



February 07, 2024

Eagle Environmental Consulting, LLC

Andrew Newberry

8000 W 44th Ave

Wheat Ridge CO 80033

Project Name - Noble - Wilmoth #14-0314

Project Number - [none]

Attached are your analytical results for Noble - Wilmoth #14-0314 received by Origins Laboratory, Inc. January 23, 2024. This project is associated with Origins project number Y401557-01.

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, LLC
8000 W 44th Ave
Wheat Ridge CO 80033

Andrew Newberry
Project Number: [none]
Project: Noble - Wilmoth #14-0314

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Background-01@2	Y401557-01	Soil	January 23, 2024 13:15	01/23/2024 17:26

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

Andrew Newberry
Project Number: [none]
Project: Noble - Wilmoth #14-0314

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: 140557 Client: Eagle
Client Project ID: Wilmoth #14-0314
Checklist Completed by: TSH/ELH Shipped Via: HD
(UPS, FedEx, Hand Delivered, Pick-up, etc.)
Date/time completed: 1/24/24 Airbill #: N/A
Matrix(s) Received: (Check all that apply) Soil/Solid Water Other: _____
Cooler Number/Temperature: 1 6 °C _____ °C (Describe) _____ °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 ⁽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 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 ⁽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 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (note ID or 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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 in the additional comments (above) and the case narrative.

Reviewed by (Project Manager)

Date/Time Reviewed

Origins Laboratory, Inc.



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Jordan A. Bynon, Project Manager

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

Andrew Newberry
 Project Number: [none]
 Project: Noble - Wilmoth #14-0314

Background-01@2'
1/23/2024 1:15:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y401557-01 (Soil)

Boron (DTPA Sorbitol)

Boron	1.31		0.101	mg/L	1	B4A2612	01/26/2024	01/30/2024	
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Metals by Saturated Paste by EPA 6010

Calcium	3.85		0.499	meq/L	10	[CALC]	01/26/2024	01/29/2024	
Magnesium	1.70		0.823	"	"	"	"	"	
Sodium	7.56		0.435	"	"	"	"	"	

pH in Soil by 9045D

pH	8.11			pH Units	1	B4A2615	01/26/2024	01/27/2024	
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SAR by 20B Saturated Paste

SAR	4.54		0.0100	SAR	1	B4A2607	01/26/2024	01/29/2024	
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	1.47		0.00500	mmhos/cm	1	B4A2615	01/26/2024	01/27/2024	
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Table 915 metals by EPA 6020B

Arsenic	3.32		0.0903	mg/kg	10	B4A2420	01/24/2024	01/26/2024	
Barium	143		9.03	"	"	"	"	"	
Cadmium	0.216		0.0903	"	"	"	"	"	
Copper	13.4		9.03	"	"	"	"	"	

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Andrew Newberry
 Project Number: [none]
 Project: Noble - Wilmoth #14-0314

Background-01@2'
1/23/2024 1:15:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y401557-01 (Soil)

Table 915 metals by EPA 6020B

Lead	13.2		0.903	mg/kg	10	B4A2420	01/24/2024	01/26/2024	
Nickel	12.3		0.903	"	"	"	"	"	"
Selenium	0.180		0.0903	"	"	"	"	"	"
Silver	ND		0.0903	"	"	"	"	"	"
Zinc	56.8		9.03	"	"	"	"	"	"

Total Metals by 7196A

Chromium, Hexavalent	ND	0.244	0.5	mg/Kg	1	L729960	01/23/2024	01/31/2024	
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 Wheat Ridge CO 80033

Andrew Newberry
 Project Number: [none]
 Project: Noble - Wilmoth #14-0314

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 B4A2420 - EPA 3050B

Prepared: 01/24/2024 Analyzed: 01/26/2024

Blank (B4A2420-BLK1)

Arsenic	ND	0.0100	mg/kg							
Barium	ND	1.00	"							
Cadmium	ND	0.0100	"							
Copper	ND	1.00	"							
Lead	ND	0.100	"							
Nickel	ND	0.100	"							
Selenium	ND	0.0100	"							
Silver	ND	0.0100	"							
Zinc	ND	1.00	"							

LCS (B4A2420-BS1)

Prepared: 01/24/2024 Analyzed: 01/26/2024

Arsenic	4.92	0.0100	mg/kg	5.00		98.4	80-120			
Barium	496	1.00	"	500		99.3	80-120			
Cadmium	4.84	0.0100	"	5.00		96.9	80-120			
Copper	51.0	1.00	"	50.0		102	80-120			
Lead	5.16	0.100	"	5.00		103	80-120			
Nickel	5.09	0.100	"	5.00		102	80-120			
Selenium	4.66	0.0100	"	5.00		93.2	80-120			
Silver	5.17	0.0100	"	5.00		103	80-120			
Zinc	49.7	1.00	"	50.0		99.5	80-120			

Matrix Spike (B4A2420-MS1)

Source: Y401546-01

Prepared: 01/24/2024 Analyzed: 01/26/2024

Arsenic	10.8	0.0988	mg/kg	4.94	5.92	98.6	75-125			
Barium	729	9.88	"	494	257	95.4	75-125			
Cadmium	5.36	0.0988	"	4.94	0.180	105	75-125			
Copper	65.7	9.88	"	49.4	35.2	61.7	75-125			QM-07
Lead	17.8	0.988	"	4.94	13.8	79.9	75-125			

Origins Laboratory, Inc.

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Jordan A. Bynon, Project Manager



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 Project Number: [none]
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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 B4A2420 - EPA 3050B

Matrix Spike (B4A2420-MS1)

Source: Y401546-01

Prepared: 01/24/2024 Analyzed: 01/26/2024

Nickel	18.4	0.988	mg/kg	4.94	13.7	96.4	75-125			
Selenium	4.28	0.0988	"	4.94	0.278	81.1	75-125			
Silver	4.75	0.0988	"	4.94	0.0403	95.3	75-125			
Zinc	93.5	9.88	"	49.4	46.5	95.1	75-125			

Matrix Spike Dup (B4A2420-MSD1)

Source: Y401546-01

Prepared: 01/24/2024 Analyzed: 01/26/2024

Arsenic	10.4	0.0976	mg/kg	4.88	5.92	92.8	75-125	3.19	20	
Barium	728	9.76	"	488	257	96.4	75-125	0.109	20	
Cadmium	5.30	0.0976	"	4.88	0.180	105	75-125	1.18	20	
Copper	67.1	9.76	"	48.8	35.2	65.3	75-125	2.12	20	QM-07
Lead	18.0	0.976	"	4.88	13.8	86.1	75-125	1.42	20	
Nickel	18.0	0.976	"	4.88	13.7	88.2	75-125	2.51	20	
Selenium	4.30	0.0976	"	4.88	0.278	82.4	75-125	0.378	20	
Silver	4.50	0.0976	"	4.88	0.0403	91.3	75-125	5.41	20	
Zinc	91.7	9.76	"	48.8	46.5	92.5	75-125	1.95	20	

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Classical Chemistry Parameters - 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 B4A2607 - Saturated Paste Metals

Blank (B4A2607-BLK1)

Prepared: 01/26/2024 Analyzed: 01/29/2024

Calcium PPM	ND	10.0	mg/L							
SAR	ND	0.0100	SAR							
Magnesium PPM	ND	10.0	mg/L							
Sodium PPM	ND	10.0	"							

Duplicate (B4A2607-DUP1)

Source: Y401556-01

Prepared: 01/26/2024 Analyzed: 01/29/2024

SAR	ND	0.0100	SAR	3.20				200		
Calcium PPM	72.4	10.0	mg/L	61.0				17.1	50	
Magnesium PPM	15.0	10.0	"	12.4				18.7	50	
Sodium PPM	119	10.0	"	105				12.9	50	

Batch B4A2612 - DTPA Sorbitol Preparation

Blank (B4A2612-BLK1)

Prepared: 01/26/2024 Analyzed: 01/30/2024

Boron	ND	0.100	mg/L							
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Duplicate (B4A2612-DUP1)

Source: Y401543-03

Prepared: 01/26/2024 Analyzed: 01/30/2024

Boron	0.0468	0.0995	mg/L	0.0467				0.0555	50	
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 Wheat Ridge CO 80033

Andrew Newberry
 Project Number: [none]
 Project: Noble - Wilmoth #14-0314

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 B4A2615 - Saturated Paste pH/EC

Blank (B4A2615-BLK1)

Prepared: 01/26/2024 Analyzed: 01/27/2024

Specific Conductance (EC) ND 0.00500 mmhos/cm

Duplicate (B4A2615-DUP1)

Source: Y401556-01

Prepared: 01/26/2024 Analyzed: 01/27/2024

pH 8.18 pH Units 8.15 0.367 25

Specific Conductance (EC) 1.22 0.00500 mmhos/cm 1.14 7.17 25

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 8000 W 44th Ave
 Wheat Ridge CO 80033

Andrew Newberry
 Project Number: [none]
 Project: Noble - Wilmoth #14-0314

Total Metals by 7196A - 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 L729960 -

DUP (L 88458-DUP)

Source: 88458

Prepared: Analyzed: 01/31/2024

Chromium, Hexavalent	ND	0.5	mg/Kg		<0.500	-	0	20	
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MS (L 88458-MS)

Source: 88458

Prepared: Analyzed: 01/31/2024

Chromium, Hexavalent	29.6	2.5	mg/Kg	39.6	< 0.244	75	75-125		
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LCS (LCS)

Prepared: Analyzed: 01/31/2024

Chromium, Hexavalent	6.05	0.5	mg/Kg	8		76	75-125		
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LRB (LRB)

Prepared: Analyzed: 01/31/2024

Chromium, Hexavalent	ND	0.5	mg/Kg			-			
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Project Number: [none]
Project: Noble - Wilmoth #14-0314

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.

Calculated results may use J-flag data (instead of reported "ND") as part of calculation to provide a more accurate result.

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