



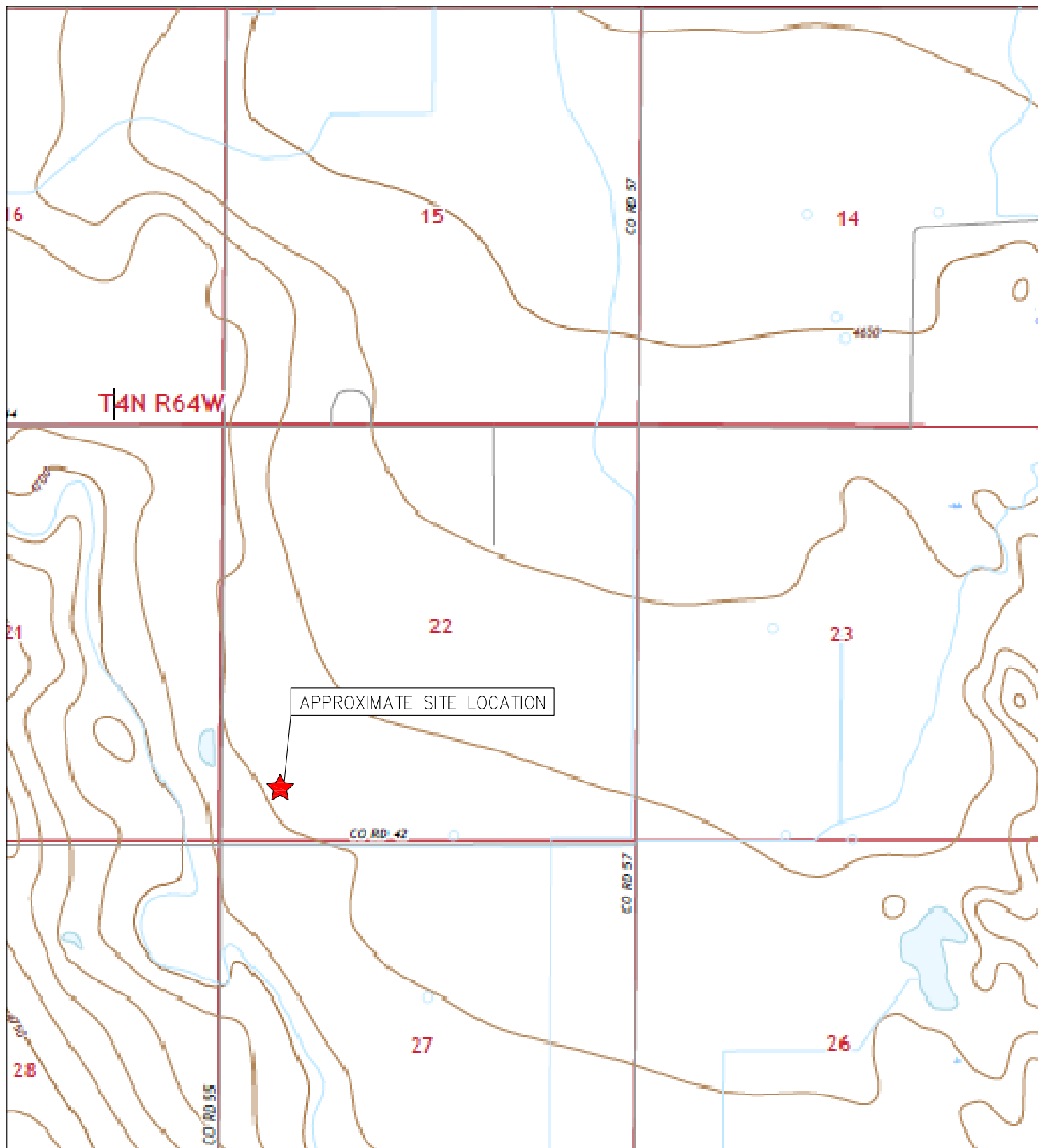
FIGURES

Figure 1: Topographic Site Location Map

Figure 2: Aerial Site Location Map

Figure 3: Soil Analytical Map

Figure 4: Polycyclic Aromatics Hydrocarbons Map



TOPOGRAPHIC SITE LOCATION MAP
 HERBST #1
 CLOSURE ASSESSMENT
 40.292470 / -104.544040
 SW¼ SW¼ SEC.22 T4N R64W 6PM
 WELD COUNTY, COLORADO
 API # 05-123-05138
 REMEDIATION # 25242



EAGLE
 ENVIRONMENTAL
 CONSULTING, INC.

8000 W 44th Ave, Wheat Ridge, CO 80033
 Ph: 303-433-0479 • F: 303-325-5449

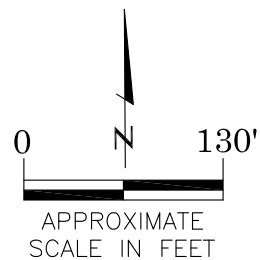
SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC MAP,
 VALLEY VIEW SCHOOL, CO QUADRANGLE 2022

FIGURE 1



LEGEND

- FORMER HERBST #1 WELLHEAD (PLUGGED AND ABANDONED)
- ASSOCIATED SEPARATOR
- APPROXIMATE FLOWLINE LOCATION



AERIAL SITE LOCATION MAP

HERBST #1
CLOSURE ASSESSMENT
40.292470 / -104.544040
SW¼ SW¼ SEC.22 T4N R64W 6PM
WELD COUNTY, COLORADO
API # 05-123-05138
REMEDATION # 25242

FIGURE NO.
2

DRAWN BY:
GK



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LEGEND

— WELLHEAD ASSESSMENT BOUNDARIES

● APPROXIMATE LOCATION OF SOIL SAMPLES
SUBMITTED FOR LABORATORY ANALYSIS

PARAMETERS

SAMPLE LOCATION

DATE

DEPTH (FEET)

B = BENZENE (mg/kg)

T = TOLUENE (mg/kg)

E = ETHYLBENZENE (mg/kg)

X = TOTAL XYLENES (mg/kg)

G = TPH-GRO (mg/kg)

D = TPH-DRO (mg/kg)

R = TPH-RRO (mg/kg)

1,2,4-TMB = 1,2,4 TRIMETHYLBENZENE (mg/kg)

1,3,5-TMB = 1,3,5 TRIMETHYLBENZENE (mg/kg)

Brn= BORON (mg/L)

EC = SPECIFIC CONDUCTANCE (mmhos/cm)

SAR= SODIUM ADSORPTION RATIO

pH = pH (PH UNITS)

mg/kg = MILLIGRAMS PER KILOGRAM

mg/L = MILLIGRAMS PER LITER

mmhos/cm = MILLIMHOS PER CENTIMETER

TPH-GRO = TOTAL PETROLEUM HYDROCARBONS - GASOLINE
RANGE ORGANICS

TPH-DRO = TOTAL PETROLEUM HYDROCARBONS - DIESEL
RANGE ORGANICS

TPH-RRO = TOTAL PETROLEUM HYDROCARBONS - RESIDUAL
RANGE ORGANICS

NOTES:

VALUES PRESENTED WITH A LESS THAN SYMBOL (<) DID NOT
CONTAIN CONCENTRATIONS AT OR ABOVE LABORATORY
DETECTION LIMITS

VALUES PRESENTED IN **BOLD** EXCEED COGCC TABLE 915-1
REGULATORY LIMITS

VALUES PRESENTED WITH ASTERISK (*) EXCEED COGCC
TABLE 915-1 PROTECTION OF GROUNDWATER SOIL
SCREENING LEVELS

COGCC = COLORADO OIL AND GAS CONSERVATION
COMMISSION

SOIL ANALYTICAL MAP

HERBST #1

CLOSURE ASSESSMENT

40.292470 / -104.544040

SW¼ SW¼ SEC.22 T4N R64W 6PM

WELD COUNTY, COLORADO

API # 05-123-05138

REMEDATION # 25242

FIGURE NO.

3

DRAWN BY:

GK



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LEGEND

— WELLHEAD ASSESSMENT BOUNDARIES

● APPROXIMATE LOCATION OF SOIL SAMPLES
SUBMITTED FOR LABORATORY ANALYSIS

PARAMETERS

SAMPLE LOCATION
DATE SAMPLE COLLECTED
APPROXIMATE DEPTH

POLYCYCLIC AROMATIC HYDROCARBONS (PAHs) (mg/kg)

mg/kg = MILLIGRAMS PER KILOGRAM

NOTES:

VALUES PRESENTED WITH A LESS THAN SYMBOL (<) DID NOT
CONTAIN CONCENTRATIONS AT OR ABOVE LABORATORY
DETECTION LIMITS.

VALUES PRESENTED IN **BOLD** EXCEED COGCC TABLE 915-1
REGULATORY LIMITS.

VALUES PRESENTED WITH AN ASTERISK (*) EXCEED COGCC
TABLE 915-1 PROTECTION OF GROUNDWATER SOIL SCREENING
LEVELS.

COGCC = COLORADO OIL AND GAS CONSERVATION COMMISSION

POLYCYCLIC AROMATIC HYDROCARBONS MAP

HERBST #1
CLOSURE ASSESSMENT
40.292470 / -104.544040
SW¼ SW¼ SEC.22 T4N R64W 6PM
WELD COUNTY, COLORADO
API # 05-123-05138
REMEDATION # 25242

FIGURE NO.
4

DRAWN BY:
GK



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CONSULTING, INC.
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Ph: 303-433-0479 • F: 303-325-5449



ATTACHMENT A

Photo Log

Herbst #1

API # 05-123-05138

Remediation # 25242

Closure Assessment

January 2023

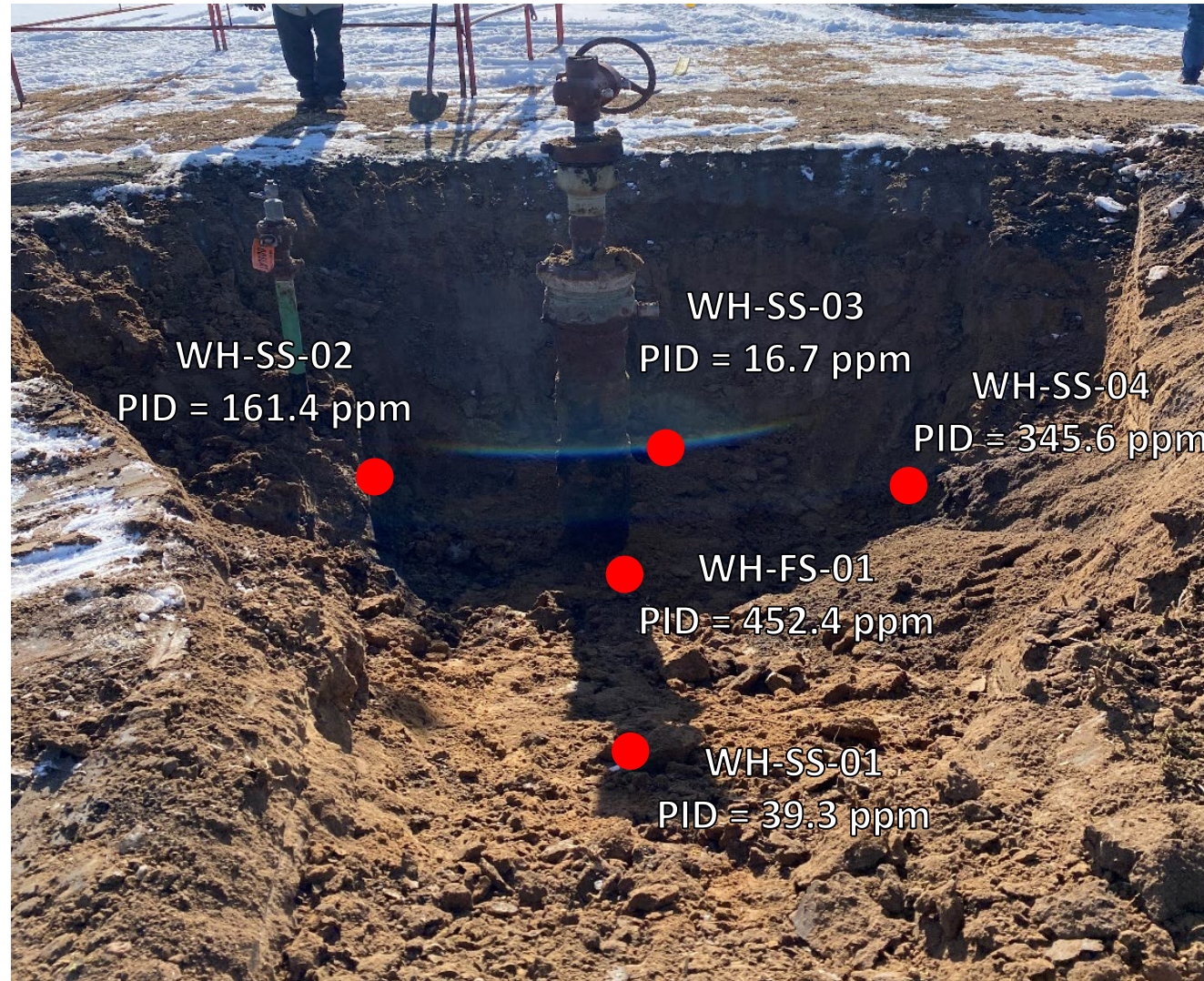


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Ph: 303-433-0479 • F: 303-325-5449



Wellhead Excavation – 01/09/23



Looking south

Petroleum hydrocarbon staining and odor observed



ATTACHMENT B

Laboratory Analytical Report



January 16, 2023

Eagle Environmental Consulting, Inc.

Martin C Eckert III

8000 W 44th Ave

Wheat Ridge CO 80033

Project Name - Noble - Herbst #1

Project Number - [none]

Attached are your analytical results for Noble - Herbst #1 received by Origins Laboratory, Inc. January 09, 2023. This project is associated with Origins project number Y301113-01.

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: [none]
Project: Noble - Herbst #1

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
WH-SS-01@5'	Y301113-01	Soil	January 9, 2023 11:20	01/09/2023 13:40
WH-SS-02@5'	Y301113-02	Soil	January 9, 2023 11:22	01/09/2023 13:40
WH-SS-03@5'	Y301113-03	Soil	January 9, 2023 11:24	01/09/2023 13:40
WH-SS-04@5'	Y301113-04	Soil	January 9, 2023 11:26	01/09/2023 13:40
WH-FS-01@6'	Y301113-05	Soil	January 9, 2023 11:28	01/09/2023 13:40

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Herbst #1

4301113

page 1 of 1

Client: Eagle Environmental Consulting
Address: 8000 W 44th Ave
Telephone Number: 303-933-0679
Email Address: mce@eagle-enviro.com

Project Manager: Martin Eckert III
Project Name: Herbst #1
Project Number: -
Samples Collected By: CT/EL

Fax: 303.265.9645

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative	Matrix	Analysis	Sample Instructions
WH-SS-01@5'	01/09/23	1120	2	Unpreserved	Soil	EC, SAR, pH =	1
WH-SS-02@5'	1122						2
WH-SS-03@5'	1124						3
WH-SS-04@5'	1126						4
WH-FS-01@10'	1128						5
							6
							7
							8
							9
							10

Relinquished By: CT/EL Date: 01/09/23 Time: 1340

Relinquished By: CT/EL Date: 01/09/23 Time: 1340

Received By: CT/EL Date: 11/23 Time: 1340

Received By: CT/EL Date: 11/23 Time: 1340

Turnaround Time: 24 Hr ☐ 48 Hr ☐ 72 Hr ☐ Standard ☒

Date Results Needed: Noble

Temp Received: 4.5

* Bill to Cole

Origins Laboratory, Inc.

Jen Pellegrini

Jen Pellegrini, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Herbst #1

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: 430113

Client: Eagle

Client Project ID: Herbst #1

Checklist Completed by: EHS/AF

Shipped Via: HD

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

Date/time completed: 1/9/23

Airbill #: NA

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

Cooler Number/Temperature: 1 / 4.5 °C 1 / _____ °C 1 / _____ °C (Describe)

Thermometer ID: 7004

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
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 ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?		<input checked="" type="checkbox"/>		
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<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 ⁽¹⁾ ? (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 ₃ , HCL, H ₂ SO ₄) / (pH >10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH)			<input checked="" type="checkbox"/>	
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note date/time and person contacted as well as the corrective action to in the additional comments (above) and the case narrative.

Reviewed by (Project Manager) [Signature]

Date/Time Reviewed 1/10/23

Origins Laboratory, Inc.

[Signature]

Jen Pellegrini, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Herbst #1

WH-SS-01@5'
1/9/2023 11:20:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y301113-01 (Soil)

Boron (DTPA Sorbitol)

Boron	0.612	0.0992	mg/L	1	B3A1009	01/10/2023	01/11/2023	
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DRO/ORO by EPA 8015D

Diesel (C10-C28)	32.4	25.0	mg/kg	1	B3A1001	01/10/2023	01/11/2023	
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	U

Surrogate: o-Terphenyl	101 %	50-150	"	"	"	"	"	
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GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND	0.00200	mg/kg	1	B3A0920	01/09/2023	01/10/2023	U
1,3,5-Trimethylbenzene	ND	0.00200	"	"	"	"	"	U
Benzene	ND	0.00200	"	"	"	"	"	U
Ethylbenzene	ND	0.00200	"	"	"	"	"	U
Naphthalene	0.00384	0.00380	"	"	"	"	"	
Toluene	ND	0.00200	"	"	"	"	"	U
Xylenes, total	ND	0.00200	"	"	"	"	"	U
Gasoline Range Hydrocarbons	ND	0.200	"	"	"	"	"	U

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Herbst #1

WH-SS-01@5'
1/9/2023 11:20:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
---------	--------	---------------------	-----------------	-------	----------	-------	----------	----------	-------

Origins Laboratory, Inc.
Y301113-01 (Soil)

GBTEX+TMBs by 8260D

Surrogate: 1,2-Dichloroethane-d4	113 %	70-130	B3A09 20	01/09/2023	01/10/2023
Surrogate: Toluene-d8	97.9 %	70-130	"	"	"
Surrogate: 4-Bromofluorobenzene	98.8 %	70-130	"	"	"

Metals by Saturated Paste by EPA 6010

Calcium	3.03	0.499	meq/L	10	[CALC]	01/11/2023	01/12/2023
Magnesium	1.09	0.823	"	"	"	"	"
Sodium	8.11	0.435	"	"	"	"	"

PAH by 8270D SIM

1-Methylnaphthalene	0.0173	0.00109	0.00201	mg/Kg	1	L657997	01/11/2023	01/12/2023
2-Methylnaphthalene	0.0285	0.00194	0.00201	"	"	"	"	"
Acenaphthene	0.00316	0.000304	0.00067	"	"	"	"	"
Anthracene	0.00147	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	0.00104	0.000624	0.00067	"	"	"	"	"
Dibenz(a,h)anthracene	ND	0.000614	0.00067	"	"	"	"	"
Fluoranthene	ND	0.000394	0.00067	"	"	"	"	"

Origins Laboratory, Inc.



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Jen Pellegrini, Project Manager

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Herbst #1

WH-SS-01@5'
1/9/2023 11:20:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Waypoint Analytical, LLC.
Y301113-01 (Soil)

PAH by 8270D SIM

Fluorene	0.00475	0.000286	0.00067	mg/Kg	1	L657997	01/11/2023	01/12/2023
Indeno(1,2,3-cd)pyrene	ND	0.000627	0.00067	"	"	"	"	"
Naphthalene	0.00314	0.00145	0.00201	"	"	"	"	"
Pyrene	0.00145	0.000643	0.00067	"	"	"	"	"

Surrogate: 2-Fluorobiphenyl	48.9 %	33-115	"	"	"
Surrogate: 4-Terphenyl-d14	53.8 %	33-122	"	"	"
Surrogate: Nitrobenzene-d5	54.7 %	29-110	"	"	"

pH in Soil by 9045D

pH	8.04	pH Units	1	B3A1105	01/11/2023	01/12/2023
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SAR by 20B Saturated Paste

SAR	5.65	SAR	1	B3A1103	01/11/2023	01/12/2023
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	1.33	0.00500	mmhos/cm	1	B3A1105	01/11/2023	01/12/2023
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Origins Laboratory, Inc.



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Jen Pellegrini, Project Manager

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Herbst #1

WH-SS-02@5'
1/9/2023 11:22:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y301113-02 (Soil)

Boron (DTPA Sorbitol)

Boron	0.692	0.0996	mg/L	1	B3A1009	01/10/2023	01/11/2023
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DRO/ORO by EPA 8015D

Diesel (C10-C28)	138	25.0	mg/kg	1	B3A1001	01/10/2023	01/11/2023
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	U

Surrogate: o-Terphenyl	103 %	50-150	"	"	"
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GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	0.0118	0.00200	mg/kg	1	B3A0920	01/09/2023	01/10/2023
1,3,5-Trimethylbenzene	ND	0.00200	"	"	"	"	U
Benzene	ND	0.00200	"	"	"	"	U
Ethylbenzene	ND	0.00200	"	"	"	"	U
Naphthalene	0.0105	0.00380	"	"	"	"	
Toluene	ND	0.00200	"	"	"	"	U
Xylenes, total	ND	0.00200	"	"	"	"	U
Gasoline Range Hydrocarbons	2.98	0.200	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4	113 %	70-130	"	"	"
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Origins Laboratory, Inc.



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Jen Pellegrini, Project Manager

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Herbst #1

WH-SS-02@5'
1/9/2023 11:22:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y301113-02 (Soil)

GBTEX+TMBs by 8260D

Surrogate: Toluene-d8	96.1 %	70-130	B3A09 20	01/09/2023	01/10/2023
Surrogate: 4-Bromofluorobenzene	88.2 %	70-130	"	"	"

Metals by Saturated Paste by EPA 6010

Calcium	2.23	0.499	meq/L	10	[CALC]	01/11/2023	01/12/2023
Magnesium	ND	0.823	"	"	"	"	"
Sodium	2.95	0.435	"	"	"	"	"

PAH by 8270D SIM

1-Methylnaphthalene	0.0439	0.00109	0.00201	mg/Kg	1	L657997	01/11/2023	01/12/2023
2-Methylnaphthalene	0.0569	0.00194	0.00201	"	"	"	"	"
Acenaphthene	0.0286	0.000304	0.00067	"	"	"	"	"
Anthracene	0.00109	0.000334	0.00067	"	"	"	"	"
Benzo(a)anthracene	0.00237	0.000493	0.00067	"	"	"	"	"
Benzo(a)pyrene	0.000613	0.000468	0.00067	"	"	"	"	" J
Benzo(b)fluoranthene	0.000586	0.000585	0.00067	"	"	"	"	" J
Benzo(k)fluoranthene	ND	0.000437	0.00067	"	"	"	"	"
Chrysene	0.00314	0.000624	0.00067	"	"	"	"	"
Dibenz(a,h)anthracene	ND	0.000614	0.00067	"	"	"	"	"
Fluoranthene	0.000629	0.000394	0.00067	"	"	"	"	" J
Fluorene	0.0391	0.000286	0.00067	"	"	"	"	"

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Herbst #1

WH-SS-02@5'

1/9/2023 11:22:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Waypoint Analytical, LLC. Y301113-02 (Soil)

PAH by 8270D SIM

Indeno(1,2,3-cd)pyrene	0.000902	0.000627	0.00067	mg/Kg	1	L657997	01/11/2023	01/12/2023
Naphthalene	0.0106	0.00145	0.00201	"	"	"	"	"
Pyrene	ND	0.000643	0.00067	"	"	"	"	"

Surrogate: 2-Fluorobiphenyl	38.5 %	33-115	"	"	"
Surrogate: 4-Terphenyl-d14	40.3 %	33-122	"	"	"
Surrogate: Nitrobenzene-d5	44 %	29-110	"	"	"

pH in Soil by 9045D

pH	8.10	pH Units	1	B3A1105	01/11/2023	01/12/2023
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SAR by 20B Saturated Paste

SAR	2.55	SAR	1	B3A1103	01/11/2023	01/12/2023
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	1.14	0.00500	mmhos/cm	1	B3A1105	01/11/2023	01/12/2023
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Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Jen Pellegrini, Project Manager

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Herbst #1

WH-SS-03@5'
1/9/2023 11:24:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y301113-03 (Soil)

Boron (DTPA Sorbitol)

Boron	1.02	0.0986	mg/L	1	B3A1009	01/10/2023	01/11/2023	
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DRO/ORO by EPA 8015D

Diesel (C10-C28)	111	25.0	mg/kg	1	B3A1001	01/10/2023	01/11/2023	
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	U

Surrogate: o-Terphenyl	102 %	50-150	"	"	"	"	"	
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GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND	0.00200	mg/kg	1	B3A0920	01/09/2023	01/10/2023	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

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Herbst #1

WH-SS-03@5'
1/9/2023 11:24:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y301113-03 (Soil)

GBTEX+TMBs by 8260D

Surrogate: 1,2-Dichloroethane-d4	112 %		70-130			B3A09 20	01/09/2023	01/10/2023
Surrogate: Toluene-d8	95.8 %		70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	96.0 %		70-130			"	"	"

Metals by Saturated Paste by EPA 6010

Calcium	3.79		0.499	meq/L	10	[CALC]	01/11/2023	01/12/2023
Magnesium	0.842		0.823	"	"	"	"	"
Sodium	5.88		0.435	"	"	"	"	"

PAH by 8270D SIM

1-Methylnaphthalene	ND	0.00549	0.0101	mg/Kg	5	L657997	01/11/2023	01/12/2023
2-Methylnaphthalene	ND	0.00972	0.0101	"	"	"	"	"
Acenaphthene	0.00349	0.00152	0.00335	"	"	"	"	"
Anthracene	ND	0.00167	0.00335	"	"	"	"	"
Benzo(a)anthracene	0.00399	0.00247	0.00335	"	"	"	"	"
Benzo(a)pyrene	ND	0.00234	0.00335	"	"	"	"	"
Benzo(b)fluoranthene	ND	0.00293	0.00335	"	"	"	"	"
Benzo(k)fluoranthene	ND	0.00219	0.00335	"	"	"	"	"
Chrysene	0.0142	0.00312	0.00335	"	"	"	"	"
Dibenz(a,h)anthracene	ND	0.00307	0.00335	"	"	"	"	"
Fluoranthene	ND	0.00197	0.00335	"	"	"	"	"

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Herbst #1

WH-SS-03@5'
1/9/2023 11:24:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Waypoint Analytical, LLC.
Y301113-03 (Soil)

PAH by 8270D SIM

Fluorene	0.0143	0.00143	0.00335	mg/Kg	5	L657997	01/11/2023	01/12/2023
Indeno(1,2,3-cd)pyrene	ND	0.00314	0.00335	"	"	"	"	"
Naphthalene	ND	0.0073	0.0101	"	"	"	"	"
Pyrene	0.00481	0.00322	0.00335	"	"	"	"	"

Surrogate: 2-Fluorobiphenyl	48.5 %	33-115	"	"	"
Surrogate: 4-Terphenyl-d14	47.3 %	33-122	"	"	"
Surrogate: Nitrobenzene-d5	48.2 %	29-110	"	"	"

pH in Soil by 9045D

pH	7.95	pH Units	1	B3A1105	01/11/2023	01/12/2023
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SAR by 20B Saturated Paste

SAR	3.86	SAR	1	B3A1103	01/11/2023	01/12/2023
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	1.30	0.00500	mmhos/cm	1	B3A1105	01/11/2023	01/12/2023
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Origins Laboratory, Inc.



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Jen Pellegrini, Project Manager

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Herbst #1

WH-SS-04@5'
1/9/2023 11:26:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y301113-04 (Soil)

Boron (DTPA Sorbitol)

Boron	0.768	0.0984	mg/L	1	B3A1009	01/10/2023	01/11/2023
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DRO/ORO by EPA 8015D

Diesel (C10-C28)	1090	25.0	mg/kg	1	B3A1001	01/10/2023	01/11/2023
Residual Range Organics (C28-C40)	230	100	"	"	"	"	"

Surrogate: o-Terphenyl	99.1 %	50-150	"	"	"
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GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	0.0253	0.00200	mg/kg	1	B3A0920	01/09/2023	01/10/2023
1,3,5-Trimethylbenzene	ND	0.00200	"	"	"	"	U
Benzene	ND	0.00200	"	"	"	"	U
Ethylbenzene	ND	0.00200	"	"	"	"	U
Naphthalene	0.136	0.00380	"	"	"	"	
Toluene	ND	0.00200	"	"	"	"	U
Xylenes, total	ND	0.00200	"	"	"	"	U
Gasoline Range Hydrocarbons	26.8	5.00	"	25	"	"	01/12/2023

Surrogate: 1,2-Dichloroethane-d4	114 %	70-130	"	"	01/10/2023
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Origins Laboratory, Inc.



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Jen Pellegrini, Project Manager

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Herbst #1

WH-SS-04@5'

1/9/2023 11:26:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y301113-04 (Soil)

GBTEX+TMBs by 8260D

Surrogate: Toluene-d8	93.8 %	70-130	B3A09 20	01/09/2023	01/10/2023
Surrogate: 4-Bromofluorobenzene	82.7 %	70-130	"	"	"

Metals by Saturated Paste by EPA 6010

Calcium	6.73	0.499	meq/L	10	[CALC]	01/11/2023	01/12/2023
Magnesium	1.78	0.823	"	"	"	"	"
Sodium	7.15	0.435	"	"	"	"	"

PAH by 8270D SIM

1-Methylnaphthalene	0.467	0.00549	0.0101	mg/Kg	5	L657997	01/11/2023	01/12/2023
2-Methylnaphthalene	0.721	0.00972	0.0101	"	"	"	"	"
Acenaphthene	0.0843	0.00152	0.00335	"	"	"	"	"
Anthracene	0.00919	0.00167	0.00335	"	"	"	"	"
Benzo(a)anthracene	0.00461	0.00247	0.00335	"	"	"	"	"
Benzo(a)pyrene	ND	0.00234	0.00335	"	"	"	"	"
Benzo(b)fluoranthene	ND	0.00293	0.00335	"	"	"	"	"
Benzo(k)fluoranthene	ND	0.00219	0.00335	"	"	"	"	"
Chrysene	0.012	0.00312	0.00335	"	"	"	"	"
Dibenz(a,h)anthracene	ND	0.00307	0.00335	"	"	"	"	"
Fluoranthene	0.00315	0.00197	0.00335	"	"	"	"	"
Fluorene	0.147	0.00143	0.00335	"	"	"	"	"

Origins Laboratory, Inc.



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Jen Pellegrini, Project Manager

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Herbst #1

WH-SS-04@5'
1/9/2023 11:26:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Waypoint Analytical, LLC.
Y301113-04 (Soil)

PAH by 8270D SIM

Indeno(1,2,3-cd)pyrene	ND	0.00314	0.00335	mg/Kg	5	L657997	01/11/2023	01/12/2023
Naphthalene	0.102	0.0073	0.0101	"	"	"	"	"
Pyrene	0.0258	0.00322	0.00335	"	"	"	"	"

Surrogate: 2-Fluorobiphenyl	48.9 %		33-115			"	"	"
Surrogate: 4-Terphenyl-d14	50.5 %		33-122			"	"	"
Surrogate: Nitrobenzene-d5	50.8 %		29-110			"	"	"

pH in Soil by 9045D

pH	7.43			pH Units	1	B3A1106	01/11/2023	01/12/2023
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SAR by 20B Saturated Paste

SAR	3.46			SAR	1	B3A1104	01/11/2023	01/12/2023
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	1.70		0.00500	mmhos/cm	1	B3A1106	01/11/2023	01/12/2023
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Origins Laboratory, Inc.



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Jen Pellegrini, Project Manager

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Herbst #1

WH-FS-01@6'
1/9/2023 11:28:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y301113-05 (Soil)

Boron (DTPA Sorbitol)

Boron	0.885	0.100	mg/L	1	B3A1009	01/10/2023	01/11/2023
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DRO/ORO by EPA 8015D

Diesel (C10-C28)	2430	25.0	mg/kg	1	B3A1001	01/10/2023	01/11/2023
Residual Range Organics (C28-C40)	521	100	"	"	"	"	"

Surrogate: o-Terphenyl	141 %	50-150	"	"	"
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GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	0.0971	0.00200	mg/kg	1	B3A0920	01/09/2023	01/10/2023
1,3,5-Trimethylbenzene	ND	0.00200	"	"	"	"	U
Benzene	ND	0.00200	"	"	"	"	U
Ethylbenzene	0.00472	0.00200	"	"	"	"	"
Naphthalene	0.349	0.00380	"	"	"	"	"
Toluene	ND	0.00200	"	"	"	"	U
Xylenes, total	0.00362	0.00200	"	"	"	"	"
Gasoline Range Hydrocarbons	66.4	5.00	"	25	"	"	01/12/2023

Surrogate: 1,2-Dichloroethane-d4	115 %	70-130	"	"	01/10/2023
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Origins Laboratory, Inc.



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Jen Pellegrini, Project Manager

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Herbst #1

WH-FS-01@6'

1/9/2023 11:28:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y301113-05 (Soil)

GBTEX+TMBs by 8260D

Surrogate: Toluene-d8	114 %		70-130			B3A09 20	01/09/2023	01/10/2023	
Surrogate: 4-Bromofluorobenzene	90.1 %		70-130			"	"	"	

Metals by Saturated Paste by EPA 6010

Calcium	3.83		0.499	meq/L	10	[CALC]	01/11/2023	01/12/2023	
Magnesium	1.19		0.823	"	"	"	"	"	
Sodium	4.82		0.435	"	"	"	"	"	

PAH by 8270D SIM

1-Methylnaphthalene	5.03	0.0218	0.0402	mg/Kg	20	L657997	01/11/2023	01/12/2023	
2-Methylnaphthalene	6.52	0.0387	0.0402	"	"	"	"	"	
Acenaphthene	0.577	0.00608	0.0134	"	"	"	"	"	
Anthracene	0.0848	0.00668	0.0134	"	"	"	"	"	
Benzo(a)anthracene	0.0248	0.00986	0.0134	"	"	"	"	"	
Benzo(a)pyrene	0.0176	0.00936	0.0134	"	"	"	"	"	
Benzo(b)fluoranthene	ND	0.0117	0.0134	"	"	"	"	"	
Benzo(k)fluoranthene	ND	0.00874	0.0134	"	"	"	"	"	
Chrysene	0.0944	0.0125	0.0134	"	"	"	"	"	
Dibenz(a,h)anthracene	ND	0.0123	0.0134	"	"	"	"	"	
Fluoranthene	0.0679	0.00788	0.0134	"	"	"	"	"	
Fluorene	0.962	0.00572	0.0134	"	"	"	"	"	

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Herbst #1

WH-FS-01@6'

1/9/2023 11:28:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Waypoint Analytical, LLC.
Y301113-05 (Soil)

PAH by 8270D SIM

Indeno(1,2,3-cd)pyrene	ND	0.0125	0.0134	mg/Kg	20	L657997	01/11/2023	01/12/2023
Naphthalene	1.53	0.029	0.0402	"	"	"	"	"
Pyrene	0.264	0.0129	0.0134	"	"	"	"	"

Surrogate: 2-Fluorobiphenyl	51.4 %		33-115			"	"	"
Surrogate: 4-Terphenyl-d14	56.9 %		33-122			"	"	"
Surrogate: Nitrobenzene-d5	66.1 %		29-110			"	"	"

pH in Soil by 9045D

pH	7.21			pH Units	1	B3A1106	01/11/2023	01/12/2023
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SAR by 20B Saturated Paste

SAR	3.04			SAR	1	B3A1104	01/11/2023	01/12/2023
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	1.30		0.00500	mmhos/cm	1	B3A1106	01/11/2023	01/12/2023
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Origins Laboratory, Inc.



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Jen Pellegrini, Project Manager

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Herbst #1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B3A0920 - EPA 5030 (soil)										
Blank (B3A0920-BLK1)					Prepared: 01/09/2023 Analyzed: 01/10/2023					
1,2,4-Trimethylbenzene	ND	0.00200	mg/kg							U
1,3,5-Trimethylbenzene	ND	0.00200	"							U
Benzene	ND	0.00200	"							U
Ethylbenzene	ND	0.00200	"							U
Naphthalene	ND	0.00380	"							U
Toluene	ND	0.00200	"							U
Xylenes, total	ND	0.00200	"							U
Gasoline Range Hydrocarbons	ND	0.200	"							U
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125	104		70-130			
Surrogate: Toluene-d8	0.12		"	0.125	97.9		70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125	95.7		70-130			

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Herbst #1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B3A0920 - EPA 5030 (soil)										
LCS (B3A0920-BS1)					Prepared: 01/09/2023 Analyzed: 01/10/2023					
1,2,4-Trimethylbenzene	0.0948	0.00200	mg/kg	0.100		94.8	70-130			
1,3,5-Trimethylbenzene	0.0988	0.00200	"	0.100		98.8	70-130			
Benzene	0.0943	0.00200	"	0.100		94.3	70-130			
Ethylbenzene	0.0999	0.00200	"	0.100		99.9	70-130			
Naphthalene	0.0899	0.00380	"	0.100		89.9	70-130			
Toluene	0.0931	0.00200	"	0.100		93.1	70-130			
o-Xylene	0.0937	0.00200	"	0.100		93.7	70-130			
m,p-Xylene	0.198	0.00400	"	0.200		99.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		96.8	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		98.1	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		103	70-130			

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Herbst #1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B3A0920 - EPA 5030 (soil)										
Matrix Spike Dup (B3A0920-MSD1)		Source: Y301094-01			Prepared: 01/09/2023 Analyzed: 01/10/2023					
1,2,4-Trimethylbenzene	0.0894	0.00200	mg/kg	0.100	0.000460	89.0	70-130	17.4	20	
1,3,5-Trimethylbenzene	0.0924	0.00200	"	0.100	ND	92.4	70-130	17.0	20	
Benzene	0.0930	0.00200	"	0.100	ND	93.0	70-130	20.8	20	QR-02
Ethylbenzene	0.0956	0.00200	"	0.100	ND	95.6	70-130	20.0	20	
Naphthalene	0.0846	0.00380	"	0.100	ND	84.6	70-130	13.8	20	
Toluene	0.0909	0.00200	"	0.100	0.00210	88.8	70-130	22.5	20	QR-02
o-Xylene	0.0892	0.00200	"	0.100	0.000560	88.7	70-130	19.9	20	
m,p-Xylene	0.186	0.00400	"	0.200	0.00160	92.3	70-130	20.6	20	QR-02
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		100	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		99.7	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		100	70-130			

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Herbst #1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B3A1001 - EPA 3580										
Blank (B3A1001-BLK1)					Prepared: 01/10/2023 Analyzed: 01/11/2023					
Diesel (C10-C28)	ND	25.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	100	"							U
Surrogate: o-Terphenyl	28		"	24.9		112	50-150			

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Herbst #1

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 B3A1001 - EPA 3580

LCS (B3A1001-BS1)

Prepared: 01/10/2023 Analyzed: 01/11/2023

Diesel (C10-C28)	1040	50.0	mg/kg	1000		104	70-130			
Residual Range Organics (C28-C40)	961	200	"	1000		96.1	70-130			
Surrogate: o-Terphenyl	56		"	49.8		113	50-150			

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Herbst #1

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 B3A1001 - EPA 3580

Matrix Spike (B3A1001-MS1)		Source: Y301105-01			Prepared: 01/10/2023 Analyzed: 01/11/2023					
Diesel (C10-C28)	1020	50.0	mg/kg	1000	ND	102	70-130			
Residual Range Organics (C28-C40)	989	200	"	1000	ND	98.9	70-130			
Surrogate: o-Terphenyl	51		"	49.8		103	50-150			

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Herbst #1

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 B3A1001 - EPA 3580

Matrix Spike Dup (B3A1001-MSD1)		Source: Y301105-01			Prepared: 01/10/2023 Analyzed: 01/11/2023					
Diesel (C10-C28)	936	50.0	mg/kg	1000	ND	93.6	70-130	8.75	35	
Residual Range Organics (C28-C40)	931	200	"	1000	ND	93.1	70-130	6.07	35	
Surrogate: o-Terphenyl	48		"	49.8		95.9	50-150			

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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8000 W 44th Ave
Wheat Ridge CO 80033

Martin C Eckert III
Project Number: [none]
Project: Noble - Herbst #1

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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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 B3A1009 - DTPA Sorbitol Preparation

Blank (B3A1009-BLK1)

Prepared: 01/10/2023 Analyzed: 01/11/2023

Boron	ND	0.100	mg/L							U
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Duplicate (B3A1009-DUP1)

Source: Y301096-01

Prepared: 01/10/2023 Analyzed: 01/11/2023

Boron	0.649	0.100	mg/L		0.570			13.0	50	
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Batch B3A1103 - Saturated Paste Metals

Blank (B3A1103-BLK1)

Prepared: 01/11/2023 Analyzed: 01/12/2023

SAR	0.00		SAR							U
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Calcium PPM	ND	10.0	mg/L							U
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Magnesium PPM	ND	10.0	"							U
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Sodium PPM	ND	10.0	"							U
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Duplicate (B3A1103-DUP1)

Source: Y301111-01

Prepared: 01/11/2023 Analyzed: 01/12/2023

SAR	0.00		SAR	3.22			200	200		U
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Calcium PPM	72.0	10.0	mg/L	73.6			2.18	50		
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Magnesium PPM	19.2	10.0	"	17.2			11.2	50		
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Sodium PPM	120	10.0	"	118			1.66	50		
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Batch B3A1104 - Saturated Paste Metals

Blank (B3A1104-BLK1)

Prepared: 01/11/2023 Analyzed: 01/12/2023

Calcium PPM	ND	10.0	mg/L							U
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Origins Laboratory, Inc.



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Jen Pellegrini, Project Manager

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Herbst #1

Classical Chemistry Parameters - Quality Control Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B3A1104 - Saturated Paste Metals										
Blank (B3A1104-BLK1)					Prepared: 01/11/2023 Analyzed: 01/12/2023					
SAR	0.00		SAR							U
Magnesium PPM	ND	10.0	mg/L							U
Sodium PPM	ND	10.0	"							U
Duplicate (B3A1104-DUP1)					Source: Y301113-04 Prepared: 01/11/2023 Analyzed: 01/12/2023					
SAR	0.00		SAR		3.46			200	200	U
Calcium PPM	137	10.0	mg/L		135			1.45	50	
Magnesium PPM	22.2	10.0	"		21.6			2.80	50	
Sodium PPM	150	10.0	"		164			8.93	50	

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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Wheat Ridge CO 80033

Martin C Eckert III
Project Number: [none]
Project: Noble - Herbst #1

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 B3A1105 - Saturated Paste pH/EC

Blank (B3A1105-BLK1)

Prepared: 01/11/2023 Analyzed: 01/12/2023

Specific Conductance (EC)	ND	0.00500	mmhos/cm							U
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Duplicate (B3A1105-DUP1)

Source: Y301111-01

Prepared: 01/11/2023 Analyzed: 01/12/2023

Specific Conductance (EC)	1.17	0.00500	mmhos/cm		1.16			0.456	25	
pH	8.03		pH Units		8.93			10.6	25	

Batch B3A1106 - Saturated Paste pH/EC

Blank (B3A1106-BLK1)

Prepared: 01/11/2023 Analyzed: 01/12/2023

Specific Conductance (EC)	ND	0.00500	mmhos/cm							U
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Duplicate (B3A1106-DUP1)

Source: Y301113-04

Prepared: 01/11/2023 Analyzed: 01/12/2023

pH	7.29		pH Units		7.43			1.90	25	
Specific Conductance (EC)	1.74	0.00500	mmhos/cm		1.70			2.36	25	

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Herbst #1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch L657997 - 3550B

MSD (L 91059-MSD-L657997)		Source: 91059			Prepared: 01/11/2023 Analyzed: 01/12/2023					
Chrysene	0.116	0.00067	mg/Kg	0.164	<0.000624	70.7	30-130	3.5	30	
Pyrene	0.11	0.00067	"	0.164	<0.000643	67	30-130	5.6	30	
Naphthalene	0.0954	0.00201	"	0.164	<0.00145	58.1	30-130	10.4	30	
Indeno(1,2,3-cd)pyrene	0.0925	0.00067	"	0.164	<0.000627	56.4	30-130	13.6	30	
Fluorene	0.106	0.00067	"	0.164	<0.000286	64.6	30-130	4.8	30	
Dibenz(a,h)anthracene	0.0995	0.00067	"	0.164	<0.000614	60.6	30-130	15.3	30	
Benzo(k)fluoranthene	0.094	0.00067	"	0.164	<0.000437	57.3	30-130	0.7	30	
2-Methylnaphthalene	0.108	0.00201	"	0.164	<0.00194	65.8	30-130	10	30	
Fluoranthene	0.114	0.00067	"	0.164	<0.000394	69.5	30-130	2.6	30	
Benzo(b)fluoranthene	0.0884	0.00067	"	0.164	<0.000585	53.9	30-130	5.2	30	
Acenaphthene	0.101	0.00067	"	0.164	<0.000304	61.5	30-130	6.6	30	
Anthracene	0.104	0.00067	"	0.164	<0.000334	63.4	30-130	4.9	30	
Benzo(a)anthracene	0.108	0.00067	"	0.164	<0.000493	65.8	30-130	5.7	30	
Benzo(a)pyrene	0.115	0.00067	"	0.164	<0.000468	70.1	30-130	1.7	30	
1-Methylnaphthalene	0.0934	0.00201	"	0.164	<0.00109	56.9	30-130	10	30	
Surrogate: Nitrobenzene-d5	56.8		"	0.329	148	56.8	29-110			
Surrogate: 2-Fluorobiphenyl	52.5		"	0.329	127	52.5	33-115			
Surrogate: 4-Terphenyl-d14	58.6		"	0.329	145	58.6	33-122			

MS (L 91059-MS-L657997)		Source: 91059			Prepared: 01/11/2023 Analyzed: 01/12/2023					
Benzo(k)fluoranthene	0.0947	0.00067	mg/Kg	0.164	<0.000437	57.7	30-130			
Naphthalene	0.0859	0.00201	"	0.164	<0.00145	52.3	30-130			
Indeno(1,2,3-cd)pyrene	0.106	0.00067	"	0.164	<0.000627	64.6	30-130			
Fluorene	0.101	0.00067	"	0.164	<0.000286	61.5	30-130			
Fluoranthene	0.111	0.00067	"	0.164	<0.000394	67.6	30-130			
Dibenz(a,h)anthracene	0.116	0.00067	"	0.164	<0.000614	70.7	30-130			
Chrysene	0.112	0.00067	"	0.164	<0.000624	68.2	30-130			

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Herbst #1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch L657997 - 3550B

MS (L 91059-MS-L657997)		Source: 91059			Prepared: 01/11/2023 Analyzed: 01/12/2023					
Benzo(b)fluoranthene	0.0839	0.00067	mg/Kg	0.164	<0.000585	51.1	30-130			
Pyrene	0.104	0.00067	"	0.164	<0.000643	63.4	30-130			
1-Methylnaphthalene	0.0845	0.00201	"	0.164	<0.00109	51.5	30-130			
2-Methylnaphthalene	0.0977	0.00201	"	0.164	<0.00194	59.5	30-130			
Acenaphthene	0.0945	0.00067	"	0.164	<0.000304	57.6	30-130			
Anthracene	0.099	0.00067	"	0.164	<0.000334	60.3	30-130			
Benzo(a)anthracene	0.102	0.00067	"	0.164	<0.000493	62.1	30-130			
Benzo(a)pyrene	0.113	0.00067	"	0.164	<0.000468	68.9	30-130			
Surrogate: Nitrobenzene-d5	52.1		"	0.328	148	52.1	29-110			
Surrogate: 2-Fluorobiphenyl	47.2		"	0.328	127	47.2	33-115			
Surrogate: 4-Terphenyl-d14	57.6		"	0.328	145	57.6	33-122			

LCS (LCS-L657997)		Prepared: 01/11/2023 Analyzed: 01/12/2023								
Pyrene	0.107	0.00067	mg/Kg	0.167		64	30-130			
Fluoranthene	0.112	0.00067	"	0.167		67	30-130			
Benzo(k)fluoranthene	0.0868	0.00067	"	0.167		51.9	30-130			
Naphthalene	0.0926	0.00201	"	0.167		55.4	30-130			
Fluorene	0.101	0.00067	"	0.167		60.4	30-130			
Dibenz(a,h)anthracene	0.0997	0.00067	"	0.167		59.7	30-130			
Chrysene	0.117	0.00067	"	0.167		70	30-130			
1-Methylnaphthalene	0.0934	0.00201	"	0.167		55.9	30-130			
Benzo(a)pyrene	0.117	0.00067	"	0.167		70	30-130			
Benzo(a)anthracene	0.108	0.00067	"	0.167		64.6	30-130			
Anthracene	0.103	0.00067	"	0.167		61.6	30-130			
Acenaphthene	0.0956	0.00067	"	0.167		57.2	30-130			
2-Methylnaphthalene	0.104	0.00201	"	0.167		62.2	30-130			
Indeno(1,2,3-cd)pyrene	0.094	0.00067	"	0.167		56.2	30-130			

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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Wheat Ridge CO 80033

Martin C Eckert III
Project Number: [none]
Project: Noble - Herbst #1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch L657997 - 3550B

LCS (LCS-L657997)

Prepared: 01/11/2023 Analyzed: 01/12/2023

Benzo(b)fluoranthene	0.0864	0.00067	mg/Kg	0.167		51.7	30-130			
Surrogate: Nitrobenzene-d5	52.8		"	0.333		52.8	29-110			
Surrogate: 4-Terphenyl-d14	60.6		"	0.333		60.6	33-122			
Surrogate: 2-Fluorobiphenyl	50.7		"	0.333		50.7	33-115			

LRB (LRB-L657997)

Prepared: 01/11/2023 Analyzed: 01/12/2023

Chrysene	ND	0.00067	mg/Kg				-			
Dibenz(a,h)anthracene	ND	0.00067	"				-			
Fluoranthene	ND	0.00067	"				-			
Fluorene	ND	0.00067	"				-			
Indeno(1,2,3-cd)pyrene	ND	0.00067	"				-			
Benzo(k)fluoranthene	ND	0.00067	"				-			
Naphthalene	ND	0.00201	"				-			
Benzo(b)fluoranthene	ND	0.00067	"				-			
Benzo(a)pyrene	ND	0.00067	"				-			
Benzo(a)anthracene	ND	0.00067	"				-			
Acenaphthene	ND	0.00067	"				-			
2-Methylnaphthalene	ND	0.00201	"				-			
1-Methylnaphthalene	ND	0.00201	"				-			
Pyrene	ND	0.00067	"				-			
Anthracene	ND	0.00067	"				-			
Surrogate: Nitrobenzene-d5	55.5		"	0.333		55.5	29-110			
Surrogate: 4-Terphenyl-d14	54.6		"	0.333		54.6	33-122			
Surrogate: 2-Fluorobiphenyl	49.2		"	0.333		49.2	33-115			

Origins Laboratory, Inc.



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8000 W 44th Ave
Wheat Ridge CO 80033

Martin C Eckert III
Project Number: [none]
Project: Noble - Herbst #1

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.

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.

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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