



LEGEND

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

**Figure 1
SITE MAP**

Noble Watkins 18-1, 18-11
 Facility IDs - 322932 & 329701
 NW SW Section 18, T4N, R63W
 Weld County, Colorado

API No.
 05-123-12284
 05-123-17731

Prepared by

Drawn by
 JMA

Date
 7/28/16

Reviewed by

Filename
 V041A



Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

July 21, 2016

Paul Henehan
Fremont Environmental
1759 Redwing Lane
Broomfield, CO 80020
RE: Noble - Watkins 1

Enclosed are the results of analyses for samples received by Summit Scientific on 07/20/16 17:45. 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: Noble - Watkins 1

Project Number: [none]
Project Manager: Paul Henehan

Reported:
07/21/16 06:36

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B-10	1607133-01	Soil	07/20/16 09:30	07/20/16 17:45
E-3	1607133-02	Soil	07/20/16 09:40	07/20/16 17:45

Summit Scientific

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Fremont Environmental
1759 Redwing Lane
Broomfield CO, 80020

Project: Noble - Watkins 1

Project Number: [none]
Project Manager: Paul Henehan

Reported:
07/21/16 06:36

Summit Scientific 1607133

S₂

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

Page 1 of 1

Client: Fremont Env Project Manager: Paul Henehan
Address: _____ E-Mail: _____
City/State/Zip: _____
Phone: 303 956 8714 Fax: _____ Project Name: Watkins 1 - Noble
Sampler Name: Mike Greisler 970 231 2792 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)	BTEX N	DRD	GRD		SAR EC	PN
1	B-10	7/20/16	0930	1														
2	E-3		0940	1					X									
3	N-3		0935	1														
4	S-3		0943	1														
5	W-3		0932	1														
6																		
7																		
8																		
9																		
10																		

Relinquished by: <u>[Signature]</u>	Date/Time: <u>7/20/16 13:00</u>	Received by: <u>[Signature]</u>	Date/Time: <u>7-20-16 18:00</u>	Turn Around Time (Check)	Notes:
Relinquished by: <u>[Signature]</u>	Date/Time: <u>7.20.16 17:50</u>	Received by:	Date/Time:	Same Day <input type="checkbox"/>	Results tomorrow AM
				24 hours <input checked="" type="checkbox"/>	
				48 hours <input type="checkbox"/>	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Sample Integrity:	
				Temperature Upon Receipt: <u>15.6</u>	
				Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

www.s2scientific.com



Fremont Environmental
1759 Redwing Lane
Broomfield CO, 80020

Project: Noble - Watkins 1

Project Number: [none]
Project Manager: Paul Henehan

Reported:
07/21/16 06:36

Sample Receipt Checklist

S2 Work Order: 1667133

Client: Fremont

Client Project ID: Watkins 1 - Noble

Shipped Via: H.D. on ice
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Airbill #: _____

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

Cooler ID					
Temp (°C)	<u>15.6</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 ⁽¹⁾ ?			<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 ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
If custody seals are present, are they intact ⁽¹⁾ ?			<input checked="" type="checkbox"/>	
Are short holding time analytes or samples with HTs due within 48 hours present?	<input checked="" type="checkbox"/>			
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	<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) ⁽¹⁾ ?			<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 ⁽¹⁾ ?			<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):				

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

Muri P.
Custodian Printed Name

MP 7-20-16
Signature or Initials of Custodian

16:58
Date/Time



Fremont Environmental
1759 Redwing Lane
Broomfield CO, 80020

Project: Noble - Watkins 1

Project Number: [none]
Project Manager: Paul Henehan

Reported:
07/21/16 06:36

B-10
1607133-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 07/20/16 09:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	65	50	mg/kg	1	1607197	07/20/16	07/20/16	8015M	

Date Sampled: 07/20/16 09:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		74.6 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 07/20/16 09:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1607196	07/20/16	07/20/16	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: 07/20/16 09:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		94.9 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.0 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		85.7 %	21-167		"	"	"	"	

Summit Scientific

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Fremont Environmental
1759 Redwing Lane
Broomfield CO, 80020

Project: Noble - Watkins 1

Project Number: [none]
Project Manager: Paul Henehan

Reported:
07/21/16 06:36

E-3

1607133-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/20/16 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1607197	07/20/16	07/20/16	8015M	

Date Sampled: **07/20/16 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		79.8 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/20/16 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Naphthalene	ND	0.010	mg/kg	1	1607196	07/20/16	07/20/16	EPA 8260B	
Benzene	ND	0.0020	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **07/20/16 09:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		92.9 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.9 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.2 %	21-167		"	"	"	"	

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

Date Sampled: **07/20/16 09:40**

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

Project: Noble - Watkins 1

Project Number: [none]
Project Manager: Paul Henehan

Reported:
07/21/16 06:36

E-3
1607133-02 (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	452	11.1	mg/kg dry	1	1607186	07/20/16	07/20/16	EPA 6020/Mod. USDA60 6(2, 3A)	
Magnesium	204	5.56	"	"	"	"	"	"	
Sodium	39.6	5.56	"	"	"	"	"	"	

Date Sampled: 07/20/16 09:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.390		units	"	1607199	07/21/16	07/21/16	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: 07/20/16 09:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.327	0.0100	mmhos/cm	1	1607195	07/20/16	07/20/16	SM 2510B	

Date Sampled: 07/20/16 09:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.10	0.100	pH Units	"	1607194	07/20/16	07/20/16	EPA 9045	

Date Sampled: 07/20/16 09:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	89.9		%	"	1607198	07/20/16	07/21/16	% calculation	

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Project: Noble - Watkins 1

Project Number: [none]
Project Manager: Paul Henehan

Reported:
07/21/16 06:36

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch 1607197 - EPA 3550A

Blank (1607197-BLK1)

Prepared & Analyzed: 07/20/16

C10-C28 (DRO)	ND	50	mg/kg								
<i>Surrogate: o-Terphenyl</i>	11.2		"	12.5		89.4	30-150				

LCS (1607197-BS1)

Prepared & Analyzed: 07/20/16

C10-C28 (DRO)	615	50	mg/kg	499		123	73-134				
<i>Surrogate: o-Terphenyl</i>	11.0		"	12.5		88.3	30-150				

Matrix Spike (1607197-MS1)

Source: 1607134-01

Prepared & Analyzed: 07/20/16

C10-C28 (DRO)	457	50	mg/kg	486	17.8	90.2	50-148				
<i>Surrogate: o-Terphenyl</i>	9.12		"	12.2		74.8	30-150				

Matrix Spike Dup (1607197-MSD1)

Source: 1607134-01

Prepared & Analyzed: 07/20/16

C10-C28 (DRO)	487	50	mg/kg	482	17.8	97.5	50-148	6.48	20		
<i>Surrogate: o-Terphenyl</i>	9.64		"	12.1		79.9	30-150				

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Project: Noble - Watkins 1

Project Number: [none]
Project Manager: Paul Henehan

Reported:
07/21/16 06:36

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 1607196 - EPA 5030 Soil MS

Blank (1607196-BLK1)

Prepared & Analyzed: 07/20/16

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>0.0368</i>		<i>"</i>	<i>0.0400</i>		<i>91.9</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0392</i>		<i>"</i>	<i>0.0400</i>		<i>97.9</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0396</i>		<i>"</i>	<i>0.0400</i>		<i>98.9</i>	<i>21-167</i>			

LCS (1607196-BS1)

Prepared & Analyzed: 07/20/16

Naphthalene	ND	0.010	mg/kg				66-138			
Benzene	0.0967	0.0020	"	0.100		96.7	58-130			
Toluene	0.110	0.0050	"	0.100		110	61-134			
Ethylbenzene	0.117	0.0050	"	0.0992		118	74-139			
m,p-Xylene	0.222	0.010	"	0.200		111	73-137			
o-Xylene	0.111	0.0050	"	0.0980		113	73-141			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0376</i>		<i>"</i>	<i>0.0400</i>		<i>94.1</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0394</i>		<i>"</i>	<i>0.0400</i>		<i>98.6</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0381</i>		<i>"</i>	<i>0.0400</i>		<i>95.2</i>	<i>21-167</i>			

Matrix Spike (1607196-MS1)

Source: 1607134-01

Prepared & Analyzed: 07/20/16

Naphthalene	ND	0.010	mg/kg		ND		10-158			
Benzene	0.0897	0.0020	"	0.0949	ND	94.6	30-131			
Toluene	0.101	0.0050	"	0.0949	ND	106	30-134			
Ethylbenzene	0.108	0.0050	"	0.0941	ND	115	22-153			
m,p-Xylene	0.210	0.010	"	0.189	ND	111	10-159			
o-Xylene	0.104	0.0050	"	0.0930	ND	112	31-151			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0369</i>		<i>"</i>	<i>0.0380</i>		<i>97.1</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0372</i>		<i>"</i>	<i>0.0380</i>		<i>98.1</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0372</i>		<i>"</i>	<i>0.0380</i>		<i>98.0</i>	<i>21-167</i>			

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Fremont Environmental
1759 Redwing Lane
Broomfield CO, 80020

Project: Noble - Watkins 1

Project Number: [none]
Project Manager: Paul Henehan

Reported:
07/21/16 06:36

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 1607196 - EPA 5030 Soil MS

Matrix Spike Dup (1607196-MSD1)	Source: 1607134-01			Prepared & Analyzed: 07/20/16						
Naphthalene	ND	0.010	mg/kg		ND		10-158		42	
Benzene	0.0913	0.0020	"	0.0951	ND	96.0	30-131	1.70	34	
Toluene	0.103	0.0050	"	0.0951	ND	109	30-134	2.50	30	
Ethylbenzene	0.109	0.0050	"	0.0943	ND	115	22-153	0.216	24	
m,p-Xylene	0.210	0.010	"	0.190	ND	111	10-159	0.0677	68	
o-Xylene	0.105	0.0050	"	0.0932	ND	113	31-151	1.31	38	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0379</i>		<i>"</i>	<i>0.0380</i>		<i>99.7</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0374</i>		<i>"</i>	<i>0.0380</i>		<i>98.5</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0366</i>		<i>"</i>	<i>0.0380</i>		<i>96.2</i>	<i>21-167</i>			

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1759 Redwing Lane
Broomfield CO, 80020

Project: Noble - Watkins 1

Project Number: [none]
Project Manager: Paul Henehan

Reported:
07/21/16 06:36

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 1607186 - General Preparation

Blank (1607186-BLK1)

Prepared & Analyzed: 07/20/16

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

LCS (1607186-BS1)

Prepared & Analyzed: 07/20/16

Calcium	475	10.0	mg/kg wet	500	95.0	82.9-118			
Magnesium	509	5.00	"	500	102	77.1-123			
Sodium	523	5.00	"	500	105	71-129			

Duplicate (1607186-DUP1)

Source: 1607090-02

Prepared & Analyzed: 07/20/16

Calcium	1230	10.0	mg/kg wet	1040			17.0	200	
Magnesium	177	5.00	"	145			19.4	200	
Sodium	711	5.00	"	714			0.430	200	

Matrix Spike (1607186-MS1)

Source: 1607090-02

Prepared & Analyzed: 07/20/16

Calcium	1540	10.0	mg/kg wet	500	1040	101	75-125		
Magnesium	625	5.00	"	500	145	96.0	75-125		
Sodium	1060	5.00	"	500	714	68.4	75-125		QM-07

Matrix Spike Dup (1607186-MSD1)

Source: 1607090-02

Prepared & Analyzed: 07/20/16

Calcium	1570	10.0	mg/kg wet	500	1040	107	75-125	1.79	25
Magnesium	677	5.00	"	500	145	106	75-125	8.01	25
Sodium	1140	5.00	"	500	714	85.9	75-125	7.99	25

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Project: Noble - Watkins 1

Project Number: [none]
Project Manager: Paul Henehan

Reported:
07/21/16 06:36

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 1607194 - General Preparation

LCS (1607194-BS1)					Prepared & Analyzed: 07/20/16					
pH	6.03	0.100	pH Units	6.00	100	95-105				
Duplicate (1607194-DUP1)					Source: 1607132-04		Prepared & Analyzed: 07/20/16			
pH	8.38	0.100	pH Units	8.44				0.713	20	

Batch 1607195 - General Preparation

Blank (1607195-BLK1)					Prepared & Analyzed: 07/20/16					
Specific Conductance (EC)	ND	0.0100	mmhos/cm							
LCS (1607195-BS1)					Prepared & Analyzed: 07/20/16					
Specific Conductance (EC)	100	0.00200	mmhos/cm	100	100	90-110				
Duplicate (1607195-DUP1)					Source: 1607132-04		Prepared & Analyzed: 07/20/16			
Specific Conductance (EC)	0.407	0.0100	mmhos/cm	0.403				1.15	20	

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Project: Noble - Watkins 1

Project Number: [none]
Project Manager: Paul Henehan

Reported:
07/21/16 06:36

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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