FENCE LINE
-  CONTAINMENT WALL
-  CONTAINMENT BERM
-  ABOVE GROUND STORAGE TANK
-  FORMER FACILITY

Figure 1  
**SITE MAP**

**Noble Sauer 33-2, G4-28D, G4-29D**  
 Facility ID - 327497  
 SW SW Section 33, T5N, R65W  
 Weld County, Colorado

API No. <b>05-123-14773</b>	Prepared by	Drawn by <b>JMA</b>
Date <b>4/14/16</b>	Reviewed by	Filename <b>V017A</b>



# Summit Scientific

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741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

March 08, 2016

Paul Henehan  
Fremont Environmental  
1759 Redwing Lane  
Broomfield, CO 80020

RE: Sauer - 33-2, F33-25, F33-33, G04-28D, G04-29D

Enclosed are the results of analyses for samples received by Summit Scientific on 03/07/16 14:11. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Paul Shrewsbury  
President



Fremont Environmental  
1759 Redwing Lane  
Broomfield CO, 80020

Project: Sauer - 33-2, F33-25, F33-33, G04-28D, G04-29D

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
03/08/16 07:38

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Floor 4Ft	1603047-01	Soil	03/07/16 00:00	03/07/16 14:11
W. Wall 2Ft	1603047-02	Soil	03/07/16 00:00	03/07/16 14:11

Summit Scientific

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Fremont Environmental  
1759 Redwing Lane  
Broomfield CO, 80020

Project: Sauer - 33-2, F33-25, F33-33, G04-28D, G04-29D

Project Number: [none]  
Project Manager: Paul Henehan

Reported:  
03/08/16 07:38

# Summit Scientific 1603047

S<sub>2</sub>

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

Page 1 of 1

Client: FREMONT/NOBLE Project Manager: HENEHAN  
Address: \_\_\_\_\_ E-Mail: \_\_\_\_\_  
City/State/Zip: \_\_\_\_\_  
Phone: 303 956 8714 Fax: \_\_\_\_\_ Project Name: SAUER - 33-2, G4-28D, G4-29D, F33-25, F33-33  
Sampler Name: HENEHAN Project Number: \_\_\_\_\_

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested						Special Instructions
					HCl	HNO3	None	Other (Specify)	Groundwater	Soil	Air-Canister #	Other (Specify)	BYEX	GR/D2O	MMP/PTZ	SAR	PEC	
1	FLOOR 4 FT	3/7/16		1			✓		✓				✓	✓	✓	✓	✓	
2	W. WALL 2 FT	"		1			✓		✓				✓	✓	✓	✓	✓	
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		

  

Relinquished by: <u>DL/FE</u> Date/Time: <u>3/7/16 14:11</u>	Received by: <u>[Signature]</u> Date/Time: <u>3-7-16 14:11</u>	<b>Turn Around Time</b> (Check) Same Day <input checked="" type="checkbox"/> 72 hours ___ 24 hours ___ Standard ___ 48 hours ___ <u>TUES. AM PLZ.</u> <b>Sample Integrity:</b> Temperature Upon Receipt: <u>17.1"</u> Intact: <input checked="" type="checkbox"/> Yes No	<b>Notes:</b>
Relinquished by: <u>[Signature]</u> Date/Time: <u>3-7-16 17:50</u>	Received by: _____ Date/Time: _____		
Relinquished by: _____ Date/Time: _____	Received by: _____ Date/Time: _____		

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Fremont Environmental  
1759 Redwing Lane  
Broomfield CO, 80020

Project: Sauer - 33-2, F33-25, F33-33, G04-28D, G04-29D

Project Number: [none]  
Project Manager: Paul Henehan

Reported:  
03/08/16 07:38

**Floor 4Ft**  
**1603047-01 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/07/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1603060	03/07/16	03/07/16	8015M	

Date Sampled: **03/07/16 00:00**

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

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

Date Sampled: **03/07/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1603059	03/07/16	03/07/16	EPA 8260B	
<b>Benzene</b>	<b>0.074</b>	0.0020	"	"	"	"	"	"	
<b>Toluene</b>	<b>0.045</b>	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>0.053</b>	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **03/07/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		110 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		101 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	21-167		"	"	"	"	

Summit Scientific

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1759 Redwing Lane  
Broomfield CO, 80020

Project: Sauer - 33-2, F33-25, F33-33, G04-28D, G04-29D

Project Number: [none]  
Project Manager: Paul Henehan

Reported:  
03/08/16 07:38

**W. Wall 2Ft  
1603047-02 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/07/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1603060	03/07/16	03/07/16	8015M	

Date Sampled: **03/07/16 00:00**

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

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

Date Sampled: **03/07/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1603059	03/07/16	03/07/16	EPA 8260B	
<b>Benzene</b>	<b>0.022</b>	0.0020	"	"	"	"	"	"	
<b>Toluene</b>	<b>0.047</b>	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>0.053</b>	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **03/07/16 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		95.7 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	21-167		"	"	"	"	

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

Date Sampled: **03/07/16 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: Sauer - 33-2, F33-25, F33-33, G04-28D, G04-29D

Project Number: [none]  
Project Manager: Paul Henehan

Reported:  
03/08/16 07:38

**W. Wall 2Ft  
1603047-02 (Soil)**

**Summit Scientific**

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	1450	13.6 mg/kg dry		1	1603065	03/07/16	03/07/16	EPA 6020/Mod. USDA60 6(2, 3A)	
Magnesium	1360	6.78	"	"	"	"	"	"	
Sodium	253	6.78	"	"	"	"	"	"	

Date Sampled: 03/07/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.15		units	"	1603070	03/08/16	03/08/16	"	

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

Date Sampled: 03/07/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.879	0.0100 mmhos/cm		1	1603067	03/07/16	03/07/16	SM 2510B	

Date Sampled: 03/07/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.11	0.100	pH Units	"	1603066	03/07/16	03/07/16	EPA 9045	

Date Sampled: 03/07/16 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	73.7		%	"	1603069	03/08/16	03/08/16	% calculation	

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1759 Redwing Lane  
Broomfield CO, 80020

Project: Sauer - 33-2, F33-25, F33-33, G04-28D, G04-29D

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
03/08/16 07:38

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

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

**Batch 1603060 - EPA 3550A**

**Blank (1603060-BLK1)**

Prepared & Analyzed: 03/07/16

C10-C28 (DRO)	ND	50	mg/kg								
<i>Surrogate: o-Terphenyl</i>	14.0		"	12.5		112	30-150				

**LCS (1603060-BS1)**

Prepared & Analyzed: 03/07/16

C10-C28 (DRO)	453	50	mg/kg	499		90.8	73-134				
<i>Surrogate: o-Terphenyl</i>	14.8		"	12.5		118	30-150				

**Matrix Spike (1603060-MS1)**

Source: 1603037-01

Prepared & Analyzed: 03/07/16

C10-C28 (DRO)	426	50	mg/kg	498	20.7	81.3	50-148				
<i>Surrogate: o-Terphenyl</i>	14.7		"	12.5		118	30-150				

**Matrix Spike Dup (1603060-MSD1)**

Source: 1603037-01

Prepared & Analyzed: 03/07/16

C10-C28 (DRO)	404	50	mg/kg	471	20.7	81.5	50-148	5.12	13		
<i>Surrogate: o-Terphenyl</i>	15.1		"	11.8		128	30-150				

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Broomfield CO, 80020

Project: Sauer - 33-2, F33-25, F33-33, G04-28D, G04-29D

Project Number: [none]  
Project Manager: Paul Henehan

Reported:  
03/08/16 07:38

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

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

**Batch 1603059 - EPA 5030 Soil MS**

**Blank (1603059-BLK1)**

Prepared & Analyzed: 03/07/16

Naphthalene	ND	0.010	mg/kg							
Benzene	ND	0.0020	"							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0406</i>		<i>"</i>	<i>0.0396</i>		<i>103</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0396</i>		<i>"</i>	<i>0.0400</i>		<i>99.0</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0407</i>		<i>"</i>	<i>0.0400</i>		<i>102</i>	<i>21-167</i>			

**LCS (1603059-BS1)**

Prepared & Analyzed: 03/07/16

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.0902	0.0020	"	0.100		90.2	58-130			
Toluene	0.0936	0.0050	"	0.100		93.6	61-134			
Ethylbenzene	0.0963	0.0050	"	0.0992		97.1	74-139			
m,p-Xylene	0.179	0.010	"	0.200		89.4	73-137			
o-Xylene	0.0882	0.0050	"	0.0984		89.7	73-141			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0378</i>		<i>"</i>	<i>0.0396</i>		<i>95.5</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0437</i>		<i>"</i>	<i>0.0400</i>		<i>109</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0402</i>		<i>"</i>	<i>0.0400</i>		<i>100</i>	<i>21-167</i>			

**Matrix Spike (1603059-MS1)**

Source: 1603037-01

Prepared & Analyzed: 03/07/16

Naphthalene	ND	0.010	mg/kg		ND		10-158			
Benzene	0.0866	0.0020	"	0.0935	ND	92.6	30-131			
Toluene	0.0959	0.0050	"	0.0935	ND	103	30-134			
Ethylbenzene	0.104	0.0050	"	0.0927	ND	113	22-153			
m,p-Xylene	0.193	0.010	"	0.187	ND	103	10-159			
o-Xylene	0.0947	0.0050	"	0.0920	ND	103	31-151			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0345</i>		<i>"</i>	<i>0.0370</i>		<i>93.1</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0385</i>		<i>"</i>	<i>0.0374</i>		<i>103</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0371</i>		<i>"</i>	<i>0.0374</i>		<i>99.4</i>	<i>21-167</i>			

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Fremont Environmental  
1759 Redwing Lane  
Broomfield CO, 80020

Project: Sauer - 33-2, F33-25, F33-33, G04-28D, G04-29D

Project Number: [none]  
Project Manager: Paul Henehan

Reported:  
03/08/16 07:38

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

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

**Batch 1603059 - EPA 5030 Soil MS**

<b>Matrix Spike Dup (1603059-MSD1)</b>	<b>Source: 1603037-01</b>			<b>Prepared &amp; Analyzed: 03/07/16</b>						
Naphthalene	ND	0.010	mg/kg	ND	ND	106	30-131	14.0	42	
Benzene	0.0996	0.0020	"	0.0936	ND	111	30-134	8.40	30	
Toluene	0.104	0.0050	"	0.0936	ND	123	22-153	9.44	24	
Ethylbenzene	0.115	0.0050	"	0.0929	ND	112	10-159	8.40	68	
m,p-Xylene	0.210	0.010	"	0.187	ND	114	31-151	10.4	38	
o-Xylene	0.105	0.0050	"	0.0921	ND					
Surrogate: 1,2-Dichloroethane-d4	0.0394		"	0.0371		106	23-173			
Surrogate: Toluene-d8	0.0379		"	0.0375		101	20-170			
Surrogate: 4-Bromofluorobenzene	0.0372		"	0.0375		99.4	21-167			

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Project: Sauer - 33-2, F33-25, F33-33, G04-28D, G04-29D

Project Number: [none]  
Project Manager: Paul Henehan

Reported:  
03/08/16 07:38

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

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

**Batch 1603065 - General Prep**

**Blank (1603065-BLK1)**

Prepared & Analyzed: 03/07/16

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

**LCS (1603065-BS1)**

Prepared & Analyzed: 03/07/16

Calcium	572	10.0	mg/kg wet	500	114	82.9-118			
Magnesium	535	5.00	"	500	107	77.1-123			
Sodium	555	5.00	"	500	111	71-129			

**Duplicate (1603065-DUP1)**

Source: 1603047-02

Prepared & Analyzed: 03/07/16

Calcium	1360	13.6	mg/kg dry	1450			6.66	200	
Magnesium	1210	6.78	"	1360			12.0	200	
Sodium	258	6.78	"	253			1.94	200	

**Matrix Spike (1603065-MS1)**

Source: 1603047-02

Prepared & Analyzed: 03/07/16

Calcium	1810	13.6	mg/kg dry	678	1450	52.4	75-125		QM-07
Magnesium	1880	6.78	"	678	1360	76.6	75-125		
Sodium	932	6.78	"	678	253	100	75-125		

**Matrix Spike Dup (1603065-MSD1)**

Source: 1603047-02

Prepared & Analyzed: 03/07/16

Calcium	1950	13.6	mg/kg dry	678	1450	73.3	75-125	7.56	25	QM-07
Magnesium	1820	6.78	"	678	1360	67.3	75-125	3.42	25	QM-07
Sodium	1020	6.78	"	678	253	114	75-125	9.45	25	

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Project: Sauer - 33-2, F33-25, F33-33, G04-28D, G04-29D

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
03/08/16 07:38

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

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

**Batch 1603066 - General Preparation**

<b>LCS (1603066-BS1)</b>					Prepared & Analyzed: 03/07/16					
pH	6.08	0.100	pH Units	6.00	101	95-105				
<b>Duplicate (1603066-DUP1)</b>					<b>Source: 1603047-02</b>		Prepared & Analyzed: 03/07/16			
pH	8.03	0.100	pH Units	8.11	0.991	20				

**Batch 1603067 - General Preparation**

<b>Blank (1603067-BLK1)</b>					Prepared & Analyzed: 03/07/16					
Specific Conductance (EC)	ND	0.0100	mmhos/cm							
<b>LCS (1603067-BS1)</b>					Prepared & Analyzed: 03/07/16					
Specific Conductance (EC)	0.0984	0.00200	mmhos/cm	0.100	98.4	90-110				
<b>Duplicate (1603067-DUP1)</b>					<b>Source: 1603047-02</b>		Prepared & Analyzed: 03/07/16			
Specific Conductance (EC)	0.891	0.0100	mmhos/cm	0.879	1.30	20				

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Project: Sauer - 33-2, F33-25, F33-33, G04-28D, G04-29D

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
03/08/16 07:38

### Notes and Definitions

- 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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