



February 28, 2024

Eagle Environmental Consulting, LLC

Andrew Newberry

8000 W 44th Ave

Wheat Ridge CO 80033

Project Name - Noble - Dillard USX AB #29-17

Project Number - [none]

Attached are your analytical results for Noble - Dillard USX AB #29-17 received by Origins Laboratory, Inc. February 14, 2024. This project is associated with Origins project number Y402330-01.

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



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

Andrew Newberry  
Project Number: [none]  
Project: Noble - Dillard USX AB #29-17

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
WH-FS-01@7'	Y402330-01	Soil	February 13, 2024 12:12	02/14/2024 13:02
Background-01@2'	Y402330-02	Soil	February 13, 2024 12:14	02/14/2024 13:02

Origins Laboratory, Inc.



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Origins Laboratory

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

**Sample Receipt Checklist**

Origins Work Order: 4402330 Client: Eagle  
 Client Project ID: Dillard USX AB 29-17  
 Checklist Completed by: EHS Shipped Via: HO  
 Date/time completed: 2/14/24 (UPS, FedEx, Hand Delivered, Pick-up, etc.)  
 Airbill #: N/A  
 Matrix(s) Received: (Check all that apply):  Soil/Solid  Water  Other: \_\_\_\_\_  
 Cooler Number/Temperature: 1 / 2.5 °C \_\_\_\_\_ / \_\_\_\_\_ °C \_\_\_\_\_ / \_\_\_\_\_ °C (Describe)  
 Thermometer ID: T004

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"/>			
Is there ice present (document if blue ice is used)	<input checked="" 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"/>		
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"/>		
Were all samples received intact <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Are short holding time analytes or samples with HTs due within 48 hours present <sup>(1)</sup> ?		<input checked="" type="checkbox"/>		
Is a chain-of-custody (COC) present and filled out completely <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client with date and time recorded <sup>(1)</sup> ?	<input checked="" 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"/>	
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 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] Date/Time Reviewed 2/15/24

Origins Laboratory, Inc.

[Signature]

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 Project: Noble - Dillard USX AB #29-17

**WH-FS-01@7'**

**2/13/2024 12:12:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y402330-01 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.180		0.0988	mg/L	1	B4B1610	02/16/2024	02/19/2024	
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**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND		25.0	mg/kg	1	B4B1901	02/19/2024	02/22/2024	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: o-Terphenyl	93.3 %		50-150			"	"	"	
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**GBTEX+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B4B1503	02/15/2024	02/15/2024	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@7'**

**2/13/2024 12:12:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y402330-01 (Soil)**

**GBTEX+TMBs by 8260D**

Surrogate: 1,2-Dichloroethane-d4	99.9 %		70-130			B4B15 03	02/15/2024	02/15/2024	
Surrogate: Toluene-d8	99.9 %		70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	98.9 %		70-130			"	"	"	

**Metals by Saturated Paste by EPA 6010**

Calcium	1.97		0.499	meq/L	10	[CALC]	02/16/2024	02/19/2024	
Magnesium	0.913		0.823	"	"	"	"	"	
Sodium	1.53		0.435	"	"	"	"	"	

**PAH by EPA 8270E**

1-Methylnaphthalene	ND		0.002	mg/kg	1	B4B2006	02/20/2024	02/21/2024	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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**WH-FS-01@7'**

**2/13/2024 12:12:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y402330-01 (Soil)**

**PAH by EPA 8270E**

Fluoranthene	ND		0.020	mg/kg	1	B4B2006	02/20/2024	02/21/2024	U
Fluorene	ND		0.020	"	"	"	"	"	U
Indeno (1,2,3-cd) pyrene	ND		0.020	"	"	"	"	"	U
Pyrene	ND		0.020	"	"	"	"	"	U

Surrogate: Fluorene-d10	100 %		60-130			"	"	"	
Surrogate: Anthracene-d10	94.4 %		60-130			"	"	"	
Surrogate: Pyrene-d10	95.1 %		60-130			"	"	"	
Surrogate: Benzo (a) pyrene-d12	101 %		60-130			"	"	"	

**pH in Soil by 9045D**

pH	8.18			pH Units	1	B4B1620	02/16/2024	02/18/2024	
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**SAR by 20B Saturated Paste**

SAR	2.27		0.0100	SAR	1	B4B1615	02/16/2024	02/19/2024	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	0.448		0.00500	mmhos/cm	1	B4B1620	02/16/2024	02/18/2024	
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**Table 915 metals by EPA 6020B**

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**WH-FS-01@7'**

**2/13/2024 12:12:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y402330-01 (Soil)**

**Table 915 metals by EPA 6020B**

Arsenic	3.58		0.0950	mg/kg	10	B4B1435	02/14/2024	02/20/2024	
Barium	113		9.50	"	"	"	"	"	
Cadmium	0.0959		0.0950	"	"	"	"	"	
Copper	ND		9.50	"	"	"	"	"	
Lead	5.04		0.950	"	"	"	"	"	
Nickel	5.29		0.950	"	"	"	"	"	
Selenium	0.142		0.0950	"	"	"	"	"	
Silver	ND		0.0950	"	"	"	"	"	
Zinc	19.5		9.50	"	"	"	"	"	

**Total Metals by 7196A**

Chromium, Hexavalent	ND	0.244	0.5	mg/Kg	1	L734869	02/13/2024	02/26/2024	
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**Background-01@2'**  
**2/13/2024 12:14:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y402330-02 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.620		0.0989	mg/L	1	B4B1610	02/16/2024	02/19/2024	
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**Metals by Saturated Paste by EPA 6010**

Calcium	6.87		0.499	meq/L	10	[CALC]	02/16/2024	02/19/2024	
Magnesium	4.38		0.823	"	"	"	"	"	
Sodium	2.21		0.435	"	"	"	"	"	

**pH in Soil by 9045D**

pH	7.64			pH Units	1	B4B1620	02/16/2024	02/18/2024	
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**SAR by 20B Saturated Paste**

SAR	0.931		0.0100	SAR	1	B4B1615	02/16/2024	02/19/2024	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	1.61		0.00500	mmhos/cm	1	B4B1620	02/16/2024	02/18/2024	
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**Table 915 metals by EPA 6020B**

Arsenic	3.98		0.0948	mg/kg	10	B4B1435	02/14/2024	02/20/2024	
Barium	74.4		9.48	"	"	"	"	"	
Cadmium	0.205		0.0948	"	"	"	"	"	
Copper	11.8		9.48	"	"	"	"	"	

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**Background-01@2'**  
**2/13/2024 12:14:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y402330-02 (Soil)**

**Table 915 metals by EPA 6020B**

Lead	8.38		0.948	mg/kg	10	B4B1435	02/14/2024	02/20/2024	
Nickel	7.89		0.948	"	"	"	"	"	
Selenium	0.251		0.0948	"	"	"	"	"	
Silver	ND		0.0948	"	"	"	"	"	
Zinc	54.9		9.48	"	"	"	"	"	

**Total Metals by 7196A**

Chromium, Hexavalent	ND	0.244	0.5	mg/Kg	1	L734869	02/13/2024	02/26/2024	
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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
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**Batch B4B1503 - EPA 5030 (soil)**

**Blank (B4B1503-BLK1)**

Prepared: 02/15/2024 Analyzed: 02/15/2024

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	0.11		"	0.125	89.7		70-130			
Surrogate: Toluene-d8	0.13		"	0.125	102		70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125	101		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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**Batch B4B1503 - EPA 5030 (soil)**

**LCS (B4B1503-BS1)**

Prepared: 02/15/2024 Analyzed: 02/15/2024

1,2,4-Trimethylbenzene	0.107	0.00200	mg/kg	0.100		107	70-130			
1,3,5-Trimethylbenzene	0.111	0.00200	"	0.100		111	70-130			
Benzene	0.101	0.00200	"	0.100		101	70-130			
Ethylbenzene	0.111	0.00200	"	0.100		111	70-130			
Naphthalene	0.0968	0.00380	"	0.100		96.8	70-130			
Toluene	0.0991	0.00200	"	0.100		99.1	70-130			
o-Xylene	0.0938	0.00200	"	0.100		93.8	70-130			
m,p-Xylene	0.217	0.00400	"	0.200		108	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.11		"	0.125		88.9	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		100	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		96.1	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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Batch B4B1503 - EPA 5030 (soil)

Matrix Spike (B4B1503-MS1)	Source: Y402324-01			Prepared: 02/15/2024 Analyzed: 02/15/2024						
1,2,4-Trimethylbenzene	0.0822	0.00200	mg/kg	0.100	ND	82.2	70-130			
1,3,5-Trimethylbenzene	0.0855	0.00200	"	0.100	ND	85.5	70-130			
Benzene	0.0822	0.00200	"	0.100	ND	82.2	70-130			
Ethylbenzene	0.0891	0.00200	"	0.100	ND	89.1	70-130			
Naphthalene	0.0879	0.00380	"	0.100	ND	87.9	70-130			
Toluene	0.0808	0.00200	"	0.100	ND	80.8	70-130			
o-Xylene	0.0843	0.00200	"	0.100	ND	84.3	70-130			
m,p-Xylene	0.179	0.00400	"	0.200	ND	89.5	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		102	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		100	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		99.1	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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Batch B4B1503 - EPA 5030 (soil)

Matrix Spike Dup (B4B1503-MSD1)	Source: Y402324-01			Prepared: 02/15/2024 Analyzed: 02/15/2024						
1,2,4-Trimethylbenzene	0.0976	0.00200	mg/kg	0.100	ND	97.6	70-130	17.1	20	
1,3,5-Trimethylbenzene	0.101	0.00200	"	0.100	ND	101	70-130	16.5	20	
Benzene	0.0972	0.00200	"	0.100	ND	97.2	70-130	16.8	20	
Ethylbenzene	0.102	0.00200	"	0.100	ND	102	70-130	13.5	20	
Naphthalene	0.110	0.00380	"	0.100	ND	110	70-130	22.4	20	QR-02
Toluene	0.0949	0.00200	"	0.100	ND	94.9	70-130	16.1	20	
o-Xylene	0.0966	0.00200	"	0.100	ND	96.6	70-130	13.6	20	
m,p-Xylene	0.207	0.00400	"	0.200	ND	104	70-130	14.8	20	
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		103	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		99.5	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		94.7	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 B4B1901 - EPA 3550B</b>										
<b>Blank (B4B1901-BLK1)</b>										
					Prepared: 02/19/2024 Analyzed: 02/21/2024					
Diesel (C10-C28)	ND	25.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	100	"							U
Surrogate: o-Terphenyl	21		"	24.9		86.0	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 B4B1901 - EPA 3550B**

**LCS (B4B1901-BS1)**

Prepared: 02/19/2024 Analyzed: 02/21/2024

Diesel (C10-C28)	1030	50.0	mg/kg	1000		103	70-130			
Residual Range Organics (C28-C40)	1180	200	"	1000		118	70-130			
Surrogate: o-Terphenyl	46		"	49.8		92.4	50-150			

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 #29-17

**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 B4B1901 - EPA 3550B**

<b>Matrix Spike (B4B1901-MS1)</b>	<b>Source: Y402331-01</b>			Prepared: 02/19/2024 Analyzed: 02/21/2024						
Diesel (C10-C28)	979	50.0	mg/kg	1000	ND	97.9	70-130			
Residual Range Organics (C28-C40)	1130	200	"	1000	ND	113	70-130			
Surrogate: o-Terphenyl	51		"	49.8		103	50-150			

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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 - Dillard USX AB #29-17

**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
<b>Batch B4B1901 - EPA 3550B</b>										
<b>Matrix Spike Dup (B4B1901-MSD1)</b>					<b>Source: Y402331-01</b>					Prepared: 02/19/2024 Analyzed: 02/21/2024
Diesel (C10-C28)	984	50.0	mg/kg	1000	ND	98.4	70-130	0.432	35	
Residual Range Organics (C28-C40)	1130	200	"	1000	ND	113	70-130	0.516	35	
Surrogate: o-Terphenyl	41		"	49.8		82.6	50-150			

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Andrew Newberry  
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 Project: Noble - Dillard USX AB #29-17

**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 B4B1435 - EPA 3050B**

**Blank (B4B1435-BLK1)**

Prepared: 02/14/2024 Analyzed: 02/19/2024

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 (B4B1435-BS1)**

Prepared: 02/14/2024 Analyzed: 02/19/2024

Arsenic	5.00	0.0100	mg/kg	5.00		100	80-120			
Barium	491	1.00	"	500		98.2	80-120			
Cadmium	4.75	0.0100	"	5.00		95.0	80-120			
Copper	52.0	1.00	"	50.0		104	80-120			
Lead	5.18	0.100	"	5.00		104	80-120			
Nickel	5.14	0.100	"	5.00		103	80-120			
Selenium	5.04	0.0100	"	5.00		101	80-120			
Silver	5.05	0.0100	"	5.00		101	80-120			
Zinc	51.0	1.00	"	50.0		102	80-120			

**Matrix Spike (B4B1435-MS1)**

Source: Y402322-05

Prepared: 02/14/2024 Analyzed: 02/19/2024

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 Project: Noble - Dillard USX AB #29-17

**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 B4B1435 - EPA 3050B**

<b>Matrix Spike (B4B1435-MS1)</b>		<b>Source: Y402322-05</b>			Prepared: 02/14/2024 Analyzed: 02/19/2024					
Arsenic	10.3	0.0875	mg/kg	4.37	5.63	107	75-125			
Barium	664	8.75	"	437	182	110	75-125			
Cadmium	4.60	0.0875	"	4.37	0.167	101	75-125			
Copper	54.5	8.75	"	43.7	10.2	101	75-125			
Lead	13.3	0.875	"	4.37	9.08	97.5	75-125			
Nickel	15.8	0.875	"	4.37	11.7	92.0	75-125			
Selenium	4.48	0.0875	"	4.37	0.257	96.5	75-125			
Silver	4.76	0.0875	"	4.37	0.0479	108	75-125			
Zinc	88.0	8.75	"	43.7	45.7	96.7	75-125			

<b>Matrix Spike Dup (B4B1435-MSD1)</b>		<b>Source: Y402322-05</b>			Prepared: 02/14/2024 Analyzed: 02/19/2024					
Arsenic	9.48	0.0876	mg/kg	4.38	5.63	87.9	75-125	8.40	20	
Barium	623	8.76	"	438	182	101	75-125	6.37	20	
Cadmium	4.64	0.0876	"	4.38	0.167	102	75-125	0.827	20	
Copper	52.0	8.76	"	43.8	10.2	95.5	75-125	4.75	20	
Lead	14.0	0.876	"	4.38	9.08	112	75-125	4.56	20	
Nickel	15.4	0.876	"	4.38	11.7	82.6	75-125	2.63	20	
Selenium	4.66	0.0876	"	4.38	0.257	101	75-125	3.98	20	
Silver	4.40	0.0876	"	4.38	0.0479	99.4	75-125	7.79	20	
Zinc	84.1	8.76	"	43.8	45.7	87.8	75-125	4.45	20	

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Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Dillard USX AB #29-17

**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 B4B2006 - EPA 3580**

**Blank (B4B2006-BLK1)**

Prepared: 02/20/2024 Analyzed: 02/21/2024

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	200		ug/kg	200		99.5	60-130			
Surrogate: Anthracene-d10	190		"	200		93.0	60-130			
Surrogate: Pyrene-d10	190		"	200		94.5	60-130			
Surrogate: Benzo (a) pyrene-d12	210		"	200		104	60-130			

**LCS (B4B2006-BS1)**

Prepared: 02/20/2024 Analyzed: 02/21/2024

1-Methylnaphthalene	0.191	0.002	mg/kg	0.200		95.6	70-130			
2-Methylnaphthalene	0.188	0.002	"	0.200		94.1	70-130			
Acenaphthene	0.193	0.020	"	0.200		96.3	70-130			
Anthracene	0.193	0.020	"	0.200		96.7	70-130			

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Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Dillard USX AB #29-17

**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 B4B2006 - EPA 3580**

**LCS (B4B2006-BS1)**

Prepared: 02/20/2024 Analyzed: 02/21/2024

Benzo (a) anthracene	0.212	0.005	mg/kg	0.200		106	70-130			
Benzo (a) pyrene	0.200	0.020	"	0.200		100	70-130			
Benzo (b) fluoranthene	0.196	0.020	"	0.200		97.8	70-130			
Benzo (g,h,i) perylene	0.202	0.020	"	0.200		101	70-130			
Benzo (k) fluoranthene	0.189	0.020	"	0.200		94.6	70-130			
Chrysene	0.200	0.020	"	0.200		100	70-130			
Dibenz (a,h) anthracene	0.203	0.020	"	0.200		102	70-130			
Fluoranthene	0.191	0.020	"	0.200		95.5	70-130			
Fluorene	0.197	0.020	"	0.200		98.5	70-130			
Indeno (1,2,3-cd) pyrene	0.203	0.020	"	0.200		101	70-130			
Naphthalene	0.197	0.002	"	0.200		98.4	70-130			
Phenanthrene	0.187	0.020	"	0.200		93.6	70-130			
Pyrene	0.181	0.020	"	0.200		90.6	70-130			
Surrogate: Fluorene-d10	200		ug/kg	200		99.9	60-130			
Surrogate: Anthracene-d10	190		"	200		95.0	60-130			
Surrogate: Pyrene-d10	190		"	200		92.9	60-130			
Surrogate: Benzo (a) pyrene-d12	210		"	200		103	60-130			

**Matrix Spike (B4B2006-MS1)**

Source: Y402326-01

Prepared: 02/20/2024 Analyzed: 02/21/2024

1-Methylnaphthalene	0.182	0.002	mg/kg	0.200	ND	90.9	70-130			
2-Methylnaphthalene	0.180	0.002	"	0.200	ND	90.2	70-130			
Acenaphthene	0.186	0.020	"	0.200	ND	92.8	70-130			
Anthracene	0.185	0.020	"	0.200	ND	92.5	70-130			
Benzo (a) anthracene	0.203	0.005	"	0.200	ND	101	70-130			
Benzo (a) pyrene	0.197	0.020	"	0.200	ND	98.5	70-130			
Benzo (b) fluoranthene	0.189	0.020	"	0.200	0.0004	94.5	70-130			
Benzo (g,h,i) perylene	0.195	0.020	"	0.200	0.0006	97.4	70-130			

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 Wheat Ridge CO 80033

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Dillard USX AB #29-17

**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 B4B2006 - EPA 3580**

<b>Matrix Spike (B4B2006-MS1)</b>		<b>Source: Y402326-01</b>			Prepared: 02/20/2024 Analyzed: 02/21/2024					
Benzo (k) fluoranthene	0.187	0.020	mg/kg	0.200	ND	93.6	70-130			
Chrysene	0.194	0.020	"	0.200	ND	96.9	70-130			
Dibenz (a,h) anthracene	0.200	0.020	"	0.200	ND	99.9	70-130			
Fluoranthene	0.186	0.020	"	0.200	ND	93.2	70-130			
Fluorene	0.190	0.020	"	0.200	ND	95.0	70-130			
Indeno (1,2,3-cd) pyrene	0.203	0.020	"	0.200	ND	101	70-130			
Naphthalene	0.187	0.002	"	0.200	ND	93.5	70-130			
Phenanthrene	0.178	0.020	"	0.200	ND	89.1	70-130			
Pyrene	0.174	0.020	"	0.200	ND	86.8	70-130			
Surrogate: Fluorene-d10	200		ug/kg	200		100	60-130			
Surrogate: Anthracene-d10	190		"	200		95.0	60-130			
Surrogate: Pyrene-d10	190		"	200		93.3	60-130			
Surrogate: Benzo (a) pyrene-d12	200		"	200		101	60-130			

<b>Matrix Spike Dup (B4B2006-MSD1)</b>		<b>Source: Y402326-01</b>			Prepared: 02/20/2024 Analyzed: 02/21/2024					
1-Methylnaphthalene	0.171	0.002	mg/kg	0.200	ND	85.3	70-130	6.37	20	
2-Methylnaphthalene	0.169	0.002	"	0.200	ND	84.4	70-130	6.58	20	
Acenaphthene	0.173	0.020	"	0.200	ND	86.4	70-130	7.17	20	
Anthracene	0.167	0.020	"	0.200	ND	83.5	70-130	10.2	20	
Benzo (a) anthracene	0.182	0.005	"	0.200	ND	91.0	70-130	10.8	20	
Benzo (a) pyrene	0.178	0.020	"	0.200	ND	88.8	70-130	10.3	20	
Benzo (b) fluoranthene	0.174	0.020	"	0.200	0.0004	87.0	70-130	8.24	20	
Benzo (g,h,i) perylene	0.177	0.020	"	0.200	0.0006	88.3	70-130	9.81	20	
Benzo (k) fluoranthene	0.161	0.020	"	0.200	ND	80.6	70-130	14.9	20	
Chrysene	0.180	0.020	"	0.200	ND	90.0	70-130	7.32	20	
Dibenz (a,h) anthracene	0.179	0.020	"	0.200	ND	89.6	70-130	10.9	20	
Fluoranthene	0.170	0.020	"	0.200	ND	85.0	70-130	9.21	20	

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 Project Number: [none]  
 Project: Noble - Dillard USX AB #29-17

**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 B4B2006 - EPA 3580**

<b>Matrix Spike Dup (B4B2006-MSD1)</b>	<b>Source: Y402326-01</b>			<b>Prepared: 02/20/2024 Analyzed: 02/21/2024</b>						
Fluorene	0.175	0.020	mg/kg	0.200	ND	87.5	70-130	8.22	20	
Indeno (1,2,3-cd) pyrene	0.183	0.020	"	0.200	ND	91.3	70-130	10.4	20	
Naphthalene	0.176	0.002	"	0.200	ND	88.2	70-130	5.84	20	
Phenanthrene	0.165	0.020	"	0.200	ND	82.5	70-130	7.67	20	
Pyrene	0.161	0.020	"	0.200	ND	80.4	70-130	7.71	20	
<i>Surrogate: Fluorene-d10</i>	200		<i>ug/kg</i>	200		100	60-130			
<i>Surrogate: Anthracene-d10</i>	190		"	200		94.9	60-130			
<i>Surrogate: Pyrene-d10</i>	190		"	200		93.4	60-130			
<i>Surrogate: Benzo (a) pyrene-d12</i>	200		"	200		102	60-130			

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 Project Number: [none]  
 Project: Noble - Dillard USX AB #29-17

**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 B4B1610 - DTPA Sorbitol Preparation**

**Blank (B4B1610-BLK1)**

Prepared: 02/16/2024 Analyzed: 02/19/2024

Boron ND 0.100 mg/L

**Duplicate (B4B1610-DUP1)**

**Source: Y402328-01**

Prepared: 02/16/2024 Analyzed: 02/19/2024

Boron 0.622 0.100 mg/L 0.603 3.14 50

**Batch B4B1615 - Saturated Paste Metals**

**Blank (B4B1615-BLK1)**

Prepared: 02/16/2024 Analyzed: 02/19/2024

SAR ND 0.0100 SAR

Calcium PPM ND 10.0 mg/L

Magnesium PPM ND 10.0 "

Sodium PPM ND 10.0 "

**Duplicate (B4B1615-DUP1)**

**Source: Y402330-01**

Prepared: 02/16/2024 Analyzed: 02/19/2024

Calcium PPM 38.5 10.0 mg/L 39.5 2.62 50

SAR ND 0.0100 SAR 2.27 200

Magnesium PPM 10.4 10.0 mg/L 11.1 6.04 50

Sodium PPM 35.0 10.0 " 35.2 0.627 50

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 Project: Noble - Dillard USX AB #29-17

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B4B1620 - Saturated Paste pH/EC</b>										
<b>Blank (B4B1620-BLK1)</b>					Prepared: 02/16/2024 Analyzed: 02/18/2024					
Specific Conductance (EC)	ND	0.00500	mmhos/cm							
<b>Duplicate (B4B1620-DUP1)</b>					<b>Source: Y402330-01</b> Prepared: 02/16/2024 Analyzed: 02/18/2024					
pH	8.20		pH Units		8.18			0.244	25	
Specific Conductance (EC)	0.365	0.00500	mmhos/cm		0.448			20.4	25	

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 Project Number: [none]  
 Project: Noble - Dillard USX AB #29-17

**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
<b>Batch L734869 -</b>										
<b>DUP (L 87391-DUP)</b>		<b>Source: Y402330-01</b>			Prepared: Analyzed: 02/26/2024					
Chromium, Hexavalent	ND	0.5	mg/Kg		<0.500		-	0	20	
<b>MS (L 87391-MS)</b>		<b>Source: Y402330-01</b>			Prepared: Analyzed: 02/26/2024					
Chromium, Hexavalent	35.2	2.5	mg/Kg	39.9	< 0.244	88	75-125			
<b>LCS (LCS)</b>		Prepared: Analyzed: 02/26/2024								
Chromium, Hexavalent	6.13	0.5	mg/Kg	8		77	75-125			
<b>LRB (LRB)</b>		Prepared: Analyzed: 02/26/2024								
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 - Dillard USX AB #29-17

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### Notes and Definitions

U Sample is Non-Detect.

QR-02 The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.

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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Jordan A. Bynon, Project Manager