



May 22, 2020

Eagle Environmental Consulting, Inc.

Dan Coloccia

8000 W 44th Ave

Wheat Ridge CO 80033

Project Name - Top Operating - Stamp 31-2C

Project Number - [none]

Attached are your analytical results for Top Operating - Stamp 31-2C received by Origins Laboratory, Inc. May 15, 2020. This project is associated with Origins project number Y005232-01.

The analytical results in the following report were analyzed under the guidelines of EPA Methods. These methods are identified as follows; "SW" are defined in SW-846, "EPA" are defined in 40CFR part 136 and "SM" are defined in the most current revision of Standard Methods For the Examination of Water and Wastewater.

The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody. As such, this report shall not be reproduced except in full, without the written approval of Origin's laboratory.

Unless otherwise noted, the analytical results for all soil samples are reported on a wet weight basis. All analytical analyses were performed under NELAP guidelines unless noted by a data qualifier.

Any holding time exceedances, deviations from the method specifications or deviations from Origins Laboratory's Standard Operating Procedures are outlined in the case narrative.

Thank you for selecting Origins for your analytical needs. Please contact us with any questions concerning this report, or if we can help with anything at all.

Origins Laboratory, Inc.
303.433.1322
o-squad@oelabinc.com



1725 Elk Place, Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

Eagle Environmental Consulting, Inc.
8000 W 44th Ave
Wheat Ridge CO 80033

Dan Coloccia
Project Number: [none]
Project: Top Operating - Stamp 31-2C

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BS-01@0-0.25	Y005232-01	Soil	May 15, 2020 10:45	05/15/2020 15:38
BS-02@0-0.25	Y005232-02	Soil	May 15, 2020 10:50	05/15/2020 15:38
BS-03@0-0.25	Y005232-03	Soil	May 15, 2020 10:55	05/15/2020 15:38

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.
 8000 W 44th Ave
 Wheat Ridge CO 80033

Dan Coloccia
 Project Number: [none]
 Project: Top Operating - Stamp 31-2C

Origins Laboratory

F-012207-01-R1
 Effective Date: 01/09/12

Sample Receipt Checklist

Origins Work Order: Y005232

Client: Eagle

Client Project ID: Stamp 31-2C

Checklist Completed by: JG

Shipped Via: HD

(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 5/15/20

Airbill #: N/A

Matrix(s) Received: (Check all that apply): Soil/Solid Water Other: _____

Cooler Number/Temperature: 1 13.4 °C 1 °C 1 °C (Describe)

Thermometer ID: T003

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)	<input type="checkbox"/>	<input checked="" 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"/>	
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) 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 with date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace (> ¼ inch bubble) 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 and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)(pH <2 for samples preserved with HNO ₃ , HCL, H ₂ SO ₄) / (pH >10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH)	<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 date/time and person contacted as well as the corrective action to in the additional comments (above) and the case narrative.

Reviewed by (Project Manager) JM

5-18-20
 Date/Time Reviewed

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.
 8000 W 44th Ave
 Wheat Ridge CO 80033

Dan Coloccia
 Project Number: [none]
 Project: Top Operating - Stamp 31-2C

BS-01@0-0.25
5/15/2020 10:45:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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AAL, Inc.
Y005232-01 (Soil)

Metals (Saturated Paste Prep)

Calcium	2.72		me/L	1	[none]		05/18/2020	05/22/2020	
Magnesium	1.94		"	"	"		"	"	
Sodium	2.28		"	"	"		"	"	

pH in Soil by EPA 9045D

pH	7.64		pH Units	1	B0E1512	KDK	05/15/2020	05/16/2020	
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SAR by 20B Saturated Paste

SAR	1.49			1	[none]		05/18/2020	05/22/2020	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.0821	0.00509	mmhos/cm	1	B0E1513	KDK	05/15/2020	05/16/2020	
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Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.
 8000 W 44th Ave
 Wheat Ridge CO 80033

Dan Coloccia
 Project Number: [none]
 Project: Top Operating - Stamp 31-2C

BS-02@0-0.25

5/15/2020 10:50:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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AAL, Inc.
Y005232-02 (Soil)

Metals (Saturated Paste Prep)

Calcium	2.63		me/L	1	[none]		05/18/2020	05/22/2020	
Magnesium	1.80		"	"	"		"	"	
Sodium	0.73		"	"	"		"	"	

pH in Soil by EPA 9045D

pH	7.64		pH Units	1	B0E1512	KDK	05/15/2020	05/16/2020	
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SAR by 20B Saturated Paste

SAR	0.49			1	[none]		05/18/2020	05/22/2020	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.0748	0.00500	mmhos/cm	1	B0E1513	KDK	05/15/2020	05/16/2020	
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Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.
 8000 W 44th Ave
 Wheat Ridge CO 80033

Dan Coloccia
 Project Number: [none]
 Project: Top Operating - Stamp 31-2C

BS-03@0-0.25
5/15/2020 10:55:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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AAL, Inc.
Y005232-03 (Soil)

Metals (Saturated Paste Prep)

Calcium	2.16		me/L	1	[none]		05/18/2020	05/22/2020	
Magnesium	2.26		"	"	"		"	"	
Sodium	0.97		"	"	"		"	"	

pH in Soil by EPA 9045D

pH	7.94		pH Units	1	B0E1512	KDK	05/15/2020	05/16/2020	
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SAR by 20B Saturated Paste

SAR	0.65			1	[none]		05/18/2020	05/22/2020	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.0879	0.00500	mmhos/cm	1	B0E1513	KDK	05/15/2020	05/16/2020	
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 Wheat Ridge CO 80033

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 Project: Top Operating - Stamp 31-2C

Classical Chemistry Parameters - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0E1512 - NO PREP										
Duplicate (B0E1512-DUP1)		Source: Y005199-01			Prepared: 05/15/2020 Analyzed: 05/16/2020					
pH	7.07		pH Units		7.03			0.567	25	
Batch B0E1513 - NO PREP										
Blank (B0E1513-BLK1)		Prepared: 05/15/2020 Analyzed: 05/16/2020								
Specific Conductance (EC)	0.00230	0.00500	mmhos/cm							
Duplicate (B0E1513-DUP1)		Source: Y005199-01			Prepared: 05/15/2020 Analyzed: 05/16/2020					
Specific Conductance (EC)	0.0976	0.00500	mmhos/cm		0.0980			0.409	25	

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Dan Coloccia
Project Number: [none]
Project: Top Operating - Stamp 31-2C

Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



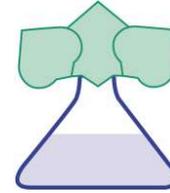
The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

American Agricultural Laboratory, Inc.

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

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

www.AmAgLab.com



95029

ORIGINS LABORATORY INC

1725 ELK PLACE

DENVER CO 80211

NAME : ORIGINS

DATE RECEIVED: 05/18/2020

DATE REPORTED: 05/22/2020

SOIL TEST RESULTS

LAB NUMBER	FIELD IDENTIFICATION	SAMPLE IDENTIFICATION	Depth Inches	pH		EL	SOLUBLE SALTS mod. SP mmhos/cm	OM LOI %	NITRATE-N (FIA)		PHOSPHORUS						
				1 : 1 Soil	Buffer Woodruff				ppm	lbs/A	P1 ppm	Bicarb ppm	P2 ppm	M2 ppm	M3 ppm		
2707121	Y005232	01	0-8														
2707122	Y005232	02	0-8														
2707123	Y005232	03	0-8														

LAB NUMBER	SULFATE-S Ca-P ppm	NH4OAc (Exchangeable)				DTPA				BORON Sorbitol ppm	EST. CATION EXCHANGE CAPACITY (CEC) me/100g	% SATURATION						
		K ppm	Ca ppm	Mg ppm	Na ppm	Zn ppm	Fe ppm	Mn ppm	Cu ppm			BASE	H	Ca	Mg	K	Na	
2707121																		
2707122																		
2707123																		

LAB NUMBER	SOLUBLE (SAT. EXT.)			SODIUM ADSORPTION RATIO (SAR)	EXCH. SODIUM PERCENT (ESP)	GYPSUM REQ T/A	PARTICLE SIZE ANALYSIS				CHLORIDE		EXCH. NH4-N		ALUMINUM ppm	TOTAL N %
	Ca me/L	Mg me/L	Na me/L				SAND %	SILT %	CLAY %	SOIL TEXTURE		ppm	lbs/A	ppm		
2707121	2.72	1.94	2.28	1.49	1	0										
2707122	2.63	1.80	0.73	0.49	1	0										
2707123	2.16	2.26	0.97	0.65	1	0										

SUGGESTED FERTILIZER RECOMMENDATIONS

LAB NUMBER	FIELD IDENTIFICATION	SAMPLE IDENTIFICATION	CROP TO BE GROWN	YIELD GOAL	N	P2O5	K2O	S	Zn	MgO	Fe	Mn	Cu	B	Cl	LIME REC 60% ECCE T/A
2707121	Y005232	01														
2707122	Y005232	02														
2707123	Y005232	03														

Analysis By: American Agricultural Lab

Recommendations By: American Agricultural Lab



Your Lab's letterhead here...

Address

City, St. Zip

Phone/Fax

SUBCONTRACT ORDER

Sending Laboratory:

Origins Laboratory, Inc.
 1725 West Elk Place
 Denver, CO 80211
 Phone: 303.433.1322
 Fax: 303.265.9645

Project Manager: Noelle Doyle Mathis

Subcontracted Laboratory:

American Agricultural Laboratory, Inc.
 210 East 1st Street
 McCook, NE 69001
 Phone: (308) 345-3670
 Fax: (308) 345-7880

Work Order: Y005232

Analysis	Due	Expires	Comments
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Sample ID: Y005232-01 Soil Sampled: 05/15/2020 10:45

SAR (Saturated Paste Prep)	05/22/2020	05/16/2020	10:45
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Containers Supplied:

Sample ID: Y005232-02 Soil Sampled: 05/15/2020 10:50

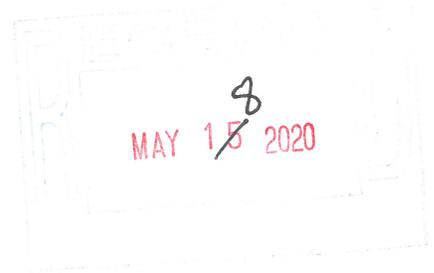
SAR (Saturated Paste Prep)	05/22/2020	05/16/2020	10:50
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Containers Supplied:

Sample ID: Y005232-03 Soil Sampled: 05/15/2020 10:55

SAR (Saturated Paste Prep)	05/22/2020	05/16/2020	10:55
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Containers Supplied:



Released By 

Date 5/15/20

Received By 

Date 5/18/20