

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

October 07, 2022

Kevin Tautkus

K.P. Kauffman

1675 Broadway

Denver, CO 80202

RE: Rodgers #1 Flowline

Work Order #2209549

Enclosed are the results of analyses for samples received by Summit Scientific on 09/28/22 16:20. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Mikayla Axtell For Paul Shrewsbury

President



K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Rodgers #1 Flowline

Project Number: [none]
Project Manager: Kevin Tautkus

Reported:
10/07/22 12:58

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH5@15'	2209549-01	Soil	09/27/22 12:40	09/28/22 16:20
BH6@15'	2209549-02	Soil	09/27/22 12:50	09/28/22 16:20
BH7@15'	2209549-03	Soil	09/27/22 13:00	09/28/22 16:20
BH8@15'	2209549-04	Soil	09/27/22 13:15	09/28/22 16:20
SW-5@13'	2209549-05	Soil	09/27/22 12:45	09/28/22 16:20
SW-6@13'	2209549-06	Soil	09/27/22 12:55	09/28/22 16:20
SW-7@13'	2209549-07	Soil	09/27/22 13:05	09/28/22 16:20
SW-8@13'	2209549-08	Soil	09/27/22 13:10	09/28/22 16:20

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2209549

S₂

4653 Table Mountain Drive ♦ Golden, Colorado 80403

303-277-9310 ♦ 303-374-5933 (f)

Page 1 of 1

Client: KP Kauffman (KPK) Project Manager: Kevin Tautkus
 Address: _____ E-Mail: primarycontractor@macomllc.net
 City/State/Zip: Denver, CO Project Name: Rodgers #1 Flareline
 Phone: _____ Project Number: _____
 Sampler Name: Kevin Tautkus

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested						Special Instructions
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other							
1	RH-5 @ 15'	9/27/22	1246	3			X			X									
2	RH-6 @ 15'		1250				X			X									
3	RH-7 @ 15'		1300				X			X									
4	RH-8 @ 15'		1315				X			X									
5	SW-5 @ 13'		1245				X			X									
6	SW-6 @ 13'		1255				X			X									
7	SW-7 @ 13'		1205				X			X									
8	SW-8 @ 13'		1310				X			X									
9																			
10																			

Relinquished by: <u>Kevin Tautkus</u> Date/Time: <u>9/28/22 0800</u>	Received by: _____ Date/Time: _____	Turn Around Time (Check) Same Day _____ 72 hours _____ 24 hours _____ Standard _____ 48 hours <u>X</u> Sample Integrity: Temperature Upon Receipt: <u>9.4</u> Samples Intact: <u>(Yes)</u> No	Notes:
Relinquished by: _____ Date/Time: _____	Received by: <u>[Signature]</u> <u>9/28/22 1620</u>		
Relinquished by: _____ Date/Time: _____	Received by: _____ Date/Time: _____		

S₂

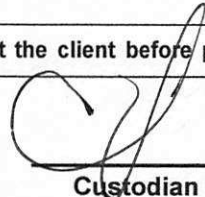
S2 Work Order# 2209549

Sample Receipt Checklist

Client: KP Kauffman Client Project ID: Rodgers #1 FlowlineShipped Via: H.D./P.U./FedEx/UPS/USPS/Other Airbill #: _____ Matrix (Check all that apply) Air Soil/Solid Water Other Temp (°C) Thermometer #

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<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 due within 48 hours present?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	<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"/>	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	<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"/>	
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"/>	
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 , etc.	<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.
Custodian Printed Name9.28.22 20:00
Date/Time



K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Rodgers #1 Flowline

Project Number: [none]
Project Manager: Kevin Tautkus

Reported:
10/07/22 12:58

BH5@15'
2209549-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/27/22 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BF10767	09/29/22	09/30/22	EPA 8260B	
Toluene	0.011	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: **09/27/22 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		109 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		99.8 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.0 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/27/22 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BF10768	09/29/22	09/30/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/27/22 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		79.9 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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BH5@15'
2209549-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/27/22 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BF10754	09/29/22	09/29/22	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: **09/27/22 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		43.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		71.0 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/27/22 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.337	0.0100	mg/L	1	BF10785	09/30/22	10/05/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/27/22 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project: Rodgers #1 Flowline

Project Number: [none]
Project Manager: Kevin Tautkus

Reported:
10/07/22 12:58

BH5@15'
2209549-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.46	0.231	mg/kg dry	1	BFJ0008	10/03/22	10/06/22	EPA 6020B	
Barium	16.4	0.462	"	"	"	"	"	"	
Cadmium	ND	0.231	"	"	"	"	"	"	
Copper	6.07	0.462	"	"	"	"	"	"	
Lead	12.3	0.231	"	"	"	"	"	"	
Nickel	5.14	0.462	"	"	"	"	"	"	
Selenium	ND	0.300	"	"	"	"	"	"	
Silver	0.0268	0.0231	"	"	"	"	"	"	
Zinc	25.0	0.462	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/27/22 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BFJ0061	10/04/22	10/04/22	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **09/27/22 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	104	0.0577	mg/L dry	1	BFJ0813	09/30/22	10/05/22	EPA 6020B	
Magnesium	43.4	0.0577	"	"	"	"	"	"	
Sodium	159	0.0577	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/27/22 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.30	0.00100	units	1	BFJ0139	10/06/22	10/06/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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BH5@15'
2209549-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/27/22 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	86.7		%	1	BFJ0055	10/04/22	10/05/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/27/22 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.42	0.0100	mmhos/cm	1	BFJ0815	09/30/22	10/03/22	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **09/27/22 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.50		pH Units	1	BFJ0814	09/30/22	10/03/22	EPA 9045D	

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1675 Broadway
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Project: Rodgers #1 Flowline

Project Number: [none]
Project Manager: Kevin Tautkus

Reported:
10/07/22 12:58

BH6@15'
2209549-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/27/22 12:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFI0767	09/29/22	09/30/22	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: **09/27/22 12:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		113 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		99.5 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.6 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/27/22 12:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFI0768	09/29/22	09/30/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/27/22 12:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		75.0 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Project: Rodgers #1 Flowline

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10/07/22 12:58

BH6@15'
2209549-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/27/22 12:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BF10754	09/29/22	09/29/22	EPA 8270D SIM	
Anthracene	0.00730	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	0.0102	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	0.00555	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	0.00791	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	0.0403	0.00500	"	"	"	"	"	"	
Fluorene	0.0117	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	0.0347	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	0.0287	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	0.0654	0.00500	"	"	"	"	"	"	

Date Sampled: **09/27/22 12:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		51.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		71.1 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/27/22 12:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.390	0.0100	mg/L	1	BF10785	09/30/22	10/05/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/27/22 12:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project: Rodgers #1 Flowline

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Project Manager: Kevin Tautkus

Reported:
10/07/22 12:58

BH6@15'
2209549-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	6.86	0.228	mg/kg dry	1	BFJ0006	10/03/22	10/04/22	EPA 6020B	
Barium	20.6	0.457	"	"	"	"	"	"	
Cadmium	ND	0.228	"	"	"	"	"	"	
Copper	9.63	0.457	"	"	"	"	"	"	
Lead	9.17	0.228	"	"	"	"	"	"	
Nickel	10.2	0.457	"	"	"	"	"	"	
Selenium	0.930	0.297	"	"	"	"	"	"	
Silver	ND	0.0228	"	"	"	"	"	"	
Zinc	57.0	0.457	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/27/22 12:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BFJ0061	10/04/22	10/04/22	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **09/27/22 12:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	393	0.0571	mg/L dry	1	BFJ0813	09/30/22	10/05/22	EPA 6020B	
Magnesium	121	0.0571	"	"	"	"	"	"	
Sodium	180	0.0571	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/27/22 12:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.04	0.00100	units	1	BFJ0139	10/06/22	10/06/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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1675 Broadway
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Project: Rodgers #1 Flowline

Project Number: [none]
Project Manager: Kevin Tautkus

Reported:
10/07/22 12:58

BH6@15'
2209549-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/27/22 12:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	87.5		%	1	BFJ0055	10/04/22	10/05/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/27/22 12:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.71	0.0100	mmhos/cm	1	BFJ0815	09/30/22	10/03/22	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **09/27/22 12:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.40		pH Units	1	BFJ0814	09/30/22	10/03/22	EPA 9045D	

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Rodgers #1 Flowline

Project Number: [none]
Project Manager: Kevin Tautkus

Reported:
10/07/22 12:58

BH7@15'
2209549-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/27/22 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFI0767	09/29/22	09/30/22	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: **09/27/22 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		128 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		97.7 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/27/22 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFI0768	09/29/22	09/30/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/27/22 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		84.3 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Rodgers #1 Flowline

Project Number: [none]
Project Manager: Kevin Tautkus

Reported:
10/07/22 12:58

BH7@15'
2209549-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/27/22 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BF10754	09/29/22	09/29/22	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: **09/27/22 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		41.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		62.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/27/22 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.279	0.0100	mg/L	1	BF10785	09/30/22	10/05/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/27/22 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Rodgers #1 Flowline

Project Number: [none]
Project Manager: Kevin Tautkus

Reported:
10/07/22 12:58

BH7@15'
2209549-03 (Soil)

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Total Metals by EPA 6020B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	5.62	0.232	mg/kg dry	1	BFJ0006	10/03/22	10/04/22	EPA 6020B	
Barium	23.0	0.464	"	"	"	"	"	"	
Cadmium	ND	0.232	"	"	"	"	"	"	
Copper	8.37	0.464	"	"	"	"	"	"	
Lead	9.78	0.232	"	"	"	"	"	"	
Nickel	14.4	0.464	"	"	"	"	"	"	
Selenium	1.14	0.301	"	"	"	"	"	"	
Silver	ND	0.0232	"	"	"	"	"	"	
Zinc	78.4	0.464	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/27/22 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BFJ0061	10/04/22	10/04/22	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **09/27/22 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	97.4	0.0579	mg/L dry	1	BFJ0813	09/30/22	10/05/22	EPA 6020B	
Magnesium	43.5	0.0579	"	"	"	"	"	"	
Sodium	155	0.0579	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/27/22 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.28	0.00100	units	1	BFJ0139	10/06/22	10/06/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Rodgers #1 Flowline

Project Number: [none]
Project Manager: Kevin Tautkus

Reported:
10/07/22 12:58

BH7@15'
2209549-03 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/27/22 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	86.3		%	1	BFJ0055	10/04/22	10/05/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/27/22 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.40	0.0100	mmhos/cm	1	BFJ0815	09/30/22	10/03/22	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **09/27/22 13:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.57		pH Units	1	BFJ0814	09/30/22	10/03/22	EPA 9045D	

Summit Scientific

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Rodgers #1 Flowline

Project Number: [none]
Project Manager: Kevin Tautkus

Reported:
10/07/22 12:58

BH8@15'
2209549-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/27/22 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFI0767	09/29/22	09/30/22	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: **09/27/22 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		112 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		98.6 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.0 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/27/22 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFI0768	09/29/22	09/30/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/27/22 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		77.3 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Rodgers #1 Flowline

Project Number: [none]
Project Manager: Kevin Tautkus

Reported:
10/07/22 12:58

BH8@15'
2209549-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/27/22 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BF10754	09/29/22	09/29/22	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: **09/27/22 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		40.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		68.4 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/27/22 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.380	0.0100	mg/L	1	BF10785	09/30/22	10/05/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/27/22 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Rodgers #1 Flowline

Project Number: [none]
Project Manager: Kevin Tautkus

Reported:
10/07/22 12:58

BH8@15'
2209549-04 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	7.67	0.227	mg/kg dry	1	BFJ0006	10/03/22	10/04/22	EPA 6020B	
Barium	20.7	0.454	"	"	"	"	"	"	
Cadmium	ND	0.227	"	"	"	"	"	"	
Copper	11.0	0.454	"	"	"	"	"	"	
Lead	10.3	0.227	"	"	"	"	"	"	
Nickel	12.1	0.454	"	"	"	"	"	"	
Selenium	1.01	0.295	"	"	"	"	"	"	
Silver	0.0231	0.0227	"	"	"	"	"	"	
Zinc	64.6	0.454	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/27/22 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BFJ0061	10/04/22	10/04/22	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **09/27/22 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	274	0.0568	mg/L dry	1	BFJ0813	09/30/22	10/05/22	EPA 6020B	
Magnesium	92.4	0.0568	"	"	"	"	"	"	
Sodium	146	0.0568	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/27/22 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.95	0.00100	units	1	BFJ0139	10/06/22	10/06/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/27/22 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Rodgers #1 Flowline

Project Number: [none]
Project Manager: Kevin Tautkus

Reported:
10/07/22 12:58

BH8@15'
2209549-04 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	88.1	%	1	BFJ0055	10/04/22	10/05/22	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/27/22 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.20	0.0100	mmhos/cm	1	BFJ0815	09/30/22	10/03/22	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **09/27/22 13:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.53		pH Units	1	BFJ0814	09/30/22	10/03/22	EPA 9045D	

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Rodgers #1 Flowline

Project Number: [none]
Project Manager: Kevin Tautkus

Reported:
10/07/22 12:58

SW-5@13'
2209549-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/27/22 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFI0767	09/29/22	09/30/22	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: **09/27/22 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		118 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		98.0 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.9 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/27/22 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFI0768	09/29/22	09/30/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/27/22 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		67.1 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Rodgers #1 Flowline

Project Number: [none]
Project Manager: Kevin Tautkus

Reported:
10/07/22 12:58

SW-5@13'
2209549-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/27/22 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BF10754	09/29/22	09/29/22	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: **09/27/22 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		40.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		63.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/27/22 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.334	0.0100	mg/L	1	BF10785	09/30/22	10/05/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/27/22 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Rodgers #1 Flowline

Project Number: [none]
Project Manager: Kevin Tautkus

Reported:
10/07/22 12:58

SW-5@13'
2209549-05 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	5.37	0.229	mg/kg dry	1	BFJ0006	10/03/22	10/04/22	EPA 6020B	
Barium	22.3	0.458	"	"	"	"	"	"	
Cadmium	ND	0.229	"	"	"	"	"	"	
Copper	4.11	0.458	"	"	"	"	"	"	
Lead	5.37	0.229	"	"	"	"	"	"	
Nickel	9.15	0.458	"	"	"	"	"	"	
Selenium	1.16	0.297	"	"	"	"	"	"	
Silver	ND	0.0229	"	"	"	"	"	"	
Zinc	38.3	0.458	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/27/22 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BFJ0061	10/04/22	10/04/22	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **09/27/22 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	460	0.0572	mg/L dry	1	BFJ0813	09/30/22	10/05/22	EPA 6020B	
Magnesium	92.6	0.0572	"	"	"	"	"	"	
Sodium	147	0.0572	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/27/22 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.64	0.00100	units	1	BFJ0139	10/06/22	10/06/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Rodgers #1 Flowline

Project Number: [none]
Project Manager: Kevin Tautkus

Reported:
10/07/22 12:58

SW-5@13'
2209549-05 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/27/22 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	87.4		%	1	BFJ0055	10/04/22	10/05/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/27/22 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.62	0.0100	mmhos/cm	1	BFJ0815	09/30/22	10/03/22	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **09/27/22 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.34		pH Units	1	BFJ0814	09/30/22	10/03/22	EPA 9045D	

Summit Scientific

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Rodgers #1 Flowline

Project Number: [none]
Project Manager: Kevin Tautkus

Reported:
10/07/22 12:58

SW-6@13'
2209549-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/27/22 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFI0767	09/29/22	09/30/22	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: **09/27/22 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		128 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		97.1 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/27/22 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFI0768	09/29/22	09/30/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/27/22 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		85.2 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Rodgers #1 Flowline

Project Number: [none]
Project Manager: Kevin Tautkus

Reported:
10/07/22 12:58

SW-6@13'
2209549-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/27/22 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BF10754	09/29/22	09/29/22	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: **09/27/22 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		40.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		71.6 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/27/22 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.747	0.0100	mg/L	1	BF10785	09/30/22	10/05/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/27/22 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Rodgers #1 Flowline

Project Number: [none]
Project Manager: Kevin Tautkus

Reported:
10/07/22 12:58

SW-6@13'
2209549-06 (Soil)

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Total Metals by EPA 6020B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	11.3	0.233	mg/kg dry	1	BFJ0006	10/03/22	10/04/22	EPA 6020B	
Barium	22.8	0.465	"	"	"	"	"	"	
Cadmium	ND	0.233	"	"	"	"	"	"	
Copper	18.5	0.465	"	"	"	"	"	"	
Lead	15.9	0.233	"	"	"	"	"	"	
Nickel	13.0	0.465	"	"	"	"	"	"	
Selenium	1.84	0.302	"	"	"	"	"	"	
Silver	0.0410	0.0233	"	"	"	"	"	"	
Zinc	69.8	0.465	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/27/22 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BFJ0061	10/04/22	10/04/22	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **09/27/22 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	57.6	0.0581	mg/L dry	1	BFJ0813	09/30/22	10/05/22	EPA 6020B	
Magnesium	29.6	0.0581	"	"	"	"	"	"	
Sodium	173	0.0581	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/27/22 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	4.62	0.00100	units	1	BFJ0139	10/06/22	10/06/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/27/22 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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K.P. Kauffman
 1675 Broadway
 Denver CO, 80202

Project: Rodgers #1 Flowline

Project Number: [none]
 Project Manager: Kevin Tautkus

Reported:
 10/07/22 12:58

SW-6@13'
2209549-06 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	86.0	%	1	BFJ0055	10/04/22	10/05/22	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/27/22 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.19	0.0100	mmhos/cm	1	BFJ0815	09/30/22	10/03/22	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **09/27/22 12:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.40		pH Units	1	BFJ0814	09/30/22	10/03/22	EPA 9045D	

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Rodgers #1 Flowline

Project Number: [none]
Project Manager: Kevin Tautkus

Reported:
10/07/22 12:58

SW-7@13'
2209549-07 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/27/22 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFI0767	09/29/22	09/30/22	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: **09/27/22 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		105 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		97.4 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.3 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/27/22 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFI0768	09/29/22	10/01/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/27/22 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		76.3 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Rodgers #1 Flowline

Project Number: [none]
Project Manager: Kevin Tautkus

Reported:
10/07/22 12:58

SW-7@13'
2209549-07 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/27/22 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BF10754	09/29/22	09/29/22	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: **09/27/22 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		42.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		64.5 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/27/22 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.272	0.0100	mg/L	1	BF10785	09/30/22	10/05/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/27/22 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Rodgers #1 Flowline

Project Number: [none]
Project Manager: Kevin Tautkus

Reported:
10/07/22 12:58

SW-7@13'
2209549-07 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	3.68	0.224	mg/kg dry	1	BFJ0006	10/03/22	10/04/22	EPA 6020B	
Barium	11.9	0.448	"	"	"	"	"	"	
Cadmium	ND	0.224	"	"	"	"	"	"	
Copper	3.49	0.448	"	"	"	"	"	"	
Lead	5.22	0.224	"	"	"	"	"	"	
Nickel	6.94	0.448	"	"	"	"	"	"	
Selenium	0.673	0.292	"	"	"	"	"	"	
Silver	ND	0.0224	"	"	"	"	"	"	
Zinc	32.9	0.448	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/27/22 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BFJ0061	10/04/22	10/04/22	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **09/27/22 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	114	0.0561	mg/L dry	1	BFJ0813	09/30/22	10/05/22	EPA 6020B	
Magnesium	66.5	0.0561	"	"	"	"	"	"	
Sodium	185	0.0561	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/27/22 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.41	0.00100	units	1	BFJ0139	10/06/22	10/06/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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K.P. Kauffman
1675 Broadway
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Project: Rodgers #1 Flowline

Project Number: [none]
Project Manager: Kevin Tautkus

Reported:
10/07/22 12:58

SW-7@13'
2209549-07 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/27/22 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	89.2		%	1	BFJ0055	10/04/22	10/05/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/27/22 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.71	0.0100	mmhos/cm	1	BFJ0815	09/30/22	10/03/22	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **09/27/22 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.52		pH Units	1	BFJ0814	09/30/22	10/03/22	EPA 9045D	

Summit Scientific

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Rodgers #1 Flowline

Project Number: [none]
Project Manager: Kevin Tautkus

Reported:
10/07/22 12:58

SW-8@13'
2209549-08 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/27/22 13:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFI0767	09/29/22	09/30/22	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: **09/27/22 13:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		107 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		102 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		88.3 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/27/22 13:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFI0768	09/29/22	10/01/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/27/22 13:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		86.5 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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1675 Broadway
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Project: Rodgers #1 Flowline

Project Number: [none]
Project Manager: Kevin Tautkus

Reported:
10/07/22 12:58

SW-8@13'
2209549-08 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/27/22 13:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BF10754	09/29/22	09/29/22	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: **09/27/22 13:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		44.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		73.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/27/22 13:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.515	0.0100	mg/L	1	BF10785	09/30/22	10/05/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/27/22 13:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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1675 Broadway
Denver CO, 80202

Project: Rodgers #1 Flowline

Project Number: [none]
Project Manager: Kevin Tautkus

Reported:
10/07/22 12:58

SW-8@13'
2209549-08 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	8.88	0.228	mg/kg dry	1	BFJ0006	10/03/22	10/04/22	EPA 6020B	
Barium	20.9	0.455	"	"	"	"	"	"	
Cadmium	ND	0.228	"	"	"	"	"	"	
Copper	11.7	0.455	"	"	"	"	"	"	
Lead	10.9	0.228	"	"	"	"	"	"	
Nickel	13.9	0.455	"	"	"	"	"	"	
Selenium	1.15	0.296	"	"	"	"	"	"	
Silver	ND	0.0228	"	"	"	"	"	"	
Zinc	61.1	0.455	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/27/22 13:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BFJ0061	10/04/22	10/04/22	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **09/27/22 13:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	69.4	0.0569	mg/L dry	1	BFJ0813	09/30/22	10/05/22	EPA 6020B	
Magnesium	40.8	0.0569	"	"	"	"	"	"	
Sodium	194	0.0569	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/27/22 13:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	4.57	0.00100	units	1	BFJ0139	10/06/22	10/06/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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K.P. Kauffman
 1675 Broadway
 Denver CO, 80202

Project: Rodgers #1 Flowline

Project Number: [none]
 Project Manager: Kevin Tautkus

Reported:
 10/07/22 12:58

SW-8@13'
2209549-08 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/27/22 13:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	87.8			%	1	BFJ0055	10/04/22	10/05/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/27/22 13:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	1.44	0.0100		mmhos/cm	1	BFJ0815	09/30/22	10/03/22	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **09/27/22 13:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	7.35			pH Units	1	BFJ0814	09/30/22	10/03/22	EPA 9045D	

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1675 Broadway
Denver CO, 80202

Project: Rodgers #1 Flowline

Project Number: [none]
Project Manager: Kevin Tautkus

Reported:
10/07/22 12:58

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BF10767 - EPA 5030 Soil MS

Blank (BF10767-BLK1)

Prepared & Analyzed: 09/29/22

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>	0.0481		"	0.0400		120	50-150			
<i>Surrogate: Toluene-d8</i>	0.0387		"	0.0400		96.8	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0390		"	0.0400		97.5	50-150			

LCS (BF10767-BS1)

Prepared & Analyzed: 09/29/22

Benzene	0.0827	0.0020	mg/kg	0.0750		110	70-130			
Toluene	0.0859	0.0050	"	0.0750		114	70-130			
Ethylbenzene	0.0852	0.0050	"	0.0750		114	70-130			
m,p-Xylene	0.172	0.010	"	0.150		114	70-130			
o-Xylene	0.0814	0.0050	"	0.0750		109	70-130			
1,2,4-Trimethylbenzene	0.0859	0.0050	"	0.0750		115	70-130			
1,3,5-Trimethylbenzene	0.0859	0.0050	"	0.0750		115	70-130			
Naphthalene	0.0856	0.0038	"	0.0750		114	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0458		"	0.0400		114	50-150			
<i>Surrogate: Toluene-d8</i>	0.0401		"	0.0400		100	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0385		"	0.0400		96.2	50-150			

Matrix Spike (BF10767-MS1)

Source: 2209541-11

Prepared: 09/29/22 Analyzed: 09/30/22

Benzene	0.0744	0.0020	mg/kg	0.0750	ND	99.2	70-130			
Toluene	0.0828	0.0050	"	0.0750	ND	110	70-130			
Ethylbenzene	0.0838	0.0050	"	0.0750	ND	112	70-130			
m,p-Xylene	0.172	0.010	"	0.150	ND	115	70-130			
o-Xylene	0.0796	0.0050	"	0.0750	ND	106	70-130			
1,2,4-Trimethylbenzene	0.0834	0.0050	"	0.0750	ND	111	70-130			
1,3,5-Trimethylbenzene	0.0849	0.0050	"	0.0750	ND	113	70-130			
Naphthalene	0.0800	0.0038	"	0.0750	ND	107	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0438		"	0.0400		109	50-150			
<i>Surrogate: Toluene-d8</i>	0.0433		"	0.0400		108	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0367		"	0.0400		91.8	50-150			

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1675 Broadway
Denver CO, 80202

Project: Rodgers #1 Flowline

Project Number: [none]
Project Manager: Kevin Tautkus

Reported:
10/07/22 12:58

Volatile Organic Compounds by EPA Method 8260B - Quality Control

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

Batch BFI0767 - EPA 5030 Soil MS

Matrix Spike Dup (BFI0767-MSD1)	Source: 2209541-11			Prepared: 09/29/22 Analyzed: 09/30/22						
Benzene	0.0786	0.0020	mg/kg	0.0750	ND	105	70-130	5.57	30	
Toluene	0.0833	0.0050	"	0.0750	ND	111	70-130	0.614	30	
Ethylbenzene	0.0837	0.0050	"	0.0750	ND	112	70-130	0.0717	30	
m,p-Xylene	0.168	0.010	"	0.150	ND	112	70-130	2.27	30	
o-Xylene	0.0813	0.0050	"	0.0750	ND	108	70-130	2.05	30	
1,2,4-Trimethylbenzene	0.0876	0.0050	"	0.0750	ND	117	70-130	4.98	30	
1,3,5-Trimethylbenzene	0.0867	0.0050	"	0.0750	ND	116	70-130	2.10	30	
Naphthalene	0.0927	0.0038	"	0.0750	ND	124	70-130	14.7	30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0461</i>		<i>"</i>	<i>0.0400</i>		<i>115</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0408</i>		<i>"</i>	<i>0.0400</i>		<i>102</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0391</i>		<i>"</i>	<i>0.0400</i>		<i>97.8</i>	<i>50-150</i>			

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1675 Broadway
Denver CO, 80202

Project: Rodgers #1 Flowline

Project Number: [none]
Project Manager: Kevin Tautkus

Reported:
10/07/22 12:58

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 BFI0768 - EPA 3550A

Blank (BFI0768-BLK1)

Prepared: 09/29/22 Analyzed: 09/30/22

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	12.5		"	12.5	100	30-150					

LCS (BFI0768-BS1)

Prepared: 09/29/22 Analyzed: 09/30/22

C10-C28 (DRO)	557	50	mg/kg	500	111	70-130					
Surrogate: <i>o</i> -Terphenyl	16.5		"	12.5	132	30-150					

Matrix Spike (BFI0768-MS1)

Source: 2209541-11

Prepared: 09/29/22 Analyzed: 09/30/22

C10-C28 (DRO)	508	50	mg/kg	500	17.5	98.1	70-130				
Surrogate: <i>o</i> -Terphenyl	14.3		"	12.5	115	30-150					

Matrix Spike Dup (BFI0768-MSD1)

Source: 2209541-11

Prepared: 09/29/22 Analyzed: 09/30/22

C10-C28 (DRO)	477	50	mg/kg	500	17.5	91.9	70-130	6.21	20		
Surrogate: <i>o</i> -Terphenyl	13.7		"	12.5	110	30-150					

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1675 Broadway
Denver CO, 80202

Project: Rodgers #1 Flowline

Project Number: [none]
Project Manager: Kevin Tautkus

Reported:
10/07/22 12:58

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 BFI0754 - EPA 5030 Soil MS

Blank (BFI0754-BLK1)

Prepared & Analyzed: 09/29/22

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>0.0206</i>		"	<i>0.0333</i>		<i>61.9</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0332</i>		"	<i>0.0333</i>		<i>99.5</i>	<i>40-150</i>			

LCS (BFI0754-BS1)

Prepared & Analyzed: 09/29/22

Acenaphthene	0.0307	0.00500	mg/kg	0.0333		92.1	31-137			
Anthracene	0.0306	0.00500	"	0.0333		91.7	30-120			
Benzo (a) anthracene	0.0251	0.00500	"	0.0333		75.2	30-120			
Benzo (a) pyrene	0.0259	0.00500	"	0.0333		77.7	30-120			
Benzo (b) fluoranthene	0.0249	0.00500	"	0.0333		74.7	30-120			
Benzo (k) fluoranthene	0.0326	0.00500	"	0.0333		97.9	30-120			
Chrysene	0.0336	0.00500	"	0.0333		101	30-120			
Dibenz (a,h) anthracene	0.0183	0.00500	"	0.0333		54.9	30-120			
Fluoranthene	0.0303	0.00500	"	0.0333		90.8	30-120			
Fluorene	0.0316	0.00500	"	0.0333		94.7	30-120			
Indeno (1,2,3-cd) pyrene	0.0185	0.00500	"	0.0333		55.5	30-120			
Pyrene	0.0344	0.00500	"	0.0333		103	35-142			
1-Methylnaphthalene	0.0268	0.00500	"	0.0333		80.3	35-142			
2-Methylnaphthalene	0.0323	0.00500	"	0.0333		96.8	35-142			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0265</i>		"	<i>0.0333</i>		<i>79.5</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0307</i>		"	<i>0.0333</i>		<i>92.1</i>	<i>40-150</i>			

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Rodgers #1 Flowline

Project Number: [none]
Project Manager: Kevin Tautkus

Reported:
10/07/22 12:58

PAH by EPA Method 8270D SIM - Quality Control

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

Batch BFI0754 - EPA 5030 Soil MS

Matrix Spike (BFI0754-MS1)	Source: 2209541-11			Prepared & Analyzed: 09/29/22								
Acenaphthene	0.0218	0.00500	mg/kg	0.0333	ND	65.4	31-137					
Anthracene	0.0228	0.00500	"	0.0333	ND	68.4	30-120					
Benzo (a) anthracene	0.0211	0.00500	"	0.0333	ND	63.4	30-120					
Benzo (a) pyrene	0.0193	0.00500	"	0.0333	ND	57.9	30-120					
Benzo (b) fluoranthene	0.0183	0.00500	"	0.0333	ND	55.0	30-120					
Benzo (k) fluoranthene	0.0221	0.00500	"	0.0333	ND	66.3	30-120					
Chrysene	0.0246	0.00500	"	0.0333	ND	73.8	30-120					
Dibenz (a,h) anthracene	0.0147	0.00500	"	0.0333	ND	44.0	30-120					
Fluoranthene	0.0233	0.00500	"	0.0333	ND	69.9	30-120					
Fluorene	0.0226	0.00500	"	0.0333	ND	67.7	30-120					
Indeno (1,2,3-cd) pyrene	0.0142	0.00500	"	0.0333	ND	42.7	30-120					
Pyrene	0.0250	0.00500	"	0.0333	ND	75.1	35-142					
1-Methylnaphthalene	0.0160	0.00500	"	0.0333	ND	47.9	15-130					
2-Methylnaphthalene	0.0213	0.00500	"	0.0333	ND	63.9	15-130					
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0168</i>		<i>"</i>	<i>0.0333</i>		<i>50.3</i>	<i>40-150</i>					
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0232</i>		<i>"</i>	<i>0.0333</i>		<i>69.7</i>	<i>40-150</i>					

Matrix Spike Dup (BFI0754-MSD1)	Source: 2209541-11			Prepared & Analyzed: 09/29/22						
Acenaphthene	0.0228	0.00500	mg/kg	0.0333	ND	68.4	31-137	4.54	30	
Anthracene	0.0232	0.00500	"	0.0333	ND	69.5	30-120	1.57	30	
Benzo (a) anthracene	0.0218	0.00500	"	0.0333	ND	65.5	30-120	3.15	30	
Benzo (a) pyrene	0.0168	0.00500	"	0.0333	ND	50.5	30-120	13.7	30	
Benzo (b) fluoranthene	0.0188	0.00500	"	0.0333	ND	56.4	30-120	2.53	30	
Benzo (k) fluoranthene	0.0216	0.00500	"	0.0333	ND	64.9	30-120	2.03	30	
Chrysene	0.0251	0.00500	"	0.0333	ND	75.3	30-120	2.03	30	
Dibenz (a,h) anthracene	0.0153	0.00500	"	0.0333	ND	46.0	30-120	4.57	30	
Fluoranthene	0.0233	0.00500	"	0.0333	ND	69.8	30-120	0.147	30	
Fluorene	0.0236	0.00500	"	0.0333	ND	70.9	30-120	4.64	30	
Indeno (1,2,3-cd) pyrene	0.0143	0.00500	"	0.0333	ND	43.0	30-120	0.651	30	
Pyrene	0.0258	0.00500	"	0.0333	ND	77.3	35-142	2.81	30	
1-Methylnaphthalene	0.0190	0.00500	"	0.0333	ND	56.9	15-130	17.1	50	
2-Methylnaphthalene	0.0188	0.00500	"	0.0333	ND	56.3	15-130	12.6	50	
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0194</i>		<i>"</i>	<i>0.0333</i>		<i>58.3</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0232</i>		<i>"</i>	<i>0.0333</i>		<i>69.7</i>	<i>40-150</i>			

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Rodgers #1 Flowline

Project Number: [none]
Project Manager: Kevin Tautkus

Reported:
10/07/22 12:58

Total Metals by EPA 6020B Hot Water Soluble Extraction - Quality Control
Summit Scientific

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

Batch BFI0785 - EPA 3050B

Blank (BFI0785-BLK1)

Prepared: 09/30/22 Analyzed: 10/05/22

Boron ND 0.0100 mg/L

LCS (BFI0785-BS1)

Prepared: 09/30/22 Analyzed: 10/05/22

Boron 5.95 0.0100 mg/L 5.00 119 80-120

Duplicate (BFI0785-DUP1)

Source: 2209538-01

Prepared: 09/30/22 Analyzed: 10/05/22

Boron 0.376 0.0100 mg/L 0.247 41.3 20 QR-03

Matrix Spike (BFI0785-MS1)

Source: 2209538-01

Prepared: 09/30/22 Analyzed: 10/05/22

Boron 5.95 0.0100 mg/L 5.00 0.247 114 75-125

Matrix Spike Dup (BFI0785-MSD1)

Source: 2209538-01

Prepared: 09/30/22 Analyzed: 10/05/22

Boron 5.97 0.0100 mg/L 5.00 0.247 114 75-125 0.324 25

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1675 Broadway
Denver CO, 80202

Project: Rodgers #1 Flowline

Project Number: [none]
Project Manager: Kevin Tautkus

Reported:
10/07/22 12:58

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 BFJ0006 - EPA 3050B

Blank (BFJ0006-BLK1)

Prepared: 10/03/22 Analyzed: 10/04/22

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 (BFJ0006-BS1)

Prepared: 10/03/22 Analyzed: 10/04/22

Arsenic	43.6	0.200	mg/kg wet	40.0		109	80-120			
Barium	40.9	0.400	"	40.0		102	80-120			
Cadmium	2.01	0.200	"	2.00		101	80-120			
Copper	44.5	0.400	"	40.0		111	80-120			
Lead	19.6	0.200	"	20.0		98.2	80-120			
Nickel	42.1	0.400	"	40.0		105	80-120			
Selenium	4.07	0.260	"	4.00		102	80-120			
Silver	1.99	0.0200	"	2.00		99.5	80-120			
Zinc	43.8	0.400	"	40.0		109	80-120			

Duplicate (BFJ0006-DUP1)

Source: 2209520-19

Prepared: 10/03/22 Analyzed: 10/04/22

Arsenic	2.90	0.214	mg/kg dry		3.03		4.23	20		
Barium	82.7	0.428	"		83.6		1.05	20		
Cadmium	0.107	0.214	"		0.115		7.68	20		
Copper	10.0	0.428	"		10.4		3.94	20		
Lead	4.69	0.214	"		4.78		1.93	20		
Nickel	14.8	0.428	"		15.3		3.60	20		
Selenium	0.697	0.278	"		0.644		7.88	20		
Silver	0.0316	0.0214	"		0.0269		16.2	20		
Zinc	44.8	0.428	"		46.9		4.61	20		

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Rodgers #1 Flowline

Project Number: [none]
Project Manager: Kevin Tautkus

Reported:
10/07/22 12:58

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 BFJ0006 - EPA 3050B

Matrix Spike (BFJ0006-MS1)

Source: 2209520-19

Prepared: 10/03/22 Analyzed: 10/04/22

Arsenic	44.9	0.214	mg/kg dry	42.8	3.03	97.8	75-125			
Barium	124	0.428	"	42.8	83.6	93.6	75-125			
Cadmium	2.17	0.214	"	2.14	0.115	95.9	75-125			
Copper	53.0	0.428	"	42.8	10.4	99.6	75-125			
Lead	23.5	0.214	"	21.4	4.78	87.3	75-125			
Nickel	56.4	0.428	"	42.8	15.3	96.0	75-125			
Selenium	4.36	0.278	"	4.28	0.644	86.9	75-125			
Silver	2.02	0.0214	"	2.14	0.0269	93.0	75-125			
Zinc	91.0	0.428	"	42.8	46.9	103	75-125			

Matrix Spike Dup (BFJ0006-MSD1)

Source: 2209520-19

Prepared: 10/03/22 Analyzed: 10/04/22

Arsenic	44.5	0.214	mg/kg dry	42.8	3.03	97.0	75-125	0.797	25
Barium	121	0.428	"	42.8	83.6	87.9	75-125	2.00	25
Cadmium	2.14	0.214	"	2.14	0.115	94.5	75-125	1.40	25
Copper	52.4	0.428	"	42.8	10.4	98.3	75-125	1.10	25
Lead	22.9	0.214	"	21.4	4.78	84.8	75-125	2.39	25
Nickel	55.7	0.428	"	42.8	15.3	94.3	75-125	1.28	25
Selenium	4.11	0.278	"	4.28	0.644	81.0	75-125	5.96	25
Silver	1.98	0.0214	"	2.14	0.0269	91.1	75-125	1.95	25
Zinc	90.4	0.428	"	42.8	46.9	102	75-125	0.744	25

Batch BFJ0008 - EPA 3050B

Blank (BFJ0008-BLK1)

Prepared: 10/03/22 Analyzed: 10/06/22

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	"						

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Rodgers #1 Flowline

Project Number: [none]
Project Manager: Kevin Tautkus

Reported:
10/07/22 12:58

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 BFJ0008 - EPA 3050B

LCS (BFJ0008-BS1)

Prepared: 10/03/22 Analyzed: 10/06/22

Arsenic	44.7	0.200	mg/kg wet	40.0		112	80-120			
Barium	42.2	0.400	"	40.0		106	80-120			
Cadmium	2.01	0.200	"	2.00		100	80-120			
Copper	42.2	0.400	"	40.0		105	80-120			
Lead	21.2	0.200	"	20.0		106	80-120			
Nickel	39.3	0.400	"	40.0		98.3	80-120			
Selenium	4.59	0.260	"	4.00		115	80-120			
Silver	1.98	0.0200	"	2.00		99.2	80-120			
Zinc	41.6	0.400	"	40.0		104	80-120			

Duplicate (BFJ0008-DUP1)

Source: 2209141-15

Prepared: 10/03/22 Analyzed: 10/06/22

Arsenic	2.70	0.222	mg/kg dry		2.59			3.87	20	
Barium	142	0.444	"		139			2.07	20	
Cadmium	0.228	0.222	"		0.231			1.36	20	
Copper	12.0	0.444	"		9.90			19.2	20	
Lead	21.9	0.222	"		20.2			8.37	20	
Nickel	10.2	0.444	"		9.28			9.86	20	
Selenium	0.457	0.289	"		0.376			19.4	20	
Silver	0.0996	0.0222	"		0.0902			9.84	20	
Zinc	46.2	0.444	"		39.0			16.9	20	

Matrix Spike (BFJ0008-MS1)

Source: 2209141-15

Prepared: 10/03/22 Analyzed: 10/06/22

Arsenic	12.9	0.222	mg/kg dry	44.4	2.59	23.2	75-125			QM-07
Barium	202	0.444	"	44.4	139	142	75-125			QM-07
Cadmium	2.50	0.222	"	2.22	0.231	102	75-125			
Copper	29.8	0.444	"	44.4	9.90	44.7	75-125			QM-07
Lead	44.0	0.222	"	22.2	20.2	107	75-125			
Nickel	29.0	0.444	"	44.4	9.28	44.5	75-125			QM-07
Selenium	4.92	0.289	"	4.44	0.376	102	75-125			
Silver	2.13	0.0222	"	2.22	0.0902	91.9	75-125			
Zinc	63.5	0.444	"	44.4	39.0	55.1	75-125			QM-07

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Rodgers #1 Flowline

Project Number: [none]
Project Manager: Kevin Tautkus

Reported:
10/07/22 12:58

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 BFJ0008 - EPA 3050B

Matrix Spike Dup (BFJ0008-MSD1)	Source: 2209141-15			Prepared: 10/03/22 Analyzed: 10/06/22							
Arsenic	12.9	0.222	mg/kg dry	44.4	2.59	23.1	75-125	0.369	25	QM-07	
Barium	200	0.444	"	44.4	139	136	75-125	1.30	25	QM-07	
Cadmium	2.47	0.222	"	2.22	0.231	101	75-125	1.21	25		
Copper	29.6	0.444	"	44.4	9.90	44.4	75-125	0.376	25	QM-07	
Lead	43.5	0.222	"	22.2	20.2	105	75-125	1.10	25		
Nickel	29.3	0.444	"	44.4	9.28	45.1	75-125	1.00	25	QM-07	
Selenium	5.07	0.289	"	4.44	0.376	106	75-125	2.87	25		
Silver	2.09	0.0222	"	2.22	0.0902	90.1	75-125	1.89	25		
Zinc	63.1	0.444	"	44.4	39.0	54.3	75-125	0.545	25	QM-07	

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1675 Broadway
Denver CO, 80202

Project: Rodgers #1 Flowline

Project Number: [none]
Project Manager: Kevin Tautkus

Reported:
10/07/22 12:58

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 BFJ0061 - 3060A Mod

Blank (BFJ0061-BLK1)

Prepared & Analyzed: 10/04/22

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BFJ0061-BS1)

Prepared & Analyzed: 10/04/22

Chromium, Hexavalent 21.9 0.30 mg/kg wet 25.0 87.6 80-120

Duplicate (BFJ0061-DUP1)

Source: 2209611-01

Prepared & Analyzed: 10/04/22

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BFJ0061-MS1)

Source: 2209611-01

Prepared & Analyzed: 10/04/22

Chromium, Hexavalent 40.7 0.30 mg/kg dry 27.4 ND 148 75-125 QM-05

Matrix Spike Dup (BFJ0061-MSD1)

Source: 2209611-01

Prepared & Analyzed: 10/04/22

Chromium, Hexavalent 36.6 0.30 mg/kg dry 27.4 ND 133 75-125 10.6 20 QM-05

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Project: Rodgers #1 Flowline

Project Number: [none]
 Project Manager: Kevin Tautkus

Reported:
 10/07/22 12:58

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction - Quality Control

Summit Scientific

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

Batch BFI0813 - General Preparation

Blank (BFI0813-BLK1)

Prepared: 09/30/22 Analyzed: 10/05/22

Calcium	ND	0.0500	mg/L wet							
Magnesium	ND	0.0500	"							
Sodium	ND	0.0500	"							

LCS (BFI0813-BS1)

Prepared: 09/30/22 Analyzed: 10/05/22

Calcium	6.24	0.0500	mg/L wet	5.00		125	70-130			
Magnesium	6.52	0.0500	"	5.00		130	70-130			
Sodium	6.31	0.0500	"	5.00		126	70-130			

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K.P. Kauffman
 1675 Broadway
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Project: Rodgers #1 Flowline

Project Number: [none]
 Project Manager: Kevin Tautkus

Reported:
 10/07/22 12:58

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 BFJ0055 - General Preparation

Duplicate (BFJ0055-DUP1)	Source: 2209549-01		Prepared: 10/04/22 Analyzed: 10/05/22		
% Solids	87.0	%	86.7	0.344	20

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K.P. Kauffman
 1675 Broadway
 Denver CO, 80202

Project: Rodgers #1 Flowline

Project Number: [none]
 Project Manager: Kevin Tautkus

Reported:
 10/07/22 12:58

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction - Quality Control

Summit Scientific

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

Batch BFI0815 - General Preparation

Blank (BFI0815-BLK1)

Prepared: 09/30/22 Analyzed: 10/03/22

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BFI0815-BS1)

Prepared: 09/30/22 Analyzed: 10/03/22

Specific Conductance (EC) 0.152 0.0100 mmhos/cm 0.150 102 95-105

Duplicate (BFI0815-DUP1)

Source: 2209520-04

Prepared: 09/30/22 Analyzed: 10/03/22

Specific Conductance (EC) 2.08 0.0100 mmhos/cm 2.08 0.00 20

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K.P. Kauffman
 1675 Broadway
 Denver CO, 80202

Project: Rodgers #1 Flowline

Project Number: [none]
 Project Manager: Kevin Tautkus

Reported:
 10/07/22 12:58

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction - Quality Control

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

Batch BFI0814 - General Preparation

LCS (BFI0814-BS1)

Prepared: 09/30/22 Analyzed: 10/03/22

pH	9.14		pH Units	9.18		99.6	95-105			
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Duplicate (BFI0814-DUP1)

Source: 2209520-04

Prepared: 09/30/22 Analyzed: 10/03/22

pH	7.65		pH Units	7.65		0.00	20			
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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Rodgers #1 Flowline

Project Number: [none]
Project Manager: Kevin Tautkus

Reported:
10/07/22 12:58

Notes and Definitions

- QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
- 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.
- QM-05 The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The associated LCS and/or LCSD were within acceptance limits, therefore the data are considered valid.
- 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