



May 24, 2023

**Eagle Environmental Consulting, LLC**

**Martin C Eckert III**

**8000 W 44th Ave**

**Wheat Ridge CO 80033**

**Project Name - Noble - HSR - Cutler #14-31**

**Project Number - [none]**

Attached are your analytical results for Noble - HSR - Cutler #14-31 received by Origins Laboratory, Inc. May 16, 2023. This project is associated with Origins project number Y305419-01.

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

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





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

Martin C Eckert III  
Project Number: [none]  
Project: Noble - HSR - Cutler #14-31

## CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Background-01@2	Y305419-01	Soil	April 19, 2023 13:58	05/16/2023 14:12

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.

Jordan A. Bynon, Project Manager







# ORIGINS

## LABORATORY, INC

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

Martin C Eckert III  
Project Number: [none]  
Project: Noble - HSR - Cutler #14-31

Origins Laboratory

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

### Sample Receipt Checklist

Origins Work Order: 4205419

Client: EAGLE

Client Project ID: HOV WATER #14-31

Checklist Completed by: JSH/JNS

Shipped Via: FID

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

Date/time completed: 5/10/23

Airbill #: NA

Matrix(s) Received: (Check all that apply): ☒ Soil/Solid

☐ Water

☐ Other:

Cooler Number/Temperature: 1 / 2 °C / °C / °C (Describe) °C

Thermometer ID: 1003

Requirement Description	Yes	No	N/A	Comments (if any)
If sample require cooling, was the temperature between 0°C to ≤ 6°C <sup>(1)</sup> ?	<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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are short holding time analytes or samples with HTs due within 48 hours present <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) present and filled out completely <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client with date and time recorded <sup>(1)</sup> ?	<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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples preserved that require preservation and was it checked <sup>(1)</sup> ? (note ID of confirmation instrument used in comments) (preservation is not confirmed for subcooled analytes in order to insure sample integrity) (pH < 2 for samples preserved with HNO <sub>3</sub> , HCL, H <sub>2</sub> SO <sub>4</sub> ) / (pH > 10 for samples preserved with NaAsO <sub>2</sub> +NaOH, ZnAc+NaOH)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Additional Comments (if any):				

<sup>(1)</sup> If NO, then contact the client before proceeding with analysis and note date/time and person contacted as well as the corrective action to be taken in the additional comments (above) and the case narrative.

Reviewed by (Project Manager) JSH

Date/Time Reviewed 5/17/23

Origins Laboratory, Inc.

*J. Bynon*

Jordan A. Bynon, Project Manager

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8000 W 44th Ave  
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Martin C Eckert III  
Project Number: [none]  
Project: Noble - HSR - Cutler #14-31

Background-01@2'  
4/19/2023 1:58:00PM

Analyte	Result	Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
Y305419-01 (Soil)

**pH in Soil by 9045D**

pH	7.73	pH Units	1	B3E1909	HJD	05/19/2023	05/20/2023
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**Table 915 metals by EPA 6020B**

Arsenic	1.69	0.0869	mg/kg	10	B3E1625	CIH	05/16/2023	05/17/2023
Barium	60.9	8.69	"	"	"	CIH	"	"
Cadmium	0.105	0.0869	"	"	"	CIH	"	"
Copper	ND	8.69	"	"	"	CIH	"	"
Lead	ND	8.69	"	"	"	CIH	"	"
Nickel	ND	8.69	"	"	"	CIH	"	"
Selenium	ND	0.0869	"	"	"	CIH	"	"
Silver	ND	0.0869	"	"	"	CIH	"	"
Zinc	ND	86.9	"	"	"	CIH	"	"

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**Metals by EPA 6000/7000 Series Methods - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B3E1625 - EPA 3050B**

**Blank (B3E1625-BLK1)**

Prepared: 05/16/2023 Analyzed: 05/17/2023

Arsenic	ND	0.000100	mg/kg
Barium	ND	0.0100	"
Cadmium	ND	0.000100	"
Copper	ND	0.0100	"
Lead	ND	0.0100	"
Nickel	ND	0.0100	"
Selenium	ND	0.000100	"
Silver	ND	0.000100	"
Zinc	ND	0.100	"

**LCS (B3E1625-BS1)**

Prepared: 05/16/2023 Analyzed: 05/17/2023

Arsenic	0.0471	0.000100	mg/kg	0.0500	94.1	80-120
Barium	4.96	0.0100	"	5.00	99.2	80-120
Cadmium	0.0531	0.000100	"	0.0500	106	80-120
Copper	0.467	0.0100	"	0.500	93.4	80-120
Lead	0.0510	0.0100	"	0.0500	102	80-120
Nickel	0.0473	0.0100	"	0.0500	94.5	80-120
Selenium	0.0543	0.000100	"	0.0500	109	80-120
Silver	0.0406	0.000100	"	0.0500	81.3	80-120
Zinc	0.452	0.100	"	0.500	90.4	80-120

**Matrix Spike (B3E1625-MS1)**

**Source: Y305418-01**

Prepared: 05/16/2023 Analyzed: 05/17/2023

Arsenic	5.63	0.0901	mg/kg	4.50	1.62	89.0	75-125
Barium	478	9.01	"	450	99.7	84.0	75-125
Cadmium	4.58	0.0901	"	4.50	0.120	99.1	75-125
Copper	45.9	9.01	"	45.0	7.83	84.5	75-125
Lead	7.76	9.01	"	4.50	3.78	88.4	75-125

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**Metals by EPA 6000/7000 Series Methods - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B3E1625 - EPA 3050B**

**Matrix Spike (B3E1625-MS1)**

**Source: Y305418-01**

Prepared: 05/16/2023 Analyzed: 05/17/2023

Nickel	7.25	9.01	mg/kg	4.50	3.19	90.1	75-125			
Selenium	4.53	0.0901	"	4.50	0.192	96.2	75-125			
Silver	3.38	0.0901	"	4.50	0.0141	74.7	75-125			QM-07
Zinc	74.5	90.1	"	45.0	39.9	76.7	75-125			

**Matrix Spike Dup (B3E1625-MSD1)**

**Source: Y305418-01**

Prepared: 05/16/2023 Analyzed: 05/17/2023

Arsenic	6.14	0.0936	mg/kg	4.68	1.62	96.5	75-125	8.66	20	
Barium	514	9.36	"	468	99.7	88.5	75-125	7.28	20	
Cadmium	4.90	0.0936	"	4.68	0.120	102	75-125	6.72	20	
Copper	47.8	9.36	"	46.8	7.83	85.4	75-125	4.14	20	
Lead	8.36	9.36	"	4.68	3.78	97.9	75-125	7.51	20	
Nickel	8.37	9.36	"	4.68	3.19	111	75-125	14.3	20	
Selenium	4.61	0.0936	"	4.68	0.192	94.3	75-125	1.76	20	
Silver	3.64	0.0936	"	4.68	0.0141	77.4	75-125	7.30	20	
Zinc	70.6	93.6	"	46.8	39.9	65.5	75-125	5.34	20	QM-07

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**Saturated Paste - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B3E1909 - Saturated Paste pH/EC**

**Duplicate (B3E1909-DUP1)**

**Source: Y305417-01**

Prepared: 05/19/2023 Analyzed: 05/20/2023

pH	7.64	pH Units	7.77	1.69	25
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### Notes and Definitions

- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- All soil results are reported at a wet weight basis.

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