



December 20, 2023

Eagle Environmental Consulting, LLC

Andrew Newberry

8000 W 44th Ave

Wheat Ridge CO 80033

Project Name - Noble - HSR - Abramson #5-23 Project Number - [none]

Attached are your analytical results for Noble - HSR - Abramson #5-23 received by Origins Laboratory, Inc. November 29, 2023. This project is associated with Origins project number Y311696-01.

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

Andrew Newberry  
Project Number: [none]  
Project: Noble - HSR - Abramson #5-23

## CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BG-02@2.5'-5'	Y311696-01	Soil	November 29, 2023 13:42	11/29/2023 16:22
BG-03@2.5'-5'	Y311696-02	Soil	November 29, 2023 13:53	11/29/2023 16:22
BG-04@2.5'-5'	Y311696-03	Soil	November 29, 2023 14:00	11/29/2023 16:22
BG-05@2.5'-5'	Y311696-04	Soil	November 29, 2023 14:06	11/29/2023 16:22

Origins Laboratory, Inc.

Jen Pellegrini For Noelle Doyle Mathis, President

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

**Sample Receipt Checklist**

Origins Work Order: 4211096 Client: Eagle  
 Client Project ID: Abramson 5-23  
 Checklist Completed by: ELH Shipped Via: HO  
 Date/time completed: 1/21/23 (UPS, FedEx, Hand Delivered, Pick-up, etc.)  
 Airbill #: N/A  
 Matrix(s) Received: (Check all that apply):  Soil/Solid  Water  Other: \_\_\_\_\_ (Describe)  
 Cooler Number/Temperature: 1/4 °C / \_\_\_\_\_ °C / \_\_\_\_\_ °C / \_\_\_\_\_ °C  
 Thermometer ID: 1004

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 sub-contracted analyses 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) [Signature] Date/Time Reviewed 1/21/23

Origins Laboratory, Inc.

*Jefe Pellegrini*

Jen Pellegrini For Noelle Doyle Mathis, President

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Andrew Newberry  
 Project Number: [none]  
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**BG-02@2.5'-5'**

**11/29/2023 1:42:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y311696-01 (Soil)**

**pH in Soil by 9045D**

pH	8.24			pH Units	1	B3L0211	12/02/2023	12/03/2023	
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**Total Metals by 6020B**

Arsenic	1.28	0.0855	0.25	mg/Kg	5	L720516	12/05/2023	12/18/2023	
Barium	48.2	0.042	0.25	"	"	"	"	"	

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**BG-03@2.5'-5'**

**11/29/2023 1:53:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y311696-02 (Soil)**

**pH in Soil by 9045D**

pH	8.45			pH Units	1	B3L0211	12/02/2023	12/03/2023	
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**Total Metals by 6020 B**

Arsenic	1.62	0.0855	0.25	mg/Kg	5	L720517	12/05/2023	12/18/2023	
Barium	66.4	0.042	0.25	"	"	"	"	"	

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**BG-04@2.5'-5'**

**11/29/2023 2:00:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y311696-03 (Soil)**

**pH in Soil by 9045D**

pH	8.26			pH Units	1	B3L0211	12/02/2023	12/03/2023	
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**Total Metals by 6020 B**

Arsenic	0.862	0.0855	0.25	mg/Kg	5	L720517	12/05/2023	12/18/2023	
Barium	27.6	0.042	0.25	"	"	"	"	"	

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**BG-05@2.5'-5'**

**11/29/2023 2:06:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y311696-04 (Soil)**

**pH in Soil by 9045D**

pH	8.50			pH Units	1	B3L0211	12/02/2023	12/03/2023	
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**Total Metals by 6020 B**

Arsenic	0.659	0.0855	0.25	mg/Kg	5	L720517	12/05/2023	12/18/2023	
Barium	32.6	0.042	0.25	"	"	"	"	"	

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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 B3L0211 - Saturated Paste pH/EC**

**Duplicate (B3L0211-DUP1)**

**Source: Y311695-01**

Prepared: 12/02/2023 Analyzed: 12/03/2023

pH	8.31	pH Units	8.32	0.120	25
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**Total Metals by 6020 B - Quality Control**  
**Waypoint Analytical, LLC.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch L720517 - 3050B**

**MSD (L 97502-MSD-L720517)**

**Source: 97502**

Prepared: 12/05/2023 Analyzed: 12/18/2023

Arsenic	2.37	0.25	mg/Kg dry	2.32	0.16	95	75-125	0.4	80	
Barium	53.2	0.25	"	4.63	49.7	76	75-125	4.4	80	

**MS (L 97502-MS-L720517)**

**Source: 97502**

Prepared: 12/05/2023 Analyzed: 12/18/2023

Barium	55.6	0.25	mg/Kg dry	4.84	49.7	122	75-125			
Arsenic	2.38	0.25	"	2.42	0.16	92	75-125			

**LCS (LCS-L720517)**

Prepared: 12/05/2023 Analyzed: 12/18/2023

Barium	5.28	0.25	mg/Kg	5		106	80-120			
Arsenic	2.38	0.25	"	2.5		95	80-120			

**LRB (LRB-L720517)**

Prepared: 12/05/2023 Analyzed: 12/18/2023

Arsenic	ND	0.25	mg/Kg							
Barium	0.0558	0.25	"							J

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**Total Metals by 6020B - Quality Control**  
**Waypoint Analytical, LLC.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch L720516 - 3050B**

**MSD (L 99229-MSD-L720516)**

**Source: Y311696-01**

Prepared: 12/05/2023 Analyzed: 12/18/2023

Arsenic	3.52	0.25	mg/Kg	2.39	1.28	94	75-125	2	80	
Barium	58.3	0.25	"	4.79	48.2	211	75-125	0.5	80	*

**MS (L 99229-MS-L720516)**

**Source: Y311696-01**

Prepared: 12/05/2023 Analyzed: 12/18/2023

Barium	58	0.25	mg/Kg	4.7	48.2	209	75-125			*
Arsenic	3.45	0.25	"	2.35	1.28	92	75-125			

**LCS (LCS-L720516)**

Prepared: 12/05/2023 Analyzed: 12/14/2023

Barium	4.52	0.25	mg/Kg	5		90	80-120			
Arsenic	2.24	0.25	"	2.5		90	80-120			

**LRB (LRB-L720516)**

Prepared: 12/05/2023 Analyzed: 12/14/2023

Barium	0.0467	0.25	mg/Kg							J
Arsenic	ND	0.25	"							

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### Notes and Definitions

- J Estimated Value. Analyte below reported quantitation limit.
  - \* QC Failure
  - ND Analyte NOT DETECTED at or above the reporting limit
  - RPD Relative Percent Difference
- All soil results are reported on a wet weight basis.

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