



#### LEGEND







	SOIL SAMPLE LOCATION	NA	NOT ANALYZED
	ABOVE GROUND STORAGE TANK	7/5/18	DATE SAMPLED
	FORMER FACILITY	N Wall ~ 3'	LOCATION and DEPTH (ft)
	FENCE LINE	B	BENZENE (mg/kg)
	CONTAINMENT BERM	T	TOLUENE (mg/kg)
	CONTAINMENT WALL	E	ETHYLBENZENE (mg/kg)
		X	TOTAL XYLENES (mg/kg)
		N	NAPHTHALENE (mg/kg)
		G	TPH-GRO (mg/kg)
		D	TPH-DRO (mg/kg)
		EC	EC mmhos/cm
		pH	pH Units
		SAR	SAR Units

Figure 1  
SITE PLAN

**Noble Stroh O 2-7,17**  
 Facility ID - 305741  
 SWNE Sec 2, T4N, R67W - 40.34249°N -104.85534°W  
 Weld County, Colorado

API No. <b>05-123-23417</b>	Prepared by <b>TDA</b>	Drawn by <b>TDA</b>
Date <b>7/31/18</b>	Reviewed by <b>PH</b>	Filename <b>V210A</b>



# Summit Scientific

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741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

July 10, 2018

Paul Henehan  
Fremont Environmental  
PO Box 1289  
Wellington, CO 80549  
RE: Noble - Stroh O 2-7, 17

Enclosed are the results of analyses for samples received by Summit Scientific on 07/05/18 17:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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

Paul Shrewsbury For Ben Shrewsbury  
Laboratory Manager



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Stroh O 2-7, 17

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
07/10/18 08:30

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
N. WALL 3FT	1807058-01	Soil	07/05/18 00:00	07/05/18 17:00
FLOOR 5FT	1807058-02	Soil	07/05/18 00:00	07/05/18 17:00

Summit Scientific

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1807058

# Summit Scientific

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

Client: FREMONTPage 1 of 1

Address:

City/State/Zip:

Phone:

Fax:

Sampler Name: HENEHANProject Manager: HENEHANBILL TO HOWARD

E-Mail:

Project Name: NOBLE - STROH 0 2-7, 17Project Number: RC # 815902679

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix			Analyze For:							Special Instructions			
				HCl	HNO <sub>3</sub>	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	BTEX	GRO/DRO	NAPHTHALENE	SAP	EC	pH				
N. WALL 3 FT	7/5/18		1			✓			✓				✓	✓	✓	✓	✓				
FLOOR 5 FT	"		1			✓			✓				✓	✓	✓	✓	✓				
Relinquished by: <u>QAS/FE 7/5/18 10:00</u>				Date/Time:				Received by: <u>[Signature]</u>				Date/Time: <u>7-5-18 1700</u>				Turn Around Time (Check)				Notes:	
Relinquished by:				Date/Time:				Received by:				Date/Time:				Same Day <input type="checkbox"/>					72 Hours <input type="checkbox"/>
Relinquished by:				Date/Time:				Received by:				Date/Time:				24 Hours <input type="checkbox"/>					Standard <input checked="" type="checkbox"/>
Relinquished by:				Date/Time:				Received in Lab by:				Date/Time:				Sample Integrity:					
Relinquished by:				Date/Time:				Received in Lab by:				Date/Time:				Temperature Upon Receipt: <u>12.5</u>					
Relinquished by:				Date/Time:				Received in Lab by:				Date/Time:				Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					

# Sample Receipt Checklist

S2 Work Order: 1807051

Client: Fremont Client Project ID: Noble - Stroh 0 2-7, 17

Shipped Via: Hand Airbill #: \_\_\_\_\_  
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

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

Temp (°C) 12.5

Thermometer ID: 61857155-K

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

Custodian Printed Name or Initials UP Signature or Initials of Custodian [Signature] Date/Time 7-5-18 1700



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Stroh O 2-7, 17

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
07/10/18 08:30

**N. WALL 3FT**  
**1807058-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **07/05/18 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1807055	07/06/18	07/07/18	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **07/05/18 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		113 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		105 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		108 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **07/05/18 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1807056	"	07/07/18	EPA 8015M	

Date Sampled: **07/05/18 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		84.4 %	30-150		"	"	"	"	

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

Date Sampled: **07/05/18 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	<b>1310</b>	11.4	mg/kg dry	1	1807061	07/06/18	07/07/18	EPA 6020B	

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PO Box 1289  
Wellington CO, 80549

Project: Noble - Stroh O 2-7, 17

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
07/10/18 08:30

**N. WALL 3FT**  
**1807058-01 (Soil)**

**Summit Scientific**

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

Magnesium	414	5.71	mg/kg dry	1	1807061	07/06/18	07/07/18	EPA 6020B
Sodium	23.0	5.71	"	"	"	"	"	"

**Calculated Analysis**

Date Sampled: **07/05/18 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.142	0.100	units	1	1807072	07/08/18	07/09/18	Calculation	

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

Date Sampled: **07/05/18 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	87.5		%	1	1807068	07/06/18	07/09/18	Calculation	
pH	8.40		pH Units	"	1807069	07/06/18	07/06/18	EPA 9045D	

**Specific Conductance by EPA Method 120.1**

Date Sampled: **07/05/18 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.592	0.0100	mmhos/cm	1	1807070	07/06/18	07/06/18	EPA 120.1	

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Wellington CO, 80549

Project: Noble - Stroh O 2-7, 17

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
07/10/18 08:30

**FLOOR 5FT**  
**1807058-02 (Soil)**

**Summit Scientific**

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

Date Sampled: **07/05/18 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1807055	07/06/18	07/07/18	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **07/05/18 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		110 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		104 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	21-167		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **07/05/18 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1807056	"	07/07/18	EPA 8015M	

Date Sampled: **07/05/18 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		84.1 %	30-150		"	"	"	"	

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PO Box 1289  
Wellington CO, 80549

Project: Noble - Stroh O 2-7, 17

Project Number: [none]  
Project Manager: Paul Henehan

Reported:  
07/10/18 08:30

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

### Summit Scientific

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

#### Batch 1807055 - EPA 5030 Soil MS

##### Blank (1807055-BLK1)

Prepared & Analyzed: 07/06/18

Benzene	ND	0.0020	mg/kg
Toluene	ND	0.0050	"
Ethylbenzene	ND	0.0050	"
Xylenes (total)	ND	0.010	"
Naphthalene	ND	0.010	"
Gasoline Range Hydrocarbons	ND	50	"

Surrogate: 1,2-Dichloroethane-d4	0.0446	"	0.0396	112	23-173
Surrogate: Toluene-d8	0.0420	"	0.0400	105	20-170
Surrogate: 4-Bromofluorobenzene	0.0415	"	0.0400	104	21-167

##### LCS (1807055-BS1)

Prepared & Analyzed: 07/06/18

Benzene	0.100	0.0020	mg/kg	0.100	100	70-130
Toluene	0.104	0.0050	"	0.100	104	70-130
Ethylbenzene	0.116	0.0050	"	0.100	116	70-130
m,p-Xylene	0.202	0.010	"	0.200	101	70-130
o-Xylene	0.102	0.0050	"	0.100	102	70-130
<hr/>						
Surrogate: 1,2-Dichloroethane-d4	0.0434		"	0.0396	110	23-173
Surrogate: Toluene-d8	0.0427		"	0.0400	107	20-170
Surrogate: 4-Bromofluorobenzene	0.0432		"	0.0400	108	21-167

##### Matrix Spike (1807055-MS1)

Source: 1807054-01

Prepared & Analyzed: 07/06/18

Benzene	0.0993	0.0020	mg/kg	0.100	ND	99.3	70-130
Toluene	0.102	0.0050	"	0.100	ND	102	70-130
Ethylbenzene	0.118	0.0050	"	0.100	ND	118	70-130
m,p-Xylene	0.202	0.010	"	0.200	ND	101	70-130
o-Xylene	0.101	0.0050	"	0.100	ND	101	70-130
Surrogate: 1,2-Dichloroethane-d4	0.0428		"	0.0396		108	23-173
Surrogate: Toluene-d8	0.0421		"	0.0400		105	20-170
Surrogate: 4-Bromofluorobenzene	0.0435		"	0.0400		109	21-167

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Wellington CO, 80549

Project: Noble - Stroh O 2-7, 17

Project Number: [none]  
Project Manager: Paul Henehan

Reported:  
07/10/18 08:30

**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 1807055 - EPA 5030 Soil MS**

Matrix Spike Dup (1807055-MSD1)	Source: 1807054-01			Prepared & Analyzed: 07/06/18						
Benzene	0.100	0.0020	mg/kg	0.100	ND	100	70-130	1.05	30	
Toluene	0.103	0.0050	"	0.100	ND	103	70-130	1.38	30	
Ethylbenzene	0.121	0.0050	"	0.100	ND	121	70-130	2.62	30	
m,p-Xylene	0.207	0.010	"	0.200	ND	104	70-130	2.23	30	
o-Xylene	0.104	0.0050	"	0.100	ND	104	70-130	2.38	30	
Surrogate: 1,2-Dichloroethane-d4	0.0426		"	0.0396		108	23-173			
Surrogate: Toluene-d8	0.0411		"	0.0400		103	20-170			
Surrogate: 4-Bromofluorobenzene	0.0446		"	0.0400		112	21-167			

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Wellington CO, 80549

Project: Noble - Stroh O 2-7, 17

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
07/10/18 08:30

**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 1807056 - EPA 3550A**

**Blank (1807056-BLK1)**

Prepared & Analyzed: 07/06/18

C10-C28 (DRO) ND 50 mg/kg

**LCS (1807056-BS1)**

Prepared & Analyzed: 07/06/18

C10-C28 (DRO) 446 50 mg/kg 70-130

**Matrix Spike (1807056-MS1)**

**Source: 1807054-01**

Prepared & Analyzed: 07/06/18

C10-C28 (DRO) 439 50 mg/kg 25.1 70-130

**Matrix Spike Dup (1807056-MSD1)**

**Source: 1807054-01**

Prepared & Analyzed: 07/06/18

C10-C28 (DRO) 443 50 mg/kg 25.1 70-130 0.943 20

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Stroh O 2-7, 17

Project Number: [none]  
Project Manager: Paul Henehan

Reported:  
07/10/18 08:30

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

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

**Batch 1807061 - General Preparation**

**Blank (1807061-BLK1)**

Prepared: 07/06/18 Analyzed: 07/07/18

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

**LCS (1807061-BS1)**

Prepared: 07/06/18 Analyzed: 07/07/18

Calcium	487	10.0	mg/kg wet	500	97.4	70-130
Magnesium	500	5.00	"	500	100	70-130
Sodium	503	5.00	"	500	101	70-130

**Duplicate (1807061-DUP1)**

Source: 1807032-01

Prepared: 07/06/18 Analyzed: 07/07/18

Calcium	801	11.1	mg/kg dry	695	14.2	20
Magnesium	189	5.55	"	171	10.5	20
Sodium	88.6	5.55	"	90.1	1.68	20

**Matrix Spike (1807061-MS1)**

Source: 1807032-01

Prepared: 07/06/18 Analyzed: 07/07/18

Calcium	1270	11.1	mg/kg dry	555	695	103	70-130
Magnesium	733	5.55	"	555	171	101	70-130
Sodium	608	5.55	"	555	90.1	93.3	70-130

**Matrix Spike Dup (1807061-MSD1)**

Source: 1807032-01

Prepared: 07/06/18 Analyzed: 07/07/18

Calcium	1380	11.1	mg/kg dry	555	695	124	70-130	8.46	25
Magnesium	782	5.55	"	555	171	110	70-130	6.48	25
Sodium	623	5.55	"	555	90.1	96.1	70-130	2.51	25

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Stroh O 2-7, 17

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
07/10/18 08:30

**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 1807068 - General Preparation**

**Duplicate (1807068-DUP1)**      **Source: 1807051-04**      Prepared: 07/06/18      Analyzed: 07/09/18

% Solids	80.0		%		79.0			1.18	20
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**Batch 1807069 - General Preparation**

**LCS (1807069-BS1)**      Prepared & Analyzed: 07/06/18

pH	9.2		pH Units	9.18	99.8	95-105
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**Duplicate (1807069-DUP1)**      **Source: 1807062-01**      Prepared & Analyzed: 07/06/18

pH	7.8		pH Units	8.0		2.65	20
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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Stroh O 2-7, 17

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
07/10/18 08:30

**Specific Conductance by EPA Method 120.1 - Quality Control**  
**Summit Scientific**

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

**Batch 1807070 - General Preparation**

**LCS (1807070-BS1)**

Prepared & Analyzed: 07/06/18

Specific Conductance (EC)	0.744	0.0100	mmhos/cm	0.750	99.3	90-110
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**Duplicate (1807070-DUP1)**

**Source: 1807062-01**

Prepared & Analyzed: 07/06/18

Specific Conductance (EC)	0.575	0.0100	mmhos/cm	0.586	1.89	20
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PO Box 1289  
Wellington CO, 80549

Project: Noble - Stroh O 2-7, 17

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
07/10/18 08:30

### Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference