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Horsetail 30 CPB
Confirmation Sampling
Project # 701530.120.05

October HF, 2019

Prepared By:

Talon/ LPE
1811 East Mulberry Street
Fort Collins, CO 80524

Prepared For:

Whiting Oil and Gas Corporation



October 29 , 2019

Mr. Kyle Waggoner
Whiting Oil and Gas Corporation
56719 CR 127
New Raymer, CO 80742

**RE: Confirmation Sampling
Horsetail 30 CPB
Weld County, Colorado
Project # 701530.120.05**

Mr. Waggoner:

On July 23, 2019, Talon/LPE conducted a liner inspection at the Horsetail 30 CPB (Site) in Weld County, Colorado. Talon personnel discovered a tear in the liner and conducted confirmation soil sampling at the Horsetail 30 CPB (Site) in Weld County, Colorado. The purpose of the sampling event was to ensure that all hydrocarbon impacted soils had been removed to the extent required by the Colorado Oil and Gas Conservation Commission (COGCC) following cleanup activities of a produced water release. The site is identified by the COGCC as Spill/Release Point ID 464278.

On July 23, 2019, a total of 1 grab sample was taken (SS-1 at a depth of 1 foot below ground surface (ft bgs)). A site map with the sample locations is presented in Figures 1 and 2.

The collected sample was analyzed for Total Petroleum Hydrocarbons (TPH) via Gasoline Range Organics (GRO) method EPA8260B and Diesel Range Organics (DRO) method 8015, for Benzene, Toluene, Ethyl-benzene, and Xylenes (BTEX) via method EPA8260B, and for inorganics (Electrical Conductivity (EC), Sodium Adsorption Ratio (SAR), and pH) via method USDA60 at Summit Scientific (Summit) in Golden, Colorado.

Analytical results for SS-1 were above COGCC 910-1 concentration levels for pH. On July 31, 2019, Talon/LPE returned to the site to see if further excavation had been performed, and discovered a second tear in the liner. A total of two (2) grab samples were taken (SS-2 at 2 ft bgs, and Background North at 0 ft bgs). Analytical results for SS-2 were above COGCC 910-1 concentration levels for pH. Analytical Results for Background North were below laboratory detection limits and COGCC table 910-1



concentration levels. A soil concentration map is presented in Figure 3, and a breakdown of the soil analytical data is presented in Table 1.

Based on the collected analytical data, further excavation was performed by Whiting contractors to depths of 1.5 ft bgs for SS-1, and 2.2 ft bgs for SS-2. On September 18, 2019, Talon personnel collected 1 grab sample SS-1. Analytical results for pH in SS-1 were below COGCC 910-1 concentration levels. On September 30, 2019, Talon personnel collected 1 grab sample SS-2. Analytical results for pH in SS-2 were below COGCC 910-1 concentration levels. All analytical results are below laboratory detection limits and COGCC 910-01 concentration levels shown in Table 1 and Figure 3.

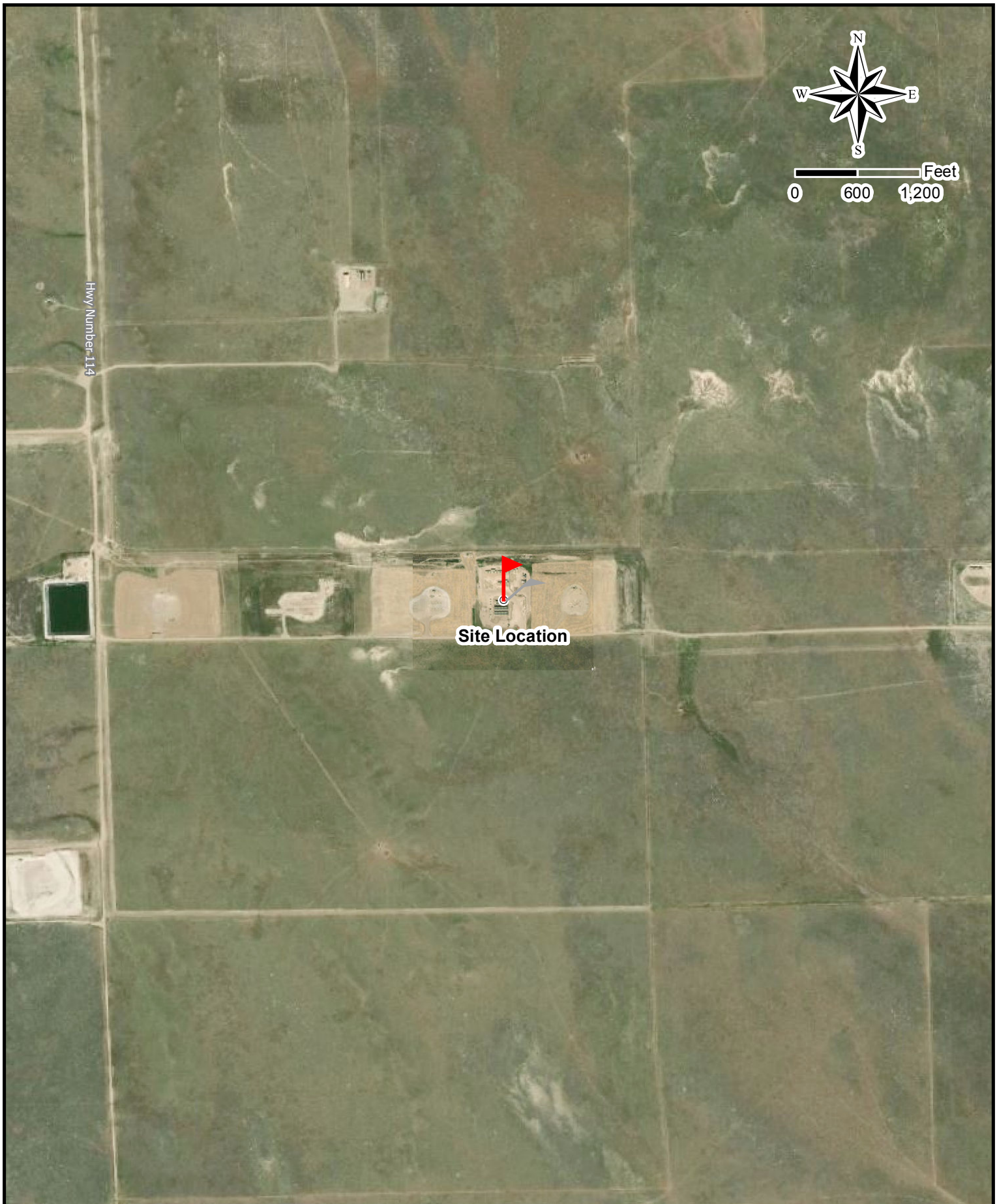
Following the excavations, Whiting contractors transported and disposed the excavated stockpile material at an approved landfill facility. Clean soil will be brought into the Site to backfill the excavated areas upon approval of this closure request.

Based upon the collected analytical data Talon/LPE believes that no further corrective action is necessary, and that Whiting can request closure from the COGCC. If you have any questions or comments, please do not hesitate to call me at (970) 818-5330.

Respectfully Submitted,

Levi Kirk
Environmental Scientist
Talon/LPE

Attachment 1
Figures



Drafted: 10/23/2019
1 in = 1,200 ft
Drafted By: JAI

Whiting Oil & Gas
Wolf 35-2623H Produced Water
Weld County, CO
Figure 1 - Aerial Map



LEGEND

- Soil Sample

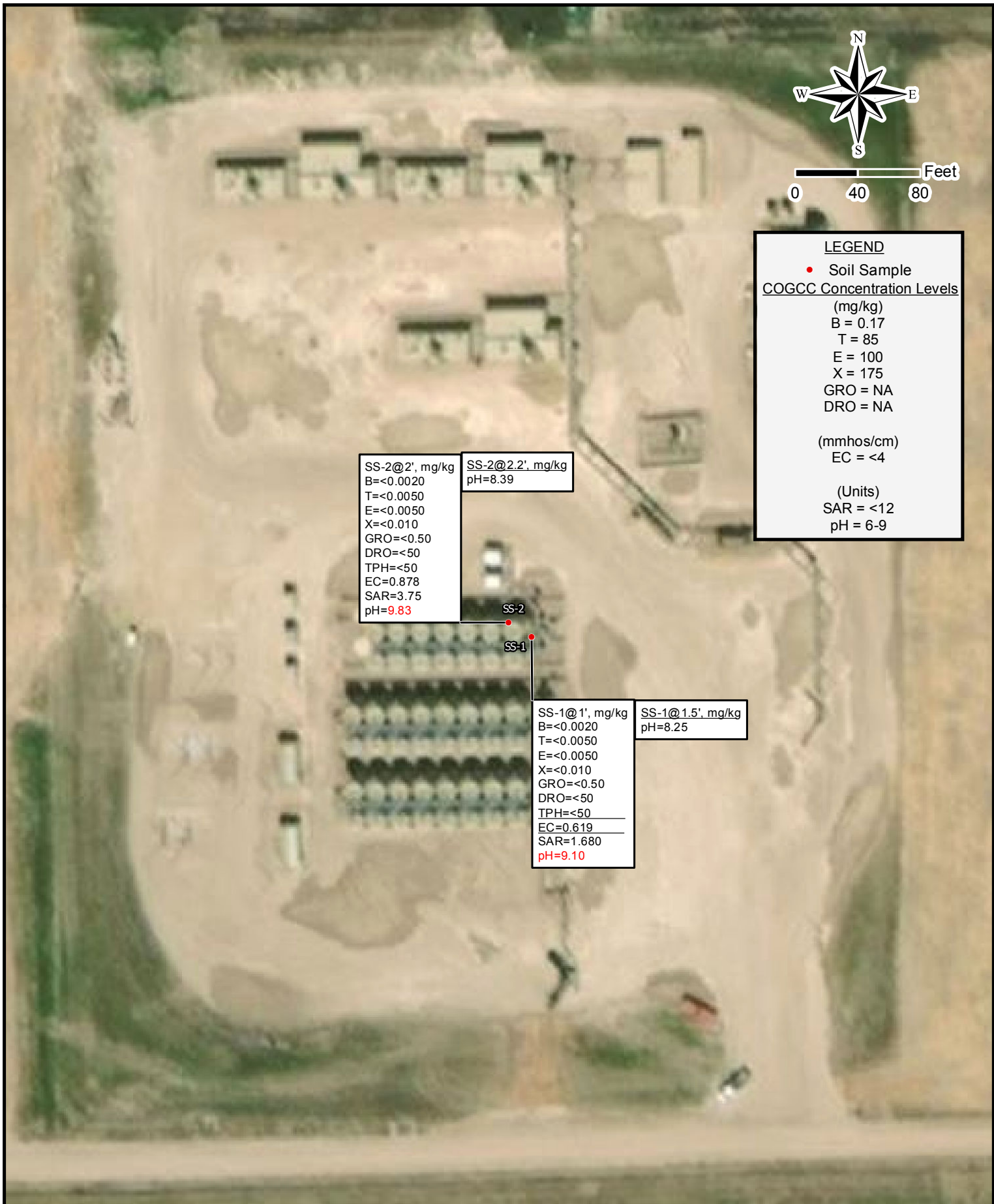


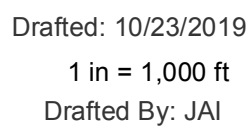
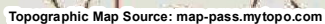
Drafted: 10/23/2019

1 in = 80 ft

Drafted By: JAI

Whiting Oil & Gas
Wolf 35-2623H Produced Water
Weld County, CO
Figure 2 - Site Map





**Whiting Oil & Gas
Wolf 35-2623H Produced Water
Weld County, CO
Figure 4 - Topographic Map**

Attachment 2
Tables



Table 1 - Soil Analytical Data

**Whiting Oil & Gas Corporation
Horsetail 30 CPB
Weld County, Colorado**

Sample ID	Depth BGS in Feet	Date Sampled	Concentration (mg/kg)							mmhos/cm	Units	
			Benzene	Toluene	Ethylbenzene	Xylenes (Total)	GRO	DRO	TPH	EC	SAR	pH
COGCC Table 910-1 Concentration Levels			0.17	85	100	175	NA	NA	500	<4	<12	6-9
SS-1	1	7/23/2019	<0.0020	<0.0050	<0.0050	<0.010	<0.50	<50	<50	0.619	1.680	9.10
	1.5	9/18/2019	NS	NS	NS	NS	NS	NS	NS	NS	NS	8.25
SS-2	2	7/31/2019	<0.0020	<0.0050	<0.0050	<0.010	<0.50	<50	<50	0.878	3.75	9.83
	2.2	9/30/2019	NS	NS	NS	NS	NS	NS	NS	NS	NS	8.39
Background North	0	7/31/2019	<0.0020	<0.0050	<0.0050	<0.010	<0.50	<50	<50	0.516	1.25	8.26

mg/kg - milligrams per kilogram
mmhos/cm - millimhos per centimeter
< - Analytical result is less than the reporting limit
COGCC - Colorado Oil and Gas Conservation Commission

GRO - Gasoline Range Organics
DRO - Diesel Range Organics
TPH - Total Petroleum Hydrocarbons (Combined GRO/DRO)
EC - Electrical Conductivity

SAR - Sodium Adsorption Ratio
NA - Not Analyzed
BGS - Below Ground Surface

Attachment 3
Analytical Report

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

July 30, 2019

Jennifer Galles

Talon/LPE

1811 East Mulberry

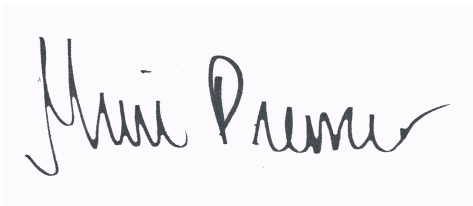
Fort Collins, CO 80525

RE: Horsetail 30 CPB

Work Order # 1907271

Enclosed are the results of analyses for samples received by Summit Scientific on 07/23/19 16:01. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink on a light blue background. The signature is cursive and reads "Muri Premier".

Muri Premier For Ben Shrewsbury

Laboratory Manager



Talon/LPE
1811 East Mulberry
Fort Collins CO, 80525

Project: Horsetail 30 CPB

Project Number: 701530.120.03

Project Manager: Jennifer Galles

Reported:
07/30/19 15:28

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS-1@1'	1907271-01	Soil	07/23/19 13:15	07/23/19 16:01

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.

1907271

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

Page 1 of 1

Client:	Talon/LPE -Bill to Whiting	
Address:	1811 East Mulberry	
City/State/Zip:	Fort Collins, CO 80524	
Phone:	970-818-5330	Fax:
Sampler Name:	Levi Kirk	

Project Manager:	Jennifer Galles
E-Mail:	jgalles@talonlpe.com & jleverton@talonlpe.com
Project Name:	Horsetail 30CPB
Project Number:	701530.120.03

[illegible]

1907271

Sample Receipt Checklist

S2 Work Order _____

Client: Talon/LPE Client Project ID: Horsetail 30CPBShipped Via: H.D./P.U./FedEx/UPS/USPS/Other Airbill #: _____Matrix (check all that apply): ☐ Air ☒ Soil/Solid ☒ Water ☐ Other: _____
(Describe)

Temp (°C)	2.3
-----------	-----

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C ⁽¹⁾ ? NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact ⁽¹⁾ ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples with holding times due within 48 hours sample due within 48 hours present?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ? Note the type of preservative in the Comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , ect	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ? Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Additional Comments (if any):

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

MP

Custodian Printed Name or Initials

Muri Premer

Signature of Custodian

7/23/19

Date/Time



Talon/LPE
1811 East Mulberry
Fort Collins CO, 80525

Project: Horsetail 30 CPB

Project Number: 701530.120.03

Project Manager: Jennifer Galles

Reported:
07/30/19 15:28

SS-1@1'
1907271-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/23/19 13:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	1907377	07/26/19	07/26/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/23/19 13:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		107 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		93.3 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.6 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/23/19 13:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	1907357	07/25/19	07/25/19	EPA 8015M	

Date Sampled: **07/23/19 13:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl		105 %	30-150		"	"	"	"	

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

Date Sampled: **07/23/19 13:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	4220	12.9	mg/kg dry	1	1907365	07/25/19	07/25/19	EPA 6020B	
Magnesium	726	6.45	"	"	"	"	"	"	

Summit Scientific

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Talon/LPE
1811 East Mulberry
Fort Collins CO, 80525

Project: Horsetail 30 CPB
Project Number: 701530.120.03
Project Manager: Jennifer Galles

Reported:
07/30/19 15:28

SS-1@1'
1907271-01 (Soil)

Summit Scientific

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

Sodium	450	6.45	mg/kg dry	1	1907365	07/25/19	07/25/19	EPA 6020B
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Calculated Analysis

Date Sampled: **07/23/19 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.68	0.100	units	1	1907416	07/30/19	07/30/19	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/23/19 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	77.5		%	1	1907330	07/24/19	07/24/19	Calculation	
pH	9.10		pH Units	"	1907331	07/24/19	07/24/19	EPA 9045D	

Specific Conductance by EPA Method 120.1

Date Sampled: **07/23/19 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.619	0.0100	mmhos/cm	1	1907332	07/24/19	07/24/19	EPA 120.1	

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Talon/LPE
1811 East Mulberry
Fort Collins CO, 80525

Project: Horsetail 30 CPB

Project Number: 701530.120.03

Project Manager: Jennifer Galles

Reported:
07/30/19 15:28

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 1907377 - EPA 5030 Soil MS

Blank (1907377-BLK1)

Prepared & Analyzed: 07/26/19

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0241		"	0.0400		60.2	23-173			
Surrogate: Toluene-d8	0.0364		"	0.0400		91.0	20-170			
Surrogate: 4-Bromofluorobenzene	0.0349		"	0.0400		87.2	21-167			

LCS (1907377-BS1)

Prepared & Analyzed: 07/26/19

Benzene	0.0776	0.0020	mg/kg	0.100		77.6	70-130			
Toluene	0.0846	0.0050	"	0.100		84.6	70-130			
Ethylbenzene	0.110	0.0050	"	0.100		110	70-130			
m,p-Xylene	0.215	0.010	"	0.200		107	70-130			
o-Xylene	0.0977	0.0050	"	0.100		97.7	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0266		"	0.0400		66.4	23-173			
Surrogate: Toluene-d8	0.0370		"	0.0400		92.6	20-170			
Surrogate: 4-Bromofluorobenzene	0.0356		"	0.0400		89.0	21-167			

Matrix Spike (1907377-MS1)

Source: 1907322-01

Prepared & Analyzed: 07/26/19

Benzene	0.0766	0.0020	mg/kg	0.100	ND	76.6	70-130			
Toluene	0.0840	0.0050	"	0.100	ND	84.0	70-130			
Ethylbenzene	0.113	0.0050	"	0.100	ND	113	70-130			
m,p-Xylene	0.222	0.010	"	0.200	ND	111	70-130			
o-Xylene	0.100	0.0050	"	0.100	ND	100	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0229		"	0.0400		57.2	23-173			
Surrogate: Toluene-d8	0.0360		"	0.0400		90.0	20-170			
Surrogate: 4-Bromofluorobenzene	0.0347		"	0.0400		86.8	21-167			

Summit Scientific

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Talon/LPE
1811 East Mulberry
Fort Collins CO, 80525

Project: Horsetail 30 CPB
Project Number: 701530.120.03
Project Manager: Jennifer Galles

Reported:
07/30/19 15:28

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 1907377 - EPA 5030 Soil MS

Matrix Spike Dup (1907377-MSD1)		Source: 1907322-01			Prepared & Analyzed: 07/26/19					
Benzene	0.0791	0.0020	mg/kg	0.100	ND	79.1	70-130	3.20	30	
Toluene	0.0872	0.0050	"	0.100	ND	87.2	70-130	3.79	30	
Ethylbenzene	0.115	0.0050	"	0.100	ND	115	70-130	2.02	30	
m,p-Xylene	0.225	0.010	"	0.200	ND	113	70-130	1.46	30	
o-Xylene	0.101	0.0050	"	0.100	ND	101	70-130	0.686	30	
<hr/>										
Surrogate: 1,2-Dichloroethane-d4	0.0234		"	0.0400		58.4	23-173			
Surrogate: Toluene-d8	0.0371		"	0.0400		92.7	20-170			
Surrogate: 4-Bromofluorobenzene	0.0338		"	0.0400		84.4	21-167			

Summit Scientific

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1811 East Mulberry
Fort Collins CO, 80525

Project: Horsetail 30 CPB
Project Number: 701530.120.03
Project Manager: Jennifer Galles

Reported:
07/30/19 15:28

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch 1907357 - EPA 3550A

Blank (1907357-BLK1)

Prepared & Analyzed: 07/25/19

C10-C28 (DRO) ND 50 mg/kg

LCS (1907357-BS1)

Prepared & Analyzed: 07/25/19

C10-C28 (DRO) 522 50 mg/kg 500 104 70-130

Matrix Spike (1907357-MS1)

Source: 1907216-01

Prepared & Analyzed: 07/25/19

C10-C28 (DRO) 534 50 mg/kg 500 44.1 97.9 70-130

Matrix Spike Dup (1907357-MSD1)

Source: 1907216-01

Prepared & Analyzed: 07/25/19

C10-C28 (DRO) 500 50 mg/kg 500 44.1 91.2 70-130 6.54 20

Summit Scientific

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Talon/LPE
1811 East Mulberry
Fort Collins CO, 80525

Project: Horsetail 30 CPB

Project Number: 701530.120.03

Project Manager: Jennifer Galles

Reported:
07/30/19 15:28

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

Summit Scientific

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

Batch 1907365 - General Preparation

Blank (1907365-BLK1)

Prepared & Analyzed: 07/25/19

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

LCS (1907365-BS1)

Prepared & Analyzed: 07/25/19

Calcium	565	10.0	mg/kg wet	500	113	70-130
Magnesium	553	5.00	"	500	111	70-130
Sodium	538	5.00	"	500	108	70-130

Duplicate (1907365-DUP1)

Source: 1907297-07

Prepared & Analyzed: 07/25/19

Calcium	2350	11.9	mg/kg dry	2570	8.86	20
Magnesium	719	5.97	"	682	5.26	20
Sodium	278	5.97	"	287	3.14	20

Matrix Spike (1907365-MS1)

Source: 1907297-07

Prepared & Analyzed: 07/25/19

Calcium	2910	11.9	mg/kg dry	597	2570	57.9	70-130	QM-07
Magnesium	1200	5.97	"	597	682	86.7	70-130	
Sodium	832	5.97	"	597	287	91.3	70-130	

Matrix Spike Dup (1907365-MSD1)

Source: 1907297-07

Prepared & Analyzed: 07/25/19

Calcium	3020	11.9	mg/kg dry	597	2570	75.7	70-130	3.59	25
Magnesium	1250	5.97	"	597	682	95.0	70-130	4.05	25
Sodium	875	5.97	"	597	287	98.4	70-130	4.99	25

Summit Scientific

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1811 East Mulberry
Fort Collins CO, 80525

Project: Horsetail 30 CPB

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Project Manager: Jennifer Galles

Reported:
07/30/19 15:28

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control

Summit Scientific

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

Batch 1907330 - General Preparation

Duplicate (1907330-DUP1)

Source: 1907270-01

Prepared & Analyzed: 07/24/19

% Solids	91.6		%		91.8			0.229	20	
----------	------	--	---	--	------	--	--	-------	----	--

Batch 1907331 - General Preparation

LCS (1907331-BS1)

Prepared & Analyzed: 07/24/19

pH	9.42		pH Units	9.23	102	95-105				
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Duplicate (1907331-DUP1)

Source: 1907244-01

Prepared & Analyzed: 07/24/19

pH	9.01		pH Units		8.94			0.780	20	
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Summit Scientific

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Talon/LPE
1811 East Mulberry
Fort Collins CO, 80525

Project: Horsetail 30 CPB
Project Number: 701530.120.03
Project Manager: Jennifer Galles

Reported:
07/30/19 15:28

Specific Conductance by EPA Method 120.1 - Quality Control
Summit Scientific

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

Batch 1907332 - General Preparation

Blank (1907332-BLK1)

Prepared & Analyzed: 07/24/19

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (1907332-BS1)

Prepared & Analyzed: 07/24/19

Specific Conductance (EC) 0.752 0.0100 mmhos/cm 0.750 100 90-110

Duplicate (1907332-DUP1)

Source: 1907244-01

Prepared & Analyzed: 07/24/19

Specific Conductance (EC) 0.453 0.0100 mmhos/cm 0.453 0.110 20

Summit Scientific

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Talon/LPE
1811 East Mulberry
Fort Collins CO, 80525

Project: Horsetail 30 CPB

Project Number: 701530.120.03
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07/30/19 15:28

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

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

August 07, 2019

Jennifer Galles

Talon/LPE

1811 East Mulberry

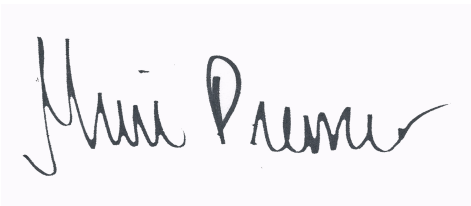
Fort Collins, CO 80525

RE: Horsetail 30 CPB

Work Order # 1907393

Enclosed are the results of analyses for samples received by Summit Scientific on 07/31/19 15:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink on a light blue background. The signature is written in a cursive style and appears to read "Muri Premier".

Muri Premier For Ben Shrewsbury

Laboratory Manager



Talon/LPE
1811 East Mulberry
Fort Collins CO, 80525

Project: Horsetail 30 CPB

Project Number: 701530.120.05

Project Manager: Jennifer Galles

Reported:
08/07/19 09:25

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS-2@2"	1907393-01	Soil	07/31/19 11:55	07/31/19 15:00
Background North@0'	1907393-02	Soil	07/31/19 12:15	07/31/19 15:00

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.

Summit Scientific

Page 1 of 1

Project Manager:	Jennifer Galles
E-Mail:	jgalles@talonlpe.com & jleverton@talonlpe.com
Project Name:	Horsetail 30 CPB
Project Number:	701530.120.05

www.s2scientific.com

Sample Receipt Checklist

S2 Work Order

1907393

Client:

Talon/LPE

Client Project ID:

HORSETAIL 30 CPB.

Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other

Airbill #:

Matrix (check all that apply):

Air

X

Soil/Solid

Water

Other:

(Describe)

Temp (°C)

3.8

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C ⁽¹⁾ ?				
NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.	X			
Were all samples received intact ⁽¹⁾ ?	X			
Was adequate sample volume provided ⁽¹⁾ ?	X			
If custody seals are present, are they intact ⁽¹⁾ ?			X	
Are samples with holding times due within 48 hours sample due within 48 hours present?		X		Standard TAT
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	X			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	X			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	X			
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	X			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.			X	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ?			X	
Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect			X	
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ?			X	
Record the pH in Comments.			X	
If dissolved metals are requested, were samples field filtered?			X	

Additional Comments (if any):

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

Custodian Printed Name or Initials

Signature of Custodian

Date/Time

07/31/19 1540



Talon/LPE
1811 East Mulberry
Fort Collins CO, 80525

Project: Horsetail 30 CPB
Project Number: 701530.120.05
Project Manager: Jennifer Galles

Reported:
08/07/19 09:25

SS-2@2"
1907393-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/31/19 11:55**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	1908004	08/01/19	08/02/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/31/19 11:55**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		84.5 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		88.1 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.2 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/31/19 11:55**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	1908002	08/01/19	08/02/19	EPA 8015M	

Date Sampled: **07/31/19 11:55**

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

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

Date Sampled: **07/31/19 11:55**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	1280	11.0	mg/kg dry	1	1908031	08/02/19	08/02/19	EPA 6020B	
Magnesium	376	5.49	"	"	"	"	"	"	

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.



Talon/LPE
1811 East Mulberry
Fort Collins CO, 80525

Project: Horsetail 30 CPB
Project Number: 701530.120.05
Project Manager: Jennifer Galles

Reported:
08/07/19 09:25

SS-2@2"
1907393-01 (Soil)

Summit Scientific

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

Sodium	594	5.49	mg/kg dry	1	1908031	08/02/19	08/02/19	EPA 6020B
--------	-----	------	-----------	---	---------	----------	----------	-----------

Calculated Analysis

Date Sampled: **07/31/19 11:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.75	0.100	units	1	1908068	08/06/19	08/06/19	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/31/19 11:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	91.1		%	1	1908005	08/01/19	08/01/19	Calculation	
pH	9.83		pH Units	"	1908007	08/01/19	08/01/19	EPA 9045D	

Specific Conductance by EPA Method 120.1

Date Sampled: **07/31/19 11:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.878	0.0100	mmhos/cm	1	1908006	08/01/19	08/01/19	EPA 120.1	

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.



Talon/LPE
1811 East Mulberry
Fort Collins CO, 80525

Project: Horsetail 30 CPB
Project Number: 701530.120.05
Project Manager: Jennifer Galles

Reported:
08/07/19 09:25

Background North@0'
1907393-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/31/19 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1908004	08/01/19	08/02/19	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **07/31/19 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		89.0 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		86.9 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.6 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/31/19 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1908002	08/01/19	08/02/19	EPA 8015M	

Date Sampled: **07/31/19 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		83.3 %	30-150		"	"	"	"	

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

Date Sampled: **07/31/19 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	453	11.1	mg/kg dry	1	1908031	08/02/19	08/02/19	EPA 6020B	
Magnesium	202	5.54	"	"	"	"	"	"	
Sodium	127	5.54	"	"	"	"	"	"	

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.



Talon/LPE
1811 East Mulberry
Fort Collins CO, 80525

Project: Horsetail 30 CPB
Project Number: 701530.120.05
Project Manager: Jennifer Galles

Reported:
08/07/19 09:25

Background North@0'
1907393-02 (Soil)

Summit Scientific

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

Calculated Analysis

Date Sampled: **07/31/19 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.25	0.100	units	1	1908068	08/06/19	08/06/19	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/31/19 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	90.2		%	1	1908005	08/01/19	08/01/19	Calculation	
pH	8.26		pH Units	"	1908007	08/01/19	08/01/19	EPA 9045D	

Specific Conductance by EPA Method 120.1

Date Sampled: **07/31/19 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.516	0.0100	mmhos/cm	1	1908006	08/01/19	08/01/19	EPA 120.1	

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.



Talon/LPE
1811 East Mulberry
Fort Collins CO, 80525

Project: Horsetail 30 CPB

Project Number: 701530.120.05

Project Manager: Jennifer Galles

Reported:
08/07/19 09:25

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch 1908004 - EPA 5030 Soil MS

Blank (1908004-BLK1)

Prepared: 08/01/19 Analyzed: 08/02/19

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0352		"	0.0400		88.0	23-173			
Surrogate: Toluene-d8	0.0344		"	0.0400		86.1	20-170			
Surrogate: 4-Bromofluorobenzene	0.0378		"	0.0400		94.5	21-167			

LCS (1908004-BS1)

Prepared: 08/01/19 Analyzed: 08/02/19

Benzene	0.0660	0.0020	mg/kg	0.0750		88.0	70-130			
Toluene	0.0748	0.0050	"	0.0750		99.7	70-130			
Ethylbenzene	0.0790	0.0050	"	0.0750		105	70-130			
m,p-Xylene	0.153	0.010	"	0.150		102	70-130			
o-Xylene	0.0767	0.0050	"	0.0750		102	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0306		"	0.0400		76.5	23-173			
Surrogate: Toluene-d8	0.0387		"	0.0400		96.8	20-170			
Surrogate: 4-Bromofluorobenzene	0.0376		"	0.0400		94.0	21-167			

Matrix Spike (1908004-MS1)

Source: 1907366-01

Prepared: 08/01/19 Analyzed: 08/02/19

Benzene	0.0683	0.0020	mg/kg	0.0750	ND	91.0	70-130			
Toluene	0.0760	0.0050	"	0.0750	ND	101	70-130			
Ethylbenzene	0.0820	0.0050	"	0.0750	ND	109	70-130			
m,p-Xylene	0.158	0.010	"	0.150	ND	105	70-130			
o-Xylene	0.0808	0.0050	"	0.0750	ND	108	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0328		"	0.0400		81.9	23-173			
Surrogate: Toluene-d8	0.0375		"	0.0400		93.8	20-170			
Surrogate: 4-Bromofluorobenzene	0.0375		"	0.0400		93.7	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.



Talon/LPE
1811 East Mulberry
Fort Collins CO, 80525

Project: Horsetail 30 CPB
Project Number: 701530.120.05
Project Manager: Jennifer Galles

Reported:
08/07/19 09:25

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 1908004 - EPA 5030 Soil MS

Matrix Spike Dup (1908004-MSD1)		Source: 1907366-01			Prepared: 08/01/19 Analyzed: 08/02/19					
Benzene	0.0659	0.0020	mg/kg	0.0750	ND	87.8	70-130	3.58	30	
Toluene	0.0754	0.0050	"	0.0750	ND	100	70-130	0.872	30	
Ethylbenzene	0.0860	0.0050	"	0.0750	ND	115	70-130	4.71	30	
m,p-Xylene	0.166	0.010	"	0.150	ND	111	70-130	5.10	30	
o-Xylene	0.0835	0.0050	"	0.0750	ND	111	70-130	3.29	30	
Surrogate: 1,2-Dichloroethane-d4	0.0307		"	0.0400		76.6	23-173			
Surrogate: Toluene-d8	0.0379		"	0.0400		94.6	20-170			
Surrogate: 4-Bromofluorobenzene	0.0360		"	0.0400		89.9	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.



Talon/LPE
1811 East Mulberry
Fort Collins CO, 80525

Project: Horsetail 30 CPB
Project Number: 701530.120.05
Project Manager: Jennifer Galles

Reported:
08/07/19 09:25

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch 1908002 - EPA 3550A

Blank (1908002-BLK1)

Prepared: 08/01/19 Analyzed: 08/02/19

C10-C28 (DRO) ND 50 mg/kg

LCS (1908002-BS1)

Prepared: 08/01/19 Analyzed: 08/02/19

C10-C28 (DRO) 570 50 mg/kg 500 114 70-130

Matrix Spike (1908002-MS1)

Source: 1907366-01

Prepared: 08/01/19 Analyzed: 08/02/19

C10-C28 (DRO) 570 50 mg/kg 500 38.3 106 70-130

Matrix Spike Dup (1908002-MSD1)

Source: 1907366-01

Prepared: 08/01/19 Analyzed: 08/02/19

C10-C28 (DRO) 563 50 mg/kg 500 38.3 105 70-130 1.23 20

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.



Talon/LPE
1811 East Mulberry
Fort Collins CO, 80525

Project: Horsetail 30 CPB

Project Number: 701530.120.05

Project Manager: Jennifer Galles

Reported:
08/07/19 09:25

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

Summit Scientific

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

Batch 1908031 - General Preparation

Blank (1908031-BLK1)

Prepared & Analyzed: 08/02/19

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

LCS (1908031-BS1)

Prepared & Analyzed: 08/02/19

Calcium	444	10.0	mg/kg wet	500	88.8	70-130
Magnesium	557	5.00	"	500	111	70-130
Sodium	482	5.00	"	500	96.4	70-130

Duplicate (1908031-DUP1)

Source: 1907375-05

Prepared & Analyzed: 08/02/19

Calcium	198	12.2	mg/kg dry	191	3.84	20
Magnesium	287	6.12	"	261	9.34	20
Sodium	219	6.12	"	224	1.87	20

Matrix Spike (1908031-MS1)

Source: 1907375-05

Prepared & Analyzed: 08/02/19

Calcium	732	12.2	mg/kg dry	612	191	88.5	70-130
Magnesium	920	6.12	"	612	261	108	70-130
Sodium	742	6.12	"	612	224	84.8	70-130

Matrix Spike Dup (1908031-MSD1)

Source: 1907375-05

Prepared & Analyzed: 08/02/19

Calcium	697	12.2	mg/kg dry	612	191	82.6	70-130	4.98	25
Magnesium	884	6.12	"	612	261	102	70-130	3.99	25
Sodium	764	6.12	"	612	224	88.4	70-130	2.93	25

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.



Talon/LPE
1811 East Mulberry
Fort Collins CO, 80525

Project: Horsetail 30 CPB

Project Number: 701530.120.05

Project Manager: Jennifer Galles

Reported:
08/07/19 09:25

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control

Summit Scientific

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

Batch 1908005 - General Preparation

Duplicate (1908005-DUP1)

Source: 1907375-05

Prepared & Analyzed: 08/01/19

% Solids	81.9		%		81.7			0.245	20	
----------	------	--	---	--	------	--	--	-------	----	--

Batch 1908007 - General Preparation

LCS (1908007-BS1)

Prepared & Analyzed: 08/01/19

pH	9.44		pH Units	9.23		102	95-105			
----	------	--	----------	------	--	-----	--------	--	--	--

Duplicate (1908007-DUP1)

Source: 1907375-05

Prepared & Analyzed: 08/01/19

pH	6.59		pH Units		6.66			1.06	20	
----	------	--	----------	--	------	--	--	------	----	--

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.



Talon/LPE
1811 East Mulberry
Fort Collins CO, 80525

Project: Horsetail 30 CPB

Project Number: 701530.120.05

Project Manager: Jennifer Galles

Reported:
08/07/19 09:25

Specific Conductance by EPA Method 120.1 - Quality Control

Summit Scientific

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

Batch 1908006 - General Preparation

Blank (1908006-BLK1)

Prepared & Analyzed: 08/01/19

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (1908006-BS1)

Prepared & Analyzed: 08/01/19

Specific Conductance (EC) 0.746 0.0100 mmhos/cm 0.750 99.4 90-110

Duplicate (1908006-DUP1)

Source: 1907375-05

Prepared & Analyzed: 08/01/19

Specific Conductance (EC) 0.0934 0.0100 mmhos/cm 0.0931 0.322 20

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.



Talon/LPE
1811 East Mulberry
Fort Collins CO, 80525

Project: Horsetail 30 CPB

Project Number: 701530.120.05
Project Manager: Jennifer Galles

Reported:
08/07/19 09:25

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

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

September 25, 2019

Jennifer Galles

Talon/LPE

1811 East Mulberry

Fort Collins, CO 80525

RE: Horsetail 30 CPB

Work Order # 1909221

Enclosed are the results of analyses for samples received by Summit Scientific on 09/18/19 17:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink on a light blue background. The signature is cursive and reads "Muri Premier".

Muri Premier For Ben Shrewsbury

Laboratory Manager



Talon/LPE
1811 East Mulberry
Fort Collins CO, 80525

Project: Horsetail 30 CPB

Project Number: 701530.120.05

Project Manager: Jennifer Galles

Reported:
09/25/19 13:13

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS-1@1.5'	1909221-01	Soil	09/18/19 13:40	09/18/19 17:00

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.

Summit Scientific

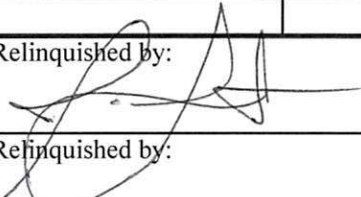
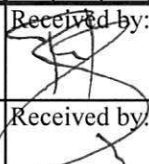
1909221

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

Page 1 of 1

Client: Talon/LPE- Bill to Whiting
Address: 1811 East Mulberry
City/State/Zip: Fort Collins, CO 80524
Phone: 970-818-5330 Fax:
Sampler Name: Ben Bradfield

Project Manager: Jennifer Galles
E-Mail: jgalles@talonlpe.com and jleverton@talonlpe.com
Project Name: Horsetail 30 CPB
Project Number: 701530.120.05

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix				Analyze For:								Special Instructions				
				HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	BTEX	GRO	DRO	pH									
SS-1 @ 1.5'	9/18/2019	0:00:00	1			x			x							x								
		13:40																						
Relinquished by: 	Date/Time: 9.18.19 17:00	Received by: 	Date/Time: 9/18/19 17:00	Turn Around Time (Check)																				
Relinquished by:	Date/Time:	Received by:	Date/Time:	Same Day	<input type="checkbox"/>	72 Hours	<input type="checkbox"/>																	
				24 Hours	<input type="checkbox"/>	Standard	<input checked="" type="checkbox"/>																	
Relinquished by:	Date/Time:	Received in Lab by:	Date/Time:	Sample Integrity:																				
				Temperature Upon Receipt:	3.7																			
				Intact:	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>																		

-Sample Receipt Checklist

S2 Work Order 1909221

Client: Talon/LPE Client Project ID: HORSETAIL 30 CPB

Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other Airbill #: _____

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

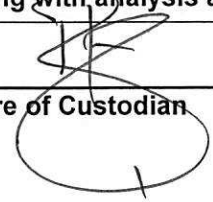
Temp (°C)	<u>3.7</u>
-----------	------------

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C ⁽¹⁾ ?				
NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.	<u>X</u>			
Were all samples received intact ⁽¹⁾ ?	<u>X</u>			
Was adequate sample volume provided ⁽¹⁾ ?	<u>X</u>			
If custody seals are present, are they intact ⁽¹⁾ ?			<u>X</u>	
Are samples with holding times due within 48 hours sample due within 48 hours present?		<u>X</u>		
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	<u>X</u>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<u>X</u>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<u>X</u>			
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	<u>X</u>			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.			<u>X</u>	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ?				
Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect			<u>X</u>	
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ?			<u>X</u>	
Record the pH in Comments.				
If dissolved metals are requested, were samples field filtered?			<u>X</u>	

Additional Comments (if any):

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

<u>EC</u> Custodian Printed Name or Initials	 Signature of Custodian	<u>09/18/17</u> Date/Time <u>1835</u>
-------------------------------------------------	----------------------------------------------------------------------------------------------------------------	------------------------------------------



Talon/LPE
1811 East Mulberry
Fort Collins CO, 80525

Project: Horsetail 30 CPB
Project Number: 701530.120.05
Project Manager: Jennifer Galles

Reported:
09/25/19 13:13

SS-1@1.5'
1909221-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/18/19 13:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.25			pH Units	1	1909248	09/19/19	09/19/19	EPA 9045D	

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.



Talon/LPE
1811 East Mulberry
Fort Collins CO, 80525

Project: Horsetail 30 CPB

Project Number: 701530.120.05

Project Manager: Jennifer Galles

Reported:
09/25/19 13:13

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control

Summit Scientific

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

Batch 1909248 - General Preparation

LCS (1909248-BS1)

Prepared & Analyzed: 09/19/19

pH	9.39	pH Units	9.18	102	95-105
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Duplicate (1909248-DUP1)

Source: 1909203-01

Prepared & Analyzed: 09/19/19

pH	9.37	pH Units	9.53	1.69	20
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Summit Scientific

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Talon/LPE
1811 East Mulberry
Fort Collins CO, 80525

Project: Horsetail 30 CPB

Project Number: 701530.120.05
Project Manager: Jennifer Galles

Reported:
09/25/19 13:13

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

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

October 07, 2019

Jennifer Galles

Talon/LPE

1811 East Mulberry

Fort Collins, CO 80525

RE: Horsetail 30 CPB

Work Order # 1909405

Enclosed are the results of analyses for samples received by Summit Scientific on 09/30/19 17:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink on a light blue background. The signature is written in a cursive style and reads "Muri Premier".

Muri Premier For Ben Shrewsbury

Laboratory Manager



Talon/LPE
1811 East Mulberry
Fort Collins CO, 80525

Project: Horsetail 30 CPB

Project Number: 701530.120.05

Project Manager: Jennifer Galles

Reported:
10/07/19 11:11

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS2@2.2'	1909405-01	Soil	09/30/19 12:25	09/30/19 17:00

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.

1909405

Page 1 of 1

Project Manager:	Jennifer Galles
E-Mail:	jgalles@talonlpe.com & jleverton@talonlpe.com
Project Name:	Horsetail 30 CPB
Project Number:	701530.120.05

				Preservative				Matrix				Analyze For:								
Sample Description	Date Sampled	Time Sampled	Number of Containers	HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	pH								Special Instructions
SS2 @ 2.2'	9/30/2019	12:25	1			x			x			x								
Relinquished by: _____ Date/Time: _____				Received by: _____ Date/Time: _____				Turn Around Time (Check)												
Jenniffer Galles 9/30/19 1700				[Signature] 9/30/19 1700				Same Day <input type="checkbox"/>				72 Hours <input type="checkbox"/>								
								24 Hours <input type="checkbox"/>				Standard <input checked="" type="checkbox"/>								
Relinquished by: _____ Date/Time: _____				Received by: _____ Date/Time: _____				48 Hours <input type="checkbox"/>												
Relinquished by: _____ Date/Time: _____				Received in Lab by: _____ Date/Time: _____				Sample Integrity:				Temperature Upon Receipt: 3.2								
								Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>												

1909405

Sample Receipt Checklist

S2 Work Order _____

Client: TALON / LPE

Client Project ID: HORSETAIL 30 CPB

Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other _____ Airbill #: _____

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

Temp (°C)	3.2
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Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C ⁽¹⁾ ? NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact ⁽¹⁾ ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples with holding times due within 48 hours sample due within 48 hours present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ? Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Additional Comments (if any):

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

RZ

Custodian Printed Name or Initials



Signature of Custodian

9/30/19

Date/Time



Talon/LPE
1811 East Mulberry
Fort Collins CO, 80525

Project: Horsetail 30 CPB
Project Number: 701530.120.05
Project Manager: Jennifer Galles

Reported:
10/07/19 11:11

SS2@2.2'
1909405-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/30/19 12:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.39			pH Units	1	1910085	10/04/19	10/04/19	EPA 9045D	

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.



Talon/LPE
1811 East Mulberry
Fort Collins CO, 80525

Project: Horsetail 30 CPB

Project Number: 701530.120.05

Project Manager: Jennifer Galles

Reported:
10/07/19 11:11

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control

Summit Scientific

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

Batch 1910085 - General Preparation

LCS (1910085-BS1)

Prepared & Analyzed: 10/04/19

pH	9.17	pH Units	9.18	99.9	95-105
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Duplicate (1910085-DUP1)

Source: 1910045-12

Prepared & Analyzed: 10/04/19

pH	8.63	pH Units	8.63	0.00	20
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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.



Talon/LPE
1811 East Mulberry
Fort Collins CO, 80525

Project: Horsetail 30 CPB

Project Number: 701530.120.05
Project Manager: Jennifer Galles

Reported:
10/07/19 11:11

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