



April 18, 2024

Eagle Environmental Consulting, LLC

Andrew Newberry

8000 W 44th Ave

Wheat Ridge CO 80033

Project Name - Noble - Dillard USX AB #03-14P

Project Number - [none]

Attached are your analytical results for Noble - Dillard USX AB #03-14P received by Origins Laboratory, Inc. April 05, 2024. This project is associated with Origins project number Y404195-01.

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 - Dillard USX AB #03-14P

### CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Background-02@3'	Y404195-01	Soil	April 5, 2024 10:15	04/05/2024 15:17

Origins Laboratory, Inc.



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Origins Laboratory

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

### Sample Receipt Checklist

Origins Work Order: Y404195

Client: Eagle  
Client Project ID: N06E-Dillard USX AB03-

Checklist Completed by: SALEHO

Shipped Via: HO  
(UPS, FedEx, Hand Delivered, Pick-up, etc.)  
Airbill #: N/A

Date/time completed: 4/5/12

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

Cooler Number/Temperature: 1 / 4.6 °C / °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 <sup>(1)</sup> ?	<u>/</u>			
Is there ice present (document if blue ice is used)	<u>/</u>			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		<u>/</u>		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		<u>/</u>		
Were all samples received intact <sup>(1)</sup> ?	<u>/</u>			
Was adequate sample volume provided <sup>(1)</sup> ?	<u>/</u>			
Are short holding time analytes or samples with HTs due within 48 hours present <sup>(1)</sup> ?		<u>/</u>		
Is a chain-of-custody (COC) present and filled out completely <sup>(1)</sup> ?	<u>/</u>			
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<u>/</u>			
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<u>/</u>			
Is the COC properly relinquished by the client with date and time recorded <sup>(1)</sup> ?	<u>/</u>			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.			<u>/</u>	
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 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)			<u>/</u>	
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]

4/9/12  
Date/Time Reviewed

Origins Laboratory, Inc.

[Signature]

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Andrew Newberry  
Project Number: [none]  
Project: Noble - Dillard USX AB #03-14P

**Background-02@3'**  
**4/5/2024 10:15:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y404195-01 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.504	0.101	mg/L	1	B4D0809	04/08/2024	04/09/2024	
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**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND	25.0	mg/kg	1	B4D0817	04/08/2024	04/10/2024	Ua
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	Ua

Surrogate: o-Terphenyl	63.7 %	50-150			"	"	"	
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**GBTEX+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND	0.00200	mg/kg	1	B4D1015	04/10/2024	04/10/2024	Ua
1,3,5-Trimethylbenzene	ND	0.00200	"	"	"	"	"	Ua
Benzene	ND	0.00200	"	"	"	"	"	Ua
Ethylbenzene	ND	0.00200	"	"	"	"	"	Ua
Naphthalene	ND	0.00380	"	"	"	"	"	Ua
Toluene	ND	0.00200	"	"	"	"	"	Ua
Xylenes, total	ND	0.00200	"	"	"	"	"	Ua
Gasoline Range Hydrocarbons	ND	0.200	"	"	"	"	"	Ua

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Jordan A. Bynon, Project Manager

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**Background-02@3'**  
**4/5/2024 10:15:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y404195-01 (Soil)**

**GBTEX+TMBs by 8260D**

Surrogate: 1,2-Dichloroethane-d4	134 %	70-130	B4D1015	04/10/2024	04/10/2024	GC
Surrogate: Toluene-d8	101 %	70-130	"	"	"	
Surrogate: 4-Bromofluorobenzene	95.3 %	70-130	"	"	"	

**Metals by Saturated Paste by EPA 6010**

Calcium	7.89	0.499	meq/L	10	[CALC]	04/08/2024	04/10/2024
Magnesium	3.51	0.823	"	"	"	"	"
Sodium	3.76	0.435	"	"	"	"	"

**PAH by EPA 8270E**

1-Methylnaphthalene	ND	0.002	mg/kg	1	B4D1025	04/10/2024	04/12/2024	Ua
2-Methylnaphthalene	ND	0.002	"	"	"	"	"	Ua
Acenaphthene	ND	0.020	"	"	"	"	"	Ua
Anthracene	ND	0.020	"	"	"	"	"	Ua
Benzo (a) anthracene	ND	0.005	"	"	"	"	"	Ua
Benzo (a) pyrene	ND	0.020	"	"	"	"	"	Ua
Benzo (b) fluoranthene	ND	0.020	"	"	"	"	"	Ua
Benzo (k) fluoranthene	ND	0.020	"	"	"	"	"	Ua
Chrysene	ND	0.020	"	"	"	"	"	Ua
Dibenz (a,h) anthracene	ND	0.020	"	"	"	"	"	Ua

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Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y404195-01 (Soil)**

**PAH by EPA 8270E**

Fluoranthene	ND	0.020	mg/kg	1	B4D1025	04/10/2024	04/12/2024	Ua
Fluorene	ND	0.020	"	"	"	"	"	Ua
Indeno (1,2,3-cd) pyrene	ND	0.020	"	"	"	"	"	Ua
Pyrene	ND	0.020	"	"	"	"	"	Ua

Surrogate: Fluorene-d10	106 %	60-130	"	"	"
Surrogate: Anthracene-d10	102 %	60-130	"	"	"
Surrogate: Pyrene-d10	86.4 %	60-130	"	"	"
Surrogate: Benzo (a) pyrene-d12	122 %	60-130	"	"	"

**pH in Soil by 9045D**

pH	7.82	pH Units	1	B4D0811	04/08/2024	04/09/2024
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**SAR by 20B Saturated Paste**

SAR	1.57	0.0100	SAR	1	B4D0803	04/08/2024	04/10/2024
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	1.41	0.00500	mmhos/cm	1	B4D0811	04/08/2024	04/09/2024
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**Table 915 metals by EPA 6020B**

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**4/5/2024 10:15:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y404195-01 (Soil)**

**Table 915 metals by EPA 6020B**

Arsenic	4.21	0.263	mg/kg	10	B4D0542	04/05/2024	04/09/2024
Barium	467	9.06	"	"	"	"	"
Cadmium	0.281	0.0906	"	"	"	"	"
Copper	14.2	9.06	"	"	"	"	"
Lead	15.5	0.906	"	"	"	"	"
Nickel	12.1	0.906	"	"	"	"	"
Selenium	0.690	0.236	"	"	"	"	"
Silver	ND	0.0906	"	"	"	"	"
Zinc	57.3	33.5	"	"	"	"	"

**Total Metals by 7196A**

Hexavalent Chromium	0.121	0.106	0.265	mg/kg dry	1	2594777	04/10/2024	04/10/2024	J
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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 B4D0817 - EPA 3550B										
Blank (B4D0817-BLK1)					Prepared: 04/08/2024 Analyzed: 04/10/2024					
Diesel (C10-C28)	ND	25.0	mg/kg							Ua
Residual Range Organics (C28-C40)	ND	100	"							Ua
Surrogate: o-Terphenyl	23		"	24.9		91.8	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 B4D0817 - EPA 3550B										
LCS (B4D0817-BS1)					Prepared: 04/08/2024 Analyzed: 04/10/2024					
Diesel (C10-C28)	917	50.0	mg/kg	1000		91.7	70-130			
Residual Range Organics (C28-C40)	990	200	"	1000		99.0	70-130			
Surrogate: o-Terphenyl	49		"	49.8		99.0	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
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Batch B4D0817 - EPA 3550B

Matrix Spike (B4D0817-MS1)		Source: Y404157-01			Prepared: 04/08/2024 Analyzed: 04/10/2024					
Diesel (C10-C28)	912	50.0	mg/kg	1000	ND	91.2	70-130			
Residual Range Organics (C28-C40)	983	200	"	1000	ND	98.3	70-130			
Surrogate: o-Terphenyl	42		"	49.8		84.9	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 B4D0817 - EPA 3550B										
Matrix Spike Dup (B4D0817-MSD1)		Source: Y404157-01			Prepared: 04/08/2024 Analyzed: 04/10/2024					
Diesel (C10-C28)	913	50.0	mg/kg	1000	ND	91.3	70-130	0.0142	35	
Residual Range Organics (C28-C40)	1010	200	"	1000	ND	101	70-130	2.68	35	
Surrogate: o-Terphenyl	64		"	49.8		129	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 B4D1015 - EPA 5030 (soil)										
Blank (B4D1015-BLK1)					Prepared: 04/10/2024 Analyzed: 04/10/2024					
1,2,4-Trimethylbenzene	ND	0.00200	mg/kg							Ua
1,3,5-Trimethylbenzene	ND	0.00200	"							Ua
Benzene	ND	0.00200	"							Ua
Ethylbenzene	ND	0.00200	"							Ua
Naphthalene	ND	0.00380	"							Ua
Toluene	ND	0.00200	"							Ua
Xylenes, total	ND	0.00200	"							Ua
Gasoline Range Hydrocarbons	ND	0.200	"							Ua
Surrogate: 1,2-Dichloroethane-d4	0.17		"	0.125	134		70-130			S-GC
Surrogate: Toluene-d8	0.13		"	0.125	102		70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125	95.5		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 B4D1015 - EPA 5030 (soil)</b>										
<b>LCS (B4D1015-BS1)</b>					Prepared: 04/10/2024 Analyzed: 04/10/2024					
1,2,4-Trimethylbenzene	0.0979	0.00200	mg/kg	0.100		97.9	70-130			
1,3,5-Trimethylbenzene	0.0958	0.00200	"	0.100		95.8	70-130			
Benzene	0.0909	0.00200	"	0.100		90.9	70-130			
Ethylbenzene	0.0964	0.00200	"	0.100		96.4	70-130			
Naphthalene	0.114	0.00380	"	0.100		114	70-130			
Toluene	0.103	0.00200	"	0.100		103	70-130			
o-Xylene	0.103	0.00200	"	0.100		103	70-130			
m,p-Xylene	0.192	0.00400	"	0.200		95.9	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.17		"	0.125		133	70-130			S-GC
Surrogate: Toluene-d8	0.12		"	0.125		99.9	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		105	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 B4D1015 - EPA 5030 (soil)</b>										
<b>Matrix Spike (B4D1015-MS1)</b>		<b>Source: Y404172-01</b>			Prepared: 04/10/2024 Analyzed: 04/10/2024					
1,2,4-Trimethylbenzene	0.107	0.00200	mg/kg	0.100	0.000520	106	70-130			
1,3,5-Trimethylbenzene	0.105	0.00200	"	0.100	ND	105	70-130			
Benzene	0.101	0.00200	"	0.100	ND	101	70-130			
Ethylbenzene	0.103	0.00200	"	0.100	ND	103	70-130			
Naphthalene	0.120	0.00380	"	0.100	0.00276	117	70-130			
Toluene	0.110	0.00200	"	0.100	ND	110	70-130			
o-Xylene	0.111	0.00200	"	0.100	ND	111	70-130			
m,p-Xylene	0.205	0.00400	"	0.200	0.000720	102	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.16		"	0.125		131	70-130			S-GC
Surrogate: Toluene-d8	0.12		"	0.125		96.0	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		102	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 B4D1015 - EPA 5030 (soil)</b>										
<b>Matrix Spike Dup (B4D1015-MSD1)</b>	<b>Source: Y404172-01</b>				Prepared: 04/10/2024 Analyzed: 04/10/2024					
1,2,4-Trimethylbenzene	0.112	0.00200	mg/kg	0.100	0.000520	111	70-130	4.51	20	
1,3,5-Trimethylbenzene	0.110	0.00200	"	0.100	ND	110	70-130	4.82	20	
Benzene	0.105	0.00200	"	0.100	ND	105	70-130	3.77	20	
Ethylbenzene	0.108	0.00200	"	0.100	ND	108	70-130	4.75	20	
Naphthalene	0.137	0.00380	"	0.100	0.00276	134	70-130	13.4	20	QM-07
Toluene	0.115	0.00200	"	0.100	ND	115	70-130	4.15	20	
o-Xylene	0.118	0.00200	"	0.100	ND	118	70-130	5.43	20	
m,p-Xylene	0.215	0.00400	"	0.200	0.000720	107	70-130	4.66	20	
Surrogate: 1,2-Dichloroethane-d4	0.16		"	0.125		129	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		98.2	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		104	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
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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 B4D0542 - EPA 3050B

#### Blank (B4D0542-BLK1)

Prepared: 04/05/2024 Analyzed: 04/09/2024

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 (B4D0542-BS1)

Prepared: 04/05/2024 Analyzed: 04/09/2024

Arsenic	5.29	0.290	mg/kg	5.00	106	80-120
Barium	512	10.0	"	500	102	80-120
Cadmium	5.78	0.100	"	5.00	116	80-120
Copper	55.7	10.0	"	50.0	111	80-120
Lead	5.38	1.00	"	5.00	108	80-120
Nickel	5.36	1.00	"	5.00	107	80-120
Selenium	10.6	0.260	"	9.50	111	80-120
Silver	5.84	0.100	"	5.00	117	80-120
Zinc	55.8	37.0	"	50.0	112	80-120

#### Matrix Spike (B4D0542-MS1)

Source: Y404189-01

Prepared: 04/05/2024 Analyzed: 04/09/2024

Origins Laboratory, Inc.



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

Andrew Newberry  
Project Number: [none]  
Project: Noble - Dillard USX AB #03-14P

## 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 B4D0542 - EPA 3050B

Matrix Spike (B4D0542-MS1)		Source: Y404189-01			Prepared: 04/05/2024 Analyzed: 04/09/2024					
Arsenic	11.7	0.253	mg/kg	4.36	7.18	104	75-125			
Barium	676	8.71	"	436	184	113	75-125			
Cadmium	5.01	0.0871	"	4.36	0.253	109	75-125			
Copper	62.1	8.71	"	43.6	15.6	107	75-125			
Lead	17.4	0.871	"	4.36	13.8	84.3	75-125			
Nickel	21.6	0.871	"	4.36	17.5	94.1	75-125			
Selenium	9.16	0.227	"	8.28	0.819	101	75-125			
Silver	5.04	0.0871	"	4.36	0.0995	114	75-125			
Zinc	107	32.2	"	43.6	60.2	107	75-125			
Matrix Spike Dup (B4D0542-MSD1)		Source: Y404189-01			Prepared: 04/05/2024 Analyzed: 04/09/2024					
Arsenic	11.3	0.257	mg/kg	4.44	7.18	92.1	75-125	3.99	20	
Barium	658	8.88	"	444	184	107	75-125	2.70	20	
Cadmium	5.19	0.0888	"	4.44	0.253	111	75-125	3.62	20	
Copper	63.8	8.88	"	44.4	15.6	109	75-125	2.81	20	
Lead	18.0	0.888	"	4.44	13.8	94.5	75-125	2.95	20	
Nickel	22.3	0.888	"	4.44	17.5	107	75-125	3.04	20	
Selenium	9.53	0.231	"	8.43	0.819	103	75-125	3.95	20	
Silver	5.01	0.0888	"	4.44	0.0995	111	75-125	0.690	20	
Zinc	106	32.8	"	44.4	60.2	104	75-125	0.241	20	

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Wheat Ridge CO 80033

Andrew Newberry  
Project Number: [none]  
Project: Noble - Dillard USX AB #03-14P

**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 B4D1025 - EPA 3580**

**Blank (B4D1025-BLK1)**

Prepared: 04/10/2024 Analyzed: 04/11/2024

1-Methylnaphthalene	ND	0.002	mg/kg							Ua
2-Methylnaphthalene	ND	0.002	"							Ua
Acenaphthene	ND	0.020	"							Ua
Anthracene	ND	0.020	"							Ua
Benzo (a) anthracene	ND	0.005	"							Ua
Benzo (a) pyrene	ND	0.020	"							Ua
Benzo (b) fluoranthene	ND	0.020	"							Ua
Benzo (g,h,i) perylene	ND	0.020	"							Ua
Benzo (k) fluoranthene	ND	0.020	"							Ua
Chrysene	ND	0.020	"							Ua
Dibenz (a,h) anthracene	ND	0.020	"							Ua
Fluoranthene	ND	0.020	"							Ua
Fluorene	ND	0.020	"							Ua
Indeno (1,2,3-cd) pyrene	ND	0.020	"							Ua
Naphthalene	ND	0.002	"							Ua
Phenanthrene	ND	0.020	"							Ua
Pyrene	ND	0.020	"							Ua

Surrogate: Fluorene-d10	200		ug/kg	200	99.5	60-130
Surrogate: Anthracene-d10	210		"	200	106	60-130
Surrogate: Pyrene-d10	170		"	200	86.8	60-130
Surrogate: Benzo (a) pyrene-d12	240		"	200	121	60-130

**LCS (B4D1025-BS1)**

Prepared: 04/10/2024 Analyzed: 04/11/2024

1-Methylnaphthalene	0.197	0.002	mg/kg	0.200	98.3	70-130
2-Methylnaphthalene	0.199	0.002	"	0.200	99.6	70-130
Acenaphthene	0.169	0.020	"	0.200	84.7	70-130
Anthracene	0.178	0.020	"	0.200	88.8	70-130

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Andrew Newberry  
Project Number: [none]  
Project: Noble - Dillard USX AB #03-14P

**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 B4D1025 - EPA 3580**

**LCS (B4D1025-BS1)**

Prepared: 04/10/2024 Analyzed: 04/11/2024

Benzo (a) anthracene	0.192	0.005	mg/kg	0.200		96.0	70-130			
Benzo (a) pyrene	0.233	0.020	"	0.200		116	70-130			
Benzo (b) fluoranthene	0.233	0.020	"	0.200		117	70-130			
Benzo (g,h,i) perylene	0.236	0.020	"	0.200		118	70-130			
Benzo (k) fluoranthene	0.211	0.020	"	0.200		106	70-130			
Chrysene	0.191	0.020	"	0.200		95.7	70-130			
Dibenz (a,h) anthracene	0.284	0.020	"	0.200		142	70-130			QM-11
Fluoranthene	0.160	0.020	"	0.200		79.8	70-130			
Fluorene	0.163	0.020	"	0.200		81.4	70-130			
Indeno (1,2,3-cd) pyrene	0.247	0.020	"	0.200		124	70-130			
Naphthalene	0.174	0.002	"	0.200		87.0	70-130			
Phenanthrene	0.184	0.020	"	0.200		92.2	70-130			
Pyrene	0.166	0.020	"	0.200		82.8	70-130			
Surrogate: Fluorene-d10	200		ug/kg	200		100	60-130			
Surrogate: Anthracene-d10	210		"	200		104	60-130			
Surrogate: Pyrene-d10	170		"	200		86.4	60-130			
Surrogate: Benzo (a) pyrene-d12	250		"	200		124	60-130			

**Matrix Spike (B4D1025-MS1)**

Source: Y404099-01

Prepared: 04/10/2024 Analyzed: 04/11/2024

1-Methylnaphthalene	0.207	0.002	mg/kg	0.200	ND	104	70-130			
2-Methylnaphthalene	0.205	0.002	"	0.200	ND	103	70-130			
Acenaphthene	0.175	0.020	"	0.200	0.002	86.8	70-130			
Anthracene	0.191	0.020	"	0.200	0.0008	95.2	70-130			
Benzo (a) anthracene	0.203	0.005	"	0.200	ND	101	70-130			
Benzo (a) pyrene	0.230	0.020	"	0.200	ND	115	70-130			
Benzo (b) fluoranthene	0.243	0.020	"	0.200	0.002	120	70-130			
Benzo (g,h,i) perylene	0.245	0.020	"	0.200	0.003	121	70-130			

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Andrew Newberry  
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Project: Noble - Dillard USX AB #03-14P

**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 B4D1025 - EPA 3580**

Matrix Spike (B4D1025-MS1)		Source: Y404099-01			Prepared: 04/10/2024 Analyzed: 04/11/2024					
Benzo (k) fluoranthene	0.210	0.020	mg/kg	0.200	0.004	103	70-130			
Chrysene	0.206	0.020	"	0.200	0.001	102	70-130			
Dibenz (a,h) anthracene	0.288	0.020	"	0.200	0.003	142	70-130			QM-07
Fluoranthene	0.164	0.020	"	0.200	0.0007	81.5	70-130			
Fluorene	0.168	0.020	"	0.200	ND	83.9	70-130			
Indeno (1,2,3-cd) pyrene	0.258	0.020	"	0.200	0.003	127	70-130			
Naphthalene	0.180	0.002	"	0.200	ND	90.0	70-130			
Phenanthrene	0.190	0.020	"	0.200	ND	95.1	70-130			
Pyrene	0.167	0.020	"	0.200	ND	83.6	70-130			
Surrogate: Fluorene-d10	200		ug/kg	200		99.0	60-130			
Surrogate: Anthracene-d10	210		"	200		106	60-130			
Surrogate: Pyrene-d10	170		"	200		85.4	60-130			
Surrogate: Benzo (a) pyrene-d12	250		"	200		124	60-130			

Matrix Spike Dup (B4D1025-MSD1)		Source: Y404099-01			Prepared: 04/10/2024 Analyzed: 04/11/2024					
1-Methylnaphthalene	0.200	0.002	mg/kg	0.200	ND	99.8	70-130	3.68	20	
2-Methylnaphthalene	0.202	0.002	"	0.200	ND	101	70-130	1.61	20	
Acenaphthene	0.170	0.020	"	0.200	0.002	84.3	70-130	2.91	20	
Anthracene	0.177	0.020	"	0.200	0.0008	88.3	70-130	7.46	20	
Benzo (a) anthracene	0.185	0.005	"	0.200	ND	92.7	70-130	9.02	20	
Benzo (a) pyrene	0.227	0.020	"	0.200	ND	113	70-130	1.25	20	
Benzo (b) fluoranthene	0.232	0.020	"	0.200	0.002	115	70-130	4.71	20	
Benzo (g,h,i) perylene	0.238	0.020	"	0.200	0.003	117	70-130	2.93	20	
Benzo (k) fluoranthene	0.206	0.020	"	0.200	0.004	101	70-130	1.56	20	
Chrysene	0.189	0.020	"	0.200	0.001	93.8	70-130	8.77	20	
Dibenz (a,h) anthracene	0.283	0.020	"	0.200	0.003	140	70-130	1.87	20	QM-07
Fluoranthene	0.158	0.020	"	0.200	0.0007	78.7	70-130	3.49	20	

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Andrew Newberry  
Project Number: [none]  
Project: Noble - Dillard USX AB #03-14P

**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 B4D1025 - EPA 3580**

Matrix Spike Dup (B4D1025-MSD1)		Source: Y404099-01			Prepared: 04/10/2024 Analyzed: 04/11/2024					
Fluorene	0.164	0.020	mg/kg	0.200	ND	81.8	70-130	2.57	20	
Indeno (1,2,3-cd) pyrene	0.246	0.020	"	0.200	0.003	121	70-130	4.81	20	
Naphthalene	0.176	0.002	"	0.200	ND	87.9	70-130	2.38	20	
Phenanthrene	0.184	0.020	"	0.200	ND	92.1	70-130	3.24	20	
Pyrene	0.161	0.020	"	0.200	ND	80.4	70-130	3.87	20	
Surrogate: Fluorene-d10	200		ug/kg	200		99.6	60-130			
Surrogate: Anthracene-d10	210		"	200		103	60-130			
Surrogate: Pyrene-d10	170		"	200		85.5	60-130			
Surrogate: Benzo (a) pyrene-d12	250		"	200		124	60-130			

Origins Laboratory, Inc.



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Wheat Ridge CO 80033

Andrew Newberry  
Project Number: [none]  
Project: Noble - Dillard USX AB #03-14P

## 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 B4D0803 - Saturated Paste Metals

##### Blank (B4D0803-BLK1)

Prepared: 04/08/2024 Analyzed: 04/10/2024

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 (B4D0803-DUP1)

Source: Y404180-09

Prepared: 04/08/2024 Analyzed: 04/10/2024

SAR	ND	0.0100	SAR	8.71			200
Calcium PPM	6.62	10.0	mg/L	6.17		7.04	50
Magnesium PPM	2.24	10.0	"	2.19		2.26	50
Sodium PPM	105	10.0	"	98.9		5.90	50

#### Batch B4D0809 - DTPA Sorbitol Preparation

##### Blank (B4D0809-BLK1)

Prepared: 04/08/2024 Analyzed: 04/09/2024

Boron	ND	0.100	mg/L
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##### Duplicate (B4D0809-DUP1)

Source: Y404143-01

Prepared: 04/08/2024 Analyzed: 04/09/2024

Boron	0.277	0.0999	mg/L	0.225		21.0	50
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Jordan A. Bynon, Project Manager

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Wheat Ridge CO 80033

Andrew Newberry  
Project Number: [none]  
Project: Noble - Dillard USX AB #03-14P

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B4D0811 - Saturated Paste pH/EC										
Blank (B4D0811-BLK1)					Prepared: 04/08/2024 Analyzed: 04/09/2024					
Specific Conductance (EC)	ND	0.00500	mmhos/cm							
Duplicate (B4D0811-DUP1)					Source: Y404180-09 Prepared: 04/08/2024 Analyzed: 04/09/2024					
Specific Conductance (EC)	0.574	0.00500	mmhos/cm		0.583			1.68	25	
pH	8.74		pH Units		8.70			0.459	25	

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Andrew Newberry  
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Project: Noble - Dillard USX AB #03-14P

## Total Metals by 7196A - Quality Control GEL Laboratories, LLC

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2594777 - SW846 3060A										
BLANK (1205699469-BLK)					Prepared: 04/10/2024 Analyzed: 04/10/2024					
Hexavalent Chromium	ND	0.390	mg/kg				-			U
LCS (1205699470-BKS)					Prepared: 04/10/2024 Analyzed: 04/10/2024					
Hexavalent Chromium	3.80	0.386	mg/kg	3.86		98.5	80-120			
DUP (1205699471 D)					Source: 662201001 Prepared: 04/10/2024 Analyzed: 04/10/2024					
Hexavalent Chromium	ND	0.390	mg/kg dry		<0.156		0-50	N/A	50	U
MS (1205699472 S)					Source: 662201001 Prepared: 04/10/2024 Analyzed: 04/10/2024					
Hexavalent Chromium	2.12	0.390	mg/kg dry	3.90	<0.156	54.2	75-125			
DUP (1205699473 D)					Source: 662203003 Prepared: 04/10/2024 Analyzed: 04/10/2024					
Hexavalent Chromium	0.174	0.382	mg/kg dry		<0.153		0-50	N/A	50	J
MS (1205699474 S)					Source: 662203003 Prepared: 04/10/2024 Analyzed: 04/10/2024					
Hexavalent Chromium	1.74	0.382	mg/kg dry	3.82	<0.153	42	75-125			
ILCS (1205699475-ILCS)					Prepared: 04/10/2024 Analyzed: 04/10/2024					
Hexavalent Chromium	7.84	0.379	mg/kg	7.78		101	80-120			

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Andrew Newberry  
Project Number: [none]  
Project: Noble - Dillard USX AB #03-14P

## Notes and Definitions

- Ua Sample is Non-Detect.
- U Result not detected above the detection limit
- S-GC Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.
- QM-11 Spike recovery was outside acceptance limits for LCS, however samples are non-detect for this compound.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- J Greater than the detection limit but less than the reporting limit
- 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