

January 7, 2014

Mr. John Axelson
Northeast Region Environmental Protection Specialist
Colorado Oil and Gas Conservation Commission
1120 Lincoln Street, Suite 801
Denver, Colorado 80203

**Re: Landfarm Sampling Letter Report
Hillman 9-1
API: 05-123-31744
Legals: NENE Sec 9-T10N-R59W
Remediation Project Number: 7277**

Dear Mr. Axelson:

Foundation Energy Management (Foundation) has prepared this Landfarm Sampling Letter Report (Report) to document environmental sampling activities at the above referenced site. Soil confirmation samples were collected from the landfarm by Tasman Geosciences LLC (Tasman) on December 19, 2013. A summary of field activities and the analytical results are provided below. The general site layout, dimensions, and sample locations are provided on the attached figure.

Excavation and Sampling Activities

Drilling pit closure activities were initiated in August 2013. Soil samples collected July 2, 2013 from the pit sidewalls and base indicated that the base sample location on the south end of the pit exceeded the Colorado Oil and Gas Conservation Commission (COGCC) Table 910-1 standard for TPH with a total value of 11,800 mg/kg. The south end of the pit was excavated August 27-30, 2013. Approximately 20 cubic yards of impacted material was removed from the pit and spread within an 80-foot by 80-foot bermed landfarm located east of the drilling pit. Approximately 20 cubic yards of manure was mixed into the landfarmed material and left to dry.

Tasman returned to the landfarm December 19, 2013 to collect soil samples. A soil sample (Landfarm North East, Landfarm North West, Landfarm South East, Landfarm South West) was collected at a depth of approximately 2 inches below ground surface (bgs) from each quadrant of the landfarm area, as shown on the attached figure.

The samples were submitted to Summit Scientific Laboratories (Summit) located in Golden, Colorado for laboratory analysis of Colorado Oil and Gas Conservation Commission (COGCC) Table 910-1 constituents. Benzene, toluene, ethylbenzene, total xylenes (BTEX) and total



**FOUNDATION
ENERGY COMPANY**

Foundation Energy Management, LLC
16000 Dallas Parkway, Suite 875
Dallas, TX 75248

petroleum hydrocarbons (TPH) gasoline range organics (GRO) were analyzed by Environmental Protection Agency (EPA) Method 8260B. TPH diesel range and oil range organics (DRO and ORO) were analyzed by EPA Method 8015. BTEX and TPH values in the soil samples were below the Table 910-1 standard. The laboratory data is summarized in Table 1, and the laboratory analytical report is provided in Attachment A.

Conclusions

Based on field observations and analytical results, the material spread within the landfarm area is dry and below COGCC regulatory standards for BTEX and TPH. Foundation would like to request permission to use the landfarmed material as backfill for the pit closure.

Please contact me at (918) 526-5592 if you have any questions regarding this report or require additional information.

Sincerely,

Rachel Eisterhold

Attachments: Tables – Table 1

Figures – Landfarm Soil Sample Locations

Attachment A – Laboratory Analytical Report

Tulsa Office

15 East 5th St, Suite 1200
Tulsa, Oklahoma 74103
P: 918-526-5500 F: 918-585-1660

Corporate Office

16000 Dallas Parkway, Suite 875
Dallas, Texas 75248
P: 972-707-2500 F: 972-934-8610

Denver Office

1801 Broadway, Suite 408
Denver, Colorado 80202
P: 303-861-0504 F: 303-861-0604



Foundation Energy Management, LLC
16000 Dallas Parkway, Suite 875
Dallas, TX 75248

Tables

Tulsa Office

15 East 5th St, Suite 1200
Tulsa, Oklahoma 74103
P: 918-526-5500 F: 918-585-1660

Corporate Office

16000 Dallas Parkway, Suite 875
Dallas, Texas 75248
P: 972-707-2500 F: 972-934-8610

Denver Office

1801 Broadway, Suite 408
Denver, Colorado 80202
P: 303-861-0504 F: 303-861-0604

TABLE 1
HILLMAN 9-1
LANDFARM SOIL SAMPLE RESULTS SUMMARY TABLE
FOUNDATION ENERGY MANAGEMENT LLC

Sample ID	Date Sampled	Depth (Feet bgs)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	TVPH - GRO (mg/kg)	TEPH - DRO (mg/kg)
LANDFARM NORTH EAST	12/19/2013	0.16	<0.002	<0.005	<0.005	<0.005	<0.5	<50
LANDFARM NORTH WEST	12/19/2013	0.16	<0.002	<0.005	<0.005	<0.005	<0.5	<50
LANDFARM SOUTH EAST	12/19/2013	0.16	<0.002	<0.005	<0.005	<0.005	<0.5	170
LANDFARM SOUTH WEST	12/19/2013	0.16	<0.002	<0.005	<0.005	<0.005	<0.5	<50
COGCC standards for soil (mg/kg)			0.17	85	100	175	500	

Notes:

TVPH - GRO: Total volatile petroleum hydrocarbons - Gasoline Range Organics

TEPH - DRO: Total extractable petroleum hydrocarbons - Diesel Range Organics

TEPH - ORO: Total extractable petroleum hydrocarbons - Oil Range Organics

mg/kg= Milligrams per kilogram.

bgs - Below ground surface.

Bold values indicate an exceedance of the COGCC soil standards for the Site.

Figures

Tulsa Office

15 East 5th St, Suite 1200
Tulsa, Oklahoma 74103
P: 918-526-5500 F: 918-585-1660

Corporate Office

16000 Dallas Parkway, Suite 875
Dallas, Texas 75248
P: 972-707-2500 F: 972-934-8610

Denver Office

1801 Broadway, Suite 408
Denver, Colorado 80202
P: 303-861-0504 F: 303-861-0604



PROJECT NO:	<div><div><div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div></div><div></div></div><div><div></div><div></div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><</div>
-------------	--

Attachment A

Laboratory Analytical Report

Tulsa Office

15 East 5th St, Suite 1200
Tulsa, Oklahoma 74103
P: 918-526-5500 F: 918-585-1660

Corporate Office

16000 Dallas Parkway, Suite 875
Dallas, Texas 75248
P: 972-707-2500 F: 972-934-8610

Denver Office

1801 Broadway, Suite 408
Denver, Colorado 80202
P: 303-861-0504 F: 303-861-0604

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

December 23, 2013

Alyssa Beard
Tasman Geosciences
6899 Pecos Street
Denver, CO 80221
RE: FEM Hillman 9-1

Enclosed are the results of analyses for samples received by Summit Scientific on 12/19/13 17:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to be 'BS' with a long, sweeping horizontal line extending to the right.

Ben Shrewsbury
President / Laboratory Manager



Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: FEM Hillman 9-1

Project Number: [none]
Project Manager: Alyssa Beard

Reported:
12/23/13 18:46

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Landfarm North East	R312126-01	Soil	12/19/13 14:00	12/19/13 17:30
Landfarm North West	R312126-02	Soil	12/19/13 14:10	12/19/13 17:30
Landfarm South East	R312126-03	Soil	12/19/13 14:20	12/19/13 17:30
Landfarm South West	R312126-04	Soil	12/19/13 14:30	12/19/13 17:30

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.



Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: FEM Hillman 9-1

Project Number: [none]
Project Manager: Alyssa Beard

Reported:
12/23/13 18:46

Summit Scientific

S₂

741 Corporate Circle, Suite 18K • Golden, Colorado 80401
303-277-9310 • 303-574-5933

Client: TASMAN Project Manager: ALYSSA BEARD Page 1 of 1
Address: ALYSSA BEARD
City/State/Zip: ALYSSA BEARD
Phone: ALYSSA BEARD
Fax: ALYSSA BEARD
Project Name: FEM Hillman 9-1
Project Number: FEM Hillman 9-1

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested	Special Instructions	
					HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air-Canister #			Other (Specify)
1	LANDFARM NORTH EAST	12/11/13	14:00	1										
2	LANDFARM NORTH WEST	12/11/13	14:10	1										
3	LANDFARM SOUTH EAST	12/11/13	14:20	1										
4	LANDFARM SOUTH WEST	12/11/13	14:30	1										
5														
6														
7														
8														
9														
10														

Relinquished by:	Date/Time:	Received by:	Date/Time:	Turn Around Time (Check)	Notes:
<u>AT</u>	<u>12/19/13 17:30</u>	<u>[Signature]</u>	<u>12/19/13 17:30</u>	Same Day <input type="checkbox"/> 72 hours <input type="checkbox"/> 24 hours <input checked="" type="checkbox"/> Standard <input checked="" type="checkbox"/> 48 hours <input type="checkbox"/>	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Sample Integrity:	Temperature Upon Receipt: <u>76</u>
Relinquished by:	Date/Time:	Received by:	Date/Time:	Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	

www.s2scientific.com

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.



Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: FEM Hillman 9-1

Project Number: [none]
Project Manager: Alyssa Beard

Reported:
12/23/13 18:46

**Landfarm North East
R312126-01 (Soil)**

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 12/19/13 14:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (TEPH-DRO)	ND	50	mg/kg	1	3122004	12/20/13	12/20/13	8015M	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: 12/19/13 14:00

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

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 12/19/13 14:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	3122005	12/20/13	12/22/13	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: 12/19/13 14:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		110 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		96.9 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	21-167		"	"	"	"	

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.



Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: FEM Hillman 9-1
Project Number: [none]
Project Manager: Alyssa Beard

Reported:
12/23/13 18:46

**Landfarm North West
R312126-02 (Soil)**

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 12/19/13 14:10

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (TEPH-DRO)	ND	50	mg/kg	1	3122004	12/20/13	12/20/13	8015M	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: 12/19/13 14:10

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		90.1 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 12/19/13 14:10

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	3122005	12/20/13	12/22/13	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: 12/19/13 14:10

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		106 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		95.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	21-167		"	"	"	"	

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.



Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: FEM Hillman 9-1

Project Number: [none]
Project Manager: Alyssa Beard

Reported:
12/23/13 18:46

**Landfarm South East
R312126-03 (Soil)**

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 12/19/13 14:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (TEPH-DRO)	170	50	mg/kg	1	3122004	12/20/13	12/20/13	8015M	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: 12/19/13 14:20

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

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 12/19/13 14:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	3122005	12/20/13	12/22/13	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: 12/19/13 14:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		106 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		95.9 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %	21-167		"	"	"	"	

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.



Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: FEM Hillman 9-1
Project Number: [none]
Project Manager: Alyssa Beard

Reported:
12/23/13 18:46

**Landfarm South West
R312126-04 (Soil)**

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 12/19/13 14:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (TEPH-DRO)	ND	50	mg/kg	1	3122004	12/20/13	12/20/13	8015M	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: 12/19/13 14:30

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

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 12/19/13 14:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	3122005	12/20/13	12/22/13	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: 12/19/13 14:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		104 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		95.2 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	21-167		"	"	"	"	

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.



Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: FEM Hillman 9-1

Project Number: [none]
Project Manager: Alyssa Beard

Reported:
12/23/13 18:46

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 3122004 - EPA 3550A

Blank (3122004-BLK1)

Prepared & Analyzed: 12/20/13

C10-C28 (TEPH-DRO)	ND	50	mg/kg
C28-C36 (TEPH-ORO)	ND	50	"

LCS (3122004-BS1)

Prepared & Analyzed: 12/20/13

C10-C28 (TEPH-DRO)	502	50	mg/kg	499	101	73-134
--------------------	-----	----	-------	-----	-----	--------

Matrix Spike (3122004-MS1)

Source: R312101-01

Prepared & Analyzed: 12/20/13

C10-C28 (TEPH-DRO)	1060	50	mg/kg	466	620	94.2	50-148
--------------------	------	----	-------	-----	-----	------	--------

Matrix Spike Dup (3122004-MSD1)

Source: R312101-01

Prepared & Analyzed: 12/20/13

C10-C28 (TEPH-DRO)	1260	50	mg/kg	472	620	135	50-148	17.2	13
--------------------	------	----	-------	-----	-----	-----	--------	------	----

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.



Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: FEM Hillman 9-1

Project Number: [none]
Project Manager: Alyssa Beard

Reported:
12/23/13 18:46

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 3122005 - EPA 5030 Soil MS

Blank (3122005-BLK1)

Prepared: 12/20/13 Analyzed: 12/21/13

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	0.0404		"	0.0387		104	23-173			
Surrogate: Toluene-d8	0.0380		"	0.0391		97.2	20-170			
Surrogate: 4-Bromofluorobenzene	0.0399		"	0.0391		102	21-167			

LCS (3122005-BS1)

Prepared: 12/20/13 Analyzed: 12/21/13

Benzene	0.0855	0.0020	mg/kg	0.0969		88.3	58-130			
Toluene	0.101	0.0050	"	0.0969		104	61-134			
Ethylbenzene	0.134	0.0050	"	0.0969		138	74-139			
m,p-Xylene	0.234	0.010	"	0.194		121	73-137			
o-Xylene	0.123	0.0050	"	0.0969		127	73-141			
Surrogate: 1,2-Dichloroethane-d4	0.0397		"	0.0384		103	23-173			
Surrogate: Toluene-d8	0.0383		"	0.0388		98.9	20-170			
Surrogate: 4-Bromofluorobenzene	0.0381		"	0.0388		98.3	21-167			

Matrix Spike (3122005-MS1)

Source: R312101-01

Prepared: 12/20/13 Analyzed: 12/21/13

Benzene	0.0848	0.0020	mg/kg	0.0952	ND	89.1	30-131			
Toluene	0.105	0.0050	"	0.0952	0.00633	103	30-134			
Ethylbenzene	0.134	0.0050	"	0.0952	0.00337	137	22-153			
m,p-Xylene	0.235	0.010	"	0.190	0.00890	119	10-159			
o-Xylene	0.126	0.0050	"	0.0952	0.00510	127	31-151			
Surrogate: 1,2-Dichloroethane-d4	0.0398		"	0.0377		106	23-173			
Surrogate: Toluene-d8	0.0372		"	0.0381		97.6	20-170			
Surrogate: 4-Bromofluorobenzene	0.0373		"	0.0381		97.9	21-167			

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.



Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: FEM Hillman 9-1

Project Number: [none]
Project Manager: Alyssa Beard

Reported:
12/23/13 18:46

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 3122005 - EPA 5030 Soil MS

Matrix Spike Dup (3122005-MSD1)		Source: R312101-01			Prepared: 12/20/13		Analyzed: 12/21/13			
Benzene	0.0825	0.0020	mg/kg	0.0943	ND	87.4	30-131	2.82	34	
Toluene	0.101	0.0050	"	0.0943	0.00633	100	30-134	3.71	30	
Ethylbenzene	0.135	0.0050	"	0.0943	0.00337	139	22-153	0.321	24	
m,p-Xylene	0.237	0.010	"	0.189	0.00890	121	10-159	0.642	68	
o-Xylene	0.124	0.0050	"	0.0943	0.00510	126	31-151	1.84	38	
Surrogate: 1,2-Dichloroethane-d4	0.0389		"	0.0374		104	23-173			
Surrogate: Toluene-d8	0.0362		"	0.0377		95.9	20-170			
Surrogate: 4-Bromofluorobenzene	0.0368		"	0.0377		97.6	21-167			

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.



Tasman Geosciences
6899 Pecos Street
Denver CO, 80221

Project: FEM Hillman 9-1

Project Number: [none]
Project Manager: Alyssa Beard

Reported:
12/23/13 18:46

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

A handwritten signature in black ink, appearing to be 'JMM'.