



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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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.

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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: YR05419 Client: EAGLE  
 Client Project ID: HOV WATER #14-31

Checklist Completed by: JSH/JENS Shipped Via: FID  
 Date/time completed: 5/10/23 (UPS, FedEx, Hand Delivered, Pick-up, etc.)  
 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: 7003

Requirement Description	Yes	No	N/A	Comments (if any)
If samples 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 subcontracts and is in order to insure sample integrity)/(pH <2 for samples preserved with HNO3, HCL, H2SO4) / (pH >10 for samples preserved with NaAsO2+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 in the additional comments (above) and the case narrative.

Reviewed by (Project Manager) JSH

Date/Time Reviewed 5/17/23

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**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**

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

**Blank (B3E1625-BLK1)**

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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