



Eagle Environmental Consulting, LLC

Alfred Garraffa

8000 W 44th Ave

Wheat Ridge CO 80033

October 01, 2024

Project Name - Noble - State #36-614

Project Number - [none]

Attached are your analytical results for Noble - State #36-614 received by Origins Laboratory September 13, 2024. This project is associated with Origins project number E409375-01.

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
303.433.1322
projectmanager@originslab.com



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

Alfred Garraffa
Project Number: [none]
Project: Noble - State #36-614

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
EX-SS-10-01@7'	E409375-01	Soil	September 13, 2024 9:00	09/13/2024 11:43
EX-SS-11-01@7'	E409375-02	Soil	September 13, 2024 9:05	09/13/2024 11:43
EX-SS-12-01@7'	E409375-03	Soil	September 13, 2024 9:10	09/13/2024 11:43
EX-SS-13-01@7'	E409375-04	Soil	September 13, 2024 9:15	09/13/2024 11:43
EX-SS-14-01@7'	E409375-05	Soil	September 13, 2024 9:20	09/13/2024 11:43
EX-SS-15-01@7'	E409375-06	Soil	September 13, 2024 9:25	09/13/2024 11:43
EX-SS-16-01@7'	E409375-07	Soil	September 13, 2024 9:30	09/13/2024 11:43
EX-SS-17-01@7'	E409375-08	Soil	September 13, 2024 9:35	09/13/2024 11:43

Origins Laboratory



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

Alfred Garraffa
 Project Number: [none]
 Project: Noble - State #36-614

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: E409375

Client: Eagle

Client Project ID: State 36-614

Checklist Completed by: CHJ

Shipped Via: HD
 (UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 9/13/12

Airbill #: N/A

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

Cooler Number/Temperature: 144 °C / _____ °C / _____ °C (Describe) _____ °C

Thermometer ID: 105

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?	/			
Is there ice present (document if blue ice is used)	/			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		/		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		/		
Were all samples received intact ⁽¹⁾ ?	/			
Was adequate sample volume provided ⁽¹⁾ ?	/			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?		/		
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	/			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	/			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	/			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	/			
For volatiles in water — is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.			/	
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)		/		
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): CHJ

Date/Time Reviewed: 9/13/12

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Alfred Garraffa
 Project Number: [none]
 Project: Noble - State #36-614

EX-SS-10-01@7'

9/13/2024 9:00:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E409375-01 (Soil)

pH in Soil by 9045D

pH	8.39			pH Units	1	B411723	09/17/2024	09/20/2024	
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Table 915 metals by EPA 6020B

Arsenic	6.50		0.278	mg/kg	10	B411334	09/13/2024	09/14/2024	
Barium	96.1		9.57	"	"	"	"	"	

Origins Laboratory



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Alfred Garraffa
 Project Number: [none]
 Project: Noble - State #36-614

EX-SS-11-01@7'

9/13/2024 9:05:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory
 E409375-02 (Soil)**

pH in Soil by 9045D

pH	8.38			pH Units	1	B411723	09/17/2024	09/20/2024	
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Table 915 metals by EPA 6020B

Arsenic	7.29		0.281	mg/kg	10	B411334	09/13/2024	09/14/2024	
Barium	148		9.67	"	"	"	"	"	

Origins Laboratory



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Alfred Garraffa
 Project Number: [none]
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EX-SS-12-01@7'

9/13/2024 9:10:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E409375-03 (Soil)

pH in Soil by 9045D

pH	8.55			pH Units	1	B411723	09/17/2024	09/20/2024	
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Table 915 metals by EPA 6020B

Arsenic	2.67	0.259		mg/kg	10	B411334	09/13/2024	09/14/2024	
Barium	132	8.93		"	"	"	"	"	

Origins Laboratory



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Alfred Garraffa
 Project Number: [none]
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EX-SS-13-01@7'

9/13/2024 9:15:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E409375-04 (Soil)

pH in Soil by 9045D

pH	8.53			pH Units	1	B411723	09/17/2024	09/20/2024	
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Table 915 metals by EPA 6020B

Arsenic	4.44		0.271	mg/kg	10	B411334	09/13/2024	09/14/2024	
Barium	105		9.34	"	"	"	"	"	

Origins Laboratory



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EX-SS-14-01@7'

9/13/2024 9:20:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E409375-05 (Soil)

pH in Soil by 9045D

pH	8.47			pH Units	1	B411723	09/17/2024	09/20/2024	
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Table 915 metals by EPA 6020B

Arsenic	12.6		0.283	mg/kg	10	B411334	09/13/2024	09/14/2024	
Barium	188		9.75	"	"	"	"	"	

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EX-SS-15-01@7'

9/13/2024 9:25:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E409375-06 (Soil)

pH in Soil by 9045D

pH	8.51			pH Units	1	B411723	09/17/2024	09/20/2024	
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Table 915 metals by EPA 6020B

Arsenic	2.79	0.249	mg/kg	10	B411334	09/13/2024	09/14/2024	
Barium	111	8.58	"	"	"	"	"	"

Origins Laboratory



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EX-SS-16-01@7'

9/13/2024 9:30:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory
 E409375-07 (Soil)**

pH in Soil by 9045D

pH	8.55			pH Units	1	B411723	09/17/2024	09/20/2024	
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Table 915 metals by EPA 6020B

Arsenic	43.7		0.272	mg/kg	10	B411334	09/13/2024	09/14/2024	
Barium	110		9.36	"	"	"	"	"	

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EX-SS-17-01@7'

9/13/2024 9:35:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E409375-08 (Soil)

pH in Soil by 9045D

pH	8.47			pH Units	1	B411723	09/17/2024	09/20/2024	
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Table 915 metals by EPA 6020B

Arsenic	4.89		0.250	mg/kg	10	B411334	09/13/2024	09/14/2024	
Barium	98.0		8.61	"	"	"	"	"	

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Metals by EPA 6000/7000 Series Methods - Quality Control
Origins Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B4I1334 - EPA 3050B

Blank (B4I1334-BLK1)

Prepared: 09/13/2024 Analyzed: 09/14/2024

Arsenic	ND	0.290	mg/kg							
Barium	ND	10.0	"							
Cadmium	ND	0.100	"							
Copper	ND	10.0	"							
Lead	ND	1.00	"							
Nickel	ND	1.00	"							
Selenium	ND	0.260	"							
Silver	ND	0.100	"							
Zinc	ND	37.0	"							

LCS (B4I1334-BS1)

Prepared: 09/13/2024 Analyzed: 09/14/2024

Arsenic	5.39	0.290	mg/kg	5.00		108	80-120			
Barium	531	10.0	"	500		106	80-120			
Cadmium	5.53	0.100	"	5.00		111	80-120			
Copper	55.4	10.0	"	50.0		111	80-120			
Lead	5.48	1.00	"	5.00		110	80-120			
Nickel	5.39	1.00	"	5.00		108	80-120			
Selenium	4.82	0.260	"	5.00		96.5	80-120			
Silver	5.60	0.100	"	5.00		112	80-120			
Zinc	48.1	37.0	"	50.0		96.1	80-120			

Matrix Spike (B4I1334-MS1)

Source: E409375-01

Prepared: 09/13/2024 Analyzed: 09/14/2024

Arsenic	9.54	0.254	mg/kg	4.37	6.50	69.5	75-125			QM-07
Barium	481	8.75	"	437	96.1	88.1	75-125			
Cadmium	4.23	0.0875	"	4.37	0.0708	95.2	75-125			
Copper	46.7	8.75	"	43.7	5.67	93.8	75-125			
Lead	9.78	0.875	"	4.37	5.68	93.7	75-125			

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 Project: Noble - State #36-614

Metals by EPA 6000/7000 Series Methods - Quality Control
Origins Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B411334 - EPA 3050B

Matrix Spike (B411334-MS1)

Source: E409375-01

Prepared: 09/13/2024 Analyzed: 09/14/2024

Nickel	11.2	0.875	mg/kg	4.37	7.12	93.3	75-125			
Selenium	3.81	0.227	"	4.37	0.0641	85.6	75-125			
Silver	4.29	0.0875	"	4.37	0.0220	97.6	75-125			
Zinc	62.0	32.4	"	43.7	20.9	93.8	75-125			

Matrix Spike Dup (B411334-MSD1)

Source: E409375-01

Prepared: 09/13/2024 Analyzed: 09/14/2024

Arsenic	11.0	0.282	mg/kg	4.86	6.50	92.7	75-125	14.2	20	
Barium	508	9.71	"	486	96.1	84.9	75-125	5.41	20	
Cadmium	4.59	0.0971	"	4.86	0.0708	93.0	75-125	8.03	20	
Copper	49.8	9.71	"	48.6	5.67	91.0	75-125	6.51	20	
Lead	10.3	0.971	"	4.86	5.68	94.8	75-125	5.03	20	
Nickel	11.5	0.971	"	4.86	7.12	89.5	75-125	2.36	20	
Selenium	4.09	0.252	"	4.86	0.0641	82.9	75-125	7.15	20	
Silver	4.60	0.0971	"	4.86	0.0220	94.3	75-125	6.98	20	
Zinc	66.2	35.9	"	48.6	20.9	93.2	75-125	6.60	20	

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Project Number: [none]
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Saturated Paste - Quality Control
Origins Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B411723 - Saturated Paste pH/EC

Duplicate (B411723-DUP1)

Source: E409338-01

Prepared: 09/17/2024 Analyzed: 09/20/2024

pH	8.34		pH Units		8.24			1.21	25	
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Jordan A. Bynon For Jen Pellegrini, Project Manager

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

Alfred Garraffa
Project Number: [none]
Project: Noble - State #36-614

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 on a wet weight basis.

Origins Laboratory



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