

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

May 07, 2020

Max Knop

K.P. Kauffman

1675 Broadway

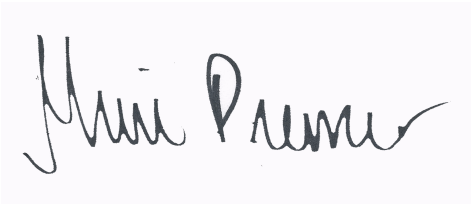
Denver, CO 80202

RE: Facility #4AW(2)

Work Order #2005032

Enclosed are the results of analyses for samples received by Summit Scientific on 05/04/20 09:20. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Muri Premer", is displayed on a light purple rectangular background.

Muri Premer For Paul Shrewsbury
President



K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Facility #4AW(2)

Project Number: [none]
Project Manager: Max Knop

Reported:
05/07/20 16:31

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
East	2005032-01	Soil	05/01/20 11:00	05/04/20 09:20
West	2005032-02	Soil	05/01/20 11:00	05/04/20 09:20
North	2005032-03	Soil	05/01/20 11:00	05/04/20 09:20
South	2005032-04	Soil	05/01/20 11:00	05/04/20 09:20
Floor	2005032-05	Soil	05/01/20 11:00	05/04/20 09:20

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Summit Scientific

2005032

741 Corporate Circle Suite 1 ♦ Golden, Colorado 80401
303-277-9310 ♦ 303-374-5933 Fax

Page 1 of 1

Client: KP Kauffman
Address: 1675 Broadway, Suite 2800
City/State/Zip: Denver, CO 80202
Phone: 303-825-4822 Fax: 303-825-4825
Sampler Name: KPK Field Ops

Project Manager: Max Knop
E-Mail: mknop@kpk.com
Project Name: FACILITY #4AW(2)
Project Number:

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix				Analyze For:								Special Instructions
				HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	TPH-GRO	TPH-DRO	TPH-ORO	BTEX	SAR	EC	pH		
East	5/1/2020	11:00	1			X		X				X	X	X	X	X	X			
West	5/1/2020	11:00	1			X		X				X	X	X	X	X	X			
North	5/1/2020	11:00	1			X		X				X	X	X	X	X	X			
South	5/1/2020	11:00	1			X		X				X	X	X	X	X	X			
Floor	5/1/2020	11:00	1			X		X				X	X	X	X	X	X			
Relinquished by: <i>Stephanie Esters</i>				Date/Time: <i>5/4/20 9:20</i>				Received by: <i>AS</i>				Date/Time: <i>05-04-2020 9:20</i>				Turn Around Time (Check)				Notes:
Relinquished by:				Date/Time:				Received by:				Date/Time:				Same Day <input type="checkbox"/> 72 Hours <input type="checkbox"/> 24 Hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/> 48 Hours <input type="checkbox"/>				
Relinquished by:				Date/Time:				Received in Lab by:				Date/Time:				Sample Integrity: Temperature Upon Receipt: <i>3.1</i> Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				

Sample Receipt Checklist

S2 Work Order 2005032

Client: KP KAUFFMAN

Client Project ID: FACILITY #4AW(2)

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

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

Temp (°C) 3.1

Thermometer ID: 61857155-K

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

Signature of Custodian [Signature]

Date/Time 05/04/2020



K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Facility #4AW(2)

Project Number: [none]
Project Manager: Max Knop

Reported:
05/07/20 16:31

East
2005032-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/01/20 11:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	2005040	05/05/20	05/05/20	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **05/01/20 11:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		89.7 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		101 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		106 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/01/20 11:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	2005039	05/05/20	05/05/20	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/01/20 11:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl		88.8 %	30-150		"	"	"	"	

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

Date Sampled: **05/01/20 11:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	1900	11.3	mg/kg dry	1	2005045	05/05/20	05/06/20	EPA 6020B	

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1675 Broadway
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Project: Facility #4AW(2)

Project Number: [none]
Project Manager: Max Knop

Reported:
05/07/20 16:31

East
2005032-01 (Soil)

Summit Scientific

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

Magnesium	968	5.64	mg/kg dry	1	2005045	05/05/20	05/06/20	EPA 6020B
Sodium	2010	5.64	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **05/01/20 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	9.36	0.100	units	1	2005081	05/07/20	05/07/20	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/01/20 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	88.7		%	1	2005061	05/07/20	05/07/20	Calculation	
pH	8.17		pH Units	"	2005048	05/06/20	05/06/20	EPA 9045D	

Specific Conductance by EPA Method 120.1

Date Sampled: **05/01/20 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	15.3	0.0100	mmhos/cm	1	2005049	05/06/20	05/06/20	EPA 120.1	

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1675 Broadway
Denver CO, 80202

Project: Facility #4AW(2)

Project Number: [none]
Project Manager: Max Knop

Reported:
05/07/20 16:31

West
2005032-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/01/20 11:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	2005040	05/05/20	05/05/20	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **05/01/20 11:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		91.0 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		103 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/01/20 11:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	52	50	mg/kg	1	2005039	05/05/20	05/05/20	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/01/20 11:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		85.8 %	30-150		"	"	"	"	

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

Date Sampled: **05/01/20 11:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	1540	11.5	mg/kg dry	1	2005045	05/05/20	05/06/20	EPA 6020B	
Magnesium	444	5.75	"	"	"	"	"	"	

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Project: Facility #4AW(2)

Project Number: [none]
Project Manager: Max Knop

Reported:
05/07/20 16:31

West
2005032-02 (Soil)

Summit Scientific

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

Sodium	197	5.75	mg/kg dry	1	2005045	05/05/20	05/06/20	EPA 6020B
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Calculated Analysis

Date Sampled: **05/01/20 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.14	0.100	units	1	2005081	05/07/20	05/07/20	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/01/20 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	87.0		%	1	2005061	05/07/20	05/07/20	Calculation	
pH	7.71		pH Units	"	2005048	05/06/20	05/06/20	EPA 9045D	

Specific Conductance by EPA Method 120.1

Date Sampled: **05/01/20 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	4.85	0.0100	mmhos/cm	1	2005049	05/06/20	05/06/20	EPA 120.1	

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Facility #4AW(2)

Project Number: [none]
Project Manager: Max Knop

Reported:
05/07/20 16:31

North
2005032-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/01/20 11:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	2005040	05/05/20	05/05/20	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **05/01/20 11:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		91.2 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		104 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		106 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/01/20 11:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	2005039	05/05/20	05/05/20	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/01/20 11:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		87.1 %	30-150		"	"	"	"	

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

Date Sampled: **05/01/20 11:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	1150	11.2	mg/kg dry	1	2005045	05/05/20	05/06/20	EPA 6020B	
Magnesium	519	5.58	"	"	"	"	"	"	

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K.P. Kauffman
1675 Broadway
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Project: Facility #4AW(2)

Project Number: [none]
Project Manager: Max Knop

Reported:
05/07/20 16:31

North
2005032-03 (Soil)

Summit Scientific

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

Sodium	485	5.58	mg/kg dry	1	2005045	05/05/20	05/06/20	EPA 6020B
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Calculated Analysis

Date Sampled: **05/01/20 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.98	0.100	units	1	2005081	05/07/20	05/07/20	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/01/20 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	89.6		%	1	2005061	05/07/20	05/07/20	Calculation	
pH	7.83		pH Units	"	2005048	05/06/20	05/06/20	EPA 9045D	

Specific Conductance by EPA Method 120.1

Date Sampled: **05/01/20 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	7.06	0.0100	mmhos/cm	1	2005049	05/06/20	05/06/20	EPA 120.1	

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Facility #4AW(2)

Project Number: [none]
Project Manager: Max Knop

Reported:
05/07/20 16:31

South
2005032-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/01/20 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	2005040	05/05/20	05/05/20	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **05/01/20 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		85.9 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		102 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/01/20 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	2005039	05/05/20	05/05/20	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/01/20 11:00**

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

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

Date Sampled: **05/01/20 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	1290	11.3	mg/kg dry	1	2005045	05/05/20	05/06/20	EPA 6020B	
Magnesium	418	5.67	"	"	"	"	"	"	

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1675 Broadway
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Project: Facility #4AW(2)
Project Number: [none]
Project Manager: Max Knop

Reported:
05/07/20 16:31

South
2005032-04 (Soil)

Summit Scientific

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

Sodium	254	5.67	mg/kg dry	1	2005045	05/05/20	05/06/20	EPA 6020B
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Calculated Analysis

Date Sampled: **05/01/20 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.57	0.100	units	1	2005081	05/07/20	05/07/20	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/01/20 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	88.2		%	1	2005061	05/07/20	05/07/20	Calculation	
pH	8.13		pH Units	"	2005048	05/06/20	05/06/20	EPA 9045D	

Specific Conductance by EPA Method 120.1

Date Sampled: **05/01/20 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.47	0.0100	mmhos/cm	1	2005049	05/06/20	05/06/20	EPA 120.1	

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1675 Broadway
Denver CO, 80202

Project: Facility #4AW(2)

Project Number: [none]
Project Manager: Max Knop

Reported:
05/07/20 16:31

Floor
2005032-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/01/20 11:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	2005040	05/05/20	05/05/20	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **05/01/20 11:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		88.9 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		103 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		107 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/01/20 11:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	2005039	05/05/20	05/05/20	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/01/20 11:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		87.5 %	30-150		"	"	"	"	

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

Date Sampled: **05/01/20 11:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	1990	11.8	mg/kg dry	1	2005045	05/05/20	05/06/20	EPA 6020B	
Magnesium	1050	5.89	"	"	"	"	"	"	

Summit Scientific

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Facility #4AW(2)

Project Number: [none]
Project Manager: Max Knop

Reported:
05/07/20 16:31

Floor
2005032-05 (Soil)

Summit Scientific

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

Sodium	2540	5.89	mg/kg dry	1	2005045	05/05/20	05/06/20	EPA 6020B
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Calculated Analysis

Date Sampled: **05/01/20 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	11.5	0.100	units	1	2005081	05/07/20	05/07/20	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/01/20 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	84.9		%	1	2005061	05/07/20	05/07/20	Calculation	
pH	8.09		pH Units	"	2005048	05/06/20	05/06/20	EPA 9045D	

Specific Conductance by EPA Method 120.1

Date Sampled: **05/01/20 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	14.1	0.0100	mmhos/cm	1	2005049	05/06/20	05/06/20	EPA 120.1	

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1675 Broadway
Denver CO, 80202

Project: Facility #4AW(2)

Project Number: [none]
Project Manager: Max Knop

Reported:
05/07/20 16:31

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch 2005040 - EPA 5030 Soil MS

Blank (2005040-BLK1)

Prepared & Analyzed: 05/05/20

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0322		"	0.0400		80.5	23-173			
Surrogate: Toluene-d8	0.0405		"	0.0400		101	20-170			
Surrogate: 4-Bromofluorobenzene	0.0420		"	0.0400		105	21-167			

LCS (2005040-BS1)

Prepared & Analyzed: 05/05/20

Benzene	0.0843	0.0020	mg/kg	0.100		84.3	70-130			
Toluene	0.0793	0.0050	"	0.100		79.3	70-130			
Ethylbenzene	0.0721	0.0050	"	0.100		72.1	70-130			
m,p-Xylene	0.142	0.010	"	0.200		71.2	70-130			
o-Xylene	0.0713	0.0050	"	0.100		71.3	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0325		"	0.0400		81.3	23-173			
Surrogate: Toluene-d8	0.0406		"	0.0400		102	20-170			
Surrogate: 4-Bromofluorobenzene	0.0411		"	0.0400		103	21-167			

Matrix Spike (2005040-MS1)

Source: 2005030-01

Prepared & Analyzed: 05/05/20

Benzene	0.0840	0.0020	mg/kg	0.100	ND	84.0	70-130			
Toluene	0.0802	0.0050	"	0.100	ND	80.2	70-130			
Ethylbenzene	0.0714	0.0050	"	0.100	ND	71.4	70-130			
m,p-Xylene	0.201	0.010	"	0.200	0.00453	98.1	70-130			
o-Xylene	0.0719	0.0050	"	0.100	ND	71.9	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0331		"	0.0400		82.7	23-173			
Surrogate: Toluene-d8	0.0416		"	0.0400		104	20-170			
Surrogate: 4-Bromofluorobenzene	0.0419		"	0.0400		105	21-167			

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1675 Broadway
Denver CO, 80202

Project: Facility #4AW(2)

Project Number: [none]
Project Manager: Max Knop

Reported:
05/07/20 16:31

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

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

Batch 2005040 - EPA 5030 Soil MS

Matrix Spike Dup (2005040-MSD1)

Source: 2005030-01

Prepared & Analyzed: 05/05/20

Benzene	0.0833	0.0020	mg/kg	0.100	ND	83.3	70-130	0.861	30	
Toluene	0.0783	0.0050	"	0.100	ND	78.3	70-130	2.38	30	
Ethylbenzene	0.0701	0.0050	"	0.100	ND	70.1	70-130	1.82	30	
m,p-Xylene	0.198	0.010	"	0.200	0.00453	96.8	70-130	1.40	30	
o-Xylene	0.0700	0.0050	"	0.100	ND	70.0	70-130	2.62	30	
Surrogate: 1,2-Dichloroethane-d4	0.0343		"	0.0400		85.6	23-173			
Surrogate: Toluene-d8	0.0413		"	0.0400		103	20-170			
Surrogate: 4-Bromofluorobenzene	0.0420		"	0.0400		105	21-167			

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1675 Broadway
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Project: Facility #4AW(2)

Project Number: [none]
Project Manager: Max Knop

Reported:
05/07/20 16:31

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch 2005039 - EPA 3550A

Blank (2005039-BLK1)

Prepared & Analyzed: 05/05/20

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

LCS (2005039-BS1)

Prepared & Analyzed: 05/05/20

C10-C28 (DRO)	388	50	mg/kg	500	77.6	70-130
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Matrix Spike (2005039-MS1)

Source: 2005005-01

Prepared & Analyzed: 05/05/20

C10-C28 (DRO)	487	50	mg/kg	500	52.8	86.9	70-130
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Matrix Spike Dup (2005039-MSD1)

Source: 2005005-01

Prepared & Analyzed: 05/05/20

C10-C28 (DRO)	468	50	mg/kg	500	52.8	83.1	70-130	3.99	20
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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Facility #4AW(2)

Project Number: [none]
Project Manager: Max Knop

Reported:
05/07/20 16:31

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

Summit Scientific

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

Batch 2005045 - General Preparation

Blank (2005045-BLK1)

Prepared & Analyzed: 05/05/20

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

LCS (2005045-BS1)

Prepared & Analyzed: 05/05/20

Calcium	526	10.0	mg/kg wet	500	105	70-130
Magnesium	565	5.00	"	500	113	70-130
Sodium	517	5.00	"	500	103	70-130

Duplicate (2005045-DUP1)

Source: 2005029-01

Prepared & Analyzed: 05/05/20

Calcium	7440	13.0	mg/kg dry	7640	2.62	20
Magnesium	928	6.49	"	787	16.4	20
Sodium	779	6.49	"	745	4.45	20

Matrix Spike (2005045-MS1)

Source: 2005029-01

Prepared & Analyzed: 05/05/20

Calcium	8340	13.0	mg/kg dry	649	7640	107	70-130
Magnesium	1520	6.49	"	649	787	112	70-130
Sodium	1430	6.49	"	649	745	105	70-130

Matrix Spike Dup (2005045-MSD1)

Source: 2005029-01

Prepared: 05/05/20 Analyzed: 05/06/20

Calcium	8370	13.0	mg/kg dry	649	7640	112	70-130	0.392	25
Magnesium	1430	6.49	"	649	787	98.3	70-130	6.23	25
Sodium	1350	6.49	"	649	745	92.6	70-130	5.89	25

Summit Scientific

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Facility #4AW(2)

Project Number: [none]
Project Manager: Max Knop

Reported:
05/07/20 16:31

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

Summit Scientific

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

Batch 2005048 - General Preparation

LCS (2005048-BS1)

Prepared & Analyzed: 05/06/20

pH	9.20		pH Units	9.18	100	95-105
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Duplicate (2005048-DUP1)

Source: 2005029-01

Prepared & Analyzed: 05/06/20

pH	8.90		pH Units	8.85		0.563	20
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Batch 2005061 - General Preparation

Duplicate (2005061-DUP1)

Source: 2004125-01

Prepared & Analyzed: 05/07/20

% Solids	96.5		%	96.6		0.103	20
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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Facility #4AW(2)

Project Number: [none]
Project Manager: Max Knop

Reported:
05/07/20 16:31

Specific Conductance by EPA Method 120.1 - Quality Control
Summit Scientific

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

Batch 2005049 - General Preparation

Blank (2005049-BLK1)

Prepared & Analyzed: 05/06/20

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (2005049-BS1)

Prepared & Analyzed: 05/06/20

Specific Conductance (EC) 0.794 0.0100 mmhos/cm 0.750 106 90-110

Duplicate (2005049-DUP1)

Source: 2005029-01

Prepared & Analyzed: 05/06/20

Specific Conductance (EC) 1.36 0.0100 mmhos/cm 1.37 0.588 20

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K.P. Kauffman
1675 Broadway
Denver CO, 80202

Project: Facility #4AW(2)

Project Number: [none]
Project Manager: Max Knop

Reported:
05/07/20 16:31

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