

Summit Scientific

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January 11, 2018

Colby Sterling
Talon/LPE
1811 E Mulberry
Ft Collins, CO 80524
RE: Horsetail 07 East CPB

Enclosed are the results of analyses for samples received by Summit Scientific on 01/08/18 15:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Paul Shrewsbury For Ben Shrewsbury
Laboratory Manager



Talon/LPE
1811 E Mulberry
Ft Collins CO, 80524

Project: Horsetail 07 East CPB

Project Number: 701530.124.01
Project Manager: Colby Sterling

Reported:
01/11/18 08:57

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS-10@0'	1801072-01	Soil	01/08/18 10:55	01/08/18 15:00
SS-11@2"	1801072-02	Soil	01/08/18 11:00	01/08/18 15:00
SS-12@2"	1801072-03	Soil	01/08/18 11:05	01/08/18 15:00

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Sample Receipt Checklist

1801072

S2 Work Order: _____

Client: Talon/LPE Client Project ID: Horsetail 07 East CPB

Shipped Via: P/U Airbill #: _____
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

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

Cooler ID				
Temp (°C)	12.5			

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.		✓		
Were all samples received intact ⁽¹⁾ ?	✓			
Was adequate sample volume provided ⁽¹⁾ ?	✓			
If custody seals are present, are they intact ⁽¹⁾ ?			✓	
Are short holding time analytes or samples with HTs due within 48 hours present?			✓	
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	✓			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	✓			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	✓			
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	✓			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.			✓	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ?			✓	
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⁾ ?			✓	
Record the pH in Comments.			✓	
If dissolved metals are requested, were samples field filtered?			✓	

Additional Comments (if any):

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

Nakita
Custodian Printed Name

[Signature]
Signature or Initials of Custodian

1/8/18 1540
Date/Time



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SS-10@0'
1801072-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/08/18 10:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	100	50	mg/kg	1	1801091	01/09/18	01/09/18	8015M	

Date Sampled: **01/08/18 10:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: o-Terphenyl</i>		71.7 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/08/18 10:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1801090	"	01/09/18	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	1.0	0.50	"	"	"	"	"	"	

Date Sampled: **01/08/18 10:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		91.7 %	23-173		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		98.7 %	20-170		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		96.8 %	21-167		"	"	"	"	

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Reported:
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SS-11@2"
1801072-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/08/18 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	760	50	mg/kg	1	1801091	01/09/18	01/09/18	8015M	

Date Sampled: **01/08/18 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		183 %	30-150		"	"	"	"	S-02

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/08/18 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1801090	"	01/09/18	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **01/08/18 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		91.0 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.3 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.8 %	21-167		"	"	"	"	

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Reported:
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SS-12@2"
1801072-03 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/08/18 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	330	50	mg/kg	1	1801091	01/09/18	01/10/18	8015M	

Date Sampled: **01/08/18 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: o-Terphenyl</i>		101 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/08/18 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1801090	"	01/09/18	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	1.9	0.50	"	"	"	"	"	"	

Date Sampled: **01/08/18 11:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		89.0 %	23-173		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		98.7 %	20-170		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		101 %	21-167		"	"	"	"	

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Reported:
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Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch 1801091 - EPA 3550A

Blank (1801091-BLK1)				Prepared & Analyzed: 01/09/18							
C10-C28 (DRO)	ND	50	mg/kg								
Surrogate: <i>o</i> -Terphenyl	12.5		"	12.5		99.7	30-150				
LCS (1801091-BS1)				Prepared & Analyzed: 01/09/18							
C10-C28 (DRO)	573	50	mg/kg	499		115	73-134				
Surrogate: <i>o</i> -Terphenyl	13.9		"	12.5		112	30-150				
Matrix Spike (1801091-MS1)				Source: 1801070-01		Prepared & Analyzed: 01/09/18					
C10-C28 (DRO)	520	50	mg/kg	499	12.4	102	50-148				
Surrogate: <i>o</i> -Terphenyl	16.0		"	12.5		128	30-150				
Matrix Spike Dup (1801091-MSD1)				Source: 1801070-01		Prepared & Analyzed: 01/09/18					
C10-C28 (DRO)	559	50	mg/kg	499	12.4	110	50-148	7.16		20	
Surrogate: <i>o</i> -Terphenyl	15.6		"	12.5		125	30-150				

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Volatile Organic Compounds by EPA Method 8260B - Quality Control
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Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1801090 - EPA 5030 Soil MS

Blank (1801090-BLK1)

Prepared & Analyzed: 01/09/18

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	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0343</i>		<i>"</i>	<i>0.0400</i>		<i>85.6</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0408</i>		<i>"</i>	<i>0.0400</i>		<i>102</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0402</i>		<i>"</i>	<i>0.0400</i>		<i>101</i>	<i>21-167</i>			

LCS (1801090-BS1)

Prepared & Analyzed: 01/09/18

Benzene	0.102	0.0020	mg/kg	0.100		102	58-130			
Toluene	0.104	0.0050	"	0.100		104	61-134			
Ethylbenzene	0.110	0.0050	"	0.0992		111	74-139			
m,p-Xylene	0.209	0.010	"	0.200		105	73-137			
o-Xylene	0.105	0.0050	"	0.0980		107	73-141			
Xylenes (total)	0.314	0.0050	"				30-150			
Gasoline Range Hydrocarbons	2.71	0.50	"				30-150			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0343</i>		<i>"</i>	<i>0.0400</i>		<i>85.6</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0424</i>		<i>"</i>	<i>0.0400</i>		<i>106</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0398</i>		<i>"</i>	<i>0.0400</i>		<i>99.4</i>	<i>21-167</i>			

Matrix Spike (1801090-MS1)

Source: 1801070-01

Prepared & Analyzed: 01/09/18

Benzene	0.102	0.0020	mg/kg	0.100	ND	102	30-131			
Toluene	0.105	0.0050	"	0.100	ND	105	30-134			
Ethylbenzene	0.114	0.0050	"	0.0992	ND	115	22-153			
m,p-Xylene	0.215	0.010	"	0.200	ND	108	10-159			
o-Xylene	0.109	0.0050	"	0.0980	ND	111	31-151			
Xylenes (total)	0.324	0.0050	"		ND		30-150			
Gasoline Range Hydrocarbons	2.86	0.50	"		ND		30-150			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0363</i>		<i>"</i>	<i>0.0400</i>		<i>90.8</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0411</i>		<i>"</i>	<i>0.0400</i>		<i>103</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0390</i>		<i>"</i>	<i>0.0400</i>		<i>97.6</i>	<i>21-167</i>			

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Volatile Organic Compounds by EPA Method 8260B - Quality Control
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Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1801090 - EPA 5030 Soil MS

Matrix Spike Dup (1801090-MSD1)	Source: 1801070-01			Prepared & Analyzed: 01/09/18						
Benzene	0.110	0.0020	mg/kg	0.100	ND	110	30-131	6.98	34	
Toluene	0.114	0.0050	"	0.100	ND	114	30-134	8.44	30	
Ethylbenzene	0.126	0.0050	"	0.0992	ND	127	22-153	9.85	24	
m,p-Xylene	0.237	0.010	"	0.200	ND	118	10-159	9.39	68	
o-Xylene	0.121	0.0050	"	0.0980	ND	124	31-151	10.9	38	
Xylenes (total)	0.358	0.0050	"		ND		30-150	9.90	20	
Gasoline Range Hydrocarbons	3.12	0.50	"		ND		30-150	8.57	20	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0370</i>		<i>"</i>	<i>0.0400</i>		<i>92.6</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0411</i>		<i>"</i>	<i>0.0400</i>		<i>103</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0398</i>		<i>"</i>	<i>0.0400</i>		<i>99.4</i>	<i>21-167</i>			

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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