

FREMONT ENVIRONMENTAL INC.

February 6, 2017

received 02/06/2017
REM 8307
Document 2527624

Mr. Phil Wright
Homestead Oil Inc.
16880 Wild Plum Circle
Morrison, CO 80465

Subject: **Ground Water Data Submittal**
Stephens #1
API # 05-123-11552
SENW Sec 15, T4N, R66W
Weld County, Colorado
Fremont Project No. C014-027
Facility #243760, Remediation # 8307

Dear Mr. Wright:

Enclosed please find a copy of the above referenced Ground Water Data Submittal for the Stephens #1 site in Weld County, Colorado. The enclosed data describes monitoring and sampling efforts to assess ground water quality at the site.

A rebound in benzene concentrations occurred in MW-1 and MW-5 during the past two quarter's sampling events. During the January 2017 sampling event, MW-1 and MW-5 had concentrations of 28 and 60 ug/L, respectively. As a result, Homestead Oil Inc. has requested that the air sparging/soil vapor extraction (AS/SVE) be reactivated for a period of three months. The AS/SVE system will be started after issues with Xcel Power Company have been resolved which will likely be in mid-February 2017.

Please contact me at (303) 956-8714 if you require any additional information.

Fremont appreciates the opportunity to provide this service.

Sincerely,
FREMONT ENVIRONMENTAL INC.



Paul V. Henahan, P.E.
Senior Consultant

Enclosure

1759 REDWING LANE, BROOMFIELD, CO 80020
(303) 956-8714 (DIRECT)

TABLE 1
SUMMARY OF GROUND WATER ELEVATION DATA AND CHEMISTRY DATA
HOMESTEAD OIL INC.
STEPHENS #1, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C014-027

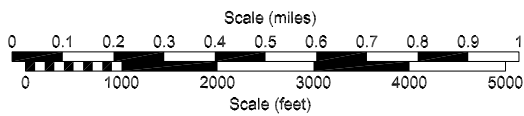
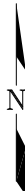
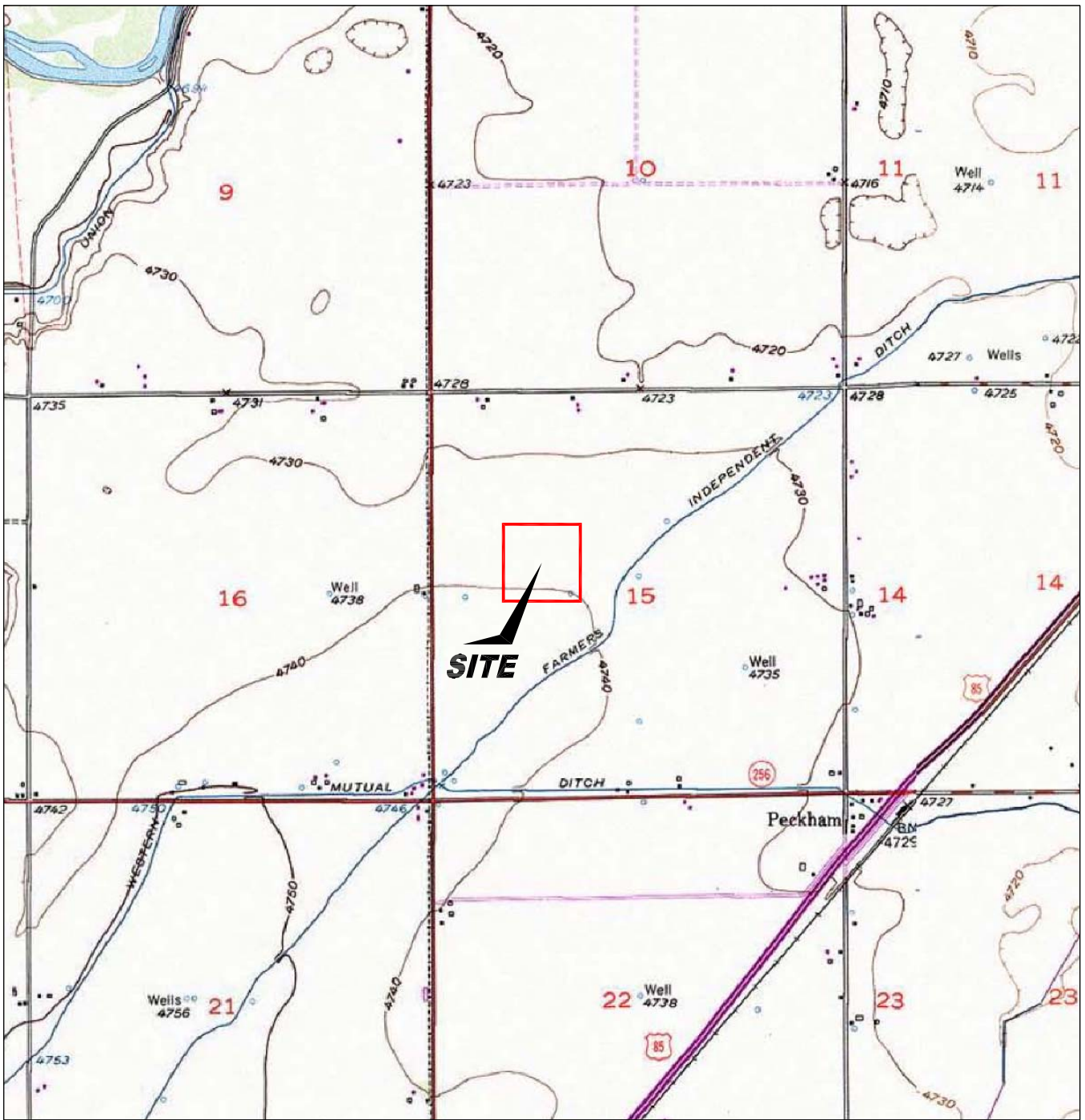
SAMPLE LOCATION	DATE	BENZENE (µg/L)	TOLUENE (µg/L)	ETHYL BENZENE (µg/L)	TOTAL XYLENES (µg/L)	TOC ELEVATION (feet)	DEPTH TO GROUND WATER (ft)	GROUND WATER ELEVATION (ft)	FREE PRODUCT THICKNESS (ft)
MW-1	08/20/14	2616	3751	4182	96434	99.22	17.94	81.28	NP
	01/29/15	1728	114	455	8314		20.03	79.19	NP
	04/07/15	30	2.2	<1.0	8800		21.01	78.21	NP
	07/07/15	<1.0	<1.0	<1.0	<1.0		18.22	81.00	NP
	10/08/15	75	90	260	4700		NM	NM	NP
	12/07/15	<1.0	<1.0	<1.0	<1.0		NM	NM	NP
	01/20/16	42	6.9	120	1500		20.07	79.15	NP
	04/11/16	40	9.2	81	1200		NM	NM	NP
	08/01/16	<1.0	<1.0	<1.0	1.1		18.28	80.94	NP
	11/30/16	40	130	240	4100		17.76	81.46	NP
01/19/17	28	35	30	3000	20.48	NM	NP		
MW-2	08/20/14	<1.0	<1.0	<1.0	<1.0	99.43	18.11	81.32	NP
	01/29/15	<1.0	<1.0	<1.0	<1.0		20.27	79.16	NP
	04/07/15	<1.0	<1.0	<1.0	11		21.52	77.91	NP
	07/07/15	<1.0	<1.0	<1.0	<1.0		18.89	80.54	NP
	10/08/15	<1.0	<1.0	<1.0	<1.0		17.09	82.34	NP
	01/20/16	<1.0	<1.0	<1.0	<1.0		20.32	79.11	NP
	11/30/16	<1.0	<1.0	<1.0	<1.0		18.44	80.99	NP
MW-3	08/20/14	8.1	<1.0	<1.0	<1.0	99.81	18.39	81.42	NP
	01/29/15	<1.0	<1.0	<1.0	<1.0		20.56	79.25	NP
	04/07/15	<1.0	<1.0	<1.0	<1.0		21.82	77.99	NP
	07/07/15	<1.0	<1.0	<1.0	<1.0		19.16	80.65	NP
	10/08/15	<1.0	<1.0	<1.0	<1.0		17.34	82.47	NP
	01/20/16	<1.0	<1.0	<1.0	<1.0		20.60	79.21	NP

SAMPLE LOCATION	DATE	BENZENE (µg/L)	TOLUENE (µg/L)	ETHYL BENZENE (µg/L)	TOTAL XYLENES (µg/L)	TOC ELEVATION (feet)	DEPTH TO GROUND WATER (ft)	GROUND WATER ELEVATION (ft)	FREE PRODUCT THICKNESS (ft)
MW-3	11/30/16	<1.0	<1.0	<1.0	<1.0		18.71	81.10	NP
MW-4	08/20/14	<1.0	<1.0	<1.0	<1.0	99.89	18.63	81.26	NP
	01/29/15	<1.0	<1.0	<1.0	<1.0		20.72	79.17	NP
	04/07/15	<1.0	<1.0	<1.0	<1.0		21.95	77.94	NP
	07/07/15	<1.0	<1.0	<1.0	<1.0		18.99	80.90	NP
	10/08/15	<1.0	<1.0	<1.0	<1.0		17.53	82.36	NP
	01/20/16	<1.0	<1.0	<1.0	<1.0		20.75	79.14	NP
	11/30/16	<1.0	<1.0	<1.0	<1.0		18.54	81.35	NP
MW-5	08/20/14	1755	3134	454	10854	99.68	18.55	81.13	NP
	01/29/15	727	2206	298	2476		20.64	79.04	NP
	04/07/15	31	<1.0	6.3	560		21.92	77.76	NP
	07/07/15	<1.0	<1.0	<1.0	4.4		19.29	80.39	NP
	08/18/15	3.2	<1.0	57	170		NM	NM	NP
	10/08/15	4.8	<1.0	69	24		17.46	82.22	NP
	01/20/16	4.9	5.4	160	14		20.67	79.01	NP
	04/11/16	<1.0	<1.0	<1.0	<1.0		NM	NM	NP
	08/01/16	<1.0	<1.0	<1.0	<1.0		18.93	80.75	NP
	11/30/16	7.4	<1.0	240	180		18.84	80.84	NP
	01/19/17	60	<1.0	200	750		21.56	NM	NP
MW-6	08/20/14	<1.0	<1.0	<1.0	<1.0	99.51	18.3	81.21	NP
	01/29/15	<1.0	<1.0	<1.0	<1.0		20.43	79.08	NP
	04/07/15	<1.0	<1.0	<1.0	<1.0		21.69	77.82	NP
	07/07/15	<1.0	<1.0	<1.0	<1.0		19.07	80.44	NP
	10/08/15	<1.0	<1.0	<1.0	<1.0		17.26	82.25	NP
	01/20/16	<1.0	<1.0	<1.0	<1.0		20.48	79.03	NP
	11/30/16	<1.0	<1.0	<1.0	<1.0		18.63	80.88	NP
MW-7	08/20/14	<1.0	<1.0	<1.0	<1.0	100.00	19.00	81.00	NP
	01/29/15	1.1	<1.0	<1.0	3.1		21.07	78.93	NP
	04/07/15	<1.0	<1.0	<1.0	<1.0		21.37	78.63	NP

SAMPLE LOCATION	DATE	BENZENE (µg/L)	TOLUENE (µg/L)	ETHYL BENZENE (µg/L)	TOTAL XYLENES (µg/L)	TOC ELEVATION (feet)	DEPTH TO GROUND WATER (ft)	GROUND WATER ELEVATION (ft)	FREE PRODUCT THICKNESS (ft)
MW-7	07/07/15	<1.0	<1.0	<1.0	<1.0		19.73	80.27	NP
	10/08/15	<1.0	<1.0	<1.0	<1.0		17.91	82.09	NP
	01/20/16	<1.0	<1.0	<1.0	<1.0		21.12	78.88	NP
	11/30/16	<1.0	<1.0	<1.0	<1.0		19.27	80.73	NP
MW-8	08/20/14	<1.0	<1.0	<1.0	<1.0	99.29	18.33	80.96	NP
	01/29/15	1.0	<1.0	<1.0	<1.0		20.37	78.92	NP
	04/07/15	<1.0	<1.0	<1.0	<1.0		21.63	77.66	NP
	07/07/15	<1.0	<1.0	<1.0	<1.0		19.05	80.24	NP
	10/08/15	<1.0	<1.0	<1.0	<1.0		17.22	82.07	NP
	01/20/16	<1.0	<1.0	<1.0	<1.0		20.42	78.87	NP
	11/30/16	<1.0	<1.0	<1.0	<1.0		18.60	80.69	NP
Table 910-1 Limits		5	560	700	1,400				

Bold face values exceed the COGCC limits

NP - No Free Product



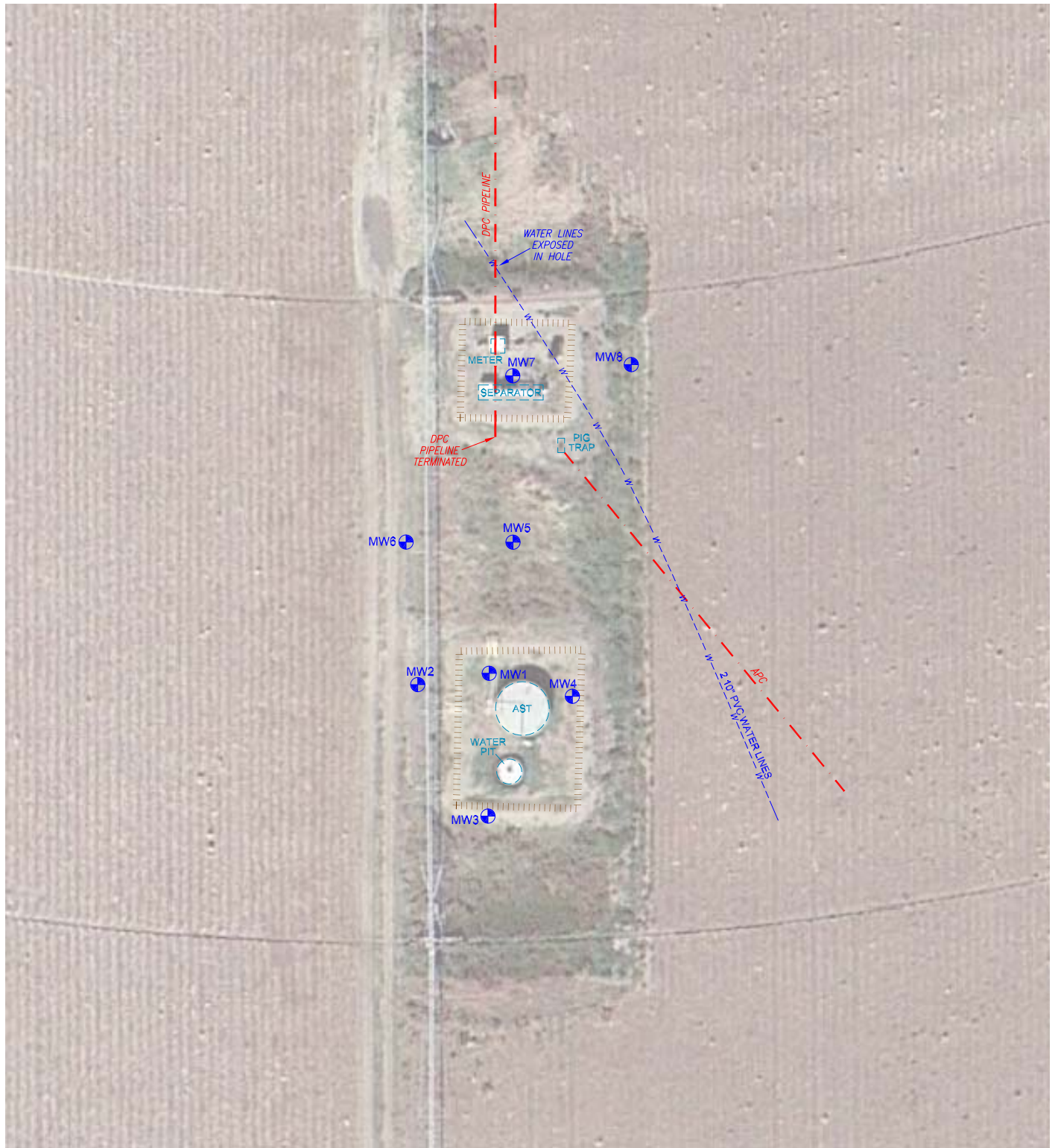
USGS 7.5 MINUTE SERIES (TOPOGRAPHIC)

Figure 1
SITE LOCATION MAP






Homestead Oil - Stephens 1
SW NW Section 15, T4N, R66W
Weld County, Colorado

Project No. C014-027	Prepared by	Drawn by JMA
Date 8/22/14	Reviewed by	Filename 14027T





LEGEND

-  MONITORING WELL
-  CONTAINMENT
-  FORMER FACILITY
-  PIPELINE
-  WATER LINE (buried)

**Figure 2
SITE MAP**

Homestead Oil - Stephens 1
SW NW Section 15, T4N, R66W
Weld County, Colorado

Project No. C014-027	Prepared by	Drawn by JMA
Date 8/27/14	Reviewed by	Filename 14027Q





LEGEND





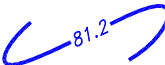

-  MONITORING WELL
-  CONTAINMENT
-  FORMER FACILITY
-  GROUND WATER ELEVATION (ft above arbitrary datum)
-  WATER TABLE CONTOUR
-  GROUND WATER FLOW DIRECTION

Figure 3
INFERRED GROUNDWATER CONTOUR
 NOVEMBER 30, 2016

Homestead Oil - Stephens 1
 SW NW Section 15, T4N, R66W
 Weld County, Colorado

Project No. C014-027	Prepared by	Drawn by JMA
Date 2/2/17	Reviewed by	Filename 14027Q





LEGEND

- MONITORING WELL
 - CONTAINMENT
 - FORMER FACILITY
- | | | |
|---|------|----------------------|
| B | <1.0 | BENZENE (ug/L) |
| T | <1.0 | TOLUENE (ug/L) |
| E | <1.0 | ETHYLBENZENE (ug/L) |
| X | <1.0 | TOTAL XYLENES (ug/L) |
- NS NOT SAMPLED

Figure 4
GROUND WATER CHEMISTRY MAP
 JANUARY 19, 2017

Homestead Oil - Stephens 1
 SW NW Section 15, T4N, R66W
 Weld County, Colorado

Project No. C014-027	Prepared by	Drawn by JMA
Date 2/2/17	Reviewed by	Filename 14027Q



Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

January 25, 2017

Paul Henehan
Fremont Environmental
1759 Redwing Lane
Broomfield, CO 80020
RE: Homestead Oil Stephens 1

Enclosed are the results of analyses for samples received by Summit Scientific on 01/19/17 13:30. 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: Homestead Oil Stephens 1

Project Number: C014-027
Project Manager: Paul Henehan

Reported:
01/25/17 13:19

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW1	1701128-01	Water	01/19/17 00:00	01/19/17 13:30
MW5	1701128-02	Water	01/19/17 00:00	01/19/17 13:30

Summit Scientific

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Fremont Environmental
1759 Redwing Lane
Broomfield CO, 80020

Project: Homestead Oil Stephens 1

Project Number: C014-027
Project Manager: Paul Henehan

Reported:
01/25/17 13:19

Summit Scientific

1701128

S₂

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

Page 1 of 1

Client: Fremont Environmental Project Manager: Paul Henehan
Address: P.O. Box 1289 E-Mail: paulh@fremontenv.com
City/State/Zip: PO Box 1829 Wellington, CO 80549
Phone: 303-956-8714 Fax: Project Name: Homestead Oil - Stephens #1
Sampler Name: Mark T Project Number: C014-027

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	CHLORO	Naphthalene	SAR	EC	
1	MW 1	1/19/17		2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					
2	S	1/19/17		2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		

Relinquished by:	Date/Time: 1/19/17 13:30	Received by:	Date/Time: 1-19-17 13:30	Turn Around Time (Check) Same Day <input type="checkbox"/> 72 hours <input checked="" type="checkbox"/> 24 hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/> 48 hours <input type="checkbox"/> Sample Integrity: Temperature Upon Receipt: 12.3 Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Notes:
Relinquished by:	Date/Time: 1-19-17 17:45	Received by:	Date/Time: 1-19-17 17:45		
Relinquished by:	Date/Time:	Received by:	Date/Time:		

www.s2scientific.com



Fremont Environmental
1759 Redwing Lane
Broomfield CO, 80020

Project: Homestead Oil Stephens 1

Project Number: C014-027
Project Manager: Paul Henehan

Reported:
01/25/17 13:19

Sample Receipt Checklist

S2 Work Order: 1701128
Client: Fremont Client Project ID: Homestead Oil - Stephens #1
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>12.3</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 ^{(1)?} NOTE: If samples are delivered the same day of sampling, this requirement is waived provided that there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<u>on ice.</u>
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)?} Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect	<input checked="" type="checkbox"/>			<u>HCl preserved</u>
If samples are acid preserved for metals, is the pH ≤ 2 ^{(1)?} Record the pH in Comments.			<input checked="" type="checkbox"/>	
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.				

AWP
Custodian Printed Name

AS 1-19-17
Signature or Initials of Custodian

13:50
Date/Time



Fremont Environmental
1759 Redwing Lane
Broomfield CO, 80020

Project: Homestead Oil Stephens 1

Project Number: C014-027
Project Manager: Paul Henehan

Reported:
01/25/17 13:19

MW1
1701128-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/19/17 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	28	1.0	ug/l	1	1701195	01/21/17	01/22/17	EPA 8260B	
Toluene	35	1.0	"	"	"	"	"	"	
Ethylbenzene	30	1.0	"	"	"	"	"	"	
Xylenes (total)	3000	1.0	"	"	"	"	"	"	

Date Sampled: **01/19/17 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		100 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		95.6 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.3 %	45-146		"	"	"	"	

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: Homestead Oil Stephens 1

Project Number: C014-027
Project Manager: Paul Henehan

Reported:
01/25/17 13:19

MW5
1701128-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/19/17 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	69	1.0	ug/l	1	1701195	01/21/17	01/22/17	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	200	1.0	"	"	"	"	"	"	
Xylenes (total)	750	1.0	"	"	"	"	"	"	

Date Sampled: **01/19/17 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		104 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		95.6 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.4 %	45-146		"	"	"	"	

Summit Scientific

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Fremont Environmental
1759 Redwing Lane
Broomfield CO, 80020

Project: Homestead Oil Stephens 1

Project Number: C014-027
Project Manager: Paul Henehan

Reported:
01/25/17 13:19

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 1701195 - EPA 5030 Water MS

Blank (1701195-BLK1)

Prepared & Analyzed: 01/21/17

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	13.7		"	13.3		103	37-154			
Surrogate: Toluene-d8	12.3		"	13.3		92.0	45-149			
Surrogate: 4-Bromofluorobenzene	12.9		"	13.3		96.9	45-146			

LCS (1701195-BS1)

Prepared & Analyzed: 01/21/17

Benzene	37.2	1.0	ug/l	33.3		111	51-132			
Toluene	36.2	1.0	"	33.3		109	51-138			
Ethylbenzene	38.4	1.0	"	33.1		116	58-146			
m,p-Xylene	70.6	2.0	"	66.5		106	57-144			
o-Xylene	36.6	1.0	"	32.7		112	53-146			
Surrogate: 1,2-Dichloroethane-d4	13.8		"	13.3		104	37-154			
Surrogate: Toluene-d8	13.4		"	13.3		100	45-149			
Surrogate: 4-Bromofluorobenzene	13.6		"	13.3		102	45-146			

Matrix Spike (1701195-MS1)

Source: 1701118-02

Prepared & Analyzed: 01/21/17

Benzene	39.0	1.0	ug/l	33.3	ND	117	34-141			
Toluene	38.6	1.0	"	33.3	ND	116	27-151			
Ethylbenzene	40.9	1.0	"	33.1	ND	124	29-160			
m,p-Xylene	75.4	2.0	"	66.5	ND	113	20-166			
o-Xylene	39.4	1.0	"	32.7	ND	121	33-159			
Surrogate: 1,2-Dichloroethane-d4	15.1		"	13.3		114	37-154			
Surrogate: Toluene-d8	13.0		"	13.3		97.7	45-149			
Surrogate: 4-Bromofluorobenzene	13.6		"	13.3		102	45-146			

Summit Scientific

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Fremont Environmental
1759 Redwing Lane
Broomfield CO, 80020

Project: Homestead Oil Stephens 1

Project Number: C014-027
Project Manager: Paul Henehan

Reported:
01/25/17 13:19

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 1701195 - EPA 5030 Water MS

Matrix Spike Dup (1701195-MSD1)	Source: 1701118-02			Prepared & Analyzed: 01/21/17						
Benzene	40.3	1.0	ug/l	33.3	ND	121	34-141	3.31	32	
Toluene	39.9	1.0	"	33.3	ND	120	27-151	3.44	25	
Ethylbenzene	43.6	1.0	"	33.1	ND	132	29-160	6.32	50	
m,p-Xylene	80.6	2.0	"	66.5	ND	121	20-166	6.70	36	
o-Xylene	42.1	1.0	"	32.7	ND	129	33-159	6.48	26	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>14.8</i>		<i>"</i>	<i>13.3</i>		<i>111</i>	<i>37-154</i>			
<i>Surrogate: Toluene-d8</i>	<i>12.9</i>		<i>"</i>	<i>13.3</i>		<i>96.8</i>	<i>45-149</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>13.6</i>		<i>"</i>	<i>13.3</i>		<i>102</i>	<i>45-146</i>			

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: Homestead Oil Stephens 1

Project Number: C014-027
Project Manager: Paul Henehan

Reported:
01/25/17 13:19

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