



June 13, 2022

Eagle Environmental Consulting, Inc.

Martin C Eckert III

8000 W 44th Ave

Wheat Ridge CO 80033

Project Name - Noble - HSR - Gutteresen  
T3N-R64W-S1 TB

Project Number - -

Attached are your analytical results for Noble - HSR - Gutteresen T3N-R64W-S1 TB received by Origins Laboratory, Inc. May 31, 2022. This project is associated with Origins project number Y206047-01.

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, Inc.  
8000 W 44th Ave  
Wheat Ridge CO 80033

Martin C Eckert III  
Project Number: -  
Project: Noble - HSR - Guttersen T3N-R64W-S1  
TB


## CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
WV-SS-01@4'	Y206047-01	Soil	May 31, 2022 9:47	05/31/2022 14:25
WV-FS-01@5'	Y206047-02	Soil	May 31, 2022 9:52	05/31/2022 14:25
TB-SS-01@0.5'	Y206047-03	Soil	May 31, 2022 10:22	05/31/2022 14:25
TB-SS-02@3'	Y206047-04	Soil	May 31, 2022 11:25	05/31/2022 14:25

### Chain of Custody Replacement Request

On 5/31/2022, Andrew Newberry from Eagle Environmental contacted Jordan Bynon via email regarding Y206047 requesting that samples WV-SS-02, -03, and -04 not be analyzed and be disposed of.

Requested modifications to the chain of custody were made by Jordan Bynon on 5/31/2022 and modified chain of custody is included in the final report.

Origins Laboratory, Inc.  


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# ORIGINS LABORATORY, INC

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Project: Noble - HSR - Guttersen T3N-R64W-S1  
TB

# ORIGINS

LABORATORY, INC

1700047

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page 1 of 1

Client: 1700047  
 Project Manager: [Signature]  
 Project Name: 1700047  
 Project Number: 1700047  
 Samples Collected By: [Signature]  
 Address: 1700047  
 Telephone Number: 1700047  
 Email Address: 1700047

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative			Matrix			Analysis	Sample Instructions	Date	Time	Date	Time	Round Time
				Unpreserved	HCl	HNO <sub>3</sub>	Groundwater	Soil	Air Summ							
1700047	05/31/22	14:25	1	X			X						5/31/22	14:25		24 Hr
1700048	05/31/22	14:25	1	X			X									48 Hr
1700049	05/31/22	14:25	1	X			X									Standard

Date Results Needed: 0.8  
 Temp Received: 0.8

Origins Laboratory, Inc.

*[Signature]*

Jordan A. Bynon, Project Manager

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# ORIGINS

LABORATORY, INC

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 Project: Noble - HSR - Guttersen T3N-R64W-S1  
 TB


Origins Laboratory F-012207-01-R1  
Effective Date: 01/09/12  
**Sample Receipt Checklist**

Origins Work Order: 4200047 Client: EAGLE  
 Client Project ID: HSR-GUTTERSEN T3N-R64W-S1-TB  
 Checklist Completed by: KH Shipped Via: FD ST TB  
 Date/time completed: 6/2/12 (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 / 10.2 °C  °C  °C (Describe)  
 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> ?	<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 <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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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 HNO3, HCL, H2SO4) / (pH > 10 for samples preserved with NaAsO2+NaOH, ZnAc+NaOH)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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 be taken in the additional comments (above) and the case narrative.

Reviewed by (Project Manager) [Signature] Date/Time Reviewed 6/3/12

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 8000 W 44th Ave  
 Wheat Ridge CO 80033

Martin C Eckert III  
 Project Number: -  
 Project: Noble - HSR - Gutteresen T3N-R64W-S1  
 TB

**WV-SS-01@4'**  
**5/31/2022 9:47:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y206047-01 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	ND		0.100	mg/L	1	B2F0216	06/02/2022	06/03/2022	
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**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND		25.0	mg/kg	1	B2F0301	06/03/2022	06/07/2022	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: *o*-Terphenyl 71.3% 50-150 " "

**GBTEX+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B2F0224	06/02/2022	06/03/2022	U
1,3,5-Trimethylbenzene	ND		0.00200	"	"	"	"	"	U
Benzene	ND		0.00200	"	"	"	"	"	U
Ethylbenzene	ND		0.00200	"	"	"	"	"	U
Toluene	ND		0.00200	"	"	"	"	"	U
Xylenes, total	ND		0.00200	"	"	"	"	"	U
Gasoline Range Hydrocarbons	ND		0.200	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4 105% 70-130 " "

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Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y206047-01 (Soil)**

**GBTEX+TMBs by 8260D**

Surrogate: Toluene-d8	95.1 %		70-130			B2F02 24	06/02/2022	06/03/2022	
Surrogate: 4-Bromofluorobenzene	98.1 %		70-130			"	"	"	

**Metals by Saturated Paste by EPA 6010**

Calcium	1.43		0.499	meq/L	10	[CALC]	06/02/2022	06/03/2022	
Magnesium	ND		0.823	"	"	"	"	"	
Sodium	ND		0.435	"	"	"	"	"	

**PAH by 8270D SIM**

1-Methylnaphthalene	ND	0.000364	0.00067	mg/Kg	1	L619835	06/06/2022	06/06/2022	
2-Methylnaphthalene	ND	0.000645	0.00067	"	"	"	"	"	
Acenaphthene	ND	0.000304	0.00067	"	"	"	"	"	
Anthracene	ND	0.000334	0.00067	"	"	"	"	"	
Benzo(a)anthracene	ND	0.000493	0.00067	"	"	"	"	"	
Benzo(a)pyrene	ND	0.000468	0.00067	"	"	"	"	"	
Benzo(b)fluoranthene	ND	0.000585	0.00067	"	"	"	"	"	
Benzo(k)fluoranthene	ND	0.000437	0.00067	"	"	"	"	"	
Chrysene	ND	0.000624	0.00067	"	"	"	"	"	
Dibenz(a,h)anthracene	ND	0.000614	0.00067	"	"	"	"	"	
Fluoranthene	ND	0.000394	0.00067	"	"	"	"	"	

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**WV-SS-01@4'**  
**5/31/2022 9:47:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Waypoint Analytical, Inc.**  
**Y206047-01 (Soil)**

**PAH by 8270D SIM**

Fluorene	ND	0.000286	0.00067	mg/Kg	1	L619835	06/06/2022	06/06/2022	
Indeno(1,2,3-cd)pyrene	ND	0.000627	0.00067	"	"	"	"	"	"
Naphthalene	ND	0.000484	0.00067	"	"	"	"	"	"
Pyrene	ND	0.000643	0.00067	"	"	"	"	"	"

Surrogate: 2-Fluorobiphenyl	57.4%		33-115			"	"	"	
Surrogate: 4-Terphenyl-d14	70.7%		33-122			"	"	"	
Surrogate: Nitrobenzene-d5	70.1%		29-110			"	"	"	

**pH in Soil by 9045D**

pH	8.33			pH Units	1	B2F0217	06/02/2022	06/03/2022	
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**SAR by 20B Saturated Paste**

SAR	0.0476			SAR	1	B2F0215	06/02/2022	06/03/2022	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	0.224		0.00500	mmhos/cm	1	B2F0217	06/02/2022	06/03/2022	
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 TB

**WV-FS-01@5'**  
**5/31/2022 9:52:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y206047-02 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	ND		0.100	mg/L	1	B2F0216	06/02/2022	06/03/2022	
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**DRO/ORO by EPA 8015D**


Diesel (C10-C28)	41.7		25.0	mg/kg	1	B2F0301	06/03/2022	06/07/2022	
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: o-Terphenyl	71.0 %		50-150	"	"	"	"	"	
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**GBTEX+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B2F0224	06/02/2022	06/03/2022	U
1,3,5-Trimethylbenzene	ND		0.00200	"	"	"	"	"	U
Benzene	ND		0.00200	"	"	"	"	"	U
Ethylbenzene	ND		0.00200	"	"	"	"	"	U
Toluene	ND		0.00200	"	"	"	"	"	U
Xylenes, total	ND		0.00200	"	"	"	"	"	U
Gasoline Range Hydrocarbons	ND		0.200	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	108 %		70-130	"	"	"	"	"	
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 TB

WV-FS-01@5'  
 5/31/2022 9:52:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y206047-02 (Soil)**

**GBTEX+TMBs by 8260D**

Surrogate: Toluene-d8	96.3 %		70-130			B2F02 24	06/02/2022	06/03/2022	
Surrogate: 4-Bromofluorobenzene	99.0 %		70-130			"	"	"	

**Metals by Saturated Paste by EPA 6010**

Calcium	4.25		0.499	meq/L	10	[CALC]	06/02/2022	06/03/2022	
Magnesium	1.52		0.823	"	"	"	"	"	
Sodium	2.34		0.435	"	"	"	"	"	

**PAH by 8270D SIM**

1-Methylnaphthalene	ND	0.000364	0.00067	mg/Kg	1	L619835	06/06/2022	06/06/2022	
2-Methylnaphthalene	0.00161	0.000645	0.00067	"	"	"	"	"	
Acenaphthene	ND	0.000304	0.00067	"	"	"	"	"	
Anthracene	ND	0.000334	0.00067	"	"	"	"	"	
Benzo(a)anthracene	ND	0.000493	0.00067	"	"	"	"	"	
Benzo(a)pyrene	ND	0.000468	0.00067	"	"	"	"	"	
Benzo(b)fluoranthene	ND	0.000585	0.00067	"	"	"	"	"	
Benzo(k)fluoranthene	ND	0.000437	0.00067	"	"	"	"	"	
Chrysene	0.00114	0.000624	0.00067	"	"	"	"	"	
Dibenz(a,h)anthracene	ND	0.000614	0.00067	"	"	"	"	"	
Fluoranthene	ND	0.000394	0.00067	"	"	"	"	"	

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 TB

**WV-FS-01@5'**  
**5/31/2022 9:52:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Waypoint Analytical, Inc.**  
**Y206047-02 (Soil)**

**PAH by 8270D SIM**

Fluorene	ND	0.000286	0.00067	mg/Kg	1	L619835	06/06/2022	06/06/2022	
Indeno(1,2,3-cd)pyrene	ND	0.000627	0.00067	"	"	"	"	"	"
Naphthalene	ND	0.000484	0.00067	"	"	"	"	"	"
Pyrene	ND	0.000643	0.00067	"	"	"	"	"	"

Surrogate: 2-Fluorobiphenyl	56 %		33-115			"	"	"	"
Surrogate: 4-Terphenyl-d14	66.6 %		33-122			"	"	"	"
Surrogate: Nitrobenzene-d5	72 %		29-110			"	"	"	"

**pH in Soil by 9045D**

pH	8.12			pH Units	1	B2F0217	06/02/2022	06/03/2022	
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**SAR by 20B Saturated Paste**

SAR	1.37			SAR	1	B2F0215	06/02/2022	06/03/2022	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	0.930		0.00500	mmhos/cm	1	B2F0217	06/02/2022	06/03/2022	
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Martin C Eckert III  
 Project Number: -  
 Project: Noble - HSR - Gutteresen T3N-R64W-S1  
 TB

**TB-SS-01@0.5'**  
**5/31/2022 10:22:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y206047-03 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	ND		0.100	mg/L	1	B2F0216	06/02/2022	06/03/2022	
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**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND		25.0	mg/kg	1	B2F0301	06/03/2022	06/07/2022	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: *o*-Terphenyl 89.1% 50-150 " "

**GBTEX+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B2F0224	06/02/2022	06/03/2022	U
1,3,5-Trimethylbenzene	ND		0.00200	"	"	"	"	"	U
Benzene	ND		0.00200	"	"	"	"	"	U
Ethylbenzene	ND		0.00200	"	"	"	"	"	U
Toluene	ND		0.00200	"	"	"	"	"	U
Xylenes, total	ND		0.00200	"	"	"	"	"	U
Gasoline Range Hydrocarbons	ND		0.200	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4 106% 70-130 " "

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 TB

**TB-SS-01@0.5'**

**5/31/2022 10:22:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y206047-03 (Soil)**

**GBTEX+TMBs by 8260D**

Surrogate: Toluene-d8	99.0 %		70-130			B2F02 24	06/02/2022	06/03/2022	
Surrogate: 4-Bromofluorobenzene	94.0 %		70-130			"	"	"	

**Metals by Saturated Paste by EPA 6010**

Calcium	ND		0.499	meq/L	10	[CALC]	06/02/2022	06/03/2022	
Magnesium	ND		0.823	"	"	"	"	"	
Sodium	1.27		0.435	"	"	"	"	"	

**PAH by 8270D SIM**

1-Methylnaphthalene	0.946	0.00364	0.0067	mg/Kg	10	L619835	06/06/2022	06/06/2022	
2-Methylnaphthalene	1.63	0.00645	0.0067	"	"	"	"	"	
Acenaphthene	0.0871	0.00304	0.0067	"	"	"	"	"	
Anthracene	0.00723	0.00334	0.0067	"	"	"	"	"	
Benzo(a)anthracene	ND	0.00493	0.0067	"	"	"	"	"	
Benzo(a)pyrene	ND	0.00468	0.0067	"	"	"	"	"	
Benzo(b)fluoranthene	ND	0.00585	0.0067	"	"	"	"	"	
Benzo(k)fluoranthene	ND	0.00437	0.0067	"	"	"	"	"	
Chrysene	0.0383	0.00624	0.0067	"	"	"	"	"	
Dibenz(a,h)anthracene	ND	0.00614	0.0067	"	"	"	"	"	
Fluoranthene	ND	0.00394	0.0067	"	"	"	"	"	
Fluorene	0.249	0.00286	0.0067	"	"	"	"	"	

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 TB

**TB-SS-01@0.5'**  
**5/31/2022 10:22:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Waypoint Analytical, Inc.**  
**Y206047-03 (Soil)**

**PAH by 8270D SIM**

Indeno(1,2,3-cd)pyrene	ND	0.00627	0.0067	mg/Kg	10	L619835	06/06/2022	06/06/2022	
Naphthalene	0.303	0.00484	0.0067	"	"	"	"	"	"
Pyrene	0.022	0.00643	0.0067	"	"	"	"	"	"

Surrogate: 2-Fluorobiphenyl	65 %		33-115				"	"	"
Surrogate: 4-Terphenyl-d14	75.5 %		33-122				"	"	"
Surrogate: Nitrobenzene-d5	69 %		29-110				"	"	"

**pH in Soil by 9045D**

pH	8.69			pH Units	1	B2F0217	06/02/2022	06/03/2022	
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**SAR by 20B Saturated Paste**

SAR	2.01			SAR	1	B2F0215	06/02/2022	06/03/2022	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	0.234		0.00500	mmhos/cm	1	B2F0217	06/02/2022	06/03/2022	
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Origins Laboratory, Inc.



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

Martin C Eckert III  
 Project Number: -  
 Project: Noble - HSR - Guttersen T3N-R64W-S1  
 TB

**TB-SS-02@3'**  
**5/31/2022 11:25:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y206047-04 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	ND		0.100	mg/L	1	B2F0216	06/02/2022	06/03/2022	
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**DRO/ORO by EPA 8015D**


Diesel (C10-C28)	ND		25.0	mg/kg	1	B2F0301	06/03/2022	06/07/2022	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: <i>o</i> -Terphenyl	50.1%		50-150	"	"	"	"	"	
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**GBTEX+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B2F0224	06/02/2022	06/03/2022	U
1,3,5-Trimethylbenzene	ND		0.00200	"	"	"	"	"	U
Benzene	ND		0.00200	"	"	"	"	"	U
Ethylbenzene	ND		0.00200	"	"	"	"	"	U
Toluene	ND		0.00200	"	"	"	"	"	U
Xylenes, total	ND		0.00200	"	"	"	"	"	U
Gasoline Range Hydrocarbons	ND		0.200	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	102%		70-130	"	"	"	"	"	
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 Wheat Ridge CO 80033

Martin C Eckert III  
 Project Number: -  
 Project: Noble - HSR - Gutteresen T3N-R64W-S1  
 TB

**TB-SS-02@3'**  
**5/31/2022 11:25:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y206047-04 (Soil)**

**GBTEX+TMBs by 8260D**

Surrogate: Toluene-d8	98.3 %		70-130			B2F02 24	06/02/2022	06/03/2022	
Surrogate: 4-Bromofluorobenzene	96.6 %		70-130			"	"	"	

**Metals by Saturated Paste by EPA 6010**

Calcium	2.08		0.499	meq/L	10	[CALC]	06/02/2022	06/03/2022	
Magnesium	ND		0.823	"	"	"	"	"	
Sodium	ND		0.435	"	"	"	"	"	

**PAH by 8270D SIM**

1-Methylnaphthalene	0.915	0.00364	0.0067	mg/Kg	10	L619835	06/06/2022	06/06/2022	
2-Methylnaphthalene	1.6	0.00645	0.0067	"	"	"	"	"	
Acenaphthene	0.0681	0.00304	0.0067	"	"	"	"	"	
Anthracene	0.00659	0.00334	0.0067	"	"	"	"	"	J
Benzo(a)anthracene	ND	0.00493	0.0067	"	"	"	"	"	
Benzo(a)pyrene	ND	0.00468	0.0067	"	"	"	"	"	
Benzo(b)fluoranthene	ND	0.00585	0.0067	"	"	"	"	"	
Benzo(k)fluoranthene	ND	0.00437	0.0067	"	"	"	"	"	
Chrysene	0.0337	0.00624	0.0067	"	"	"	"	"	
Dibenz(a,h)anthracene	ND	0.00614	0.0067	"	"	"	"	"	
Fluoranthene	ND	0.00394	0.0067	"	"	"	"	"	
Fluorene	0.23	0.00286	0.0067	"	"	"	"	"	

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Martin C Eckert III  
 Project Number: -  
 Project: Noble - HSR - Gutteresen T3N-R64W-S1  
 TB

**TB-SS-02@3'**  
**5/31/2022 11:25:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Waypoint Analytical, Inc.**  
**Y206047-04 (Soil)**

**PAH by 8270D SIM**

Indeno(1,2,3-cd)pyrene	ND	0.00627	0.0067	mg/Kg	10	L619835	06/06/2022	06/06/2022	
Naphthalene	0.284	0.00484	0.0067	"	"	"	"	"	"
Pyrene	0.0194	0.00643	0.0067	"	"	"	"	"	"
Surrogate: 2-Fluorobiphenyl	70.2 %		33-115				"	"	"
Surrogate: 4-Terphenyl-d14	78.3 %		33-122				"	"	"
Surrogate: Nitrobenzene-d5	74.1 %		29-110				"	"	"

**pH in Soil by 9045D**

pH	8.16			pH Units	1	B2F0217	06/02/2022	06/03/2022	
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**SAR by 20B Saturated Paste**

SAR	0.0693			SAR	1	B2F0215	06/02/2022	06/03/2022	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	0.281		0.00500	mmhos/cm	1	B2F0217	06/02/2022	06/03/2022	
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 Wheat Ridge CO 80033

Martin C Eckert III  
 Project Number: -  
 Project: Noble - HSR - Guttersen T3N-R64W-S1  
 TB

**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 B2F0224 - EPA 5030 (soil)

Blank (B2F0224-BLK1)

Prepared: 06/02/2022 Analyzed: 06/03/2022

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	0.0100	"							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		104	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		99.2	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		96.6	70-130			

Origins Laboratory, Inc.

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Jordan A. Bynon, Project Manager



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Martin C Eckert III  
 Project Number: -  
 Project: Noble - HSR - Gutteresen T3N-R64W-S1  
 TB

**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 B2F0224 - EPA 5030 (soil)

LCS (B2F0224-BS1)

Prepared: 06/02/2022 Analyzed: 06/03/2022

1,2,4-Trimethylbenzene	0.101	0.00200	mg/kg	0.100	101	101	70-130			
1,3,5-Trimethylbenzene	0.101	0.00200	"	0.100	101	101	70-130			
Benzene	0.103	0.00200	"	0.100	103	103	70-130			
Ethylbenzene	0.104	0.00200	"	0.100	104	104	70-130			
Naphthalene	0.111	0.0100	"	0.100	111	111	70-130			
Toluene	0.101	0.00200	"	0.100	101	101	70-130			
o-Xylene	0.101	0.00200	"	0.100	101	101	70-130			
m,p-Xylene	0.212	0.00400	"	0.200	106	106	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125	99.7	99.7	70-130			
Surrogate: Toluene-d8	0.12		"	0.125	93.6	93.6	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125	104	104	70-130			

Origins Laboratory, Inc.

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Jordan A. Bynon, Project Manager



Eagle Environmental Consulting, Inc.  
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 Wheat Ridge CO 80033

Martin C Eckert III  
 Project Number: -  
 Project: Noble - HSR - Guttersen T3N-R64W-S1  
 TB

**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 B2F0224 - EPA 5030 (soil)

Matrix Spike (B2F0224-MS1)

Source: Y206024-01

Prepared: 06/02/2022 Analyzed: 06/03/2022

1,2,4-Trimethylbenzene	0.0965	0.00200	mg/kg	0.100	ND	96.5	70-130			
1,3,5-Trimethylbenzene	0.0970	0.00200	"	0.100	ND	97.0	70-130			
Benzene	0.0934	0.00200	"	0.100	ND	93.4	70-130			
Ethylbenzene	0.0986	0.00200	"	0.100	ND	98.6	70-130			
Naphthalene	0.0925	0.0100	"	0.100	0.00172	90.8	70-130			
Toluene	0.0935	0.00200	"	0.100	ND	93.5	70-130			
o-Xylene	0.0961	0.00200	"	0.100	ND	96.1	70-130			
m,p-Xylene	0.203	0.00400	"	0.200	ND	101	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		97.5	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		96.0	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		108	70-130			

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 Wheat Ridge CO 80033

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 Project Number: -  
 Project: Noble - HSR - Gutteresen T3N-R64W-S1  
 TB

**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 B2F0224 - EPA 5030 (soil)

Matrix Spike Dup (B2F0224-MSD1)

Source: Y206024-01

Prepared: 06/02/2022 Analyzed: 06/03/2022

1,2,4-Trimethylbenzene	0.0997	0.00200	mg/kg	0.100	ND	99.7	70-130	3.28	20	
1,3,5-Trimethylbenzene	0.0985	0.00200	"	0.100	ND	98.5	70-130	1.47	20	
Benzene	0.103	0.00200	"	0.100	ND	103	70-130	9.89	20	
Ethylbenzene	0.104	0.00200	"	0.100	ND	104	70-130	5.37	20	
Naphthalene	0.0967	0.0100	"	0.100	0.00172	94.9	70-130	4.42	20	
Toluene	0.102	0.00200	"	0.100	ND	102	70-130	8.54	20	
o-Xylene	0.101	0.00200	"	0.100	ND	101	70-130	4.47	20	
m,p-Xylene	0.213	0.00400	"	0.200	ND	107	70-130	5.10	20	
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		98.2	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		94.2	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		105	70-130			

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 Wheat Ridge CO 80033

Martin C Eckert III  
 Project Number: -  
 Project: Noble - HSR - Gutteresen T3N-R64W-S1  
 TB

**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 B2F0301 - EPA 3550B

Blank (B2F0301-BLK1)

Prepared: 06/03/2022 Analyzed: 06/06/2022

Diesel (C10-C28)	ND	25.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	100	"							U
Surrogate: o-Terphenyl	20		"	24.9		82.4	50-150			

Origins Laboratory, Inc.

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Jordan A. Bynon, Project Manager



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 8000 W 44th Ave  
 Wheat Ridge CO 80033

Martin C Eckert III  
 Project Number: -  
 Project: Noble - HSR - Gutteresen T3N-R64W-S1  
 TB

**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 B2F0301 - EPA 3550B

LCS (B2F0301-BS1)

Prepared: 06/03/2022 Analyzed: 06/06/2022

Diesel (C10-C28)	881	50.0	mg/kg	1000		88.1	70-130			
Residual Range Organics (C28-C40)	892	200	"	1000		89.2	70-130			
Surrogate: o-Terphenyl	37		"	49.8		74.5	50-150			

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Jordan A. Bynon, Project Manager



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 Wheat Ridge CO 80033

Martin C Eckert III  
 Project Number: -  
 Project: Noble - HSR - Guttersen T3N-R64W-S1  
 TB

**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 B2F0301 - EPA 3550B

Matrix Spike (B2F0301-MS1)

Source: Y206002-01

Prepared: 06/03/2022 Analyzed: 06/06/2022

Diesel (C10-C28)	2230	50.0	mg/kg	1000	909	132	70-130			QM-07
Residual Range Organics (C28-C40)	1200	200	"	1000	225	97.4	70-130			
Surrogate: o-Terphenyl	36		"	49.8		71.5	50-150			

Origins Laboratory, Inc.

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Jordan A. Bynon, Project Manager



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 Wheat Ridge CO 80033

Martin C Eckert III  
 Project Number: -  
 Project: Noble - HSR - Guttersen T3N-R64W-S1  
 TB

**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 B2F0301 - EPA 3550B

Matrix Spike Dup (B2F0301-MSD1)

Source: Y206002-01

Prepared: 06/03/2022 Analyzed: 06/06/2022

Diesel (C10-C28)	2520	50.0	mg/kg	1000	909	161	70-130	12.5	35	QM-07
Residual Range Organics (C28-C40)	1290	200	"	1000	225	107	70-130	7.59	35	
Surrogate: o-Terphenyl	38		"	49.8		75.4	50-150			

Origins Laboratory, Inc.

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Jordan A. Bynon, Project Manager



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 Wheat Ridge CO 80033

Martin C Eckert III  
 Project Number: -  
 Project: Noble - HSR - Guttersen T3N-R64W-S1  
 TB

**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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**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 B2F0217 - NO PREP**

**Blank (B2F0217-BLK1)**

Prepared: 06/02/2022 Analyzed: 06/03/2022

Specific Conductance (EC) 0.00710 0.00500 mmhos/cm  
 pH 0.00 pH Units

**Duplicate (B2F0217-DUP1)**

**Source: Y206047-01**

Prepared: 06/02/2022 Analyzed: 06/03/2022

Specific Conductance (EC) 0.237 0.00500 mmhos/cm 0.224 5.90 25  
 pH 8.34 pH Units 8.33 0.120 25

Origins Laboratory, Inc.

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Jordan A. Bynon, Project Manager

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

Martin C Eckert III  
 Project Number: -  
 Project: Noble - HSR - Guttersen T3N-R64W-S1  
 TB

**PAH by 8270D SIM - Quality Control**  
**Waypoint Analytical, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch L619835 - 3550B**

**MSD (L 90166-MSD-L619835)**

**Source: 90166**

Prepared: 06/06/2022 Analyzed: 06/06/2022

Naphthalene	0.0908	0.000484	mg/Kg	0.166	<0.000484	54.6	30-130	10.1	30	
Pyrene	0.11	0.000643	"	0.166	<0.000643	66.2	30-130	9.7	30	
Indeno(1,2,3-cd)pyrene	0.124	0.000627	"	0.166	<0.000627	74.6	30-130	0	30	
Fluorene	0.116	0.000286	"	0.166	<0.000286	69.8	30-130	9	30	
Fluoranthene	0.109	0.000394	"	0.166	<0.000394	65.6	30-130	8.7	30	
Dibenz(a,h)anthracene	0.124	0.000614	"	0.166	<0.000614	74.6	30-130	2.4	30	
Chrysene	0.108	0.000624	"	0.166	<0.000624	65	30-130	5.7	30	
Benzo(k)fluoranthene	0.0954	0.000437	"	0.166	<0.000437	57.4	30-130	13.3	30	
Benzo(a)pyrene	0.109	0.000468	"	0.166	<0.000468	65.6	30-130	5.6	30	
1-Methylnaphthalene	0.0931	0.000364	"	0.166	0.000511	55.7	30-130	11.5	30	
Benzo(a)anthracene	0.126	0.000493	"	0.166	<0.000493	75.9	30-130	10.8	30	
2-Methylnaphthalene	0.11	0.000645	"	0.166	0.00169	65.2	30-130	14.9	30	
Anthracene	0.102	0.000334	"	0.166	<0.000334	61.4	30-130	6.4	30	
Acenaphthene	0.0997	0.000304	"	0.166	<0.000304	60	30-130	11.3	30	
Benzo(b)fluoranthene	0.113	0.000585	"	0.166	<0.000585	68	30-130	2.6	30	
Surrogate: Nitrobenzene-d5	71.2		"	0.331	241	71.2	29-110			
Surrogate: 4-Terphenyl-d14	71.2		"	0.331	246	71.2	33-122			
Surrogate: 2-Fluorobiphenyl	55.5		"	0.331	191	55.5	33-115			

**MS (L 90166-MS-L619835)**

**Source: 90166**

Prepared: 06/06/2022 Analyzed: 06/06/2022

Benzo(k)fluoranthene	0.0835	0.000437	mg/Kg	0.166	<0.000437	50.3	30-130			
Chrysene	0.102	0.000624	"	0.166	<0.000624	61.4	30-130			
Dibenz(a,h)anthracene	0.121	0.000614	"	0.166	<0.000614	72.8	30-130			
Fluoranthene	0.0999	0.000394	"	0.166	<0.000394	60.1	30-130			
Indeno(1,2,3-cd)pyrene	0.124	0.000627	"	0.166	<0.000627	74.6	30-130			
Anthracene	0.0956	0.000334	"	0.166	<0.000334	57.5	30-130			
Naphthalene	0.082	0.000484	"	0.166	<0.000484	49.3	30-130			

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 8000 W 44th Ave  
 Wheat Ridge CO 80033

Martin C Eckert III  
 Project Number: -  
 Project: Noble - HSR - Guttersen T3N-R64W-S1  
 TB

**PAH by 8270D SIM - Quality Control**  
**Waypoint Analytical, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch L619835 - 3550B**

**MS (L 90166-MS-L619835)**

**Source: 90166**

Prepared: 06/06/2022 Analyzed: 06/06/2022

Fluorene	0.106	0.000286	mg/Kg	0.166	<0.000286	63.8	30-130			
Benzo(b)fluoranthene	0.11	0.000585	"	0.166	<0.000585	66.2	30-130			
Benzo(a)anthracene	0.113	0.000493	"	0.166	<0.000493	68	30-130			
Acenaphthene	0.089	0.000304	"	0.166	<0.000304	53.6	30-130			
2-Methylnaphthalene	0.0947	0.000645	"	0.166	0.00169	56	30-130			
Pyrene	0.0998	0.000643	"	0.166	<0.000643	60.1	30-130			
1-Methylnaphthalene	0.0829	0.000364	"	0.166	0.000511	49.6	30-130			
Benzo(a)pyrene	0.103	0.000468	"	0.166	<0.000468	62	30-130			
Surrogate: Nitrobenzene-d5	62.9		"	0.332	241	62.9	29-110			
Surrogate: 2-Fluorobiphenyl	47.2		"	0.332	191	47.2	33-115			
Surrogate: 4-Terphenyl-d14	64.1		"	0.332	246	64.1	33-122			

**LCS (LCS-L619835)**

Prepared: 06/06/2022 Analyzed: 06/06/2022

Chrysene	0.0986	0.000624	mg/Kg	0.167		59	30-130			
Benzo(k)fluoranthene	0.0938	0.000437	"	0.167		56.1	30-130			
Pyrene	0.119	0.000643	"	0.167		71.2	30-130			
Naphthalene	0.0892	0.000484	"	0.167		53.4	30-130			
Indeno(1,2,3-cd)pyrene	0.108	0.000627	"	0.167		64.6	30-130			
Fluorene	0.101	0.000286	"	0.167		60.4	30-130			
Benzo(b)fluoranthene	0.0963	0.000585	"	0.167		57.6	30-130			
Dibenz(a,h)anthracene	0.115	0.000614	"	0.167		68.8	30-130			
1-Methylnaphthalene	0.0898	0.000364	"	0.167		53.7	30-130			
Benzo(a)pyrene	0.106	0.000468	"	0.167		63.4	30-130			
Benzo(a)anthracene	0.105	0.000493	"	0.167		62.8	30-130			
Anthracene	0.114	0.000334	"	0.167		68.2	30-130			
Acenaphthene	0.105	0.000304	"	0.167		62.8	30-130			
2-Methylnaphthalene	0.089	0.000645	"	0.167		53.2	30-130			

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**PAH by 8270D SIM - Quality Control**  
**Waypoint Analytical, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch L619835 - 3550B**

**LCS (LCS-L619835)**

Prepared: 06/06/2022 Analyzed: 06/06/2022

Fluoranthene	0.119	0.000394	mg/Kg	0.167		71.2	30-130			
Surrogate: Nitrobenzene-d5	63.3		"	0.333		63.3	29-110			
Surrogate: 4-Terphenyl-d14	78.3		"	0.333		78.3	33-122			
Surrogate: 2-Fluorobiphenyl	59.4		"	0.333		59.4	33-115			

**LRB (LRB-L619835)**

Prepared: 06/06/2022 Analyzed: 06/06/2022

Fluoranthene	ND	0.00067	mg/Kg							
Benzo(a)pyrene	ND	0.00067	"							
Pyrene	ND	0.00067	"							
Naphthalene	ND	0.00067	"							
Indeno(1,2,3-cd)pyrene	ND	0.00067	"							
Fluorene	ND	0.00067	"							
Dibenz(a,h)anthracene	ND	0.00067	"							
Chrysene	ND	0.00067	"							
Benzo(b)fluoranthene	ND	0.00067	"							
1-Methylnaphthalene	ND	0.00067	"							
Benzo(a)anthracene	ND	0.00067	"							
Anthracene	ND	0.00067	"							
Acenaphthene	ND	0.00067	"							
2-Methylnaphthalene	ND	0.00067	"							
Benzo(k)fluoranthene	ND	0.00067	"							
Surrogate: Nitrobenzene-d5	80.1		"	0.333		80.1	29-110			
Surrogate: 4-Terphenyl-d14	80.7		"	0.333		80.7	33-122			
Surrogate: 2-Fluorobiphenyl	55.5		"	0.333		55.5	33-115			

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Jordan A. Bynon, Project Manager

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Wheat Ridge CO 80033

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Project Number: -  
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TB

## 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.
  - J Estimated Value. Analyte below reported quantitation 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.

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Jordan A. Bynon, Project Manager