

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

April 24, 2017

Jeff Freitas

Top Operating Co

3609 South Wadsworth BLVD Suite 340

Lakewood, CO 80235

RE: Hays 1

Enclosed are the results of analyses for samples received by Summit Scientific on 04/20/17 14:35. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Paul Shrewsbury
President



Top Operating Co
3609 South Wadsworth BLVD Suite 340
Lakewood CO, 80235

Project: Hays 1
Project Number: [none]
Project Manager: Jeff Freitas

Reported:
04/24/17 10:59

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Hays 1 Soil	1704200-01	Soil	04/20/17 00:00	04/20/17 14:35
Hays 1 Oil	1704200-02	Water	04/20/17 00:00	04/20/17 14:35

Summit Scientific

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CASE NARRATIVE

Two water samples were received at Summit Scientific's Laboratory on April 20, 2017 at 14:35 via courier. The samples arrived on ice in good condition at a temperature of 5.5 C.

8015 DRO

Both samples were run for DRO in accordance with SW846 Method 8015.

The source of the fuel in the soil sample is not the same as the fuel type in the product sample and must be from a different source.

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Summit Scientific

1704200

S2

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

Client: Top Operating Co Project Manager: _____ Page 1 of 1
 Address: 3609 S Wadsworth Blvd Ste 340 E-Mail: jeff.freitas@topoperating.com
 City/State/Zip: Lakewood CO 80235
 Phone: 303 727-9915 Fax: _____ Project Name: HAYS 1
 Sampler Name: _____ 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)	ATP/PI	chromat. card			
1	Hays 1 soil	4/20/17		1													
2	Hays 1 oil	4/20/17		1					X								
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Relinquished by:	Date/Time: 4/20/17 14:37	Received by:	Date/Time: 4-20-17 14:35	Turn Around Time (Check) Same Day <input checked="" type="checkbox"/> 72 hours 24 hours <input type="checkbox"/> Standard 48 hours <input type="checkbox"/> Sample Integrity: Temperature Upon Receipt: 5.5 Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No	Notes: Case Narrative
Relinquished by:	Date/Time:	Received by:	Date/Time:		
Relinquished by:	Date/Time:	Received by:	Date/Time:		

www.s2scientific.com



Top Operating Co
3609 South Wadsworth BLVD Suite 340
Lakewood CO, 80235

Project: Hays 1

Project Number: [none]
Project Manager: Jeff Freitas

Reported:
04/24/17 10:59

Sample Receipt Checklist

S2 Work Order: 1704 200
Client: Top Operating Co Client Project ID: Hays 1
Shipped Via: H/D (UPS, FedEx, Hand Delivered, Pick-up, etc.) Airbill #: _____
Matrix (check all that apply): Air Soil/Solid Water Other: oil/Fuel Product
(Describe)

Cooler ID					
Temp (°C)	<u>5.5</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"/>			<u>on ice</u>
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.

Paul Shruskey
Custodian Printed Name

[Signature]
Signature or Initials of Custodian

4-20-17
Date/Time

[Signature]



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Reported:
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Hays 1 Soil
1704200-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/20/17 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	33000	50	mg/kg	1	1704223	04/20/17	04/21/17	8015M	

Date Sampled: **04/20/17 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: o-Terphenyl</i>		2080 %	30-150		"	"	"	"	S-02

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Reported:
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Hays 1 Oil
1704200-02 (Water)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/20/17 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	2380	5.00	mg/L	1	1704226	04/21/17	04/21/17	8015M	

Date Sampled: **04/20/17 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl			47.2-150		"	"	"	"	S-02

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Reported:
04/24/17 10:59

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 1704223 - EPA 3550A

Blank (1704223-BLK1)

Prepared & Analyzed: 04/20/17

C10-C28 (DRO)	ND	50	mg/kg								
<i>Surrogate: o-Terphenyl</i>	15.1		"	12.5		121	30-150				

LCS (1704223-BS1)

Prepared & Analyzed: 04/20/17

C10-C28 (DRO)	504	50	mg/kg	499		101	73-134				
<i>Surrogate: o-Terphenyl</i>	15.4		"	12.5		123	30-150				

Matrix Spike (1704223-MS1)

Source: 1704203-01

Prepared & Analyzed: 04/20/17

C10-C28 (DRO)	493	50	mg/kg	499	46.8	89.5	50-148				
<i>Surrogate: o-Terphenyl</i>	14.8		"	12.5		118	30-150				

Matrix Spike Dup (1704223-MSD1)

Source: 1704203-01

Prepared & Analyzed: 04/20/17

C10-C28 (DRO)	504	50	mg/kg	499	46.8	91.6	50-148	2.14	20		
<i>Surrogate: o-Terphenyl</i>	14.7		"	12.5		118	30-150				

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Notes and Definitions

S-02 The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.

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