



February 23, 2024

Eagle Environmental Consulting, LLC

Andrew Newberry

8000 W 44th Ave

Wheat Ridge CO 80033

Project Name - Noble - Frank C #12-22

Project Number - [none]

Attached are your analytical results for Noble - Frank C #12-22 received by Origins Laboratory, Inc. February 09, 2024. This project is associated with Origins project number Y402270-01.

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 - Frank C #12-22

### CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
WH-FS-01@6'	Y402270-01	Soil	February 9, 2024 14:20	02/09/2024 16:00
Background-01@2'	Y402270-02	Soil	February 9, 2024 13:55	02/09/2024 16:00

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 - Frank C #12-22

Origins Laboratory

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

### Sample Receipt Checklist

Origins Work Order: 4402270

Client: Eagle

Client Project ID: Frank C #12-22

Checklist Completed by: TST/ENG

Shipped Via: HV

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

Date/time completed: 2/12/24

Airbill #: N/A

Matrix(s) Received: (Check all that apply): ☒ Soil/Solid ☐ Water ☐ Other: \_\_\_\_\_

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

Thermometer ID: TOOT

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 type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 subcontracted analyses 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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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]

2/13/24  
Date/Time Reviewed

Origins Laboratory, Inc.

[Signature]

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8000 W 44th Ave  
Wheat Ridge CO 80033

Andrew Newberry  
Project Number: [none]  
Project: Noble - Frank C #12-22

WH-FS-01@6'

2/9/2024 2:20:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
Y402270-01 (Soil)

**Boron (DTPA Sorbitol)**

Boron	0.549	0.0996	mg/L	1	B4B1211	02/12/2024	02/13/2024	
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**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND	25.0	mg/kg	1	B4B1401	02/14/2024	02/20/2024	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	U

Surrogate: o-Terphenyl	93.1 %	50-150			"	"	"	
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**GBTEX+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND	0.00200	mg/kg	1	B4B1335	02/13/2024	02/14/2024	U
1,3,5-Trimethylbenzene	ND	0.00200	"	"	"	"	"	U
Benzene	ND	0.00200	"	"	"	"	"	U
Ethylbenzene	ND	0.00200	"	"	"	"	"	U
Naphthalene	ND	0.00380	"	"	"	"	"	U
Toluene	ND	0.00200	"	"	"	"	"	U
Xylenes, total	ND	0.00200	"	"	"	"	"	U
Gasoline Range Hydrocarbons	ND	0.200	"	"	"	"	"	U

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WH-FS-01@6'

2/9/2024 2:20:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y402270-01 (Soil)**

**GBTEX+TMBs by 8260D**

Surrogate: 1,2-Dichloroethane-d4	99.3 %	70-130	B4B13 35	02/13/2024	02/14/2024
Surrogate: Toluene-d8	103 %	70-130	"	"	"
Surrogate: 4-Bromofluorobenzene	102 %	70-130	"	"	"

**Metals by Saturated Paste by EPA 6010**

Calcium	13.5	0.499	meq/L	10	[CALC]	02/12/2024	02/13/2024
Magnesium	5.51	0.823	"	"	"	"	"
Sodium	13.1	0.435	"	"	"	"	"

**PAH by EPA 8270E**

1-Methylnaphthalene	ND	0.002	mg/kg	1	B4B1321	02/13/2024	02/15/2024	U
2-Methylnaphthalene	ND	0.002	"	"	"	"	"	U
Acenaphthene	ND	0.020	"	"	"	"	"	U
Anthracene	ND	0.020	"	"	"	"	"	U
Benzo (a) anthracene	ND	0.005	"	"	"	"	"	U
Benzo (a) pyrene	ND	0.020	"	"	"	"	"	U
Benzo (b) fluoranthene	ND	0.020	"	"	"	"	"	U
Benzo (k) fluoranthene	ND	0.020	"	"	"	"	"	U
Chrysene	ND	0.020	"	"	"	"	"	U
Dibenz (a,h) anthracene	ND	0.020	"	"	"	"	"	U

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2/9/2024 2:20:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
Y402270-01 (Soil)

## PAH by EPA 8270E

Fluoranthene	ND	0.020	mg/kg	1	B4B1321	02/13/2024	02/15/2024	U
Fluorene	ND	0.020	"	"	"	"	"	U
Indeno (1,2,3-cd) pyrene	ND	0.020	"	"	"	"	"	U
Pyrene	ND	0.020	"	"	"	"	"	U

Surrogate: Fluorene-d10	96.9 %	60-130	"	"	"
Surrogate: Anthracene-d10	103 %	60-130	"	"	"
Surrogate: Pyrene-d10	98.2 %	60-130	"	"	"
Surrogate: Benzo (a) pyrene-d12	102 %	60-130	"	"	"

## pH in Soil by 9045D

pH	8.02	pH Units	1	B4B1216	02/12/2024	02/13/2024
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## SAR by 20B Saturated Paste

SAR	4.24	0.0100	SAR	1	B4B1206	02/12/2024	02/13/2024
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## Specific Conductance Mod. 9050A

Specific Conductance (EC)	2.50	0.00500	mmhos/cm	1	B4B1216	02/12/2024	02/13/2024
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## Table 915 metals by EPA 6020B

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2/9/2024 2:20:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
Y402270-01 (Soil)

## Table 915 metals by EPA 6020B

Arsenic	3.66	0.0955	mg/kg	10	B4B0946	02/12/2024	02/17/2024
Barium	89.5	9.55	"	"	"	"	"
Cadmium	0.128	0.0955	"	"	"	"	"
Copper	ND	9.55	"	"	"	"	"
Lead	9.34	0.955	"	"	"	"	"
Nickel	7.87	0.955	"	"	"	"	"
Selenium	0.118	0.0955	"	"	"	"	"
Silver	ND	0.0955	"	"	"	"	"
Zinc	38.1	9.55	"	"	"	"	"

## Total Metals by 7196A

Chromium, Hexavalent	ND	0.244	0.5	mg/Kg	1	L733239	02/09/2024	02/16/2024
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**Background-01@2'**  
**2/9/2024 1:55:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y402270-02 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.839	0.100	mg/L	1	B4B1211	02/12/2024	02/13/2024
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**Metals by Saturated Paste by EPA 6010**

Calcium	22.2	0.499	meq/L	10	[CALC]	02/12/2024	02/13/2024
Magnesium	7.56	0.823	"	"	"	"	"
Sodium	15.8	0.435	"	"	"	"	"

**pH in Soil by 9045D**

pH	8.05		pH Units	1	B4B1216	02/12/2024	02/13/2024
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**SAR by 20B Saturated Paste**

SAR	4.09	0.0100	SAR	1	B4B1206	02/12/2024	02/13/2024
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	3.21	0.00500	mmhos/cm	1	B4B1216	02/12/2024	02/13/2024
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**Table 915 metals by EPA 6020B**

Arsenic	3.47	0.0872	mg/kg	10	B4B0946	02/12/2024	02/17/2024
Barium	80.6	8.72	"	"	"	"	"
Cadmium	0.134	0.0872	"	"	"	"	"
Copper	ND	8.72	"	"	"	"	"

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**Background-01@2'**  
**2/9/2024 1:55:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y402270-02 (Soil)**

**Table 915 metals by EPA 6020B**

Lead	15.0	0.872	mg/kg	10	B4B0946	02/12/2024	02/17/2024
Nickel	7.17	0.872	"	"	"	"	"
Selenium	0.177	0.0872	"	"	"	"	"
Silver	ND	0.0872	"	"	"	"	"
Zinc	41.0	8.72	"	"	"	"	"

**Total Metals by 7196A**

Chromium, Hexavalent	ND	0.244	0.5	mg/Kg	1	L733239	02/09/2024	02/16/2024
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**Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B4B1335 - EPA 5030 (soil)</b>										
<b>Blank (B4B1335-BLK1)</b>					Prepared: 02/13/2024 Analyzed: 02/13/2024					
1,2,4-Trimethylbenzene	ND	0.00200	mg/kg							U
1,3,5-Trimethylbenzene	ND	0.00200	"							U
Benzene	ND	0.00200	"							U
Ethylbenzene	ND	0.00200	"							U
Naphthalene	ND	0.00380	"							U
Toluene	ND	0.00200	"							U
Xylenes, total	ND	0.00200	"							U
Gasoline Range Hydrocarbons	ND	0.200	"							U
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125	101		70-130			
Surrogate: Toluene-d8	0.13		"	0.125	100		70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125	101		70-130			

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Project: Noble - Frank C #12-22

## Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control

### Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B4B1335 - EPA 5030 (soil)										
LCS (B4B1335-BS1)					Prepared: 02/13/2024 Analyzed: 02/13/2024					
1,2,4-Trimethylbenzene	0.106	0.00200	mg/kg	0.100		106	70-130			
1,3,5-Trimethylbenzene	0.107	0.00200	"	0.100		107	70-130			
Benzene	0.0988	0.00200	"	0.100		98.8	70-130			
Ethylbenzene	0.103	0.00200	"	0.100		103	70-130			
Naphthalene	0.114	0.00380	"	0.100		114	70-130			
Toluene	0.103	0.00200	"	0.100		103	70-130			
o-Xylene	0.104	0.00200	"	0.100		104	70-130			
m,p-Xylene	0.201	0.00400	"	0.200		101	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		98.3	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		99.7	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		95.4	70-130			

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**Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B4B1335 - EPA 5030 (soil)</b>										
<b>Matrix Spike (B4B1335-MS1)</b>		<b>Source: Y402307-02</b>			Prepared: 02/13/2024 Analyzed: 02/13/2024					
1,2,4-Trimethylbenzene	0.115	0.00200	mg/kg	0.100	ND	115	70-130			
1,3,5-Trimethylbenzene	0.115	0.00200	"	0.100	ND	115	70-130			
Benzene	0.107	0.00200	"	0.100	ND	107	70-130			
Ethylbenzene	0.110	0.00200	"	0.100	ND	110	70-130			
Naphthalene	0.125	0.00380	"	0.100	ND	125	70-130			
Toluene	0.111	0.00200	"	0.100	ND	111	70-130			
o-Xylene	0.112	0.00200	"	0.100	ND	112	70-130			
m,p-Xylene	0.217	0.00400	"	0.200	ND	109	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		102	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		98.1	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		95.4	70-130			

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## Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control

### Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B4B1335 - EPA 5030 (soil)										
Matrix Spike Dup (B4B1335-MSD1)		Source: Y402307-02			Prepared: 02/13/2024 Analyzed: 02/13/2024					
1,2,4-Trimethylbenzene	0.107	0.00200	mg/kg	0.100	ND	107	70-130	7.32	20	
1,3,5-Trimethylbenzene	0.106	0.00200	"	0.100	ND	106	70-130	7.81	20	
Benzene	0.103	0.00200	"	0.100	ND	103	70-130	4.43	20	
Ethylbenzene	0.103	0.00200	"	0.100	ND	103	70-130	6.74	20	
Naphthalene	0.119	0.00380	"	0.100	ND	119	70-130	5.42	20	
Toluene	0.106	0.00200	"	0.100	ND	106	70-130	4.94	20	
o-Xylene	0.106	0.00200	"	0.100	ND	106	70-130	6.20	20	
m,p-Xylene	0.204	0.00400	"	0.200	ND	102	70-130	5.98	20	
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		101	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		98.5	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		95.9	70-130			

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## Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control

### Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B4B1401 - EPA 3550B										
Blank (B4B1401-BLK1)					Prepared: 02/14/2024 Analyzed: 02/20/2024					
Diesel (C10-C28)	ND	25.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	100	"							U
Surrogate: o-Terphenyl	23		"	24.9		91.9	50-150			

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## Extractable Petroleum Hydrocarbons by 8015D - Quality Control Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B4B1401 - EPA 3550B										
LCS (B4B1401-BS1)					Prepared: 02/14/2024 Analyzed: 02/20/2024					
Diesel (C10-C28)	892	50.0	mg/kg	1000		89.2	70-130			
Residual Range Organics (C28-C40)	1100	200	"	1000		110	70-130			
Surrogate: o-Terphenyl	46		"	49.8		91.5	50-150			

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Project Number: [none]  
Project: Noble - Frank C #12-22

## Extractable Petroleum Hydrocarbons by 8015D - 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 B4B1401 - EPA 3550B

Matrix Spike (B4B1401-MS1)		Source: Y402244-01			Prepared: 02/14/2024 Analyzed: 02/20/2024					
Diesel (C10-C28)	932	50.0	mg/kg	1000	ND	93.2	70-130			
Residual Range Organics (C28-C40)	1180	200	"	1000	ND	118	70-130			
Surrogate: o-Terphenyl	57		"	49.8		114	50-150			

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 - Frank C #12-22

## Extractable Petroleum Hydrocarbons by 8015D - Quality Control

### Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B4B1401 - EPA 3550B										
Matrix Spike Dup (B4B1401-MSD1)		Source: Y402244-01			Prepared: 02/14/2024 Analyzed: 02/20/2024					
Diesel (C10-C28)	868	50.0	mg/kg	1000	ND	86.8	70-130	7.14	35	
Residual Range Organics (C28-C40)	1130	200	"	1000	ND	113	70-130	4.97	35	
Surrogate: o-Terphenyl	42		"	49.8		83.8	50-150			

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 - Frank C #12-22

## Extractable Petroleum Hydrocarbons by 8015D - 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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## 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 B4B0946 - EPA 3050B

#### Blank (B4B0946-BLK1)

Prepared: 02/12/2024 Analyzed: 02/16/2024

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 (B4B0946-BS1)

Prepared: 02/12/2024 Analyzed: 02/16/2024

Arsenic	4.97	0.0100	mg/kg	5.00	99.5	80-120
Barium	502	1.00	"	500	100	80-120
Cadmium	4.97	0.0100	"	5.00	99.3	80-120
Copper	47.5	1.00	"	50.0	95.0	80-120
Lead	5.11	0.100	"	5.00	102	80-120
Nickel	4.93	0.100	"	5.00	98.5	80-120
Selenium	4.97	0.0100	"	5.00	99.3	80-120
Silver	5.16	0.0100	"	5.00	103	80-120
Zinc	48.5	1.00	"	50.0	97.0	80-120

#### Matrix Spike (B4B0946-MS1)

Source: Y402269-02

Prepared: 02/12/2024 Analyzed: 02/16/2024

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Wheat Ridge CO 80033

Andrew Newberry  
Project Number: [none]  
Project: Noble - Frank C #12-22

**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 B4B0946 - EPA 3050B**

Matrix Spike (B4B0946-MS1)		Source: Y402269-02			Prepared: 02/12/2024 Analyzed: 02/16/2024					
Arsenic	11.7	0.0944	mg/kg	4.72	5.41	134	75-125			QM-07
Barium	606	9.44	"	472	69.7	114	75-125			
Cadmium	5.72	0.0944	"	4.72	0.122	119	75-125			
Copper	59.6	9.44	"	47.2	6.54	112	75-125			
Lead	13.9	0.944	"	4.72	7.68	133	75-125			QM-07
Nickel	13.3	0.944	"	4.72	7.39	125	75-125			
Selenium	5.90	0.0944	"	4.72	0.264	119	75-125			
Silver	5.56	0.0944	"	4.72	0.0244	117	75-125			
Zinc	90.0	9.44	"	47.2	33.0	121	75-125			
Matrix Spike Dup (B4B0946-MSD1)		Source: Y402269-02			Prepared: 02/12/2024 Analyzed: 02/16/2024					
Arsenic	10.8	0.0942	mg/kg	4.71	5.41	114	75-125	8.35	20	
Barium	567	9.42	"	471	69.7	106	75-125	6.57	20	
Cadmium	5.48	0.0942	"	4.71	0.122	114	75-125	4.19	20	
Copper	57.9	9.42	"	47.1	6.54	109	75-125	2.88	20	
Lead	13.7	0.942	"	4.71	7.68	127	75-125	2.03	20	QM-07
Nickel	12.3	0.942	"	4.71	7.39	105	75-125	7.54	20	
Selenium	5.13	0.0942	"	4.71	0.264	103	75-125	13.8	20	
Silver	5.33	0.0942	"	4.71	0.0244	113	75-125	4.17	20	
Zinc	85.0	9.42	"	47.1	33.0	110	75-125	5.62	20	

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Andrew Newberry  
Project Number: [none]  
Project: Noble - Frank C #12-22

**EPA 8270E (SW846) - Semivolatile Organic Compounds - 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 B4B1321 - EPA 3580**

**Blank (B4B1321-BLK1)**

Prepared: 02/13/2024 Analyzed: 02/14/2024

1-Methylnaphthalene	ND	0.002	mg/kg							U
2-Methylnaphthalene	ND	0.002	"							U
Acenaphthene	ND	0.020	"							U
Anthracene	ND	0.020	"							U
Benzo (a) anthracene	ND	0.005	"							U
Benzo (a) pyrene	ND	0.020	"							U
Benzo (b) fluoranthene	ND	0.020	"							U
Benzo (g,h,i) perylene	ND	0.020	"							U
Benzo (k) fluoranthene	ND	0.020	"							U
Chrysene	ND	0.020	"							U
Dibenz (a,h) anthracene	ND	0.020	"							U
Fluoranthene	ND	0.020	"							U
Fluorene	ND	0.020	"							U
Indeno (1,2,3-cd) pyrene	ND	0.020	"							U
Naphthalene	ND	0.002	"							U
Phenanthrene	ND	0.020	"							U
Pyrene	ND	0.020	"							U
Surrogate: Fluorene-d10	190		ug/kg	200		94.4	60-130			
Surrogate: Anthracene-d10	190		"	200		95.1	60-130			
Surrogate: Pyrene-d10	200		"	200		102	60-130			
Surrogate: Benzo (a) pyrene-d12	200		"	200		99.7	60-130			

**LCS (B4B1321-BS1)**

Prepared: 02/13/2024 Analyzed: 02/14/2024

1-Methylnaphthalene	0.195	0.002	mg/kg	0.200		97.6	70-130			
2-Methylnaphthalene	0.194	0.002	"	0.200		97.2	70-130			
Acenaphthene	0.182	0.020	"	0.200		91.2	70-130			
Anthracene	0.194	0.020	"	0.200		96.9	70-130			

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Wheat Ridge CO 80033

Andrew Newberry  
Project Number: [none]  
Project: Noble - Frank C #12-22

**EPA 8270E (SW846) - Semivolatile Organic Compounds - 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 B4B1321 - EPA 3580**

**LCS (B4B1321-BS1)**

Prepared: 02/13/2024 Analyzed: 02/14/2024

Benzo (a) anthracene	0.183	0.005	mg/kg	0.200		91.7	70-130
Benzo (a) pyrene	0.179	0.020	"	0.200		89.5	70-130
Benzo (b) fluoranthene	0.201	0.020	"	0.200		100	70-130
Benzo (g,h,i) perylene	0.195	0.020	"	0.200		97.3	70-130
Benzo (k) fluoranthene	0.196	0.020	"	0.200		97.9	70-130
Chrysene	0.184	0.020	"	0.200		92.2	70-130
Dibenz (a,h) anthracene	0.200	0.020	"	0.200		99.8	70-130
Fluoranthene	0.187	0.020	"	0.200		93.6	70-130
Fluorene	0.178	0.020	"	0.200		89.1	70-130
Indeno (1,2,3-cd) pyrene	0.189	0.020	"	0.200		94.7	70-130
Naphthalene	0.195	0.002	"	0.200		97.3	70-130
Phenanthrene	0.202	0.020	"	0.200		101	70-130
Pyrene	0.186	0.020	"	0.200		93.0	70-130
Surrogate: Fluorene-d10	190		ug/kg	200		93.4	60-130
Surrogate: Anthracene-d10	200		"	200		102	60-130
Surrogate: Pyrene-d10	200		"	200		98.1	60-130
Surrogate: Benzo (a) pyrene-d12	210		"	200		103	60-130

**Matrix Spike (B4B1321-MS1)**

**Source: Y402231-01**

Prepared: 02/13/2024 Analyzed: 02/14/2024

1-Methylnaphthalene	0.200	0.002	mg/kg	0.200	0.010	94.7	70-130
2-Methylnaphthalene	0.206	0.002	"	0.200	0.029	88.9	70-130
Acenaphthene	0.174	0.020	"	0.200	0.0004	86.7	70-130
Anthracene	0.178	0.020	"	0.200	ND	88.9	70-130
Benzo (a) anthracene	0.177	0.005	"	0.200	0.0004	88.2	70-130
Benzo (a) pyrene	0.175	0.020	"	0.200	0.002	86.2	70-130
Benzo (b) fluoranthene	0.193	0.020	"	0.200	ND	96.6	70-130
Benzo (g,h,i) perylene	0.181	0.020	"	0.200	ND	90.3	70-130

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8000 W 44th Ave  
Wheat Ridge CO 80033

Andrew Newberry  
Project Number: [none]  
Project: Noble - Frank C #12-22

**EPA 8270E (SW846) - Semivolatile Organic Compounds - 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 B4B1321 - EPA 3580**

Matrix Spike (B4B1321-MS1)		Source: Y402231-01			Prepared: 02/13/2024 Analyzed: 02/14/2024					
Benzo (k) fluoranthene	0.196	0.020	mg/kg	0.200	ND	98.0	70-130			
Chrysene	0.178	0.020	"	0.200	0.0007	88.7	70-130			
Dibenz (a,h) anthracene	0.181	0.020	"	0.200	ND	90.6	70-130			
Fluoranthene	0.197	0.020	"	0.200	0.003	96.6	70-130			
Fluorene	0.188	0.020	"	0.200	0.001	93.5	70-130			
Indeno (1,2,3-cd) pyrene	0.173	0.020	"	0.200	ND	86.7	70-130			
Naphthalene	0.191	0.002	"	0.200	0.012	89.4	70-130			
Phenanthrene	0.187	0.020	"	0.200	0.003	91.8	70-130			
Pyrene	0.196	0.020	"	0.200	0.0007	97.8	70-130			
Surrogate: Fluorene-d10	220		ug/kg	200		108	60-130			
Surrogate: Anthracene-d10	190		"	200		93.2	60-130			
Surrogate: Pyrene-d10	210		"	200		105	60-130			
Surrogate: Benzo (a) pyrene-d12	210		"	200		103	60-130			

Matrix Spike Dup (B4B1321-MSD1)		Source: Y402231-01			Prepared: 02/13/2024 Analyzed: 02/14/2024					
1-Methylnaphthalene	0.211	0.002	mg/kg	0.200	0.010	100	70-130	5.60	20	
2-Methylnaphthalene	0.220	0.002	"	0.200	0.029	95.9	70-130	6.61	20	
Acenaphthene	0.178	0.020	"	0.200	0.0004	88.9	70-130	2.48	20	
Anthracene	0.186	0.020	"	0.200	ND	93.2	70-130	4.65	20	
Benzo (a) anthracene	0.181	0.005	"	0.200	0.0004	90.1	70-130	2.23	20	
Benzo (a) pyrene	0.180	0.020	"	0.200	0.002	88.8	70-130	2.88	20	
Benzo (b) fluoranthene	0.203	0.020	"	0.200	ND	102	70-130	5.16	20	
Benzo (g,h,i) perylene	0.188	0.020	"	0.200	ND	94.2	70-130	4.22	20	
Benzo (k) fluoranthene	0.204	0.020	"	0.200	ND	102	70-130	4.16	20	
Chrysene	0.179	0.020	"	0.200	0.0007	88.9	70-130	0.273	20	
Dibenz (a,h) anthracene	0.197	0.020	"	0.200	ND	98.4	70-130	8.17	20	
Fluoranthene	0.207	0.020	"	0.200	0.003	102	70-130	5.03	20	

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Andrew Newberry  
Project Number: [none]  
Project: Noble - Frank C #12-22

**EPA 8270E (SW846) - Semivolatile Organic Compounds - 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 B4B1321 - EPA 3580**

Matrix Spike Dup (B4B1321-MSD1)		Source: Y402231-01			Prepared: 02/13/2024 Analyzed: 02/14/2024					
Fluorene	0.187	0.020	mg/kg	0.200	0.001	93.0	70-130	0.475	20	
Indeno (1,2,3-cd) pyrene	0.191	0.020	"	0.200	ND	95.6	70-130	9.73	20	
Naphthalene	0.198	0.002	"	0.200	0.012	93.0	70-130	3.71	20	
Phenanthrene	0.196	0.020	"	0.200	0.003	96.3	70-130	4.72	20	
Pyrene	0.215	0.020	"	0.200	0.0007	107	70-130	9.34	20	
Surrogate: Fluorene-d10	210		ug/kg	200		104	60-130			
Surrogate: Anthracene-d10	200		"	200		101	60-130			
Surrogate: Pyrene-d10	210		"	200		107	60-130			
Surrogate: Benzo (a) pyrene-d12	210		"	200		106	60-130			

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Jordan A. Bynon, Project Manager

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8000 W 44th Ave  
Wheat Ridge CO 80033

Andrew Newberry  
Project Number: [none]  
Project: Noble - Frank C #12-22

## 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 B4B1206 - Saturated Paste Metals

#### Blank (B4B1206-BLK1)

Prepared: 02/12/2024 Analyzed: 02/13/2024

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

#### Duplicate (B4B1206-DUP1)

Source: Y402268-04

Prepared: 02/12/2024 Analyzed: 02/13/2024

SAR	ND	0.0100	SAR	6.61		200
Calcium PPM	119	10.0	mg/L	96.9	20.1	50
Magnesium PPM	37.1	10.0	"	33.0	11.8	50
Sodium PPM	283	10.0	"	295	4.04	50

### Batch B4B1211 - DTPA Sorbitol Preparation

#### Blank (B4B1211-BLK1)

Prepared: 02/12/2024 Analyzed: 02/13/2024

Boron	ND	0.100	mg/L
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#### Duplicate (B4B1211-DUP1)

Source: Y402268-01

Prepared: 02/12/2024 Analyzed: 02/13/2024

Boron	0.331	0.0999	mg/L	0.304	8.62	50
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Andrew Newberry  
Project Number: [none]  
Project: Noble - Frank C #12-22

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B4B1216 - Saturated Paste pH/EC										
Blank (B4B1216-BLK1)					Prepared: 02/12/2024 Analyzed: 02/13/2024					
Specific Conductance (EC)	ND	0.00500	mmhos/cm							
Duplicate (B4B1216-DUP1)					Source: Y402268-04 Prepared: 02/12/2024 Analyzed: 02/13/2024					
pH	8.07		pH Units		8.10			0.371	25	
Specific Conductance (EC)	2.01	0.00500	mmhos/cm		2.14			6.30	25	

Origins Laboratory, Inc.



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Andrew Newberry  
Project Number: [none]  
Project: Noble - Frank C #12-22

## 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
Batch L733239 -										
<b>DUP (L 95863-DUP)</b>		<b>Source: 95863</b>			Prepared: Analyzed: 02/16/2024					
Chromium, Hexavalent	ND	0.5	mg/Kg		<0.500	-		0	20	
<b>MS (L 95863-MS)</b>		<b>Source: 95863</b>			Prepared: Analyzed: 02/16/2024					
Chromium, Hexavalent	19.2	2.5	mg/Kg	39.4	< 0.244	49	75-125			*
<b>LCS (LCS)</b>					Prepared: Analyzed: 02/16/2024					
Chromium, Hexavalent	6.11	0.5	mg/Kg	8		76	75-125			
<b>LRB (LRB)</b>					Prepared: Analyzed: 02/16/2024					
Chromium, Hexavalent	ND	0.5	mg/Kg							

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8000 W 44th Ave  
Wheat Ridge CO 80033

Andrew Newberry  
Project Number: [none]  
Project: Noble - Frank C #12-22

### Notes and Definitions

U Sample is Non-Detect.

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

\* 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.

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

Origins Laboratory, Inc.



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Jordan A. Bynon, Project Manager