

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

March 26, 2021

Max Knop

K.P. Kauffman

1675 Broadway

Denver, CO 80202

RE: Suckla Brown 17 Header-Spill/Release ID 478370

Work Order #2103223

Enclosed are the results of analyses for samples received by Summit Scientific on 03/11/21 09:45. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'Paul Shrewsbury', written in a cursive style.

Paul Shrewsbury

President



K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Suckla Brown 17 Header-Spill/Release ID 478370

Project Number: [none]
Project Manager: Max Knop

Reported:
03/26/21 13:59

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
#1-North	2103223-01	Soil	03/09/21 14:00	03/11/21 09:45
#2-West	2103223-02	Soil	03/09/21 14:00	03/11/21 09:45
#3-South	2103223-03	Soil	03/09/21 14:00	03/11/21 09:45
#4-South	2103223-04	Soil	03/09/21 14:00	03/11/21 09:45
#5-Bottom	2103223-05	Soil	03/09/21 14:00	03/11/21 09:45
Outsife South Barrier (B	2103223-06	Soil	03/09/21 14:00	03/11/21 09:45

Sample Receipt Checklist

S2 Work Order 2103223

Client: KP Kauffman Client Project ID: Suckla Brown 17 Header

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

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

Temp (°C)	6.8
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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.	✓			On Ice
Were all samples received intact ⁽¹⁾ ?	✓			
Was adequate sample volume provided ⁽¹⁾ ?	✓			
If custody seals are present, are they intact ⁽¹⁾ ?			✓	
Are samples with holding times due within 48 hours sample 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.

MP
Custodian Printed Name or Initials

Muri Premier
Signature of Custodian

3/11/21
Date/Time



K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Suckla Brown 17 Header-Spill/Release ID 478370

Project Number: [none]
Project Manager: Max Knop

Reported:
03/26/21 13:59

#1-North
2103223-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/09/21 14:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BEC0261	03/12/21	03/17/21	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **03/09/21 14:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		86.0 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		124 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		106 %		21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/09/21 14:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BEC0280	03/16/21	03/17/21	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **03/09/21 14:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl		111 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Project: Suckla Brown 17 Header-Spill/Release ID 478370

Project Number: [none]
Project Manager: Max Knop

Reported:
03/26/21 13:59

#1-North
2103223-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/09/21 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BEC0356	03/20/21	03/22/21	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/09/21 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		84.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		78.7 %	40-150		"	"	"	"	

Total Metals by EPA 6020B

Date Sampled: **03/09/21 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	7.07	0.226	mg/kg dry	1	BEC0322	03/18/21	03/20/21	EPA 6020B	
Barium	153	0.453	"	"	"	"	"	"	
Cadmium	0.333	0.226	"	"	"	"	"	"	
Copper	16.0	0.453	"	"	"	"	"	"	
Lead	13.7	0.226	"	"	"	"	"	"	
Nickel	17.5	0.453	"	"	"	"	"	"	
Selenium	1.33	0.294	"	"	"	"	"	"	

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Project: Suckla Brown 17 Header-Spill/Release ID 478370

Project Number: [none]
Project Manager: Max Knop

Reported:
03/26/21 13:59

#1-North
2103223-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Silver	0.0678	0.0226	mg/kg dry	1	BEC0322	03/18/21	03/20/21	EPA 6020B
Zinc	68.4	0.453	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/09/21 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BEC0380	03/23/21	03/24/21	EPA 7196A	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/09/21 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	88.3		%	1	BEC0335	03/19/21	03/19/21	Calculation	

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Project: Suckla Brown 17 Header-Spill/Release ID 478370

Project Number: [none]
Project Manager: Max Knop

Reported:
03/26/21 13:59

#2-West
2103223-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/09/21 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BEC0261	03/12/21	03/17/21	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/09/21 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		79.4 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		120 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/09/21 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BEC0280	03/16/21	03/17/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/09/21 14:00**

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

PAH by EPA Method 8270D SIM

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Project: Suckla Brown 17 Header-Spill/Release ID 478370

Project Number: [none]
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Reported:
03/26/21 13:59

#2-West
2103223-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/09/21 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BEC0356	03/20/21	03/22/21	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/09/21 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		88.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		78.7 %	40-150		"	"	"	"	

Total Metals by EPA 6020B

Date Sampled: **03/09/21 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	6.22	0.226	mg/kg dry	1	BEC0322	03/18/21	03/20/21	EPA 6020B	
Barium	159	0.451	"	"	"	"	"	"	
Cadmium	0.310	0.226	"	"	"	"	"	"	
Copper	20.7	0.451	"	"	"	"	"	"	
Lead	12.5	0.226	"	"	"	"	"	"	
Nickel	17.9	0.451	"	"	"	"	"	"	
Selenium	1.40	0.293	"	"	"	"	"	"	

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Project: Suckla Brown 17 Header-Spill/Release ID 478370

Project Number: [none]
Project Manager: Max Knop

Reported:
03/26/21 13:59

#2-West
2103223-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Silver	0.0596	0.0226	mg/kg dry	1	BEC0322	03/18/21	03/20/21	EPA 6020B
Zinc	68.1	0.451	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/09/21 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BEC0380	03/23/21	03/24/21	EPA 7196A	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/09/21 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	88.6		%	1	BEC0335	03/19/21	03/19/21	Calculation	

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1675 Broadway
Denver CO, 80202

Project: Suckla Brown 17 Header-Spill/Release ID 478370

Project Number: [none]
Project Manager: Max Knop

Reported:
03/26/21 13:59

#3-South
2103223-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/09/21 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BEC0261	03/12/21	03/17/21	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/09/21 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		84.9 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		111 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/09/21 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BEC0280	03/16/21	03/17/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/09/21 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		113 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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1675 Broadway
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Project: Suckla Brown 17 Header-Spill/Release ID 478370

Project Number: [none]
Project Manager: Max Knop

Reported:
03/26/21 13:59

#3-South
2103223-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/09/21 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BEC0356	03/20/21	03/22/21	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/09/21 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		75.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		71.5 %	40-150		"	"	"	"	

Total Metals by EPA 6020B

Date Sampled: **03/09/21 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	7.53	0.226	mg/kg dry	1	BEC0322	03/18/21	03/20/21	EPA 6020B	
Barium	133	0.452	"	"	"	"	"	"	
Cadmium	0.365	0.226	"	"	"	"	"	"	
Copper	17.5	0.452	"	"	"	"	"	"	
Lead	13.5	0.226	"	"	"	"	"	"	
Nickel	19.7	0.452	"	"	"	"	"	"	
Selenium	1.43	0.294	"	"	"	"	"	"	

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1675 Broadway
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Project: Suckla Brown 17 Header-Spill/Release ID 478370

Project Number: [none]
Project Manager: Max Knop

Reported:
03/26/21 13:59

#3-South
2103223-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Silver	0.0530	0.0226	mg/kg dry	1	BEC0322	03/18/21	03/20/21	EPA 6020B
Zinc	78.1	0.452	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/09/21 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BEC0380	03/23/21	03/24/21	EPA 7196A	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/09/21 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	88.4		%	1	BEC0335	03/19/21	03/19/21	Calculation	

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1675 Broadway
Denver CO, 80202

Project: Suckla Brown 17 Header-Spill/Release ID 478370

Project Number: [none]
Project Manager: Max Knop

Reported:
03/26/21 13:59

#4-South
2103223-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/09/21 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BEC0261	03/12/21	03/17/21	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/09/21 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		80.2 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		120 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.0 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/09/21 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BEC0280	03/16/21	03/17/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/09/21 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		100 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Suckla Brown 17 Header-Spill/Release ID 478370

Project Number: [none]
Project Manager: Max Knop

Reported:
03/26/21 13:59

#4-South
2103223-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/09/21 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BEC0356	03/20/21	03/23/21	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/09/21 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		87.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		80.4 %	40-150		"	"	"	"	

Total Metals by EPA 6020B

Date Sampled: **03/09/21 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	12.7	0.226	mg/kg dry	1	BEC0322	03/18/21	03/20/21	EPA 6020B	
Barium	135	0.453	"	"	"	"	"	"	
Cadmium	0.485	0.226	"	"	"	"	"	"	
Copper	21.3	0.453	"	"	"	"	"	"	
Lead	15.1	0.226	"	"	"	"	"	"	
Nickel	23.3	0.453	"	"	"	"	"	"	
Selenium	1.62	0.294	"	"	"	"	"	"	

Summit Scientific

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Suckla Brown 17 Header-Spill/Release ID 478370

Project Number: [none]
Project Manager: Max Knop

Reported:
03/26/21 13:59

#4-South
2103223-04 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Silver	0.0551	0.0226	mg/kg dry	1	BEC0322	03/18/21	03/20/21	EPA 6020B
Zinc	95.1	0.453	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/09/21 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BEC0380	03/23/21	03/24/21	EPA 7196A	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/09/21 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	88.4		%	1	BEC0335	03/19/21	03/19/21	Calculation	

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Suckla Brown 17 Header-Spill/Release ID 478370

Project Number: [none]
Project Manager: Max Knop

Reported:
03/26/21 13:59

#5-Bottom
2103223-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/09/21 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BEC0305	03/17/21	03/18/21	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/09/21 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		97.0 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		112 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		107 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/09/21 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BEC0280	03/16/21	03/17/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/09/21 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		112 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Suckla Brown 17 Header-Spill/Release ID 478370

Project Number: [none]
Project Manager: Max Knop

Reported:
03/26/21 13:59

#5-Bottom
2103223-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/09/21 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BEC0356	03/20/21	03/23/21	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/09/21 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		84.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		80.6 %	40-150		"	"	"	"	

Total Metals by EPA 6020B

Date Sampled: **03/09/21 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	8.27	0.227	mg/kg dry	1	BEC0322	03/18/21	03/20/21	EPA 6020B	
Barium	140	0.455	"	"	"	"	"	"	
Cadmium	0.374	0.227	"	"	"	"	"	"	
Copper	19.2	0.455	"	"	"	"	"	"	
Lead	13.9	0.227	"	"	"	"	"	"	
Nickel	21.0	0.455	"	"	"	"	"	"	
Selenium	1.55	0.296	"	"	"	"	"	"	

Summit Scientific

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Suckla Brown 17 Header-Spill/Release ID 478370

Project Number: [none]
Project Manager: Max Knop

Reported:
03/26/21 13:59

#5-Bottom
2103223-05 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Silver	0.0566	0.0227	mg/kg dry	1	BEC0322	03/18/21	03/20/21	EPA 6020B	
Zinc	83.1	0.455	"	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/09/21 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BEC0380	03/23/21	03/24/21	EPA 7196A	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/09/21 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	88.0		%	1	BEC0335	03/19/21	03/19/21	Calculation	

Summit Scientific

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Suckla Brown 17 Header-Spill/Release ID 478370

Project Number: [none]
Project Manager: Max Knop

Reported:
03/26/21 13:59

Outsife South Barrier (B)
2103223-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/09/21 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BEC0305	03/17/21	03/18/21	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/09/21 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		96.8 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		114 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		108 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/09/21 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BEC0280	03/16/21	03/17/21	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/09/21 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		112 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Suckla Brown 17 Header-Spill/Release ID 478370

Project Number: [none]
Project Manager: Max Knop

Reported:
03/26/21 13:59

Outsife South Barrier (B)
2103223-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/09/21 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BEC0356	03/20/21	03/23/21	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/09/21 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		85.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		79.4 %	40-150		"	"	"	"	

Total Metals by EPA 6020B

Date Sampled: **03/09/21 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	7.02	0.227	mg/kg dry	1	BEC0322	03/18/21	03/20/21	EPA 6020B	
Barium	200	0.455	"	"	"	"	"	"	
Cadmium	0.358	0.227	"	"	"	"	"	"	
Copper	16.9	0.455	"	"	"	"	"	"	
Lead	12.6	0.227	"	"	"	"	"	"	
Nickel	19.5	0.455	"	"	"	"	"	"	
Selenium	1.36	0.296	"	"	"	"	"	"	

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K.P. Kauffman
 1675 Broadway
 Denver CO, 80202

Project: Suckla Brown 17 Header-Spill/Release ID 478370

Project Number: [none]
 Project Manager: Max Knop

Reported:
 03/26/21 13:59

Outsife South Barrier (B)
2103223-06 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Silver	0.0490	0.0227	mg/kg dry	1	BEC0322	03/18/21	03/20/21	EPA 6020B
Zinc	73.6	0.455	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **03/09/21 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BEC0380	03/23/21	03/24/21	EPA 7196A	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/09/21 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	88.0		%	1	BEC0335	03/19/21	03/19/21	Calculation	

Summit Scientific

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Suckla Brown 17 Header-Spill/Release ID 478370

Project Number: [none]
Project Manager: Max Knop

Reported:
03/26/21 13:59

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BEC0261 - EPA 5030 Soil MS

Blank (BEC0261-BLK1)

Prepared: 03/12/21 Analyzed: 03/17/21

Benzene	ND	0.0020	mg/kg								
Toluene	ND	0.0050	"								
Ethylbenzene	ND	0.0050	"								
Xylenes (total)	ND	0.010	"								
1,2,4-Trimethylbenzene	ND	0.0050	"								
1,3,5-Trimethylbenzene	ND	0.0050	"								
Naphthalene	ND	0.0038	"								
Gasoline Range Hydrocarbons	ND	0.50	"								
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0290		"	0.0400		72.6	23-173				
<i>Surrogate: Toluene-d8</i>	0.0482		"	0.0400		120	20-170				
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0421		"	0.0400		105	21-167				

LCS (BEC0261-BS1)

Prepared: 03/12/21 Analyzed: 03/17/21

Benzene	0.0891	0.0020	mg/kg	0.100		89.1	70-130				
Toluene	0.0895	0.0050	"	0.100		89.5	70-130				
Ethylbenzene	0.0849	0.0050	"	0.100		84.9	70-130				
m,p-Xylene	0.154	0.010	"	0.200		77.0	70-130				
o-Xylene	0.0792	0.0050	"	0.100		79.2	70-130				
1,2,4-Trimethylbenzene	0.0808	0.0050	"	0.100		80.8	70-130				
1,3,5-Trimethylbenzene	0.0767	0.0050	"	0.100		76.7	70-130				
Naphthalene	0.0878	0.0038	"	0.100		87.8	70-130				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0246		"	0.0400		61.6	23-173				
<i>Surrogate: Toluene-d8</i>	0.0429		"	0.0400		107	20-170				
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0387		"	0.0400		96.7	21-167				

Matrix Spike (BEC0261-MS1)

Source: 2103217-01

Prepared: 03/12/21 Analyzed: 03/17/21

Benzene	0.0919	0.0020	mg/kg	0.100	ND	91.9	70-130				
Toluene	0.101	0.0050	"	0.100	ND	101	70-130				
Ethylbenzene	0.0928	0.0050	"	0.100	ND	92.8	70-130				
m,p-Xylene	0.171	0.010	"	0.200	ND	85.6	70-130				
o-Xylene	0.0858	0.0050	"	0.100	ND	85.8	70-130				
1,2,4-Trimethylbenzene	0.0920	0.0050	"	0.100	ND	92.0	70-130				
1,3,5-Trimethylbenzene	0.0871	0.0050	"	0.100	ND	87.1	70-130				
Naphthalene	0.0897	0.0038	"	0.100	ND	89.7	70-130				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0244		"	0.0400		61.1	23-173				
<i>Surrogate: Toluene-d8</i>	0.0469		"	0.0400		117	20-170				
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0408		"	0.0400		102	21-167				

Summit Scientific

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Suckla Brown 17 Header-Spill/Release ID 478370

Project Number: [none]
Project Manager: Max Knop

Reported:
03/26/21 13:59

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BEC0261 - EPA 5030 Soil MS

Matrix Spike Dup (BEC0261-MSD1)	Source: 2103217-01			Prepared: 03/12/21 Analyzed: 03/17/21						
Benzene	0.0705	0.0020	mg/kg	0.100	ND	70.5	70-130	26.3	30	
Toluene	0.103	0.0050	"	0.100	ND	103	70-130	1.59	30	
Ethylbenzene	0.0997	0.0050	"	0.100	ND	99.7	70-130	7.14	30	
m,p-Xylene	0.177	0.010	"	0.200	ND	88.5	70-130	3.31	30	
o-Xylene	0.0896	0.0050	"	0.100	ND	89.6	70-130	4.34	30	
1,2,4-Trimethylbenzene	0.0940	0.0050	"	0.100	ND	94.0	70-130	2.19	30	
1,3,5-Trimethylbenzene	0.0883	0.0050	"	0.100	ND	88.3	70-130	1.33	30	
Naphthalene	0.0963	0.0038	"	0.100	ND	96.3	70-130	7.10	30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0269</i>		<i>"</i>	<i>0.0400</i>		<i>67.3</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0406</i>		<i>"</i>	<i>0.0400</i>		<i>102</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0391</i>		<i>"</i>	<i>0.0400</i>		<i>97.6</i>	<i>21-167</i>			

Batch BEC0305 - EPA 5030 Soil MS

Blank (BEC0305-BLK1)	Prepared & Analyzed: 03/17/21									
Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0364</i>		<i>"</i>	<i>0.0400</i>		<i>91.0</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0445</i>		<i>"</i>	<i>0.0400</i>		<i>111</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0424</i>		<i>"</i>	<i>0.0400</i>		<i>106</i>	<i>21-167</i>			

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Suckla Brown 17 Header-Spill/Release ID 478370

Project Number: [none]
Project Manager: Max Knop

Reported:
03/26/21 13:59

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

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

Batch BEC0305 - EPA 5030 Soil MS

LCS (BEC0305-BS1)

Prepared & Analyzed: 03/17/21

Benzene	0.0936	0.0020	mg/kg	0.100		93.6	70-130			
Toluene	0.121	0.0050	"	0.100		121	70-130			
Ethylbenzene	0.0976	0.0050	"	0.100		97.6	70-130			
m,p-Xylene	0.200	0.010	"	0.200		99.8	70-130			
o-Xylene	0.101	0.0050	"	0.100		101	70-130			
1,2,4-Trimethylbenzene	0.110	0.0050	"	0.100		110	70-130			
1,3,5-Trimethylbenzene	0.109	0.0050	"	0.100		109	70-130			
Naphthalene	0.101	0.0038	"	0.100		101	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0381</i>		<i>"</i>	<i>0.0400</i>		<i>95.2</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0439</i>		<i>"</i>	<i>0.0400</i>		<i>110</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0406</i>		<i>"</i>	<i>0.0400</i>		<i>102</i>	<i>21-167</i>			

Matrix Spike (BEC0305-MS1)

Source: 2103212-02

Prepared: 03/17/21 Analyzed: 03/18/21

Benzene	0.0925	0.0020	mg/kg	0.100	ND	92.5	70-130			
Toluene	0.120	0.0050	"	0.100	ND	120	70-130			
Ethylbenzene	0.0997	0.0050	"	0.100	ND	99.7	70-130			
m,p-Xylene	0.201	0.010	"	0.200	ND	100	70-130			
o-Xylene	0.102	0.0050	"	0.100	ND	102	70-130			
1,2,4-Trimethylbenzene	0.111	0.0050	"	0.100	ND	111	70-130			
1,3,5-Trimethylbenzene	0.110	0.0050	"	0.100	ND	110	70-130			
Naphthalene	0.110	0.0038	"	0.100	ND	110	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0383</i>		<i>"</i>	<i>0.0400</i>		<i>95.8</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0432</i>		<i>"</i>	<i>0.0400</i>		<i>108</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0418</i>		<i>"</i>	<i>0.0400</i>		<i>104</i>	<i>21-167</i>			

Matrix Spike Dup (BEC0305-MSD1)

Source: 2103212-02

Prepared: 03/17/21 Analyzed: 03/18/21

Benzene	0.0922	0.0020	mg/kg	0.100	ND	92.2	70-130	0.260	30	
Toluene	0.120	0.0050	"	0.100	ND	120	70-130	0.525	30	
Ethylbenzene	0.0991	0.0050	"	0.100	ND	99.1	70-130	0.574	30	
m,p-Xylene	0.201	0.010	"	0.200	ND	100	70-130	0.0299	30	
o-Xylene	0.102	0.0050	"	0.100	ND	102	70-130	0.677	30	
1,2,4-Trimethylbenzene	0.111	0.0050	"	0.100	ND	111	70-130	0.324	30	
1,3,5-Trimethylbenzene	0.110	0.0050	"	0.100	ND	110	70-130	0.382	30	
Naphthalene	0.109	0.0038	"	0.100	ND	109	70-130	0.548	30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0387</i>		<i>"</i>	<i>0.0400</i>		<i>96.8</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0446</i>		<i>"</i>	<i>0.0400</i>		<i>112</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0418</i>		<i>"</i>	<i>0.0400</i>		<i>104</i>	<i>21-167</i>			

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Suckla Brown 17 Header-Spill/Release ID 478370

Project Number: [none]
Project Manager: Max Knop

Reported:
03/26/21 13:59

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BEC0280 - EPA 3550A

Blank (BEC0280-BLK1)

Prepared & Analyzed: 03/16/21

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

LCS (BEC0280-BS1)

Prepared & Analyzed: 03/16/21

C10-C28 (DRO)	552	50	mg/kg	500	110	99.2	70-130			
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Matrix Spike (BEC0280-MS1)

Source: 2103218-01

Prepared & Analyzed: 03/16/21

C10-C28 (DRO)	522	50	mg/kg	500	26.2	99.2	70-130			
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Matrix Spike Dup (BEC0280-MSD1)

Source: 2103218-01

Prepared & Analyzed: 03/16/21

C10-C28 (DRO)	458	50	mg/kg	500	26.2	86.4	70-130	13.1	20	
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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Suckla Brown 17 Header-Spill/Release ID 478370

Project Number: [none]
Project Manager: Max Knop

Reported:
03/26/21 13:59

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BEC0356 - EPA 5030 Soil MS

Blank (BEC0356-BLK1)

Prepared & Analyzed: 03/20/21

Acenaphthene	ND	0.00500	mg/kg								
Anthracene	ND	0.00500	"								
Benzo (a) anthracene	ND	0.00500	"								
Benzo (a) pyrene	ND	0.00500	"								
Benzo (b) fluoranthene	ND	0.00500	"								
Benzo (k) fluoranthene	ND	0.00500	"								
Chrysene	ND	0.00500	"								
Dibenz (a,h) anthracene	ND	0.00500	"								
Fluoranthene	ND	0.00500	"								
Fluorene	ND	0.00500	"								
Indeno (1,2,3-cd) pyrene	ND	0.00500	"								
Pyrene	ND	0.00500	"								
1-Methylnaphthalene	ND	0.00500	"								
2-Methylnaphthalene	ND	0.00500	"								
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0366</i>		<i>"</i>	<i>0.0333</i>	<i>110</i>	<i>40-150</i>					
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0322</i>		<i>"</i>	<i>0.0333</i>	<i>96.7</i>	<i>40-150</i>					

LCS (BEC0356-BS1)

Prepared & Analyzed: 03/20/21

Acenaphthene	0.0296	0.00500	mg/kg	0.0333	88.8	31-137					
Anthracene	0.0298	0.00500	"	0.0333	89.3	30-120					
Benzo (a) anthracene	0.0283	0.00500	"	0.0333	84.9	30-120					
Benzo (a) pyrene	0.0291	0.00500	"	0.0333	87.4	30-120					
Benzo (b) fluoranthene	0.0308	0.00500	"	0.0333	92.4	30-120					
Benzo (k) fluoranthene	0.0303	0.00500	"	0.0333	91.0	30-120					
Chrysene	0.0293	0.00500	"	0.0333	87.8	30-120					
Dibenz (a,h) anthracene	0.0267	0.00500	"	0.0333	80.1	30-120					
Fluoranthene	0.0286	0.00500	"	0.0333	85.9	30-120					
Fluorene	0.0239	0.00500	"	0.0333	71.7	30-120					
Indeno (1,2,3-cd) pyrene	0.0270	0.00500	"	0.0333	80.9	30-120					
Pyrene	0.0276	0.00500	"	0.0333	82.9	35-142					
1-Methylnaphthalene	0.0297	0.00500	"	0.0333	89.1	35-142					
2-Methylnaphthalene	0.0304	0.00500	"	0.0333	91.2	35-142					
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0306</i>		<i>"</i>	<i>0.0333</i>	<i>91.8</i>	<i>40-150</i>					
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0330</i>		<i>"</i>	<i>0.0333</i>	<i>98.9</i>	<i>40-150</i>					

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Suckla Brown 17 Header-Spill/Release ID 478370

Project Number: [none]
Project Manager: Max Knop

Reported:
03/26/21 13:59

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BEC0356 - EPA 5030 Soil MS

Matrix Spike (BEC0356-MS1)	Source: 2103219-01			Prepared & Analyzed: 03/20/21						
Acenaphthene	0.0327	0.00500	mg/kg	0.0333	ND	98.1	31-137			
Anthracene	0.0330	0.00500	"	0.0333	ND	98.9	30-120			
Benzo (a) anthracene	0.0321	0.00500	"	0.0333	ND	96.4	30-120			
Benzo (a) pyrene	0.0334	0.00500	"	0.0333	ND	100	30-120			
Benzo (b) fluoranthene	0.0342	0.00500	"	0.0333	ND	103	30-120			
Benzo (k) fluoranthene	0.0334	0.00500	"	0.0333	ND	100	30-120			
Chrysene	0.0327	0.00500	"	0.0333	ND	98.2	30-120			
Dibenz (a,h) anthracene	0.0311	0.00500	"	0.0333	ND	93.3	30-120			
Fluoranthene	0.0315	0.00500	"	0.0333	ND	94.4	30-120			
Fluorene	0.0287	0.00500	"	0.0333	ND	86.0	30-120			
Indeno (1,2,3-cd) pyrene	0.0311	0.00500	"	0.0333	ND	93.3	30-120			
Pyrene	0.0307	0.00500	"	0.0333	ND	92.1	35-142			
1-Methylnaphthalene	0.0326	0.00500	"	0.0333	ND	97.9	15-130			
2-Methylnaphthalene	0.0326	0.00500	"	0.0333	ND	97.8	15-130			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0344</i>		<i>"</i>	<i>0.0333</i>		<i>103</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0348</i>		<i>"</i>	<i>0.0333</i>		<i>104</i>	<i>40-150</i>			

Matrix Spike Dup (BEC0356-MSD1)	Source: 2103219-01			Prepared & Analyzed: 03/20/21						
Acenaphthene	0.0330	0.00500	mg/kg	0.0333	ND	99.0	31-137	0.879	30	
Anthracene	0.0347	0.00500	"	0.0333	ND	104	30-120	5.16	30	
Benzo (a) anthracene	0.0332	0.00500	"	0.0333	ND	99.5	30-120	3.08	30	
Benzo (a) pyrene	0.0347	0.00500	"	0.0333	ND	104	30-120	3.69	30	
Benzo (b) fluoranthene	0.0352	0.00500	"	0.0333	ND	106	30-120	2.89	30	
Benzo (k) fluoranthene	0.0343	0.00500	"	0.0333	ND	103	30-120	2.47	30	
Chrysene	0.0337	0.00500	"	0.0333	ND	101	30-120	3.08	30	
Dibenz (a,h) anthracene	0.0331	0.00500	"	0.0333	ND	99.3	30-120	6.29	30	
Fluoranthene	0.0325	0.00500	"	0.0333	ND	97.4	30-120	3.12	30	
Fluorene	0.0292	0.00500	"	0.0333	ND	87.6	30-120	1.77	30	
Indeno (1,2,3-cd) pyrene	0.0328	0.00500	"	0.0333	ND	98.5	30-120	5.33	30	
Pyrene	0.0319	0.00500	"	0.0333	ND	95.6	35-142	3.77	30	
1-Methylnaphthalene	0.0330	0.00500	"	0.0333	ND	98.9	15-130	1.04	50	
2-Methylnaphthalene	0.0336	0.00500	"	0.0333	ND	101	15-130	2.93	50	
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0348</i>		<i>"</i>	<i>0.0333</i>		<i>104</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0358</i>		<i>"</i>	<i>0.0333</i>		<i>107</i>	<i>40-150</i>			

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Suckla Brown 17 Header-Spill/Release ID 478370

Project Number: [none]
Project Manager: Max Knop

Reported:
03/26/21 13:59

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BEC0322 - EPA 3050B

Blank (BEC0322-BLK1)

Prepared: 03/18/21 Analyzed: 03/20/21

Arsenic	ND	0.200	mg/kg wet						
Barium	ND	0.400	"						
Cadmium	ND	0.200	"						
Copper	ND	0.400	"						
Lead	ND	0.200	"						
Nickel	ND	0.400	"						
Selenium	ND	0.260	"						
Silver	ND	0.0200	"						
Zinc	ND	0.400	"						

LCS (BEC0322-BS1)

Prepared: 03/18/21 Analyzed: 03/20/21

Arsenic	45.9	0.200	mg/kg wet	40.0	115	80-120
Barium	36.7	0.400	"	40.0	91.8	80-120
Cadmium	2.04	0.200	"	2.00	102	80-120
Copper	36.7	0.400	"	40.0	91.7	80-120
Lead	18.4	0.200	"	20.0	92.0	80-120
Nickel	35.5	0.400	"	40.0	88.7	80-120
Selenium	4.03	0.260	"	4.00	101	80-120
Silver	1.79	0.0200	"	2.00	89.4	80-120
Zinc	47.2	0.400	"	40.0	118	80-120

Duplicate (BEC0322-DUP1)

Source: 2103180-01

Prepared: 03/18/21 Analyzed: 03/20/21

Arsenic	1.78	0.225	mg/kg dry	1.90	6.37	30
Barium	78.1	0.450	"	81.4	4.22	30
Cadmium	0.100	0.225	"	0.106	5.66	30
Copper	5.96	0.450	"	6.15	3.00	30
Lead	4.69	0.225	"	5.70	19.5	30
Nickel	6.02	0.450	"	6.16	2.31	30
Selenium	0.646	0.292	"	0.599	7.61	30
Silver	0.0124	0.0225	"	0.0159	24.3	30
Zinc	24.0	0.450	"	24.3	1.07	30

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Suckla Brown 17 Header-Spill/Release ID 478370

Project Number: [none]
Project Manager: Max Knop

Reported:
03/26/21 13:59

Total Metals by EPA 6020B - Quality Control

Summit Scientific

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

Batch BEC0322 - EPA 3050B

Matrix Spike (BEC0322-MS1)

Source: 2103180-01

Prepared: 03/18/21 Analyzed: 03/20/21

Arsenic	54.0	0.225	mg/kg dry	45.0	1.90	116	75-125			
Barium	119	0.450	"	45.0	81.4	83.6	75-125			
Cadmium	2.42	0.225	"	2.25	0.106	103	75-125			
Copper	47.3	0.450	"	45.0	6.15	91.6	75-125			
Lead	24.5	0.225	"	22.5	5.70	83.8	75-125			
Nickel	47.2	0.450	"	45.0	6.16	91.2	75-125			
Selenium	5.08	0.292	"	4.50	0.599	99.6	75-125			
Silver	2.01	0.0225	"	2.25	0.0159	88.9	75-125			
Zinc	74.8	0.450	"	45.0	24.3	112	75-125			

Matrix Spike Dup (BEC0322-MSD1)

Source: 2103180-01

Prepared: 03/18/21 Analyzed: 03/20/21

Arsenic	53.0	0.225	mg/kg dry	45.0	1.90	114	75-125	1.71	25
Barium	124	0.450	"	45.0	81.4	94.8	75-125	4.13	25
Cadmium	2.31	0.225	"	2.25	0.106	98.0	75-125	4.68	25
Copper	46.7	0.450	"	45.0	6.15	90.2	75-125	1.29	25
Lead	24.0	0.225	"	22.5	5.70	81.3	75-125	2.27	25
Nickel	46.7	0.450	"	45.0	6.16	90.2	75-125	0.918	25
Selenium	4.89	0.292	"	4.50	0.599	95.5	75-125	3.71	25
Silver	1.95	0.0225	"	2.25	0.0159	86.0	75-125	3.24	25
Zinc	74.5	0.450	"	45.0	24.3	112	75-125	0.387	25

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Suckla Brown 17 Header-Spill/Release ID 478370

Project Number: [none]
Project Manager: Max Knop

Reported:
03/26/21 13:59

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

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

Batch BEC0380 - 3060A Mod

Blank (BEC0380-BLK1)

Prepared: 03/23/21 Analyzed: 03/24/21

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BEC0380-BS1)

Prepared: 03/23/21 Analyzed: 03/24/21

Chromium, Hexavalent 25.6 0.30 mg/kg wet 25.0 102 80-120

Duplicate (BEC0380-DUP1)

Source: 2103121-10

Prepared: 03/23/21 Analyzed: 03/24/21

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BEC0380-MS1)

Source: 2103121-10

Prepared: 03/23/21 Analyzed: 03/24/21

Chromium, Hexavalent 25.2 0.30 mg/kg dry 27.1 ND 93.0 75-125

Matrix Spike Dup (BEC0380-MSD1)

Source: 2103121-10

Prepared: 03/23/21 Analyzed: 03/24/21

Chromium, Hexavalent 25.2 0.30 mg/kg dry 27.1 ND 93.0 75-125 0.00 20

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K.P. Kauffman
 1675 Broadway
 Denver CO, 80202

Project: Suckla Brown 17 Header-Spill/Release ID 478370

Project Number: [none]
 Project Manager: Max Knop

Reported:
 03/26/21 13:59

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

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

Batch BEC0335 - General Preparation

Duplicate (BEC0335-DUP1)	Source: 2103223-01			Prepared & Analyzed: 03/19/21						
% Solids	88.4	%		88.3			0.118	20		

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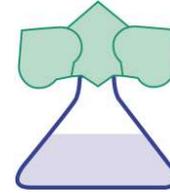
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American Agricultural Laboratory, Inc.

700 West D Street / PO Box 370 / McCook, Nebraska 69001

Office: 308-345-3670 / FAX: 308-345-7880

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4653 TABLE MOUNTAIN DRIVE, SUITE B

GOLDEN CO 80403

NAME : 2103223

DATE RECEIVED: 03/19/2021

DATE REPORTED: 03/25/2021

SOIL TEST RESULTS

LAB NUMBER	FIELD IDENTIFICATION	SAMPLE IDENTIFICATION	Depth Inches	pH		EL	SOLUBLE SALTS mod. SP mmhos/cm	OM LOI %	NITRATE-N (FIA)		PHOSPHORUS						
				1 : 1 Soil	Buffer Woodruff				ppm	lbs/A	P1 ppm	Bicarb ppm	P2 ppm	M2 ppm	M3 ppm		
3326783	1 NORTH AT 1		0-12														
3326784	2 WEST AT 1		0-12														
3326785	3 SOUTH AT 1		0-12														
3326786	4 SOUTH AT 1		0-12														
3326787	5 BOTTOM AT 1		0-12														
3326788	OUTSIDE SOUTH BARRIER AT 1		0-12														

LAB NUMBER	SULFATE-S Ca-P ppm	NH4OAc (Exchangeable)				DTPA				BORON Sorbitol ppm	EST. CATION EXCHANGE CAPACITY (CEC) me/100g	% SATURATION						
		K ppm	Ca ppm	Mg ppm	Na ppm	Zn ppm	Fe ppm	Mn ppm	Cu ppm			BASE	H	Ca	Mg	K	Na	
3326783										2.9								
3326784										3.0								
3326785										2.8								
3326786										2.8								
3326787										2.8								
3326788										2.7								

LAB NUMBER	SOLUBLE (SAT. EXT.)			SODIUM ADSORPTION RATIO (SAR)	EXCH. SODIUM PERCENT (ESP)	GYPSUM REQ T/A	PARTICLE SIZE ANALYSIS				CHLORIDE		EXCH. NH4-N		ALUMINUM ppm	TOTAL N %
	Ca me/L	Mg me/L	Na me/L				SAND %	SILT %	CLAY %	SOIL TEXTURE		ppm	lbs/A	ppm		
3326783	4.73	5.63	29.87	13.12	18											
3326784	6.22	7.53	34.29	13.08	18											
3326785	5.42	6.47	29.92	12.27	17											
3326786	4.34	5.14	28.29	12.99	18											
3326787	6.48	7.13	34.25	13.13	18											
3326788	5.98	6.83	31.28	12.36	17											

SUGGESTED FERTILIZER RECOMMENDATIONS

LAB NUMBER	FIELD IDENTIFICATION	SAMPLE IDENTIFICATION	CROP TO BE GROWN	YIELD GOAL	N	P2O5	K2O	S	Zn	MgO	Fe	Mn	Cu	B	Cl	LIME REC 60% ECCE T/A
3326783	1 NORTH AT 1															
3326784	2 WEST AT 1															
3326785	3 SOUTH AT 1															
3326786	4 SOUTH AT 1															
3326787	5 BOTTOM AT 1															
3326788	OUTSIDE SOUTH BARRIER AT 1															

Approved By: Kevin Grooms

Analysis By: American Agricultural Lab

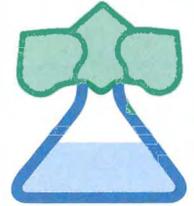
Recommendations By: American Agricultural Lab

American Agricultural Laboratory, Inc.

700 West D St. / P.O. Box 370 / McCook, Nebraska 69001

Office: 308-345-3670 / FAX: 308-345-7880 / www.AmAgLab.com

"Analysis You Can Grow With"



SUMMIT SCIENTIFIC
4653 TABLE MOUNTAIN DRIVE SUITE B
GOLDEN, CO 80403

ACCOUNT NO: 20491
DATE RECEIVED: 03/19/2021
DATE REPORTED: 03/23/2021

SATURATED PASTE EXTRACT ANALYSIS

Lab No.	Grower	Sample ID	Depth inches	pH s.u.	Soluble Salts mmhos/cm
3326783	2103223	#1-NORTH@1'	0-12	8.3	2.19
3326784	2103223	#2-WEST@1'	0-12	8.1	2.07
3326785	2103223	#3-SOUTH@1'	0-12	8.2	2.33
3326786	2103223	#4-SOUTH@1'	0-12	8.1	2.21
3326787	2103223	#5-BOTTOM@1'	0-12	8.3	2.38
3326788	2103223	OUTSIFE SOUTH BARRIER@1'	0-12	8.2	2.39

By: Electronically Approved Kevin Grooms



K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Suckla Brown 17 Header-Spill/Release ID 478370

Project Number: [none]
Project Manager: Max Knop

Reported:
03/26/21 13:59

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