

# Wellhead Closure Checklist

## COGCC Rule 911.a.(4) Environmental Site Closure Assessment Field Form

Additional attachments (optional):		Pit Closure		Tank Battery Closure		Flowline Closure		Partially Buried Vault Closure
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Site Name & COGCC Facility Number: Guttersen D #30-68-1HN	Date: 10-19-23	Remediation Project #: 30548
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Associated Wells: 05-123-35611	Age of Site: years	Number of Photos Attached: 6
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Location: (GPS coordinates of wellhead or southeastern most wellhead for multiple) 40.199950 / -104.583230	Estimated Facility Size (acres):
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General Condition of Site: (General observations regarding housekeeping, corrosion, waste management, etc.)

Site in good condition

USCS Soil Type: SW	Estimated Depth to Groundwater: >20'
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Hydrocarbon Impacted Soils / Spills: (Note estimated size and if impact appears to be surficial or extends to an unknown depth)

None observed

Salt Crusted Soils or Impacted Vegetation: (Note estimated size and if impact appears to be surficial or extends to an unknown depth)

None observed

### Wellhead(s)

Well API	05-123-35611					
Age	years					
Condition of surface around wellhead	Good - no staining/no odor					
PID Readings	WH-N: 1.1	WH-E: 0.7	WH-S: 2.4	WH-W: 1.6		
Condition of subsurface (staining present)	Good - no staining/no odor					
PID Readings	2.3	1.9	2.1	2.1	2.2	
Sample taken? Location/Sample ID#	WH-FS-01	WH-SS-01	WH-SS-02	WH-SS-03	WH-SS-04	
Photo Number(s)	See photolog					

Other observations regarding wellheads:

### Summary

Was impacted soil identified?  
 No     Yes - less than 10 cubic yards     Yes - more than 10 cubic yards

Total number of samples field screened: 9	Total number of samples collected: 9
---	--------------------------------------

Highest PID Reading: 2.4	Total number of samples submitted to lab for analysis: 1
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If more than 10 cubic yards of impacted soil were observed:

Vertical extent:	Estimated spill volume:
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Lateral extent:	Volume of soil removed:
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Is additional investigation required?

Was groundwater encountered during the investigation?  
 No     Yes - not impacted or in contact with impacted soils     Yes - groundwater impacted and/or in contact with impacted soils

Measured depth to groundwater:	Was remedial groundwater removal conducted? <input type="checkbox"/> Yes <input type="checkbox"/> No
--------------------------------	--

Date Groundwater was encountered:	Commencement date of removal:
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Sheen on groundwater? <input type="checkbox"/> Yes <input type="checkbox"/> No	Volume of groundwater removed prior to sampling:
--	--

Free product observed? <input type="checkbox"/> Yes <input type="checkbox"/> No	Volume of groundwater removed post sampling:
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Total number of samples collected:	Total Volume of groundwater removed:
------------------------------------	--------------------------------------

Total number of samples submitted to lab for analysis:	
--	--



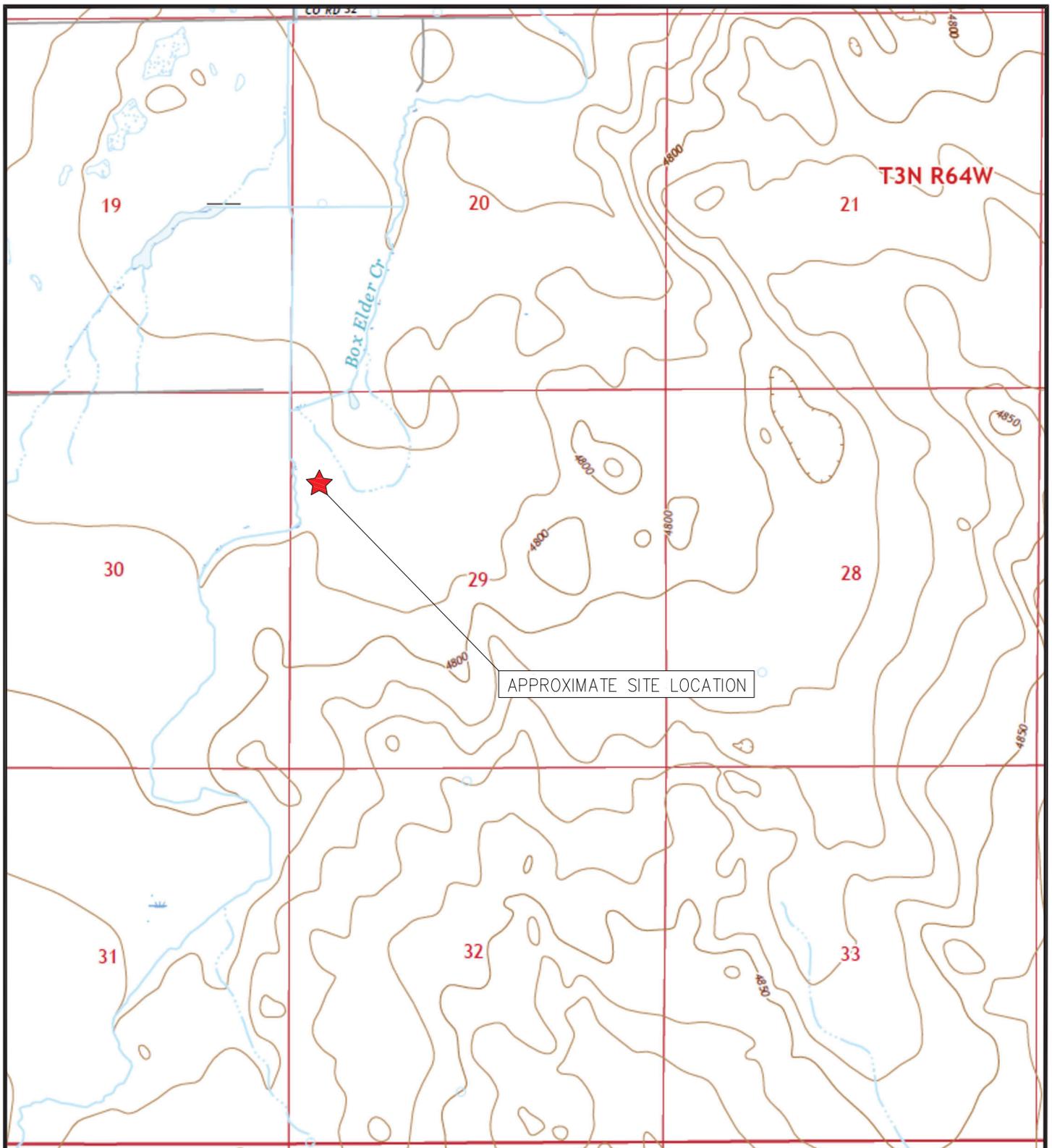
## **FIGURES**

**Figure 1: Topographic Site Location Map**

**Figure 2: Aerial Site Location Map**

**Figure 3: Soil Analytical Map**

**Figure 4: Metals in Soil Map**



APPROXIMATE SITE LOCATION



TOPOGRAPHIC SITE LOCATION MAP  
 GUTTERSEN D #30-68-1HN  
 CLOSURE ASSESSMENT  
 40.199950 / -104.583230  
 NW¼ NW¼ SEC.29 T3N R64W 6PM  
 WELD COUNTY, COLORADO  
 API # 05-123-35611  
 REMEDIATION # 30548



**EAGLE**  
 ENVIRONMENTAL  
 CONSULTING, LLC

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

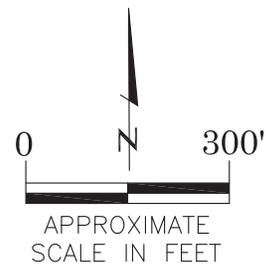
SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC MAP,  
 KLUG RANCH, CO QUADRANGLE 2022

FIGURE NO. 1



LEGEND

-  FORMER GUTTERSEN D #30-68-1HN WELLHEAD (PLUGGED AND ABANDONED)
-  ASSOCIATED SEPARATOR
-  APPROXIMATE FLOWLINE LOCATION



AERIAL SITE LOCATION MAP  
GUTTERSEN D #30-68-1HN  
CLOSURE ASSESSMENT  
40.199950 / -104.583230  
NW $\frac{1}{4}$  NW $\frac{1}{4}$  SEC.29 T3N R64W 6PM  
WELD COUNTY, COLORADO  
API # 05-123-35611  
REMEDATION # 30548

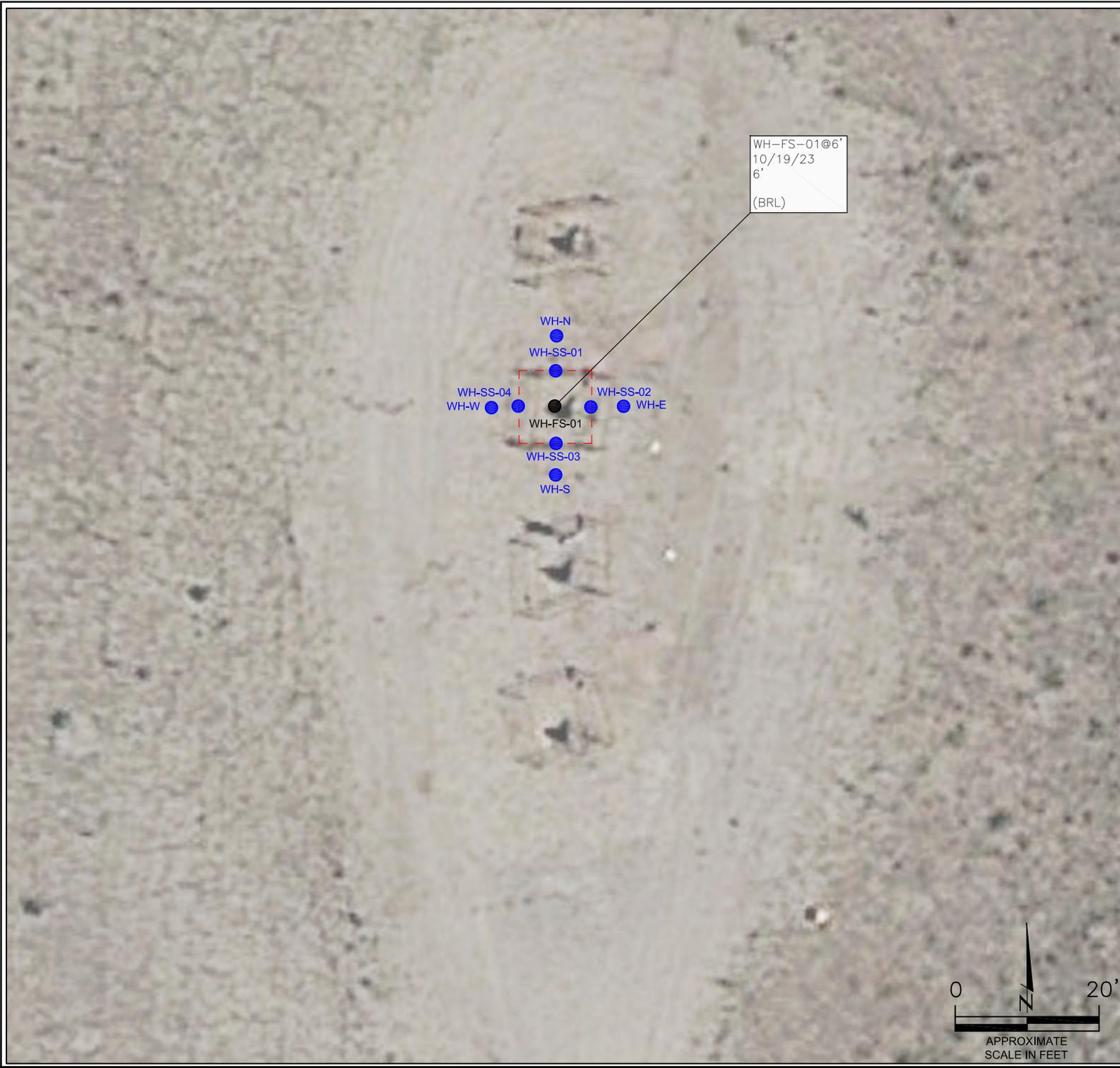
FIGURE NO.  
2

DRAWN BY:  
JF



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**LEGEND**

- WELLHEAD ASSESSMENT BOUNDARIES
- APPROXIMATE LOCATION OF SOIL SAMPLES FIELD SCREENED, ONLY, WITH PHOTOIONIZATION DETECTOR
- 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)  
 N = NAPHTHALENE (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)  
 POLYCYCLIC AROMATIC HYDROCARBONS (PAHs) (mg/kg)

mg/kg = MILLIGRAMS PER KILOGRAM  
 mg/L = MILLIGRAMS PER LITER  
 mmhos/cm = MILLIMHOS PER CENTIMETER

(BRL) = ALL VALUES BELOW REGULATORY LIMITS

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 IN **BOLD** EXCEED ECMC TABLE 915-1 REGULATORY LIMITS.

ECMC = ENERGY & CARBON MANAGEMENT COMMISSION

SOIL ANALYTICAL MAP  
 GUTTERSEN D #30-68-1HN  
 CLOSURE ASSESSMENT  
 40.199950 / -104.583230  
 NW¼ NW¼ SEC.29 T3N R64W 6PM  
 WELD COUNTY, COLORADO  
 API # 05-123-35611  
 REMEDIATION # 30548

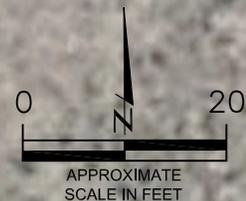


FIGURE NO.

3

DRAWN BY:

BU

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WH-FS-01@6'  
10/17/23  
6'

Arsenic = 1.56  
Barium = 116\*  
Cadmium = <0.0846  
Chromium (VI) = <0.164\*\*  
Copper = <8.46  
Lead = <8.46  
Nickel = <8.46  
Selenium = <0.0846  
Silver = <0.0846  
Zinc = <84.6

BACKGROUND-01@2'  
10/17/23  
2'

Arsenic = 1.86  
Barium = 147\*  
Cadmium = NA  
Chromium (VI) = NA  
Copper = NA  
Lead = NA  
Nickel = NA  
Selenium = NA  
Silver = NA  
Zinc = NA



**LEGEND**

- WELLHEAD ASSESSMENT BOUNDARIES
- SS-02 APPROXIMATE LOCATION OF SOIL SAMPLES FIELD SCREENED, ONLY, WITH PHOTOIONIZATION DETECTOR
- APPROXIMATE LOCATION OF SOIL SAMPLES SUBMITTED FOR LABORATORY ANALYSIS

**PARAMETERS**

SAMPLE LOCATION  
DATE SAMPLE COLLECTED  
APPROXIMATE DEPTH  
Arsenic = (mg/kg)  
Barium = (mg/kg)  
Cadmium = (mg/kg)  
Chromium (VI) = (mg/kg)  
Copper = (mg/kg)  
Lead = (mg/kg)  
Nickel = (mg/kg)  
Selenium = (mg/kg)  
Silver = (mg/kg)  
Zinc = (mg/kg)

mg/kg = MILLIGRAMS PER KILOGRAM

NA = NOT ANALYZED

NOTES:  
VALUES PRESENTED WITH A LESS THAN SYMBOL (<) DID NOT CONTAIN CONCENTRATIONS AT/OR ABOVE LABORATORY REPORTING LIMITS AND/OR MINIMUM DETECTION LIMITS.

ELEVATED METALS ARE NATURALLY OCCURRING IN COLORADO. LOCAL CLEAN-UP LEVELS ARE 1.25\*BACKGROUND CONCENTRATIONS WHERE APPLICABLE.

VALUES PRESENTED IN **BOLD** EXCEED ECMC TABLE 915-1 REGULATORY LIMITS AND APPLICABLE LOCAL CLEAN-UP LEVELS.

\*VALUES EXCEED ECMC TABLE 915-1 PROTECTION OF GROUNDWATER SOIL SCREENING LEVELS, ONLY.

\*\*ACHIEVABLE PRACTICAL QUANTITATIVE LIMITS FOR HEXAVALENT CHROMIUM (Cr VI) IN SOILS IS IN THE RANGE OF 0.1 TO 1 mg/kg.

ECMC = ENERGY & CARBON MANAGEMENT COMMISSION

METALS IN SOIL MAP  
GUTTERSEN D #30-68-1HN  
CLOSURE ASSESSMENT  
40.199950 / -104.583230  
NW¼ NW¼ SEC.29 T3N R64W 6PM  
WELD COUNTY, COLORADO  
API # 05-123-35611  
REMEDIATION # 30548

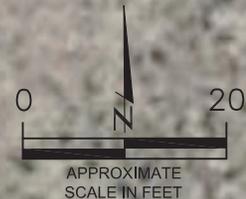


FIGURE NO.  
4

DRAWN BY:  
BU

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## **TABLES**

**Table 1: Photoionization Detector Reading Summary**

**Table 2: Soil Analytical Results Summary**

**TABLE 1**  
**PHOTOIONIZATION DETECTOR READING SUMMARY**  
**GUTTERSEN D #30-68-1HN**  
**CLOSURE ASSESSMENT**  
**40.199950 / -104.583230**  
**NW¼ NW¼ SEC.29 T3N R64W 6PM**  
**WELD COUNTY, COLORADO**  
**API # 05-123-35611**  
**REMEDIATION # 30548**

Sample Location (Latitude/Longitude)	Date	Approximate Depth (feet)	PID Reading (ppm-v)	Lab Submission (Y/N)
WH-FS-01 @ 6' (40.200005 / -104.583240)	10/19/23	6	2.3	Y
WH-SS-01 @ 5' (40.200020 / -104.583243)	10/19/23	5	1.9	N
WH-SS-02 @ 5' (40.200007 / -104.583220)	10/19/23	5	2.1	N
WH-SS-03 @ 5' (40.199994 / -104.583242)	10/19/23	5	2.1	N
WH-SS-04 @ 5' (40.200005 / -104.583258)	10/19/23	5	2.2	N
WH-N @ 0.5' (40.200035 / -104.583241)	10/19/23	0.5	1.1	N
WH-E @ 0.5' (40.200006 / -104.583203)	10/19/23	0.5	0.7	N
WH-S @ 0.5' (40.199980 / -104.583242)	10/19/23	0.5	2.4	N
WH-W @ 0.5' (40.200006 / -104.583279)	10/19/23	0.5	1.6	N
Background-01 @ 2' (40.200006 / -104.583330)	10/19/23	2	3.0	Y
(Y/N) = Yes or No ppm-v = parts per million by volume PID = Photoionization Detector				

TABLE 2  
 SOIL ANALYTICAL RESULTS SUMMARY  
 GUTTERSEN D #30-68-1HN  
 CLOSURE ASSESSMENT  
 40.199950 / -104.583230  
 NW¼ NW¼ SEC.29 T3N R64W 6PM  
 WELD COUNTY, COLORADO  
 API # 05-123-35611  
 REMEDIATION # 30548

Sample Location		WH-FS-01 @ 6'	Background-01 @ 2'			
(Latitude / Longitude)		(40.200005 / -104.583240)	(40.200006 / -104.583330)			
Sample Date		10/17/2023	10/17/2023			
Sample Depth		6	2			
PID Reading (ppm-v)		2.3	3.0			
Regulatory Limits						
Chemical of Concern	Units	ECMC Table 915-1 RSSLs	ECMC Table 915-1 GSSLs	Local Clean-Up Level		
<b>VOLATILE ORGANIC COMPOUNDS</b>						
Benzene	mg/kg	1.2	0.0026	--	<0.00200	NA
Toluene	mg/kg	490	0.69	--	<0.00200	NA
Ethylbenzene	mg/kg	5.8	0.78	--	<0.00200	NA
Total Xylenes	mg/kg	58	9.9	--	<0.00200	NA
Naphthalene	mg/kg	2	0.0038	--	<0.00380	NA
1,2,4-Trimethylbenzene	mg/kg	30	0.0081	--	<0.00200	NA
1,3,5-Trimethylbenzene	mg/kg	27	0.0087	--	<0.00200	NA
<b>TOTAL PETROLEUM HYDROCARBONS</b>						
TPH-GRO	mg/kg	500	--	--	<0.200	NA
TPH-DRO	mg/kg		--	--	<25.0	NA
TPH-RRO	mg/kg		--	--	<100	NA
<b>POLYCYCLIC AROMATIC HYDROCARBONS</b>						
1-Methyl-naphthalene	mg/kg	18	0.006	--	0.003	NA
2-Methyl-naphthalene	mg/kg	24	0.019	--	0.007	NA
Acenaphthene	mg/kg	360	0.55	--	<0.020	NA
Anthracene	mg/kg	1800	5.8	--	<0.020	NA
Benzo(a)-anthracene	mg/kg	1.1	0.011	--	<0.005	NA
Benzo(a)-pyrene	mg/kg	0.11	0.24	--	<0.002	NA
Benzo(b)-fluoranthene	mg/kg	1.1	0.3	--	<0.002	NA
Benzo(k)-fluoranthene	mg/kg	11	2.9	--	<0.002	NA
Chrysene	mg/kg	110	9	--	<0.002	NA
Dibenzo(a,h)-anthracene	mg/kg	0.11	0.096	--	<0.002	NA
Fluoranthene	mg/kg	240	8.9	--	<0.002	NA
Fluorene	mg/kg	240	0.54	--	<0.002	NA
Indeno(1,2,3-cd)-pyrene	mg/kg	1.1	0.98	--	<0.002	NA
Pyrene	mg/kg	180	1.3	--	<0.020	NA
<b>SOIL SUITABILITY (Inorganics)</b>						
Boron	mg/L	2	--	--	0.146	NA
pH	standard unit	6-8.3	--	--	8.24	NA
Sodium Adsorption Ratio (SAR)	--	<6	--	--	2.22	NA
Specific Conductance (EC)	mmhos/cm	<4	--	--	0.424	NA
<b>METALS</b>						
Arsenic	mg/kg	0.68	0.29	2.33	1.56	1.86
Barium	mg/kg	15000	82	184	116*	147*
Cadmium	mg/kg	71	0.38	--	<0.0846	NA
Copper	mg/kg	3100	46	--	<8.46	NA
Lead	mg/kg	400	14	--	<8.46	NA
Nickel	mg/kg	1500	26	--	<8.46	NA
Selenium	mg/kg	390	0.26	--	<0.0846	NA
Silver	mg/kg	390	0.8	--	<0.0846	NA
Zinc	mg/kg	23000	370	--	<84.6	NA
Hexavalent Chromium	mg/kg	0.3**	0.00067**	0.1 to 1.0**	<0.164**	NA
ECMC = Energy & Carbon Management Commission mg/kg = milligrams per kilogram mmhos/cm = millimhos per centimeter PID = Photoionization Detector ppm-v = parts per million by volume mg/L = milligrams per liter NA - Not Analyzed Notes: Values presented with a less than symbol (<) did not contain concentrations at or above the laboratory reporting limit and/or minimum detection limit. Elevated metals are naturally occurring in Colorado. Local Clean-up Levels are 1.25*Background concentrations where applicable. Values presented in <b>BOLD</b> exceed ECMC Table 915-1 Regulatory Limits and applicable Local Clean-up Levels. Values presented with asterisk (*) exceed ECMC Table 915-1 GSSLs, only. **Achievable practical quantitative limits for Hexavalent Chromium in soils is in the range of 0.1 to 1 mg/kg.						





## **ATTACHMENT A**

### **Photo Log**

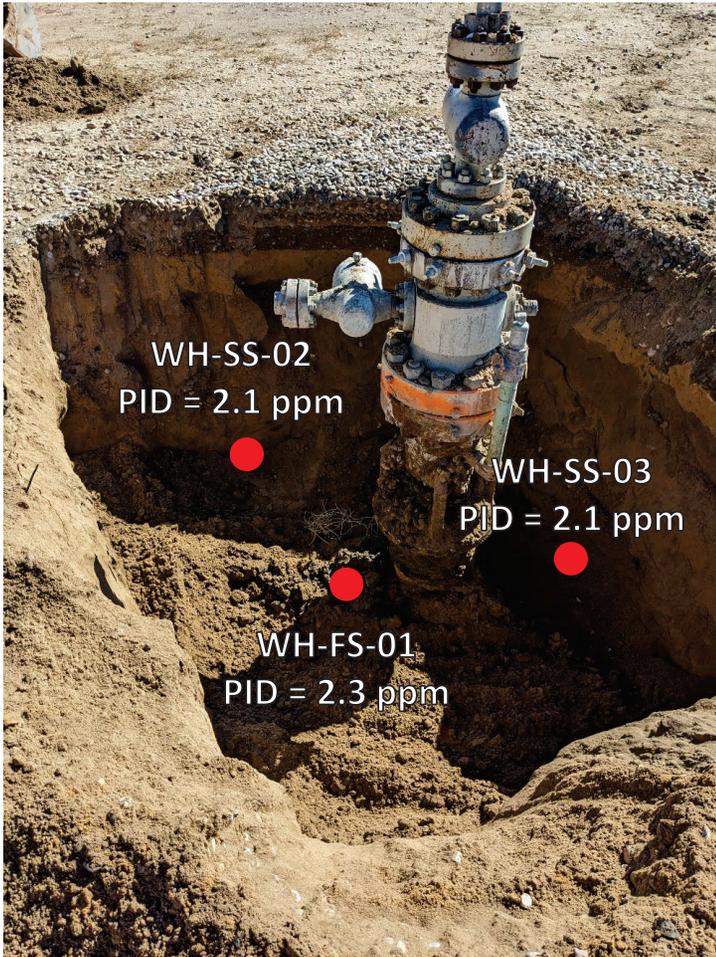
Gutterson D #30-68-1HN  
API # 05-123-35611  
Remediation # 30548

Closure Assessment

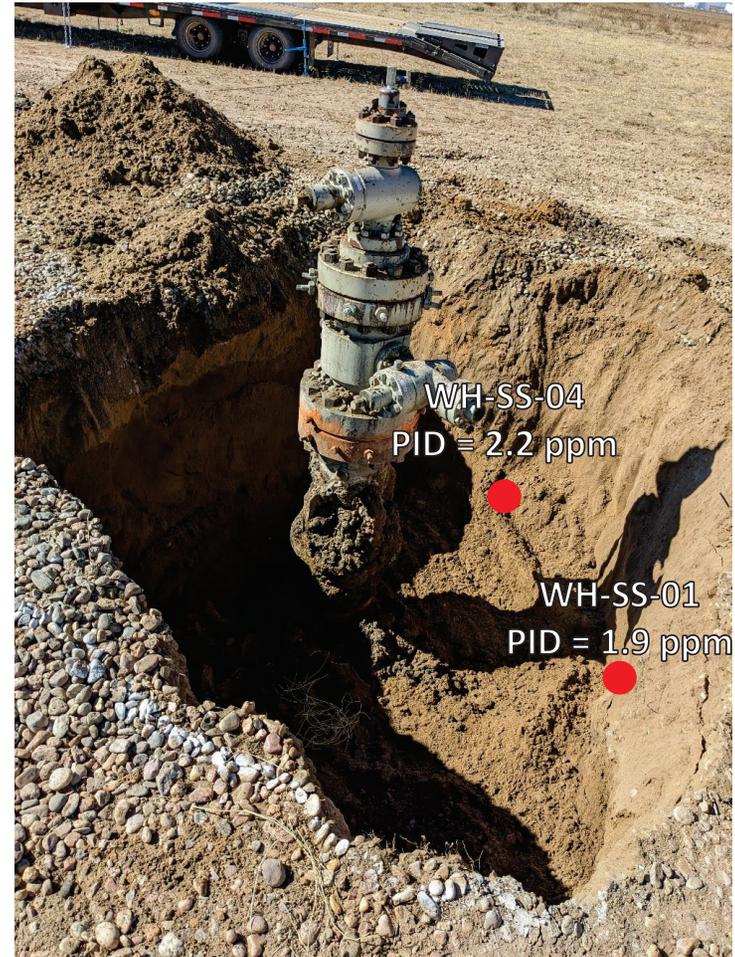
October 2023



## Wellhead Excavation – 10/19/23



Looking east southeast  
No petroleum hydrocarbon staining or odor observed



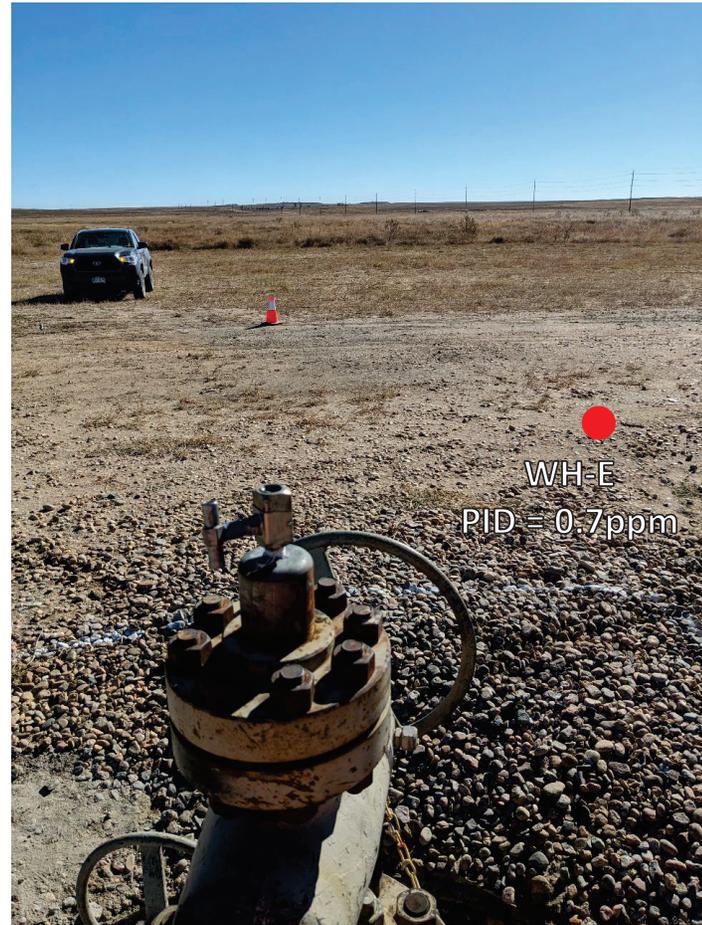
Looking west  
No petroleum hydrocarbon staining or odor observed

## Wellhead Surface – 10/19/23



Looking north

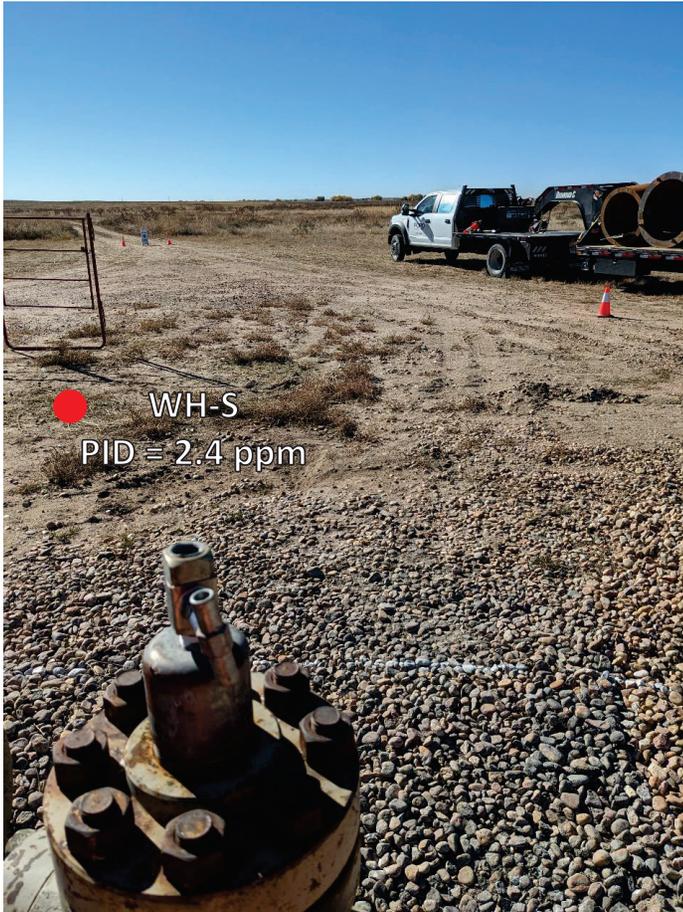
Site in good condition – no petroleum hydrocarbon staining or odor  
Observed on surface around wellhead



Looking east

Site in good condition – no petroleum hydrocarbon staining or odor  
Observed on surface around wellhead

## Wellhead Surface – 10/19/23



Looking south

Site in good condition – no petroleum hydrocarbon staining or odor  
Observed on surface around wellhead



Looking west

Site in good condition – no petroleum hydrocarbon staining or odor  
Observed on surface around wellhead



## **ATTACHMENT B**

### **Laboratory Analytical Report**



November 01, 2023

Eagle Environmental Consulting, LLC

Andrew Newberry

8000 W 44th Ave

Wheat Ridge CO 80033

**Project Name - Noble - Guttersen D #30-68-1 HN    Project Number - [none]**

Attached are your analytical results for Noble - Guttersen D #30-68-1 HN received by Origins Laboratory, Inc. October 19, 2023. This project is associated with Origins project number Y310553-01.

The analytical results in the following report were analyzed under the guidelines of EPA Methods. These methods are identified as follows; "SW" are defined in SW-846, "EPA" are defined in 40CFR part 136 and "SM" are defined in the most current revision of Standard Methods For the Examination of Water and Wastewater.

The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody. As such, this report shall not be reproduced except in full, without the written approval of Origin's laboratory.

Unless otherwise noted, the analytical results for all soil samples are reported on a wet weight basis. All analytical analyses were performed under NELAP guidelines unless noted by a data qualifier.

Any holding time exceedances, deviations from the method specifications or deviations from Origins Laboratory's Standard Operating Procedures are outlined in the case narrative.

Thank you for selecting Origins for your analytical needs. Please contact us with any questions concerning this report, or if we can help with anything at all.

Origins Laboratory, Inc.  
303.433.1322  
o-squad@oelabinc.com



1725 Elk Place, Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

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

Andrew Newberry  
Project Number: [none]  
Project: Noble - Gutterson D #30-68-1 HN

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
WH-FS-01@6'	Y310553-01	Soil	October 19, 2023 12:02	10/19/2023 17:23

Chain of Custody Modification Request

On 11/1/2023, Kendra Marcum from Eagle Environmental contacted Jordan Bynon via email regarding Y310553 requesting that the project name be revised from Gutterson to Gutterson. Requested modifications to the chain of custody were made by Jordan Bynon on 11/1/2023.

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.*



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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Gutterson D #30-68-1 HN

Origins Laboratory

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

**Sample Receipt Checklist**

Origins Work Order: 4310553

Client: Eagle

Client Project ID: Gutterson D #30-68-1HN

Checklist Completed by: SHS

Shipped Via: HD  
 (UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 10/19/23

Airbill #: N/A

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

Cooler Number/Temperature: 1 / 2 °c \_\_\_\_\_ / \_\_\_\_\_ °c \_\_\_\_\_ / \_\_\_\_\_ °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 <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? <b>If yes, contact client and note in narrative.</b>			<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 10/23/23

Origins Laboratory, Inc.

[Signature]

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, LLC  
 8000 W 44th Ave  
 Wheat Ridge CO 80033

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Gutterson D #30-68-1 HN

**WH-FS-01@6'**  
**10/19/2023 12:02:00PM**

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

**Origins Laboratory, Inc.**  
**Y310553-01 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.146		0.102	mg/L	1	B3J2514	10/25/2023	10/26/2023	
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**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND		25.0	mg/kg	1	B3J2402	10/24/2023	10/25/2023	Ua
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	Ua

Surrogate: o-Terphenyl	98.3 %		50-150			"	"	"	
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**GBTEX+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B3J2034	10/20/2023	10/22/2023	Ua
1,3,5-Trimethylbenzene	ND		0.00200	"	"	"	"	"	Ua
Benzene	ND		0.00200	"	"	"	"	"	Ua
Ethylbenzene	ND		0.00200	"	"	"	"	"	Ua
Naphthalene	ND		0.00380	"	"	"	"	"	Ua
Toluene	ND		0.00200	"	"	"	"	"	Ua
Xylenes, total	ND		0.00200	"	"	"	"	"	Ua
Gasoline Range Hydrocarbons	ND		0.200	"	"	"	"	"	Ua

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 8000 W 44th Ave  
 Wheat Ridge CO 80033

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Gutterson D #30-68-1 HN

**WH-FS-01@6'**  
**10/19/2023 12:02:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y310553-01 (Soil)**

**GBTEX+TMBs by 8260D**

Surrogate: 1,2-Dichloroethane-d4	120 %		70-130			B3J20 34	10/20/2023	10/22/2023	
Surrogate: Toluene-d8	96.9 %		70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	101 %		70-130			"	"	"	

**Metals by Saturated Paste by EPA 6010**

Calcium	1.04		0.499	meq/L	10	[CALC]	10/24/2023	10/25/2023	
Magnesium	ND		0.823	"	"	"	"	"	
Sodium	1.81		0.435	"	"	"	"	"	

**PAH by EPA 8270E**

1-Methylnaphthalene	0.003		0.002	mg/kg	1	B3J2327	10/23/2023	10/30/2023	
2-Methylnaphthalene	0.007		0.002	"	"	"	"	"	
Acenaphthene	ND		0.020	"	"	"	"	"	Ua
Anthracene	ND		0.020	"	"	"	"	"	Ua
Benzo (a) anthracene	ND		0.005	"	"	"	"	"	Ua
Benzo (a) pyrene	ND		0.020	"	"	"	"	"	Ua
Benzo (b) fluoranthene	ND		0.020	"	"	"	"	"	Ua
Benzo (k) fluoranthene	ND		0.020	"	"	"	"	"	Ua
Chrysene	ND		0.020	"	"	"	"	"	Ua
Dibenz (a,h) anthracene	ND		0.020	"	"	"	"	"	Ua
Fluoranthene	ND		0.020	"	"	"	"	"	Ua

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Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Guttersen D #30-68-1 HN

**WH-FS-01@6'**  
**10/19/2023 12:02:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y310553-01 (Soil)**

**PAH by EPA 8270E**

Fluorene	ND		0.020	mg/kg	1	B3J2327	10/23/2023	10/30/2023	Ua
Indeno (1,2,3-cd) pyrene	ND		0.020	"	"	"	"	"	Ua
Pyrene	ND		0.020	"	"	"	"	"	Ua

Surrogate: Fluorene-d10	102 %		60-130			"	"	"	
Surrogate: Anthracene-d10	109 %		60-130			"	"	"	
Surrogate: Pyrene-d10	102 %		60-130			"	"	"	
Surrogate: Benzo (a) pyrene-d12	103 %		60-130			"	"	"	

**pH in Soil by 9045D**

pH	8.24			pH Units	1	B3J2425	10/24/2023	10/25/2023	
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**SAR by 20B Saturated Paste**

SAR	2.22		0.0100	SAR	1	B3J2420	10/24/2023	10/25/2023	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	0.424		0.00500	mmhos/cm	1	B3J2425	10/24/2023	10/25/2023	
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**Table 915 metals by EPA 6020B**

Arsenic	1.56		0.0846	mg/kg	10	B3J2018	10/20/2023	10/24/2023	
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**WH-FS-01@6'**  
**10/19/2023 12:02:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y310553-01 (Soil)**

**Table 915 metals by EPA 6020B**

Barium	116		8.46	mg/kg	10	B3J2018	10/20/2023	10/24/2023	
Cadmium	ND		0.0846	"	"	"	"	"	
Copper	ND		8.46	"	"	"	"	"	
Lead	ND		8.46	"	"	"	"	"	
Nickel	ND		8.46	"	"	"	"	"	
Selenium	ND		0.0846	"	"	"	"	"	
Silver	ND		0.0846	"	"	"	"	"	
Zinc	ND		84.6	"	"	"	"	"	

**Total Metals by 7196A**

Hexavalent Chromium	ND	0.164	0.409	mg/kg dry	1	2512704	10/23/2023	10/24/2023	U
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 Project: Noble - Gutterson D #30-68-1 HN

**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 B3J2034 - EPA 5030 (soil)**

**Blank (B3J2034-BLK1)**

Prepared: 10/20/2023 Analyzed: 10/22/2023

1,2,4-Trimethylbenzene	ND	0.00200	mg/kg							Ua
1,3,5-Trimethylbenzene	ND	0.00200	"							Ua
Benzene	ND	0.00200	"							Ua
Ethylbenzene	ND	0.00200	"							Ua
Naphthalene	ND	0.00380	"							Ua
Toluene	ND	0.00200	"							Ua
Xylenes, total	ND	0.00200	"							Ua
Gasoline Range Hydrocarbons	ND	0.200	"							Ua
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125	102		70-130			
Surrogate: Toluene-d8	0.12		"	0.125	96.9		70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125	99.1		70-130			

Origins Laboratory, Inc.



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 Project: Noble - Guttersen D #30-68-1 HN

**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 B3J2034 - EPA 5030 (soil)

**LCS (B3J2034-BS1)**

Prepared: 10/20/2023 Analyzed: 10/22/2023

1,2,4-Trimethylbenzene	0.116	0.00200	mg/kg	0.100		116	70-130			
1,3,5-Trimethylbenzene	0.117	0.00200	"	0.100		117	70-130			
Benzene	0.111	0.00200	"	0.100		111	70-130			
Ethylbenzene	0.112	0.00200	"	0.100		112	70-130			
Naphthalene	0.116	0.00380	"	0.100		116	70-130			
Toluene	0.109	0.00200	"	0.100		109	70-130			
o-Xylene	0.116	0.00200	"	0.100		116	70-130			
m,p-Xylene	0.226	0.00400	"	0.200		113	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		103	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		99.1	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		99.4	70-130			

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 Project: Noble - Gutterson D #30-68-1 HN

**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 B3J2034 - EPA 5030 (soil)

Matrix Spike (B3J2034-MS1)	Source: Y310484-48			Prepared: 10/20/2023 Analyzed: 10/22/2023						
1,2,4-Trimethylbenzene	0.105	0.00200	mg/kg	0.100	ND	105	70-130			
1,3,5-Trimethylbenzene	0.105	0.00200	"	0.100	ND	105	70-130			
Benzene	0.0986	0.00200	"	0.100	ND	98.6	70-130			
Ethylbenzene	0.101	0.00200	"	0.100	ND	101	70-130			
Naphthalene	0.102	0.00380	"	0.100	ND	102	70-130			
Toluene	0.0965	0.00200	"	0.100	ND	96.5	70-130			
o-Xylene	0.105	0.00200	"	0.100	ND	105	70-130			
m,p-Xylene	0.208	0.00400	"	0.200	ND	104	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		102	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		99.5	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		99.5	70-130			

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 Project Number: [none]  
 Project: Noble - Gutterson D #30-68-1 HN

**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 B3J2034 - EPA 5030 (soil)

Matrix Spike Dup (B3J2034-MSD1)	Source: Y310484-48			Prepared: 10/20/2023 Analyzed: 10/22/2023						
1,2,4-Trimethylbenzene	0.116	0.00200	mg/kg	0.100	ND	116	70-130	10.1	20	
1,3,5-Trimethylbenzene	0.117	0.00200	"	0.100	ND	117	70-130	11.2	20	
Benzene	0.111	0.00200	"	0.100	ND	111	70-130	12.2	20	
Ethylbenzene	0.112	0.00200	"	0.100	ND	112	70-130	10.2	20	
Naphthalene	0.117	0.00380	"	0.100	ND	117	70-130	14.3	20	
Toluene	0.109	0.00200	"	0.100	ND	109	70-130	11.8	20	
o-Xylene	0.118	0.00200	"	0.100	ND	118	70-130	11.2	20	
m,p-Xylene	0.231	0.00400	"	0.200	ND	115	70-130	10.3	20	
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		104	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		100	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		98.5	70-130			

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 Project Number: [none]  
 Project: Noble - Gutterson D #30-68-1 HN

**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 B3J2402 - EPA 3550B</b>										
<b>Blank (B3J2402-BLK1)</b>										
					Prepared: 10/24/2023 Analyzed: 10/25/2023					
Diesel (C10-C28)	ND	25.0	mg/kg							Ua
Residual Range Organics (C28-C40)	ND	100	"							Ua
Surrogate: o-Terphenyl	24		"	24.9		97.9	50-150			

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Andrew Newberry  
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 Project: Noble - Gutterson D #30-68-1 HN

**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 B3J2402 - EPA 3550B

**LCS (B3J2402-BS1)**

Prepared: 10/24/2023 Analyzed: 10/25/2023

Diesel (C10-C28)	1110	50.0	mg/kg	1000		111	70-130			
Residual Range Organics (C28-C40)	872	200	"	1000		87.2	70-130			
Surrogate: o-Terphenyl	55		"	49.8		110	50-150			

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Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Gutterson D #30-68-1 HN

**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 B3J2402 - EPA 3550B

Matrix Spike (B3J2402-MS1)	Source: Y310553-01			Prepared: 10/24/2023 Analyzed: 10/25/2023						
Diesel (C10-C28)	1170	50.0	mg/kg	1000	ND	117	70-130			
Residual Range Organics (C28-C40)	944	200	"	1000	ND	94.4	70-130			
Surrogate: o-Terphenyl	55		"	49.8		111	50-150			

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Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Gutterson D #30-68-1 HN

**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 B3J2402 - EPA 3550B

Matrix Spike Dup (B3J2402-MSD1)	Source: Y310553-01			Prepared: 10/24/2023 Analyzed: 10/25/2023						
Diesel (C10-C28)	983	50.0	mg/kg	1000	ND	98.3	70-130	17.5	35	
Residual Range Organics (C28-C40)	769	200	"	1000	ND	76.9	70-130	20.4	35	
Surrogate: o-Terphenyl	47		"	49.8		94.3	50-150			

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Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Gutterson D #30-68-1 HN

**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 B3J2018 - EPA 3050B**

**Blank (B3J2018-BLK1)**

Prepared: 10/20/2023 Analyzed: 10/24/2023

Arsenic	ND	0.000100	mg/kg							
Barium	ND	0.0100	"							
Cadmium	ND	0.000100	"							
Copper	ND	0.0100	"							
Lead	ND	0.0100	"							
Nickel	ND	0.0100	"							
Selenium	ND	0.000100	"							
Silver	ND	0.000100	"							
Zinc	ND	0.100	"							

**LCS (B3J2018-BS1)**

Prepared: 10/20/2023 Analyzed: 10/24/2023

Arsenic	0.0520	0.000100	mg/kg	0.0500		104	80-120			
Barium	5.22	0.0100	"	5.00		104	80-120			
Cadmium	0.0506	0.000100	"	0.0500		101	80-120			
Copper	0.533	0.0100	"	0.500		107	80-120			
Lead	0.0500	0.0100	"	0.0500		100	80-120			
Nickel	0.0521	0.0100	"	0.0500		104	80-120			
Selenium	0.0476	0.000100	"	0.0500		95.2	80-120			
Silver	0.0525	0.000100	"	0.0500		105	80-120			
Zinc	0.518	0.100	"	0.500		104	80-120			

**Matrix Spike (B3J2018-MS1)**

Source: Y310124-02

Prepared: 10/20/2023 Analyzed: 10/24/2023

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 Project: Noble - Gutterson D #30-68-1 HN

**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 B3J2018 - EPA 3050B**

<b>Matrix Spike (B3J2018-MS1)</b>		<b>Source: Y310124-02</b>			Prepared: 10/20/2023 Analyzed: 10/24/2023					
Arsenic	6.46	0.0918	mg/kg	4.59	1.88	99.7	75-125			
Barium	545	9.18	"	459	68.0	104	75-125			
Cadmium	4.84	0.0918	"	4.59	0.0953	103	75-125			
Copper	54.2	9.18	"	45.9	6.38	104	75-125			
Lead	9.18	9.18	"	4.59	5.16	87.5	75-125			
Nickel	9.44	9.18	"	4.59	5.19	92.5	75-125			
Selenium	4.39	0.0918	"	4.59	0.0694	94.2	75-125			
Silver	4.95	0.0918	"	4.59	0.0285	107	75-125			
Zinc	70.7	91.8	"	45.9	27.1	94.9	75-125			

<b>Matrix Spike Dup (B3J2018-MSD1)</b>		<b>Source: Y310124-02</b>			Prepared: 10/20/2023 Analyzed: 10/24/2023					
Arsenic	6.79	0.0953	mg/kg	4.76	1.88	103	75-125	5.03	20	
Barium	583	9.53	"	476	68.0	108	75-125	6.78	20	
Cadmium	5.10	0.0953	"	4.76	0.0953	105	75-125	5.32	20	
Copper	57.1	9.53	"	47.6	6.38	106	75-125	5.16	20	
Lead	9.39	9.53	"	4.76	5.16	88.6	75-125	2.21	20	
Nickel	9.61	9.53	"	4.76	5.19	92.7	75-125	1.81	20	
Selenium	4.63	0.0953	"	4.76	0.0694	95.6	75-125	5.23	20	
Silver	5.24	0.0953	"	4.76	0.0285	109	75-125	5.72	20	
Zinc	74.3	95.3	"	47.6	27.1	99.1	75-125	5.04	20	

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Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Gutterson D #30-68-1 HN

**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 B3J2327 - EPA 3580**

**Blank (B3J2327-BLK1)**

Prepared: 10/23/2023 Analyzed: 10/30/2023

1-Methylnaphthalene	ND	0.002	mg/kg							Ua
2-Methylnaphthalene	ND	0.002	"							Ua
Acenaphthene	ND	0.020	"							Ua
Anthracene	ND	0.020	"							Ua
Benzo (a) anthracene	ND	0.005	"							Ua
Benzo (a) pyrene	ND	0.020	"							Ua
Benzo (b) fluoranthene	ND	0.020	"							Ua
Benzo (g,h,i) perylene	ND	0.020	"							Ua
Benzo (k) fluoranthene	ND	0.020	"							Ua
Chrysene	ND	0.020	"							Ua
Dibenz (a,h) anthracene	ND	0.020	"							Ua
Fluoranthene	ND	0.020	"							Ua
Fluorene	ND	0.020	"							Ua
Indeno (1,2,3-cd) pyrene	ND	0.020	"							Ua
Naphthalene	ND	0.002	"							Ua
Phenanthrene	ND	0.020	"							Ua
Pyrene	ND	0.020	"							Ua
Surrogate: Fluorene-d10	190		ug/kg	200		97.4	60-130			
Surrogate: Anthracene-d10	180		"	200		90.2	60-130			
Surrogate: Pyrene-d10	220		"	200		109	60-130			
Surrogate: Benzo (a) pyrene-d12	200		"	200		99.9	60-130			

**LCS (B3J2327-BS1)**

Prepared: 10/23/2023 Analyzed: 10/30/2023

1-Methylnaphthalene	0.189	0.002	mg/kg	0.200		94.6	70-130			
2-Methylnaphthalene	0.194	0.002	"	0.200		97.2	70-130			
Acenaphthene	0.197	0.020	"	0.200		98.4	70-130			
Anthracene	0.194	0.020	"	0.200		96.9	70-130			

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 - Gutterson D #30-68-1 HN

**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 B3J2327 - EPA 3580**

**LCS (B3J2327-BS1)**

Prepared: 10/23/2023 Analyzed: 10/30/2023

Benzo (a) anthracene	0.205	0.005	mg/kg	0.200		102	70-130			
Benzo (a) pyrene	0.196	0.020	"	0.200		98.1	70-130			
Benzo (b) fluoranthene	0.193	0.020	"	0.200		96.7	70-130			
Benzo (g,h,i) perylene	0.190	0.020	"	0.200		94.9	70-130			
Benzo (k) fluoranthene	0.205	0.020	"	0.200		102	70-130			
Chrysene	0.219	0.020	"	0.200		110	70-130			
Dibenz (a,h) anthracene	0.224	0.020	"	0.200		112	70-130			
Fluoranthene	0.183	0.020	"	0.200		91.6	70-130			
Fluorene	0.199	0.020	"	0.200		99.7	70-130			
Indeno (1,2,3-cd) pyrene	0.193	0.020	"	0.200		96.3	70-130			
Naphthalene	0.191	0.002	"	0.200		95.5	70-130			
Phenanthrene	0.187	0.020	"	0.200		93.3	70-130			
Pyrene	0.223	0.020	"	0.200		112	70-130			
Surrogate: Fluorene-d10	200		ug/kg	200		97.8	60-130			
Surrogate: Anthracene-d10	180		"	200		90.6	60-130			
Surrogate: Pyrene-d10	210		"	200		105	60-130			
Surrogate: Benzo (a) pyrene-d12	190		"	200		94.4	60-130			

**Matrix Spike (B3J2327-MS1)**

Source: Y310553-01

Prepared: 10/23/2023 Analyzed: 10/30/2023

1-Methylnaphthalene	0.192	0.002	mg/kg	0.200	0.003	94.1	70-130			
2-Methylnaphthalene	0.195	0.002	"	0.200	0.007	93.9	70-130			
Acenaphthene	0.206	0.020	"	0.200	0.001	102	70-130			
Anthracene	0.199	0.020	"	0.200	ND	99.4	70-130			
Benzo (a) anthracene	0.198	0.005	"	0.200	0.002	98.1	70-130			
Benzo (a) pyrene	0.235	0.020	"	0.200	ND	118	70-130			
Benzo (b) fluoranthene	0.186	0.020	"	0.200	0.0005	92.6	70-130			
Benzo (g,h,i) perylene	0.175	0.020	"	0.200	0.003	85.8	70-130			

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 - Gutterson D #30-68-1 HN

**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 B3J2327 - EPA 3580**

<b>Matrix Spike (B3J2327-MS1)</b>		<b>Source: Y310553-01</b>			Prepared: 10/23/2023 Analyzed: 10/30/2023					
Benzo (k) fluoranthene	0.225	0.020	mg/kg	0.200	0.002	112	70-130			
Chrysene	0.248	0.020	"	0.200	ND	124	70-130			
Dibenz (a,h) anthracene	0.222	0.020	"	0.200	ND	111	70-130			
Fluoranthene	0.255	0.020	"	0.200	0.0009	127	70-130			
Fluorene	0.218	0.020	"	0.200	0.002	108	70-130			
Indeno (1,2,3-cd) pyrene	0.192	0.020	"	0.200	ND	96.1	70-130			
Naphthalene	0.192	0.002	"	0.200	0.001	95.5	70-130			
Phenanthrene	0.195	0.020	"	0.200	0.004	95.4	70-130			
Pyrene	0.207	0.020	"	0.200	0.003	102	70-130			
Surrogate: Fluorene-d10	220		ug/kg	200		108	60-130			
Surrogate: Anthracene-d10	200		"	200		97.8	60-130			
Surrogate: Pyrene-d10	200		"	200		98.0	60-130			
Surrogate: Benzo (a) pyrene-d12	230		"	200		113	60-130			

<b>Matrix Spike Dup (B3J2327-MSD1)</b>		<b>Source: Y310553-01</b>			Prepared: 10/23/2023 Analyzed: 10/30/2023					
1-Methylnaphthalene	0.180	0.002	mg/kg	0.200	0.003	88.3	70-130	6.32	20	
2-Methylnaphthalene	0.188	0.002	"	0.200	0.007	90.3	70-130	3.77	20	
Acenaphthene	0.201	0.020	"	0.200	0.001	99.9	70-130	2.30	20	
Anthracene	0.204	0.020	"	0.200	ND	102	70-130	2.68	20	
Benzo (a) anthracene	0.205	0.005	"	0.200	0.002	102	70-130	3.61	20	
Benzo (a) pyrene	0.227	0.020	"	0.200	ND	114	70-130	3.52	20	
Benzo (b) fluoranthene	0.203	0.020	"	0.200	0.0005	101	70-130	8.83	20	
Benzo (g,h,i) perylene	0.185	0.020	"	0.200	0.003	90.9	70-130	5.73	20	
Benzo (k) fluoranthene	0.224	0.020	"	0.200	0.002	111	70-130	0.633	20	
Chrysene	0.247	0.020	"	0.200	ND	123	70-130	0.478	20	
Dibenz (a,h) anthracene	0.249	0.020	"	0.200	ND	124	70-130	11.2	20	
Fluoranthene	0.224	0.020	"	0.200	0.0009	112	70-130	12.8	20	

Origins Laboratory, Inc.



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 Wheat Ridge CO 80033

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Guttersen D #30-68-1 HN

**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 B3J2327 - EPA 3580

Matrix Spike Dup (B3J2327-MSD1)	Source: Y310553-01			Prepared: 10/23/2023 Analyzed: 10/30/2023						
Fluorene	0.200	0.020	mg/kg	0.200	0.002	99.4	70-130	8.48	20	
Indeno (1,2,3-cd) pyrene	0.208	0.020	"	0.200	ND	104	70-130	8.10	20	
Naphthalene	0.184	0.002	"	0.200	0.001	91.4	70-130	4.39	20	
Phenanthrene	0.207	0.020	"	0.200	0.004	102	70-130	6.21	20	
Pyrene	0.191	0.020	"	0.200	0.003	93.9	70-130	8.42	20	
Surrogate: Fluorene-d10	190		ug/kg	200		95.3	60-130			
Surrogate: Anthracene-d10	200		"	200		102	60-130			
Surrogate: Pyrene-d10	180		"	200		91.0	60-130			
Surrogate: Benzo (a) pyrene-d12	230		"	200		115	60-130			

Origins Laboratory, Inc.



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 8000 W 44th Ave  
 Wheat Ridge CO 80033

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Guttersen D #30-68-1 HN

**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 B3J2420 - Saturated Paste Metals**

**Blank (B3J2420-BLK1)**

Prepared: 10/24/2023 Analyzed: 10/25/2023

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

**Duplicate (B3J2420-DUP1)**

Source: Y310485-13

Prepared: 10/24/2023 Analyzed: 10/25/2023

Calcium PPM	25.5	10.0	mg/L		23.3			9.07	50	
SAR	ND	0.0100	SAR		9.11				200	
Magnesium PPM	1.08	10.0	mg/L		0.980			9.71	50	
Sodium PPM	183	10.0	"		165			10.1	50	

**Batch B3J2514 - DTPA Sorbitol Preparation**

**Blank (B3J2514-BLK1)**

Prepared: 10/25/2023 Analyzed: 10/26/2023

Boron	ND	0.100	mg/L							
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**Duplicate (B3J2514-DUP1)**

Source: Y310549-01

Prepared: 10/25/2023 Analyzed: 10/26/2023

Boron	0.760	0.101	mg/L		ND				50	
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 Wheat Ridge CO 80033

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Gutterson D #30-68-1 HN

**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 B3J2425 - Saturated Paste pH/EC</b>										
<b>Blank (B3J2425-BLK1)</b>					Prepared: 10/24/2023 Analyzed: 10/25/2023					
Specific Conductance (EC)	ND	0.00500	mmhos/cm							
<b>Duplicate (B3J2425-DUP1)</b>					<b>Source: Y310485-13</b> Prepared: 10/24/2023 Analyzed: 10/25/2023					
pH	8.26		pH Units		8.24		0.242	25		
Specific Conductance (EC)	1.01	0.00500	mmhos/cm		0.968		4.35	25		

Origins Laboratory, Inc.



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 8000 W 44th Ave  
 Wheat Ridge CO 80033

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Guttersen D #30-68-1 HN

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 2512704 - SW846 3060A</b>										
<b>BLANK (1205553982-BLK)</b>					Prepared: 10/23/2023 Analyzed: 10/24/2023					
Hexavalent Chromium	ND	0.399	mg/kg				-			U
<b>LCS (1205553983-BKS)</b>					Prepared: 10/23/2023 Analyzed: 10/24/2023					
Hexavalent Chromium	4.05	0.398	mg/kg	3.98		102	80-120			
<b>DUP (1205553984 D)</b>					Source: 641865001 Prepared: 10/23/2023 Analyzed: 10/24/2023					
Hexavalent Chromium	ND	0.316	mg/kg dry		<0.126		0-50	N/A	50	U
<b>MS (1205553985 S)</b>					Source: 641865001 Prepared: 10/23/2023 Analyzed: 10/24/2023					
Hexavalent Chromium	2.26	0.399	mg/kg dry	3.99	<0.160	55.2	75-125			
<b>DUP (1205553986 D)</b>					Source: 641888007 Prepared: 10/23/2023 Analyzed: 10/24/2023					
Hexavalent Chromium	ND	0.361	mg/kg dry		<0.144		0-50	N/A	50	U
<b>MS (1205553987 S)</b>					Source: 641888007 Prepared: 10/23/2023 Analyzed: 10/24/2023					
Hexavalent Chromium	4.30	0.419	mg/kg dry	4.19	<0.167	100	75-125			
<b>ILCS (1205553988-ILCS)</b>					Prepared: 10/23/2023 Analyzed: 10/24/2023					
Hexavalent Chromium	8.05	0.400	mg/kg	8.10		99.3	80-120			

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 - Gutterson D #30-68-1 HN

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**Notes and Definitions**

Ua Sample is Non-Detect.

U Result not detected above the detection limit

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported on a wet weight basis.

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

Origins Laboratory, Inc.



*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.*

---

Jordan A. Bynon, Project Manager



November 13, 2023

Eagle Environmental Consulting, LLC

Andrew Newberry

8000 W 44th Ave

Wheat Ridge CO 80033

**Project Name - Noble - Guttersen D #30-68-1 HN    Project Number - [none]**

Attached are your analytical results for Noble - Guttersen D #30-68-1 HN received by Origins Laboratory, Inc. November 02, 2023. This project is associated with Origins project number Y311070-01.

The analytical results in the following report were analyzed under the guidelines of EPA Methods. These methods are identified as follows; "SW" are defined in SW-846, "EPA" are defined in 40CFR part 136 and "SM" are defined in the most current revision of Standard Methods For the Examination of Water and Wastewater.

The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody. As such, this report shall not be reproduced except in full, without the written approval of Origin's laboratory.

Unless otherwise noted, the analytical results for all soil samples are reported on a wet weight basis. All analytical analyses were performed under NELAP guidelines unless noted by a data qualifier.

Any holding time exceedances, deviations from the method specifications or deviations from Origins Laboratory's Standard Operating Procedures are outlined in the case narrative.

Thank you for selecting Origins for your analytical needs. Please contact us with any questions concerning this report, or if we can help with anything at all.

Origins Laboratory, Inc.  
303.433.1322  
o-squad@oelabinc.com



1725 Elk Place, Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

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

Andrew Newberry  
Project Number: [none]  
Project: Noble - Guttersen D #30-68-1 HN

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Background-01@2'	Y311070-01	Soil	October 19, 2023 11:30	11/02/2023 15:45

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 - Guttersen D #30-68-1 HN

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

**Sample Receipt Checklist**

Origins Laboratory

Origins Work Order: YB11070 Client: Eagle  
 Checklist Completed by: EAS Client Project ID: Guttersen D# 30-68-1HN  
 Date/time completed: 11/2/23 Shipped Via: HD  
 (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 / 13.5 °C / \_\_\_\_\_ °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: AB (Project Manager) Date/Time Reviewed: 11-16-23

Origins Laboratory, Inc.  


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 8000 W 44th Ave  
 Wheat Ridge CO 80033

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Guttersen D #30-68-1 HN

**Background-01@2'**  
**10/19/2023 11:30:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y311070-01 (Soil)**

**Table 915 metals by EPA 6020B**

Arsenic	1.86	0.0899	mg/kg	10	B3K0320	CIH	11/03/2023	11/07/2023	
Barium	147	8.99	"	"	"	CIH	"	"	

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 - Guttersen D #30-68-1 HN

**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 B3K0320 - EPA 3050B**

**Blank (B3K0320-BLK1)**

Prepared: 11/03/2023 Analyzed: 11/07/2023

Arsenic	ND	0.000100	mg/kg							
Barium	ND	0.0100	"							
Cadmium	ND	0.000100	"							
Copper	ND	0.0100	"							
Lead	ND	0.0100	"							
Nickel	ND	0.0100	"							
Selenium	ND	0.000100	"							
Silver	ND	0.000100	"							
Zinc	ND	0.100	"							

**LCS (B3K0320-BS1)**

Prepared: 11/03/2023 Analyzed: 11/07/2023

Arsenic	0.0484	0.000100	mg/kg	0.0500		96.8	80-120			
Barium	5.09	0.0100	"	5.00		102	80-120			
Cadmium	0.0514	0.000100	"	0.0500		103	80-120			
Copper	0.528	0.0100	"	0.500		106	80-120			
Lead	0.0514	0.0100	"	0.0500		103	80-120			
Nickel	0.0500	0.0100	"	0.0500		100	80-120			
Selenium	0.0505	0.000100	"	0.0500		101	80-120			
Silver	0.0510	0.000100	"	0.0500		102	80-120			
Zinc	0.517	0.100	"	0.500		103	80-120			

**Matrix Spike (B3K0320-MS1)**

Source: Y311056-01

Prepared: 11/03/2023 Analyzed: 11/07/2023

Arsenic	6.18	0.0850	mg/kg	4.25	2.81	79.4	75-125			
Barium	483	8.50	"	425	73.8	96.3	75-125			
Cadmium	4.34	0.0850	"	4.25	0.103	99.8	75-125			
Copper	50.8	8.50	"	42.5	8.47	99.5	75-125			
Lead	10.2	8.50	"	4.25	8.11	48.3	75-125			QM-07

Origins Laboratory, Inc.



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 Wheat Ridge CO 80033

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Guttersen D #30-68-1 HN

**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
<b>Batch B3K0320 - EPA 3050B</b>										
<b>Matrix Spike (B3K0320-MS1)</b>			<b>Source: Y311056-01</b>			Prepared: 11/03/2023 Analyzed: 11/07/2023				
Nickel	12.3	8.50	mg/kg	4.25	11.0	30.4	75-125			QM-07
Selenium	3.96	0.0850	"	4.25	0.158	89.3	75-125			
Silver	4.31	0.0850	"	4.25	0.0449	100	75-125			
Zinc	68.5	85.0	"	42.5	33.6	82.0	75-125			
<b>Matrix Spike Dup (B3K0320-MSD1)</b>			<b>Source: Y311056-01</b>			Prepared: 11/03/2023 Analyzed: 11/07/2023				
Arsenic	7.92	0.0950	mg/kg	4.75	2.81	108	75-125	24.7	20	QR-02
Barium	544	9.50	"	475	73.8	98.9	75-125	11.7	20	
Cadmium	4.95	0.0950	"	4.75	0.103	102	75-125	13.1	20	
Copper	56.7	9.50	"	47.5	8.47	101	75-125	11.0	20	
Lead	11.1	9.50	"	4.75	8.11	63.8	75-125	9.17	20	QM-07
Nickel	11.6	9.50	"	4.75	11.0	13.6	75-125	5.40	20	QM-07
Selenium	4.48	0.0950	"	4.75	0.158	91.0	75-125	12.5	20	
Silver	4.87	0.0950	"	4.75	0.0449	102	75-125	12.3	20	
Zinc	75.1	95.0	"	47.5	33.6	87.4	75-125	9.28	20	

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Project Number: [none]  
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### Notes and Definitions

- 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.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- All soil results are reported at a wet weight basis.

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