

Wellhead Closure Checklist						
COGCC Rule 911.a.(4) Environmental Site Closure Assessment Field Form						
Additional attachments (optional):		Pit Closure		Tank Battery Closure		Flowline Closure
Site Name & COGCC Facility Number: Guttersen State CC #20-06		Date: 08/31/23				Remediation Project #: 30024
Associated Wells: 05-123-22236		Age of Site: Years				Number of Photos Attached: 2
Location: (GPS coordinates of wellhead or southeastern most wellhead for multiple)					40.299350 / -104.464100	
General Condition of Site: (General observations regarding housekeeping, corrosion, waste management, etc.)						
Good Condition						
USCS Soil Type: Clayey SAND				Estimated Depth to Groundwater: Approx. 20-40'		
Hydrocarbon Impacted Soils / Spills: (Note estimated size and if impact appears to be surficial or extends to an unknown depth)						
Slight hydrocarbon odor observed in excavation, no staining.						
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	05-123-22236					
Age	Years					
Condition of surface around wellhead	Good - No Odor/Staining					
PID Readings	WH-N: 1.9	WH-E: 1.7	WH-S: 3.1	WH-W: 1.5		
Condition of subsurface (staining present)	Slight HC odor					
PID Readings	15.2	27.8	381.7	43.3	940.0	
Sample taken? Location/Sample ID#	WH-SS-01	WH-SS-02	WH-SS-03	WH-SS-04	WH-FS-01	
Photo Number(s)	See photolog					
Other observations regarding wellheads:						
Well casing cut/capped following assessment.						
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: 940.0				Total number of samples submitted to lab for analysis: 5		
If more than 10 cubic yards of impacted soil were observed:						
Vertical extent:				Estimated spill volume:		
Lateral extent: N/A				Volume of soil removed:		
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? Yes No		
Date Groundwater was encountered:				Commencement date of removal:		
Sheen on groundwater? Yes No				Volume of groundwater removed prior to sampling:		
Free product observed? Yes No				Volume of groundwater removed post sampling:		
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

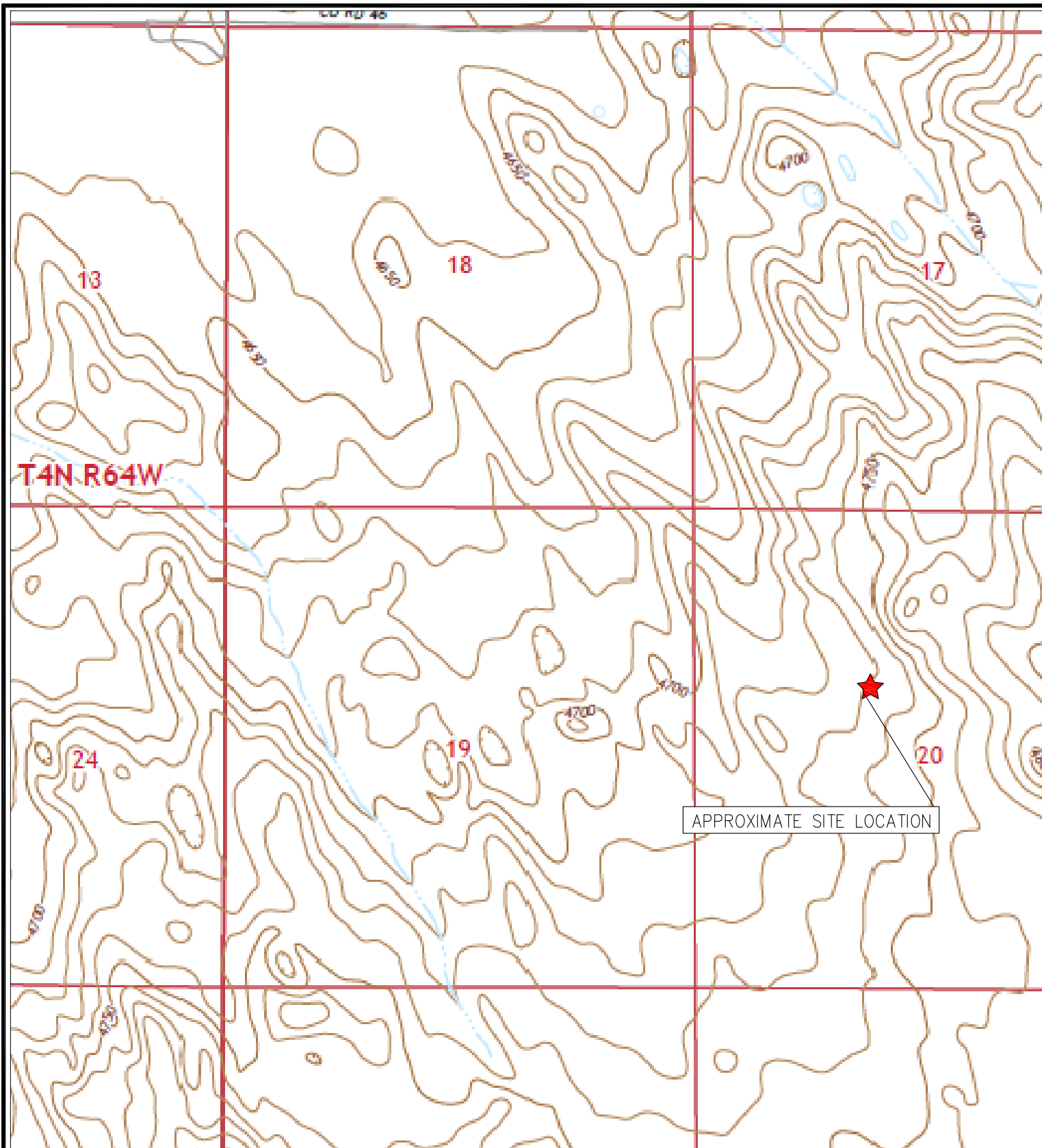
Figure 2: Aerial Site Location Map

Figure 3: Soil Sample Location Map

Figure 4: Soil Analytical Map

Figure 5: Polycyclic Aromatic Hydrocarbons Map

Figure 6: Metals in Soil Map



TOPOGRAPHIC SITE LOCATION MAP
 GUTTERSEN STATE CC #20-06
 CLOSURE ASSESSMENT
 40.299350 / -104.464100
 SE¼ NW¼ SEC.20 T4N R63W 6PM
 WELD COUNTY, COLORADO
 API # 05-123-22236
 REMEDIATION # 30024

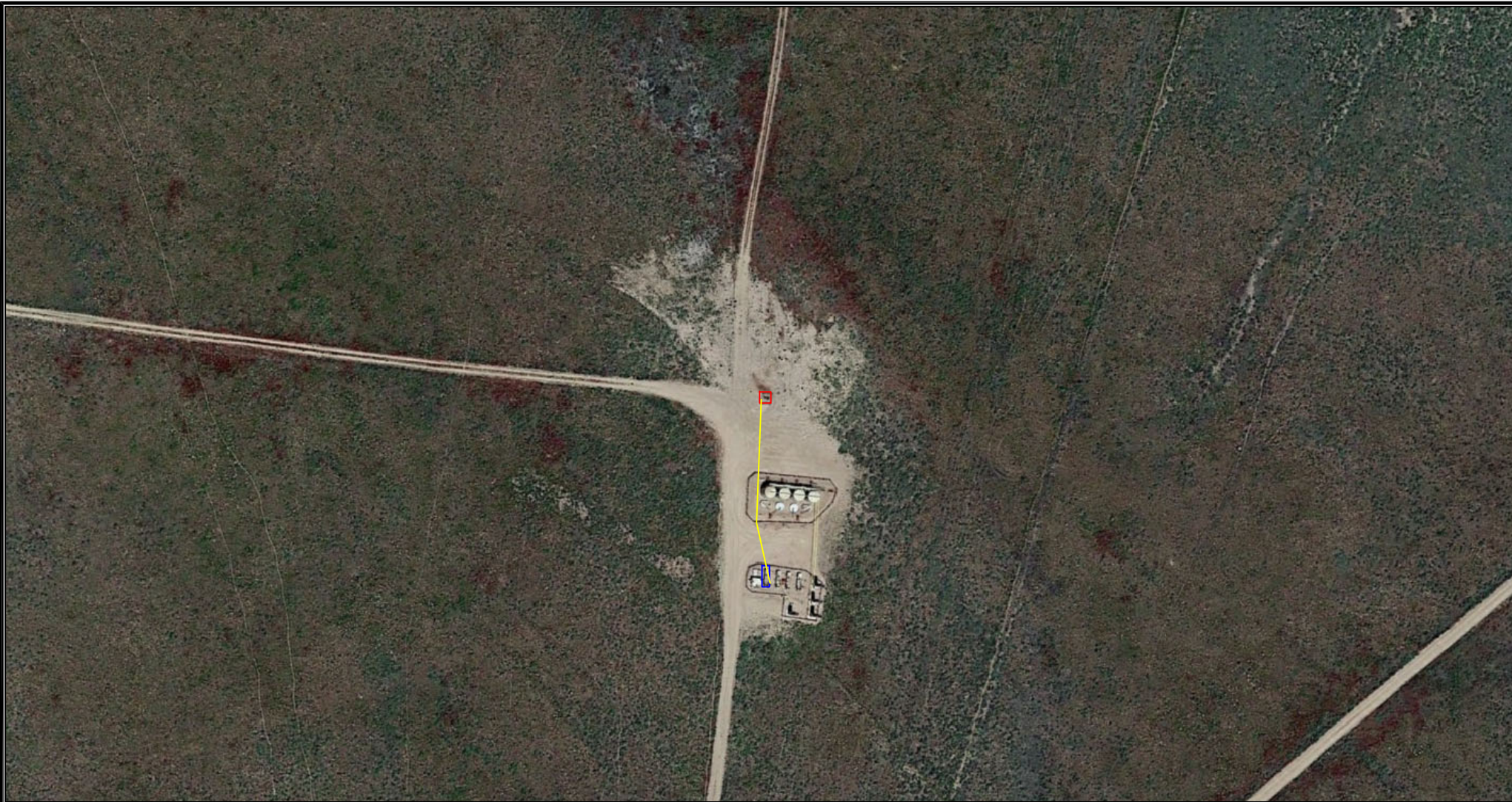


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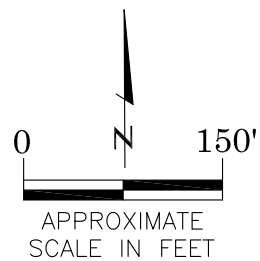
SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC MAP,
 HARDIN, CO QUADRANGLE 2022

FIGURE NO. 1



LEGEND

- FORMER GUTTERSEN STATE CC #20-06 WELLHEAD (PLUGGED AND ABANDONED)
- ASSOCIATED SEPARATOR
- APPROXIMATE FLOWLINE LOCATION



AERIAL SITE LOCATION MAP
 GUTTERSEN STATE CC #20-06
 CLOSURE ASSESSMENT
 40.299350 / -104.464100
 SE¼ NW¼ SEC.20 T4N R63W 6PM
 WELD COUNTY, COLORADO
 API # 05-123-22236
 REMEDIATION # 30024

FIGURE NO.
2

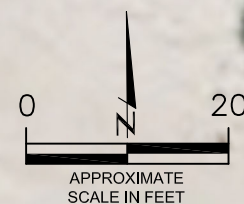
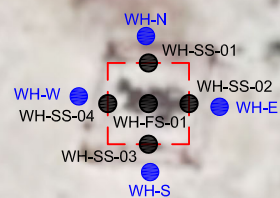
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LEGEND

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



SAMPLE LOCATION MAP
GUTTERSEN STATE CC #20-06
CLOSURE ASSESSMENT
40.299350 / -104.464100
SE¼ NW¼ SEC.20 T4N R63W 6PM
WELD COUNTY, COLORADO
API # 05-123-22236
REMEDATION # 30024

FIGURE NO.
3

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LEGEND

— INITIAL ASSESSMENT BOUNDARIES

● APPROXIMATE LOCATION OF SOIL SAMPLES
SS-02 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)

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 ECMC TABLE 915-1 REGULATORY LIMITS

VALUES PRESENTED WITH ASTERISK (*) EXCEED ECMC TABLE 915-1 PROTECTION OF GROUNDWATER SOIL SCREENING LEVELS, ONLY.

ECMC = ENERGY & CARBON MANAGEMENT COMMISSION

SOIL ANALYTICAL MAP
GUTTERSEN STATE CC #20-06
CLOSURE ASSESSMENT
40.299350 / -104.464100
SE¼ NW¼ SEC.20 T4N R63W 6PM
WELD COUNTY, COLORADO
API # 05-123-22236
REMEDIAL # 30024

FIGURE NO.

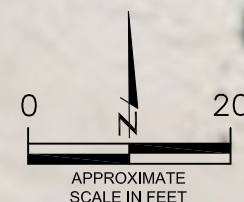
4

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APPROXIMATE
SCALE IN FEET

WH-FS-01@6'
08/31/23
5'
B = <0.00200
T = <0.00200
E = <0.00200
X = <0.00200
N = <0.00380
G = 10.7
D = 177
R = <100
1,2,4-TMB = **0.00856***
1,3,5-TMB = **0.0142***
Brn= <0.0987
EC = 0.197
SAR= 2.47
pH = 7.61

WH-SS-01@5'
08/31/23
5'
B = <0.00200
T = <0.00200
E = <0.00200
X = <0.00200
N = <0.00380
G = **1.98**
D = **198**
R = **327**
1,2,4-TMB = <0.00200
1,3,5-TMB = <0.00200
Brn= <0.0995
EC = 0.281
SAR= 1.67
pH = 7.77

WH-SS-01
WH-SS-02
WH-FS-01
WH-SS-03
WH-SS-04

WH-SS-04@5'
08/31/23
5'
B = <0.00200
T = <0.00200
E = <0.00200
X = <0.00200
N = <0.00380
G = 0.890
D = <25.0
R = <100
1,2,4-TMB = <0.00200
1,3,5-TMB = <0.00200
Brn= <0.101
EC = 0.0609
SAR= 2.59
pH = 7.38

WH-SS-03@5'
08/31/23
5'
B = <0.00200
T = <0.00200
E = <0.00200
X = <0.00200
N = <0.00380
G = 7.96
D = 149
R = <100
1,2,4-TMB = <0.00200
1,3,5-TMB = 0.00414
Brn= <0.0993
EC = 0.190
SAR= 1.31
pH = 8.00

WH-SS-02@5'
08/31/23
5'
B = <0.00200
T = <0.00200
E = <0.00200
X = <0.00200
N = <0.00380
G = 0.613
D = <25.0
R = <100
1,2,4-TMB = <0.00200
1,3,5-TMB = <0.00200
Brn= <0.0991
EC = 0.146
SAR= 2.26
pH = 6.94

LEGEND

— INITIAL 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 ECMC TABLE 915-1
REGULATORY LIMITS

ECMC = ENERGY & CARBON MANAGEMENT COMMISSION

WH-FS-01@6'
08/31/23
6'

1-Methylnaphthalene = 0.005
2-Methylnaphthalene = <0.002
Acenaphthene = <0.020
Anthracene = <0.020
Benzo(a)anthracene = <0.005
Benzo(a)pyrene = <0.020
Benzo(b)fluoranthene = <0.020
Benzo(k)fluoranthene = <0.020
Chrysene = <0.020
Dibenzo(a,h)anthracene = <0.020
Fluoranthene = <0.020
Fluorene = <0.020
Indeno(1,2,3-CD)pyrene = <0.020
Pyrene = <0.020

WH-SS-01@5'
08/31/23
5'

1-Methylnaphthalene = 0.002
2-Methylnaphthalene = <0.002
Acenaphthene = <0.020
Anthracene = <0.020
Benzo(a)anthracene = <0.005
Benzo(a)pyrene = <0.020
Benzo(b)fluoranthene = <0.020
Benzo(k)fluoranthene = <0.020
Chrysene = <0.020
Dibenzo(a,h)anthracene = <0.020
Fluoranthene = <0.020
Fluorene = <0.020
Indeno(1,2,3-CD)pyrene = <0.020
Pyrene = <0.020

WH-SS-04@5'
08/31/23
5'

1-Methylnaphthalene = <0.002
2-Methylnaphthalene = <0.002
Acenaphthene = <0.020
Anthracene = <0.020
Benzo(a)anthracene = <0.005
Benzo(a)pyrene = <0.020
Benzo(b)fluoranthene = <0.020
Benzo(k)fluoranthene = <0.020
Chrysene = <0.020
Dibenzo(a,h)anthracene = <0.020
Fluoranthene = <0.020
Fluorene = <0.020
Indeno(1,2,3-CD)pyrene = <0.020
Pyrene = <0.020

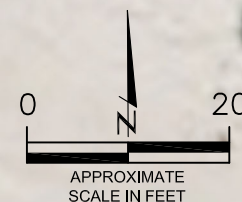
WH-SS-01
WH-SS-02
WH-SS-04
WH-FS-01
WH-SS-03

WH-SS-03@5'
08/31/23
5'

1-Methylnaphthalene = <0.002
2-Methylnaphthalene = <0.002
Acenaphthene = <0.020
Anthracene = <0.020
Benzo(a)anthracene = <0.005
Benzo(a)pyrene = <0.020
Benzo(b)fluoranthene = <0.020
Benzo(k)fluoranthene = <0.020
Chrysene = <0.020
Dibenzo(a,h)anthracene = <0.020
Fluoranthene = <0.020
Fluorene = <0.020
Indeno(1,2,3-CD)pyrene = <0.020
Pyrene = <0.020

WH-SS-02@5'
08/31/23
5'

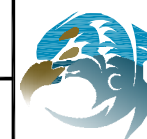
1-Methylnaphthalene = <0.002
2-Methylnaphthalene = <0.002
Acenaphthene = <0.020
Anthracene = <0.020
Benzo(a)anthracene = <0.005
Benzo(a)pyrene = <0.020
Benzo(b)fluoranthene = <0.020
Benzo(k)fluoranthene = <0.020
Chrysene = <0.020
Dibenzo(a,h)anthracene = <0.020
Fluoranthene = <0.020
Fluorene = <0.020
Indeno(1,2,3-CD)pyrene = <0.020
Pyrene = <0.020



POLYCYCLIC AROMATIC HYDROCARBONS MAP
GUTTERSEN STATE CC #20-06
CLOSURE ASSESSMENT
40.299350 / -104.464100
SE¼ NW¼ SEC.20 T4N R63W 6PM
WELD COUNTY, COLORADO
API # 05-123-22236
REMEDIAION # 30024

FIGURE NO.
5

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LEGEND

- INITIAL ASSESSMENT BOUNDARIES
- 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

(NS) – NOT SAMPLED

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

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

*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.

***ARSENIC IS NATURALLY OCCURRING IN COLORADO. LOCAL CLEAN-UP LEVEL (1.73 mg/kg) is 1.25*BACKGROUND (1.39 mg/kg).

ECMC = ENERGY & CARBON MANAGEMENT COMMISSION

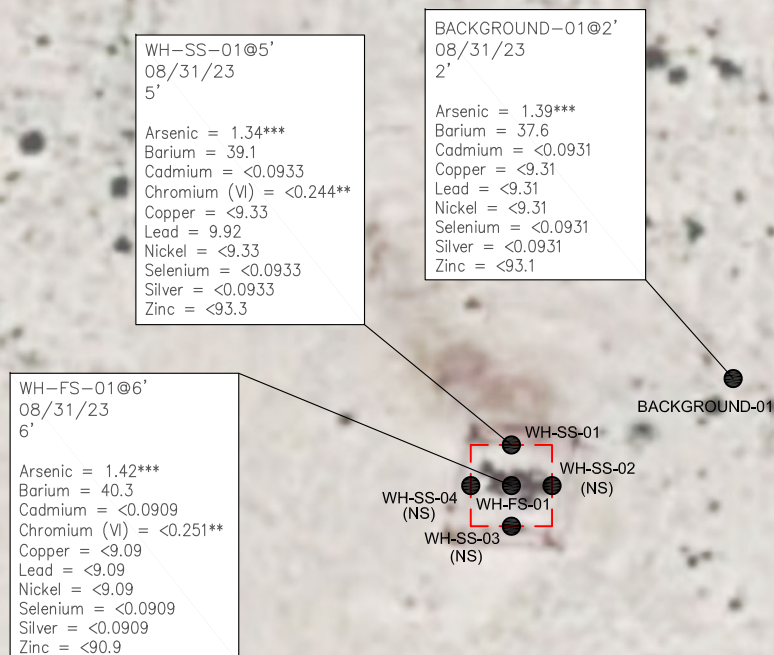
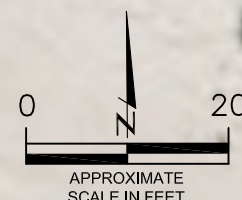
METALS IN SOIL MAP
GUTTERSEN STATE CC #20-06
CLOSURE ASSESSMENT
40.299350 / -104.464100
SE¼ NW¼ SEC.20 T4N R63W 6PM
WELD COUNTY, COLORADO
API # 05-123-22236
REMEDATION # 30024

FIGURE NO.
6

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TABLES

Table 1: Photoionization Detector Reading Summary

Table 2: Soil Analytical Results Summary

TABLE 1
PHOTOIONIZATION DETECTOR READING SUMMARY
GUTTERSEN STATE CC #20-06
CLOSURE ASSESSMENT
40.299350 / -104.464100
SE¼ NW¼ SEC.20 T4N R63W 6PM
WELD COUNTY, COLORADO
API # 05-123-22236
REMEDATION # 30024

Sample Location (Latitude/Longitude)	Date	Approximate Depth (feet)	PID Reading (ppm-v)	Lab Submission (Y/N)
WH-SS-01 @ 5' (40.299536/-104.464130)	08/31/23	5	15.2	Y
WH-SS-02 @ 5' (40.299343/-104.464111)	08/31/23	5	27.8	Y
WH-SS-03 @ 5' (40.299335/-104.464134)	08/31/23	5	381.7	Y
WH-SS-04 @ 5' (40.299436/-104.464147)	08/31/23	5	43.3	Y
WH-FS-01 @ 6' (40.299347/-104.464131)	08/31/23	6	940.0	Y
Background-01 @ 2' (40.299389 / -104.464042)	08/31/23	2	8.0	Y
WH-N @ 0.5' (40.299366 / -104.464127)	08/31/23	0.5	1.9	N
WH-E @ 0.5' (40.299342 / -104.464101)	08/31/23	0.5	1.7	N
WH-S @ 0.5' (40.299327 / -104.464135)	08/31/23	0.5	3.1	N
WH-W @ 0.5' (40.299348 / -104.464156)	08/31/23	0.5	1.5	N
(Y/N) = Yes or No ppm-v = parts per million by volume PID = Photoionization Detector				



TABLE 2
SOIL ANALYTICAL RESULTS SUMMARY
GUTTERSEN STATE CC #20-06
CLOSURE ASSESSMENT
40.299350 / -104.464100
SE¼ NW¼ SEC.20 T4N R63W 6PM
WELD COUNTY, COLORADO
API # 05-123-22236
REMEDATION # 30024

Sample Location (Latitude / Longitude)		WH-SS-01 @ 5'	WH-SS-02 @ 5'	WH-SS-03 @ 5'	WH-SS-04 @ 5'	WH-FS-01 @ 6'	Background-01 @ 2'
		(40.299536 / -104.464130)	(40.299343 / -104.464111)	(40.299335 / -104.464134)	(40.299436 / -104.464147)	(40.299347 / -104.464131)	(40.299389 / -104.464042)
Sample Date		8/31/2023	8/31/2023	8/31/2023	8/31/2023	8/31/2023	8/31/2023
Sample Depth		5'	5'	5'	5'	6'	2'
PID Reading (ppm-v)		15.2	27.8	381.7	43.3	940.0	8.0
Regulatory Limits							
Chemical of Concern	Units	ECMC Table 915-1 RSSLs	ECMC Table 915-1 GSSLs	Local Clean-Up Level			
VOCs							
Benzene	mg/kg	1.2	0.0026	--	<0.00200	<0.00200	<0.00200
Toluene	mg/kg	490	0.69	--	<0.00200	<0.00200	<0.00200
Ethylbenzene	mg/kg	5.8	0.78	--	<0.00200	<0.00200	<0.00200
Total Xylenes	mg/kg	58	9.9	--	<0.00200	<0.00200	<0.00200
Naphthalene	mg/kg	2	0.0038	--	<0.00380	<0.00380	<0.00380
1,2,4-Trimethylbenzene	mg/kg	30	0.0081	--	<0.00200	<0.00200	0.00856*
1,3,5-Trimethylbenzene	mg/kg	27	0.0087	--	<0.00200	<0.00200	0.0142*
TOTAL PETROLEUM HYDROCARBONS							
TPH-GRO	mg/kg	500	--	--	1.98	0.613	7.96
TPH-DRO	mg/kg	500	--	--	198	<25.1	149
TPH-RRO	mg/kg	500	--	--	327	<101	<102
POLYCYCLIC AROMATIC HYDROCARBONS							
1-Methyl-naphthalene	mg/kg	18	0.006	--	0.002	<0.002	<0.002
2-Methyl-naphthalene	mg/kg	24	0.019	--	<0.002	<0.002	<0.002
Acenaphthene	mg/kg	360	0.55	--	<0.020	<0.020	<0.020
Anthracene	mg/kg	1800	5.8	--	<0.020	<0.020	<0.020
Benzo(a)-anthracene	mg/kg	1.1	0.011	--	<0.005	<0.005	<0.005
Benzo(a)-pyrene	mg/kg	0.11	0.24	--	<0.002	<0.002	<0.002
Benzo(b)-fluoranthene	mg/kg	1.1	0.3	--	<0.002	<0.002	<0.002
Benzo(k)-fluoranthene	mg/kg	11	2.9	--	<0.002	<0.002	<0.002
Chrysene	mg/kg	110	9	--	<0.002	<0.002	<0.002
Dibenzo(a,h)-anthracene	mg/kg	0.11	0.096	--	<0.002	<0.002	<0.002
Fluoranthene	mg/kg	240	8.9	--	<0.002	<0.002	<0.002
Fluorene	mg/kg	240	0.54	--	<0.002	<0.002	<0.002
Indeno(1,2,3-cd)-pyrene	mg/kg	1.1	0.98	--	<0.002	<0.002	<0.002
Pyrene	mg/kg	180	1.3	--	<0.020	<0.020	<0.020
SOIL SUITABILITY (Inorganics)							
Boron	mg/L	2	--	--	<0.0995	<0.0991	<0.0993
pH	standard unit	6-8.3	--	--	7.77	6.94	8.00
Sodium Adsorption Ratio (SAR)	--	<6	--	--	1.67	2.26	1.31
Specific Conductance (EC)	mmhos/cm	<4	--	--	0.281	0.146	0.190
METALS							
Arsenic	mg/kg	0.68***	0.29***	1.73***	1.34***	NA	NA
Barium	mg/kg	15000	82	--	39.1	NA	NA
Cadmium	mg/kg	71	0.38	--	<0.0933	NA	NA
Copper	mg/kg	3100	46	--	<9.33	NA	NA
Lead	mg/kg	400	14	--	9.92	NA	NA
Nickel	mg/kg	1500	26	--	<9.33	NA	NA
Selenium	mg/kg	390	0.26	--	<0.0933	NA	NA
Silver	mg/kg	390	0.8	--	<0.0933	NA	NA
Zinc	mg/kg	23000	370	--	<93.3	NA	NA
Hexavalent Chromium	mg/kg	0.3**	0.00067**	0.1 to 1.0**	<0.244**	NA	NA
ECMC = Energy & Carbon Management Commission NA - Not Analyzed VOCs - Volatile Organic Compounds 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 SAR = Sodium Adsorption Ratio Notes: Values presented with a less than symbol (<) did not contain concentrations at or above the laboratory reporting limit and/or minimum detection limit. Values presented in BOLD exceed ECMC Table 915-1 Regulatory Limits. 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. ***Arsenic is naturally occurring in Colorado.							



ATTACHMENT A

Photo Log

Guttersen State CC #20-06

API # 05-123-22236

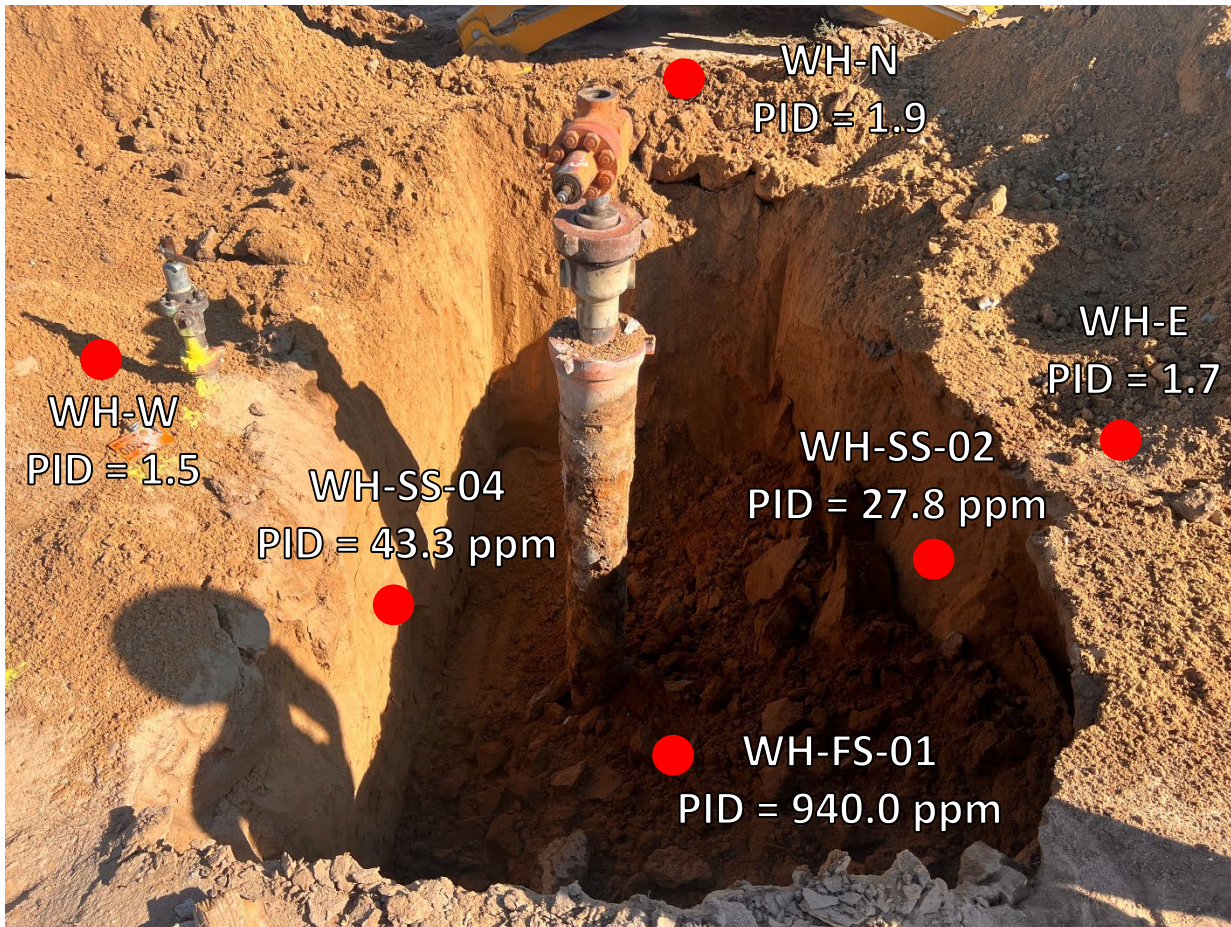
Remediation # 30024

Closure Assessment

August 2023



Wellhead Excavation – 08/31/23



Looking north



Looking west

Slight petroleum hydrocarbon odor observed on floor and south sidewall of excavation; no staining observed



ATTACHMENT B

Laboratory Analytical Reports



September 21, 2023

Eagle Environmental Consulting, LLC

Martin C Eckert III

8000 W 44th Ave

Wheat Ridge CO 80033

Project Name - Noble - Guttersen State CC #20-06 Project Number - [none]

Attached are your analytical results for Noble - Guttersen State CC #20-06 received by Origins Laboratory, Inc. August 31, 2023. This project is associated with Origins project number Y308820-01.

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Guttersen State CC #20-06

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
WH-SS-01@5'	Y308820-01	Soil	August 31, 2023 9:08	08/31/2023 14:31
WH-SS-02@5'	Y308820-02	Soil	August 31, 2023 9:10	08/31/2023 14:31
WH-SS-03@5'	Y308820-03	Soil	August 31, 2023 9:12	08/31/2023 14:31
WH-SS-04@5'	Y308820-04	Soil	August 31, 2023 9:14	08/31/2023 14:31
WH-FS-01@6'	Y308820-05	Soil	August 31, 2023 9:16	08/31/2023 14:31

Chain of Custody Modification Request

On 9/14/2023, Grace Congdon from Eagle Environmental contacted Jordan Bynon via email regarding Y308820 requesting that Table 915 Metals be added to WH-SS-01@5' and WH-FS-01@6'. Requested modifications to the chain of custody were made by Jordan Bynon on 9/14/2023.

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.

Martin C Eckert III
Project Number: [none]
Project: Noble - Guttersen State CC #20-06

ORIGINS
LABORATORY, INC

Client: Engle Environmental Consulting

Address: 8000 W 44th Ave
Wentz Ridge CO 80033

Telephone Number: 303-433-0499

Email Address: the3e@engle-enviro.com

Fax: 303.265.9645

www.originslaboratory.com

1309820

page 1 of 1

Project Manager: Martin Eckert III

Project Name: Gruterson State CC #20-06

Project Number: —

Samples Collected By: IM

Sample ID Description	Date Sampled	Time Sampled	Preservative						# of Containers	Matrix							Analysis	Sample Instructions	
			Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil		Air Summ #	Canister #	Other	Gravel - 0-20 cm	Mud - 0-20 cm	Silt - 0-20 cm	EC - 0-20 cm			pH - 0-20 cm
W1-SS-01 E5'	8/31/23	0902	X						X						X	X	X	EC 1.22 pH = 7.1 SAR = 2.3 PM - 9045D	Sample Instructions
W1-SS-02 E5'		0910																	Submerged plate prep
W1-SS-03 E5'		0912																	
W1-SS-04 E5'		0914																	
W1-SS-01 E6'		0916																	MDAs needed
Relinquished By:	Date:	Time:	Received By:	Date:	Time:	Received By:	Date:	Time:	Turnaround Time:										
[Signature]	8/31/23	1431	[Signature]	8/31/23	1441	[Signature]	8/31/23	1441	Same Day <input type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input type="checkbox"/> Standard <input checked="" type="checkbox"/>										

0 Bill to Jeff	Temp Received - 4.5	Date Results Needed 8 Noble
---------------------------	---------------------	--

Byron

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Gutterson State CC #20-06

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: Y 308620

Client: Eagle

Client Project ID: Gutterson State CC 20-06

Checklist Completed by: SG

Shipped Via: AS

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

Date/time completed: 8/31/23

Airbill #: N/A

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

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

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

Date/Time Reviewed 9/5/23

Origins Laboratory, Inc.

J. Bynon

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Guttarsen State CC #20-06

WH-SS-01@5'
8/31/2023 9:08:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y308820-01 (Soil)

Boron (DTPA Sorbitol)

Boron	ND	0.0995	mg/L	1	B3I0607	09/06/2023	09/07/2023
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DRO/ORO by EPA 8015D

Diesel (C10-C28)	198	25.0	mg/kg	1	B3I0103	09/01/2023	09/06/2023
Residual Range Organics (C28-C40)	327	100	"	"	"	"	"

Surrogate: o-Terphenyl	86.6 %	50-150	"	"	"	"	"
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GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND	0.00200	mg/kg	1	B3I0132	09/01/2023	09/05/2023	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	1.98	0.200	"	"	"	"	"	

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Gutttersen State CC #20-06

WH-SS-01@5'

8/31/2023 9:08:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y308820-01 (Soil)

GBTEX+TMBs by 8260D

Surrogate: 1,2-Dichloroethane-d4	110 %	70-130	B3I013 2	09/01/2023	09/05/2023
Surrogate: Toluene-d8	104 %	70-130	"	"	"
Surrogate: 4-Bromofluorobenzene	107 %	70-130	"	"	"

Metals by Saturated Paste by EPA 6010

Calcium	1.16	0.499	meq/L	10	[CALC]	09/05/2023	09/06/2023
Magnesium	ND	0.823	"	"	"	"	"
Sodium	1.46	0.435	"	"	"	"	"

PAH by EPA 8270E

1-Methylnaphthalene	0.002	0.002	mg/kg	1	B3I0617	09/06/2023	09/06/2023	
2-Methylnaphthalene	ND	0.002	"	"	"	"	"	U
Acenaphthene	ND	0.020	"	"	"	"	"	U
Anthracene	ND	0.020	"	"	"	"	"	U
Benzo (a) anthracene	ND	0.005	"	"	"	"	"	U
Benzo (a) pyrene	ND	0.020	"	"	"	"	"	U
Benzo (b) fluoranthene	ND	0.020	"	"	"	"	"	U
Benzo (k) fluoranthene	ND	0.020	"	"	"	"	"	U
Chrysene	ND	0.020	"	"	"	"	"	U
Dibenz (a,h) anthracene	ND	0.020	"	"	"	"	"	U

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Guttersen State CC #20-06

WH-SS-01@5'

8/31/2023 9:08:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y308820-01 (Soil)

PAH by EPA 8270E

Fluoranthene	ND	0.020	mg/kg	1	B3I0617	09/06/2023	09/06/2023	U
Fluorene	ND	0.020	"	"	"	"	"	U
Indeno (1,2,3-cd) pyrene	ND	0.020	"	"	"	"	"	U
Pyrene	ND	0.020	"	"	"	"	"	U

Surrogate: Fluorene-d10	101 %	60-130	"	"	"
Surrogate: Anthracene-d10	111 %	60-130	"	"	"
Surrogate: Benzo (a) pyrene-d12	101 %	60-130	"	"	"
Surrogate: Pyrene-d10	102 %	60-130	"	"	"

pH in Soil by 9045D

pH	7.77	pH Units	1	B3I0519	09/05/2023	09/06/2023
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SAR by 20B Saturated Paste

SAR	1.67	0.0100	SAR	1	B3I0511	09/05/2023	09/06/2023
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.281	0.00500	mmhos/cm	1	B3I0519	09/05/2023	09/06/2023
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Table 915 metals by EPA 6020B

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Guttarsen State CC #20-06

WH-SS-01@5'

8/31/2023 9:08:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y308820-01 (Soil)

Table 915 metals by EPA 6020B

Arsenic	1.34	0.0933	mg/kg	10	B311430	09/14/2023	09/15/2023
Barium	39.1	9.33	"	"	"	"	"
Cadmium	ND	0.0933	"	"	"	"	"
Copper	ND	9.33	"	"	"	"	"
Lead	9.92	9.33	"	"	"	"	"
Nickel	ND	9.33	"	"	"	"	"
Selenium	ND	0.0933	"	"	"	"	"
Silver	ND	0.0933	"	"	"	"	"
Zinc	ND	93.3	"	"	"	"	"

Total Metals by 7196A

Chromium, Hexavalent	ND	0.244	0.5	mg/Kg	1	L705008	08/31/2023	09/18/2023
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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.

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Gutttersen State CC #20-06

WH-SS-02@5'
8/31/2023 9:10:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y308820-02 (Soil)

Boron (DTPA Sorbitol)

Boron	ND	0.0991	mg/L	1	B3I0607	09/06/2023	09/07/2023	
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DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	25.0	mg/kg	1	B3I0103	09/01/2023	09/06/2023	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	U

Surrogate: o-Terphenyl	87.5 %	50-150			"	"	"	
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GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND	0.00200	mg/kg	1	B3I0132	09/01/2023	09/05/2023	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	0.613	0.200	"	"	"	"	"	

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Gutttersen State CC #20-06

WH-SS-02@5'

8/31/2023 9:10:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y308820-02 (Soil)

GBTEX+TMBs by 8260D

Surrogate: 1,2-Dichloroethane-d4	107 %	70-130	B3I013 2	09/01/2023	09/05/2023
Surrogate: Toluene-d8	102 %	70-130	"	"	"
Surrogate: 4-Bromofluorobenzene	105 %	70-130	"	"	"

Metals by Saturated Paste by EPA 6010

Calcium	ND	0.499	meq/L	10	[CALC]	09/05/2023	09/06/2023
Magnesium	ND	0.823	"	"	"	"	"
Sodium	0.618	0.435	"	"	"	"	"

PAH by EPA 8270E

1-Methylnaphthalene	ND	0.002	mg/kg	1	B3I0617	09/06/2023	09/06/2023	U
2-Methylnaphthalene	ND	0.002	"	"	"	"	"	U
Acenaphthene	ND	0.020	"	"	"	"	"	U
Anthracene	ND	0.020	"	"	"	"	"	U
Benzo (a) anthracene	ND	0.005	"	"	"	"	"	U
Benzo (a) pyrene	ND	0.020	"	"	"	"	"	U
Benzo (b) fluoranthene	ND	0.020	"	"	"	"	"	U
Benzo (k) fluoranthene	ND	0.020	"	"	"	"	"	U
Chrysene	ND	0.020	"	"	"	"	"	U
Dibenz (a,h) anthracene	ND	0.020	"	"	"	"	"	U

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Guttersen State CC #20-06

WH-SS-02@5'

8/31/2023 9:10:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. Y308820-02 (Soil)

PAH by EPA 8270E

Fluoranthene	ND	0.020	mg/kg	1	B3I0617	09/06/2023	09/06/2023	U
Fluorene	ND	0.020	"	"	"	"	"	U
Indeno (1,2,3-cd) pyrene	ND	0.020	"	"	"	"	"	U
Pyrene	ND	0.020	"	"	"	"	"	U

Surrogate: Fluorene-d10	105 %	60-130	"	"	"
Surrogate: Anthracene-d10	95.6 %	60-130	"	"	"
Surrogate: Benzo (a) pyrene-d12	97.5 %	60-130	"	"	"
Surrogate: Pyrene-d10	108 %	60-130	"	"	"

pH in Soil by 9045D

pH	6.94	pH Units	1	B3I0519	09/05/2023	09/06/2023
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SAR by 20B Saturated Paste

SAR	2.26	0.0100	SAR	1	B3I0511	09/05/2023	09/06/2023
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.146	0.00500	mmhos/cm	1	B3I0519	09/05/2023	09/06/2023
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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.

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Guttarsen State CC #20-06

WH-SS-03@5'

8/31/2023 9:12:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y308820-03 (Soil)

Boron (DTPA Sorbitol)

Boron	ND	0.0993	mg/L	1	B3I0607	09/06/2023	09/07/2023	
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DRO/ORO by EPA 8015D

Diesel (C10-C28)	149	25.0	mg/kg	1	B3I0103	09/01/2023	09/06/2023	
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	B3I0132	09/01/2023	09/05/2023	U
1,3,5-Trimethylbenzene	0.00414	0.00200	"	"	"	"	"	
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	7.96	0.200	"	"	"	"	"	

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Gutterson State CC #20-06

WH-SS-03@5'

8/31/2023 9:12:00AM

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

Origins Laboratory, Inc.
Y308820-03 (Soil)

GBTEX+TMBs by 8260D

Surrogate: 1,2-Dichloroethane-d4	110 %	70-130	B3I013 2	09/01/2023	09/05/2023
Surrogate: Toluene-d8	98.8 %	70-130	"	"	"
Surrogate: 4-Bromofluorobenzene	107 %	70-130	"	"	"

Metals by Saturated Paste by EPA 6010

Calcium	0.695	0.499	meq/L	10	[CALC]	09/05/2023	09/06/2023
Magnesium	ND	0.823	"	"	"	"	"
Sodium	0.894	0.435	"	"	"	"	"

PAH by EPA 8270E

1-Methylnaphthalene	ND	0.002	mg/kg	1	B3I0617	09/06/2023	09/06/2023	U
2-Methylnaphthalene	ND	0.002	"	"	"	"	"	U
Acenaphthene	ND	0.020	"	"	"	"	"	U
Anthracene	ND	0.020	"	"	"	"	"	U
Benzo (a) anthracene	ND	0.005	"	"	"	"	"	U
Benzo (a) pyrene	ND	0.020	"	"	"	"	"	U
Benzo (b) fluoranthene	ND	0.020	"	"	"	"	"	U
Benzo (k) fluoranthene	ND	0.020	"	"	"	"	"	U
Chrysene	ND	0.020	"	"	"	"	"	U
Dibenz (a,h) anthracene	ND	0.020	"	"	"	"	"	U

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Guttersen State CC #20-06

WH-SS-03@5'

8/31/2023 9:12:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y308820-03 (Soil)

PAH by EPA 8270E

Fluoranthene	ND	0.020	mg/kg	1	B3I0617	09/06/2023	09/06/2023	U
Fluorene	ND	0.020	"	"	"	"	"	U
Indeno (1,2,3-cd) pyrene	ND	0.020	"	"	"	"	"	U
Pyrene	ND	0.020	"	"	"	"	"	U

Surrogate: Fluorene-d10	120 %	60-130	"	"	"
Surrogate: Anthracene-d10	117 %	60-130	"	"	"
Surrogate: Benzo (a) pyrene-d12	96.3 %	60-130	"	"	"
Surrogate: Pyrene-d10	106 %	60-130	"	"	"

pH in Soil by 9045D

pH	8.00	pH Units	1	B3I0519	09/05/2023	09/06/2023
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SAR by 20B Saturated Paste

SAR	1.31	0.0100	SAR	1	B3I0511	09/05/2023	09/06/2023
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.190	0.00500	mmhos/cm	1	B3I0519	09/05/2023	09/06/2023
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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.

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Guttersen State CC #20-06

WH-SS-04@5'

8/31/2023 9:14:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y308820-04 (Soil)

Boron (DTPA Sorbitol)

Boron	ND	0.101	mg/L	1	B3I0607	09/06/2023	09/07/2023	
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DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	25.0	mg/kg	1	B3I0103	09/01/2023	09/06/2023	U
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	B3I0132	09/01/2023	09/05/2023	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	0.890	0.200	"	"	"	"	"	

Origins Laboratory, Inc.



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

Martin C Eckert III
Project Number: [none]
Project: Noble - Gutttersen State CC #20-06

WH-SS-04@5'

8/31/2023 9:14:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y308820-04 (Soil)

GBTEX+TMBs by 8260D

Surrogate: 1,2-Dichloroethane-d4	109 %	70-130	B3I013 2	09/01/2023	09/05/2023
Surrogate: Toluene-d8	103 %	70-130	"	"	"
Surrogate: 4-Bromofluorobenzene	100 %	70-130	"	"	"

Metals by Saturated Paste by EPA 6010

Calcium	ND	0.499	meq/L	10	[CALC]	09/05/2023	09/06/2023
Magnesium	ND	0.823	"	"	"	"	"
Sodium	ND	0.435	"	"	"	"	"

PAH by EPA 8270E

1-Methylnaphthalene	ND	0.002	mg/kg	1	B3I0617	09/06/2023	09/06/2023	U
2-Methylnaphthalene	ND	0.002	"	"	"	"	"	U
Acenaphthene	ND	0.020	"	"	"	"	"	U
Anthracene	ND	0.020	"	"	"	"	"	U
Benzo (a) anthracene	ND	0.005	"	"	"	"	"	U
Benzo (a) pyrene	ND	0.020	"	"	"	"	"	U
Benzo (b) fluoranthene	ND	0.020	"	"	"	"	"	U
Benzo (k) fluoranthene	ND	0.020	"	"	"	"	"	U
Chrysene	ND	0.020	"	"	"	"	"	U
Dibenz (a,h) anthracene	ND	0.020	"	"	"	"	"	U

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Guttersen State CC #20-06

WH-SS-04@5'

8/31/2023 9:14:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y308820-04 (Soil)

PAH by EPA 8270E

Fluoranthene	ND	0.020	mg/kg	1	B3I0617	09/06/2023	09/06/2023	U
Fluorene	ND	0.020	"	"	"	"	"	U
Indeno (1,2,3-cd) pyrene	ND	0.020	"	"	"	"	"	U
Pyrene	ND	0.020	"	"	"	"	"	U

Surrogate: Fluorene-d10	104 %	60-130	"	"	"
Surrogate: Anthracene-d10	116 %	60-130	"	"	"
Surrogate: Benzo (a) pyrene-d12	93.6 %	60-130	"	"	"
Surrogate: Pyrene-d10	113 %	60-130	"	"	"

pH in Soil by 9045D

pH	7.38	pH Units	1	B3I0519	09/05/2023	09/06/2023
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SAR by 20B Saturated Paste

SAR	2.59	0.0100	SAR	1	B3I0511	09/05/2023	09/06/2023
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.0609	0.00500	mmhos/cm	1	B3I0519	09/05/2023	09/06/2023
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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.

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Gutttersen State CC #20-06

WH-FS-01@6'

8/31/2023 9:16:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y308820-05 (Soil)

Boron (DTPA Sorbitol)

Boron	ND	0.0987	mg/L	1	B3I0607	09/06/2023	09/07/2023	
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DRO/ORO by EPA 8015D

Diesel (C10-C28)	177	25.0	mg/kg	1	B3I0103	09/01/2023	09/06/2023	
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	U

Surrogate: o-Terphenyl	113 %	50-150			"	"	"	
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GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	0.00856	0.00200	mg/kg	1	B3I0132	09/01/2023	09/05/2023	
1,3,5-Trimethylbenzene	0.0142	0.00200	"	"	"	"	"	
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	10.7	0.200	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4	108 %	70-130			"	"	"	
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Origins Laboratory, Inc.



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

Martin C Eckert III
Project Number: [none]
Project: Noble - Gutterson State CC #20-06

WH-FS-01@6'

8/31/2023 9:16:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y308820-05 (Soil)

GBTEX+TMBs by 8260D

Surrogate: Toluene-d8	98.9 %	70-130	B3I013 2	09/01/2023	09/05/2023
Surrogate: 4-Bromofluorobenzene	107 %	70-130	"	"	"

Metals by Saturated Paste by EPA 6010

Calcium	ND	0.499	meq/L	10	[CALC]	09/05/2023	09/06/2023
Magnesium	ND	0.823	"	"	"	"	"
Sodium	1.39	0.435	"	"	"	"	"

PAH by EPA 8270E

1-Methylnaphthalene	0.005	0.002	mg/kg	1	B3I0617	09/06/2023	09/06/2023	
2-Methylnaphthalene	ND	0.002	"	"	"	"	"	U
Acenaphthene	ND	0.020	"	"	"	"	"	U
Anthracene	ND	0.020	"	"	"	"	"	U
Benzo (a) anthracene	ND	0.005	"	"	"	"	"	U
Benzo (a) pyrene	ND	0.020	"	"	"	"	"	U
Benzo (b) fluoranthene	ND	0.020	"	"	"	"	"	U
Benzo (k) fluoranthene	ND	0.020	"	"	"	"	"	U
Chrysene	ND	0.020	"	"	"	"	"	U
Dibenz (a,h) anthracene	ND	0.020	"	"	"	"	"	U
Fluoranthene	ND	0.020	"	"	"	"	"	U

Origins Laboratory, Inc.



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

Martin C Eckert III
Project Number: [none]
Project: Noble - Gutttersen State CC #20-06

WH-FS-01@6'

8/31/2023 9:16:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y308820-05 (Soil)

PAH by EPA 8270E

Fluorene	ND	0.020	mg/kg	1	B3I0617	09/06/2023	09/06/2023	U
Indeno (1,2,3-cd) pyrene	ND	0.020	"	"	"	"	"	U
Pyrene	ND	0.020	"	"	"	"	"	U

Surrogate: Fluorene-d10	79.6 %	60-130	"	"	"
Surrogate: Anthracene-d10	108 %	60-130	"	"	"
Surrogate: Benzo (a) pyrene-d12	95.9 %	60-130	"	"	"
Surrogate: Pyrene-d10	97.4 %	60-130	"	"	"

pH in Soil by 9045D

pH	7.61	pH Units	1	B3I0519	09/05/2023	09/06/2023
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SAR by 20B Saturated Paste

SAR	2.47	0.0100	SAR	1	B3I0511	09/05/2023	09/06/2023
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.197	0.00500	mmhos/cm	1	B3I0519	09/05/2023	09/06/2023
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Table 915 metals by EPA 6020B

Arsenic	1.42	0.0909	mg/kg	10	B3I1430	09/14/2023	09/15/2023
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Origins Laboratory, Inc.



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

Martin C Eckert III
Project Number: [none]
Project: Noble - Gutttersen State CC #20-06

WH-FS-01@6'

8/31/2023 9:16:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y308820-05 (Soil)

Table 915 metals by EPA 6020B

Barium	40.3		9.09	mg/kg	10	B311430	09/14/2023	09/15/2023	
Cadmium	ND		0.0909	"	"	"	"	"	
Copper	ND		9.09	"	"	"	"	"	
Lead	ND		9.09	"	"	"	"	"	
Nickel	ND		9.09	"	"	"	"	"	
Selenium	ND		0.0909	"	"	"	"	"	
Silver	ND		0.0909	"	"	"	"	"	
Zinc	ND		90.9	"	"	"	"	"	

Total Metals by 7196A

Chromium, Hexavalent	ND	0.251	0.515	mg/Kg	1	L705008	08/31/2023	09/18/2023	
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Origins Laboratory, Inc.



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

Martin C Eckert III
Project Number: [none]
Project: Noble - Guttarsen State CC #20-06

Extractable Petroleum Hydrocarbons by 8015D - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B3I0103 - EPA 3550B										
Blank (B3I0103-BLK1)					Prepared: 09/01/2023 Analyzed: 09/06/2023					
Diesel (C10-C28)	ND	25.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	100	"							U
Surrogate: o-Terphenyl	21		"	24.9		85.9	50-150			

Origins Laboratory, Inc.



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

Martin C Eckert III
Project Number: [none]
Project: Noble - Guttersen State CC #20-06

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 B3I0103 - EPA 3550B

LCS (B3I0103-BS1)

Prepared: 09/01/2023 Analyzed: 09/06/2023

Diesel (C10-C28)	791	50.0	mg/kg	1000		79.1	70-130			
Residual Range Organics (C28-C40)	1030	200	"	1000		103	70-130			
Surrogate: o-Terphenyl	45		"	49.8		90.8	50-150			

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Gutterson State CC #20-06

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 B3I0103 - EPA 3550B

Matrix Spike (B3I0103-MS1)		Source: Y308796-01			Prepared: 09/01/2023 Analyzed: 09/06/2023					
Diesel (C10-C28)	750	50.0	mg/kg	1000	ND	75.0	70-130			
Residual Range Organics (C28-C40)	985	200	"	1000	ND	98.5	70-130			
Surrogate: o-Terphenyl	42		"	49.8		84.7	50-150			

Origins Laboratory, Inc.



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

Martin C Eckert III
Project Number: [none]
Project: Noble - Guttersen State CC #20-06

Extractable Petroleum Hydrocarbons by 8015D - Quality Control Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B3I0103 - EPA 3550B										
Matrix Spike Dup (B3I0103-MSD1)		Source: Y308796-01			Prepared: 09/01/2023 Analyzed: 09/06/2023					
Diesel (C10-C28)	815	50.0	mg/kg	1000	ND	81.5	70-130	8.30	35	
Residual Range Organics (C28-C40)	1090	200	"	1000	ND	109	70-130	9.85	35	
Surrogate: o-Terphenyl	47		"	49.8		93.5	50-150			

Origins Laboratory, Inc.



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

Martin C Eckert III
Project Number: [none]
Project: Noble - Gutterson State CC #20-06

Extractable Petroleum Hydrocarbons by 8015D - Quality Control

Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B3I0132 - EPA 5030 (soil)										
Blank (B3I0132-BLK1)					Prepared: 09/01/2023 Analyzed: 09/05/2023					
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		105	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		102	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		101	70-130			

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Gutterson State CC #20-06

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 B3I0132 - EPA 5030 (soil)

LCS (B3I0132-BS1)

Prepared: 09/01/2023 Analyzed: 09/05/2023

1,2,4-Trimethylbenzene	0.0918	0.00200	mg/kg	0.100		91.8	70-130			
1,3,5-Trimethylbenzene	0.0934	0.00200	"	0.100		93.4	70-130			
Benzene	0.0808	0.00200	"	0.100		80.8	70-130			
Ethylbenzene	0.0922	0.00200	"	0.100		92.2	70-130			
Naphthalene	0.0828	0.00380	"	0.100		82.8	70-130			
Toluene	0.0807	0.00200	"	0.100		80.7	70-130			
o-Xylene	0.0948	0.00200	"	0.100		94.8	70-130			
m,p-Xylene	0.189	0.00400	"	0.200		94.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		98.9	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		97.2	70-130			
Surrogate: 4-Bromofluorobenzene	0.14		"	0.125		112	70-130			

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Guttersen State CC #20-06

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 B3I0132 - EPA 5030 (soil)										
Matrix Spike (B3I0132-MS1)		Source: Y308810-01			Prepared: 09/01/2023 Analyzed: 09/05/2023					
1,2,4-Trimethylbenzene	0.0824	0.00200	mg/kg	0.100	ND	82.4	70-130			
1,3,5-Trimethylbenzene	0.0853	0.00200	"	0.100	ND	85.3	70-130			
Benzene	0.0703	0.00200	"	0.100	ND	70.3	70-130			
Ethylbenzene	0.0857	0.00200	"	0.100	ND	85.7	70-130			
Naphthalene	0.0576	0.00380	"	0.100	ND	57.6	70-130			QM-07
Toluene	0.0738	0.00200	"	0.100	ND	73.8	70-130			
o-Xylene	0.0843	0.00200	"	0.100	ND	84.3	70-130			
m,p-Xylene	0.175	0.00400	"	0.200	ND	87.3	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.11		"	0.125		89.8	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		102	70-130			
Surrogate: 4-Bromofluorobenzene	0.14		"	0.125		114	70-130			

Origins Laboratory, Inc.



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

Martin C Eckert III
Project Number: [none]
Project: Noble - Guttersen State CC #20-06

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 B3I0132 - EPA 5030 (soil)										
Matrix Spike Dup (B3I0132-MSD1)			Source: Y308810-01		Prepared: 09/01/2023 Analyzed: 09/05/2023					
1,2,4-Trimethylbenzene	0.0840	0.00200	mg/kg	0.100	ND	84.0	70-130	1.97	20	
1,3,5-Trimethylbenzene	0.0852	0.00200	"	0.100	ND	85.2	70-130	0.117	20	
Benzene	0.0738	0.00200	"	0.100	ND	73.8	70-130	4.83	20	
Ethylbenzene	0.0806	0.00200	"	0.100	ND	80.6	70-130	6.04	20	
Naphthalene	0.0764	0.00380	"	0.100	ND	76.4	70-130	28.0	20	QR-03
Toluene	0.0747	0.00200	"	0.100	ND	74.7	70-130	1.29	20	
o-Xylene	0.0836	0.00200	"	0.100	ND	83.6	70-130	0.858	20	
m,p-Xylene	0.164	0.00400	"	0.200	ND	82.0	70-130	6.32	20	
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		99.1	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		102	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		108	70-130			

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Guttarsen State CC #20-06

Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control

Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Metals by EPA 6000/7000 Series Methods - Quality Control

Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B3I1430 - EPA 3050B

Blank (B3I1430-BLK1)

Prepared: 09/14/2023 Analyzed: 09/15/2023

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 (B3I1430-BS1)

Prepared: 09/14/2023 Analyzed: 09/15/2023

Arsenic	0.0453	0.000100	mg/kg	0.0500	90.6	80-120
Barium	4.87	0.0100	"	5.00	97.5	80-120
Cadmium	0.0500	0.000100	"	0.0500	99.9	80-120
Copper	0.499	0.0100	"	0.500	99.7	80-120
Lead	0.0486	0.0100	"	0.0500	97.2	80-120
Nickel	0.0498	0.0100	"	0.0500	99.6	80-120
Selenium	0.0508	0.000100	"	0.0500	102	80-120
Silver	0.0513	0.000100	"	0.0500	103	80-120
Zinc	0.464	0.100	"	0.500	92.7	80-120

Matrix Spike (B3I1430-MS1)

Source: Y309252-01

Prepared: 09/14/2023 Analyzed: 09/15/2023

Origins Laboratory, Inc.



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8000 W 44th Ave
Wheat Ridge CO 80033

Martin C Eckert III
Project Number: [none]
Project: Noble - Gutttersen State CC #20-06

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
Batch B3I1430 - EPA 3050B										
Matrix Spike (B3I1430-MS1)		Source: Y309252-01			Prepared: 09/14/2023 Analyzed: 09/15/2023					
Arsenic	6.09	0.0903	mg/kg	4.52	1.47	102	75-125			
Barium	485	9.03	"	452	20.7	103	75-125			
Cadmium	4.69	0.0903	"	4.52	0.127	101	75-125			
Copper	62.6	9.03	"	45.2	8.88	119	75-125			
Lead	17.1	9.03	"	4.52	8.77	184	75-125			QM-07
Nickel	7.39	9.03	"	4.52	1.77	124	75-125			QM-07
Selenium	4.48	0.0903	"	4.52	0.0533	98.1	75-125			
Silver	4.78	0.0903	"	4.52	0.113	103	75-125			
Zinc	75.5	90.3	"	45.2	21.1	120	75-125			
Matrix Spike Dup (B3I1430-MSD1)		Source: Y309252-01			Prepared: 09/14/2023 Analyzed: 09/15/2023					
Arsenic	6.25	0.0949	mg/kg	4.74	1.47	101	75-125	2.57	20	
Barium	492	9.49	"	474	20.7	99.4	75-125	1.50	20	
Cadmium	4.96	0.0949	"	4.74	0.127	102	75-125	5.54	20	
Copper	60.2	9.49	"	47.4	8.88	108	75-125	3.84	20	
Lead	17.1	9.49	"	4.74	8.77	176	75-125	0.183	20	QM-07
Nickel	7.55	9.49	"	4.74	1.77	122	75-125	2.25	20	
Selenium	4.56	0.0949	"	4.74	0.0533	95.0	75-125	1.75	20	
Silver	5.11	0.0949	"	4.74	0.113	105	75-125	6.78	20	
Zinc	77.7	94.9	"	47.4	21.1	119	75-125	2.88	20	

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Gutterson State CC #20-06

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 B3I0617 - EPA 3580

Blank (B3I0617-BLK1)

Prepared: 09/06/2023 Analyzed: 09/06/2023

1-Methylnaphthalene	ND	0.002	mg/kg							U
2-Methylnaphthalene	ND	0.002	"							U
Acenaphthene	ND	0.020	"							U
Anthracene	ND	0.020	"							U
Benzo (a) anthracene	ND	0.005	"							U
Benzo (a) pyrene	ND	0.020	"							U
Benzo (b) fluoranthene	ND	0.020	"							U
Benzo (g,h,i) perylene	ND	0.020	"							U
Benzo (k) fluoranthene	ND	0.020	"							U
Chrysene	ND	0.020	"							U
Dibenz (a,h) anthracene	ND	0.020	"							U
Fluoranthene	ND	0.020	"							U
Fluorene	ND	0.020	"							U
Indeno (1,2,3-cd) pyrene	ND	0.020	"							U
Naphthalene	ND	0.002	"							U
Phenanthrene	ND	0.020	"							U
Pyrene	ND	0.020	"							U
Surrogate: Fluorene-d10	220		ug/kg	200		110	60-130			
Surrogate: Anthracene-d10	160		"	200		82.2	60-130			
Surrogate: Benzo (a) pyrene-d12	200		"	200		102	60-130			
Surrogate: Pyrene-d10	230		"	200		113	60-130			

LCS (B3I0617-BS1)

Prepared: 09/06/2023 Analyzed: 09/06/2023

1-Methylnaphthalene	0.197	0.002	mg/kg	0.200		98.4	70-130
2-Methylnaphthalene	0.197	0.002	"	0.200		98.3	70-130
Acenaphthene	0.188	0.020	"	0.200		94.1	70-130
Anthracene	0.216	0.020	"	0.200		108	70-130

Origins Laboratory, Inc.



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

Martin C Eckert III
Project Number: [none]
Project: Noble - Guttersen State CC #20-06

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 B3I0617 - EPA 3580

LCS (B3I0617-BS1)

Prepared: 09/06/2023 Analyzed: 09/06/2023

Benzo (a) anthracene	0.187	0.005	mg/kg	0.200		93.6	70-130
Benzo (a) pyrene	0.222	0.020	"	0.200		111	70-130
Benzo (b) fluoranthene	0.203	0.020	"	0.200		101	70-130
Benzo (g,h,i) perylene	0.187	0.020	"	0.200		93.6	70-130
Benzo (k) fluoranthene	0.184	0.020	"	0.200		92.2	70-130
Chrysene	0.172	0.020	"	0.200		85.8	70-130
Dibenz (a,h) anthracene	0.212	0.020	"	0.200		106	70-130
Fluoranthene	0.187	0.020	"	0.200		93.3	70-130
Fluorene	0.194	0.020	"	0.200		97.1	70-130
Indeno (1,2,3-cd) pyrene	0.206	0.020	"	0.200		103	70-130
Naphthalene	0.193	0.002	"	0.200		96.7	70-130
Phenanthrene	0.175	0.020	"	0.200		87.4	70-130
Pyrene	0.204	0.020	"	0.200		102	70-130
Surrogate: Fluorene-d10	180		ug/kg	200		90.0	60-130
Surrogate: Anthracene-d10	190		"	200		96.7	60-130
Surrogate: Benzo (a) pyrene-d12	200		"	200		102	60-130
Surrogate: Pyrene-d10	210		"	200		107	60-130

Matrix Spike (B3I0617-MS1)

Source: Y308820-01

Prepared: 09/06/2023 Analyzed: 09/06/2023

1-Methylnaphthalene	0.183	0.002	mg/kg	0.200	0.002	90.5	70-130
2-Methylnaphthalene	0.169	0.002	"	0.200	ND	84.5	70-130
Acenaphthene	0.169	0.020	"	0.200	0.001	84.0	70-130
Anthracene	0.202	0.020	"	0.200	0.005	98.6	70-130
Benzo (a) anthracene	0.179	0.005	"	0.200	ND	89.6	70-130
Benzo (a) pyrene	0.172	0.020	"	0.200	ND	86.0	70-130
Benzo (b) fluoranthene	0.175	0.020	"	0.200	0.008	83.7	70-130
Benzo (g,h,i) perylene	0.147	0.020	"	0.200	0.002	72.5	70-130

Origins Laboratory, Inc.



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

Martin C Eckert III
Project Number: [none]
Project: Noble - Guttersen State CC #20-06

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 B3I0617 - EPA 3580

Matrix Spike (B3I0617-MS1)		Source: Y308820-01			Prepared: 09/06/2023 Analyzed: 09/06/2023					
Benzo (k) fluoranthene	0.155	0.020	mg/kg	0.200	0.007	73.9	70-130			
Chrysene	0.203	0.020	"	0.200	ND	101	70-130			
Dibenz (a,h) anthracene	0.173	0.020	"	0.200	0.003	84.8	70-130			
Fluoranthene	0.188	0.020	"	0.200	0.001	93.3	70-130			
Fluorene	0.168	0.020	"	0.200	0.004	81.8	70-130			
Indeno (1,2,3-cd) pyrene	0.148	0.020	"	0.200	0.002	72.9	70-130			
Naphthalene	0.187	0.002	"	0.200	ND	93.7	70-130			
Phenanthrene	0.177	0.020	"	0.200	0.005	85.8	70-130			
Pyrene	0.150	0.020	"	0.200	0.006	71.7	70-130			
Surrogate: Fluorene-d10	180		ug/kg	200		91.7	60-130			
Surrogate: Anthracene-d10	200		"	200		97.8	60-130			
Surrogate: Benzo (a) pyrene-d12	200		"	200		102	60-130			
Surrogate: Pyrene-d10	180		"	200		91.6	60-130			

Matrix Spike Dup (B3I0617-MSD1)		Source: Y308820-01			Prepared: 09/06/2023 Analyzed: 09/06/2023					
1-Methylnaphthalene	0.193	0.002	mg/kg	0.200	0.002	95.4	70-130	5.17	20	
2-Methylnaphthalene	0.186	0.002	"	0.200	ND	93.2	70-130	9.75	20	
Acenaphthene	0.175	0.020	"	0.200	0.001	86.9	70-130	3.28	20	
Anthracene	0.172	0.020	"	0.200	0.005	83.5	70-130	16.2	20	
Benzo (a) anthracene	0.190	0.005	"	0.200	ND	95.2	70-130	6.11	20	
Benzo (a) pyrene	0.176	0.020	"	0.200	ND	88.2	70-130	2.54	20	
Benzo (b) fluoranthene	0.159	0.020	"	0.200	0.008	75.5	70-130	9.88	20	
Benzo (g,h,i) perylene	0.166	0.020	"	0.200	0.002	82.1	70-130	12.2	20	
Benzo (k) fluoranthene	0.157	0.020	"	0.200	0.007	75.2	70-130	1.59	20	
Chrysene	0.186	0.020	"	0.200	ND	92.9	70-130	8.81	20	
Dibenz (a,h) anthracene	0.200	0.020	"	0.200	0.003	98.3	70-130	14.5	20	
Fluoranthene	0.151	0.020	"	0.200	0.001	74.7	70-130	22.0	20	QR-02

Origins Laboratory, Inc.



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Eagle Environmental Consulting, LLC
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Wheat Ridge CO 80033

Martin C Eckert III
Project Number: [none]
Project: Noble - Guttersen State CC #20-06

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 B3I0617 - EPA 3580

Matrix Spike Dup (B3I0617-MSD1)		Source: Y308820-01			Prepared: 09/06/2023 Analyzed: 09/06/2023					
Fluorene	0.185	0.020	mg/kg	0.200	0.004	90.2	70-130	9.58	20	
Indeno (1,2,3-cd) pyrene	0.161	0.020	"	0.200	0.002	79.8	70-130	8.93	20	
Naphthalene	0.184	0.002	"	0.200	ND	92.1	70-130	1.80	20	
Phenanthrene	0.190	0.020	"	0.200	0.005	92.8	70-130	7.55	20	
Pyrene	0.172	0.020	"	0.200	0.006	82.9	70-130	13.9	20	
Surrogate: Fluorene-d10	200		ug/kg	200		97.9	60-130			
Surrogate: Anthracene-d10	210		"	200		105	60-130			
Surrogate: Benzo (a) pyrene-d12	210		"	200		103	60-130			
Surrogate: Pyrene-d10	190		"	200		95.9	60-130			

Origins Laboratory, Inc.



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

Martin C Eckert III
Project Number: [none]
Project: Noble - Gutterson State CC #20-06

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 B3I0511 - Saturated Paste Metals

Blank (B3I0511-BLK1)

Prepared: 09/05/2023 Analyzed: 09/06/2023

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 (B3I0511-DUP1)

Source: Y308808-01

Prepared: 09/05/2023 Analyzed: 09/06/2023

Calcium PPM	43.1	10.0	mg/L	37.4	14.1	50
SAR	ND	0.0100	SAR	0.971	200	
Magnesium PPM	7.14	10.0	mg/L	6.36	11.6	50
Sodium PPM	27.1	10.0	"	24.4	10.3	50

Batch B3I0607 - DTPA Sorbitol Preparation

Blank (B3I0607-BLK1)

Prepared: 09/06/2023 Analyzed: 09/07/2023

Boron	ND	0.100	mg/L
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Duplicate (B3I0607-DUP1)

Source: Y308807-05

Prepared: 09/06/2023 Analyzed: 09/07/2023

Boron	0.515	0.0998	mg/L	0.483	6.39	50
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Origins Laboratory, Inc.



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8000 W 44th Ave
Wheat Ridge CO 80033

Martin C Eckert III
Project Number: [none]
Project: Noble - Guttarsen State CC #20-06

Saturated Paste - Quality Control Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B3I0519 - Saturated Paste pH/EC										
Blank (B3I0519-BLK1)					Prepared: 09/05/2023 Analyzed: 09/06/2023					
Specific Conductance (EC)	ND	0.00500	mmhos/cm							
Duplicate (B3I0519-DUP1)					Source: Y308808-01 Prepared: 09/05/2023 Analyzed: 09/06/2023					
pH	8.21		pH Units		8.23			0.243	25	
Specific Conductance (EC)	0.370	0.00500	mmhos/cm		0.324			13.1	25	

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Guttarsen State CC #20-06

Total Metals by 7196A - Quality Control Waypoint Analytical, LLC.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch L705008 -										
DUP (L 90359-DUP)		Source: Y308820-05			Prepared: Analyzed: 09/18/2023					
Chromium, Hexavalent	ND	0.5	mg/Kg		<0.500	-		0	20	
MS (L 90359-MS)		Source: Y308820-05			Prepared: Analyzed: 09/18/2023					
Chromium, Hexavalent	36.1	2.53	mg/Kg	40.5	<1.23	89	75-125			
LCS (LCS)					Prepared: Analyzed: 09/18/2023					
Chromium, Hexavalent	6.29	0.5	mg/Kg	8		79	75-125			
LRB (LRB)					Prepared: Analyzed: 09/18/2023					
Chromium, Hexavalent	ND	0.5	mg/Kg				-			

Origins Laboratory, Inc.



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

Martin C Eckert III
Project Number: [none]
Project: Noble - Gutttersen State CC #20-06

Notes and Definitions

U Sample is Non-Detect.

QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.

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 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.



October 13, 2023

Eagle Environmental Consulting, LLC

Martin C Eckert III

8000 W 44th Ave

Wheat Ridge CO 80033

Project Name - Noble - Guttensen State CC #20-06 Project Number - [none]

Attached are your analytical results for Noble - Guttensen State CC #20-06 received by Origins Laboratory, Inc. September 26, 2023. This project is associated with Origins project number Y309646-01.

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
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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

Martin C Eckert III

Project Number: [none]

Project: Noble - Guttarsen State CC #20-06

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Background-01@2'	Y309646-01	Soil	August 31, 2023 9:18	09/26/2023 17:02

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 For Noelle Doyle Mathis, President

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Gutterson State CC #20-06

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page 1 of 1

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

Client: Eagle Env. Consulting
Address: 8000 W 44th Ave
Telephone Number: 303-433-0479
Email Address: mce@eagle-enviro.com

Project Manager: Martin Eckert III
Project Name: Gutterson State CC #20-06
Project Number: [none]
Samples Collected By: IM

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

Sample ID Description	Date Sampled	Time Sampled	Preservative				Matrix			Analysis	Sample Instructions
			Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summa Canister #		
Background - die 2'	8/3/23	0918	X								MDLs needed 1
											2
											3
											4
											5
											6
											7
											8
											9
											10

Relinquished By: Blake Ulrich
Relinquished By: [Signature]
Date: 9-26-23
Time: 1702
Date: 9/26/23
Time: 1702
Turnaround Time: Same Day ☐ 24 Hr ☐ 48 Hr ☐ 72 Hr ☒ Standard

Temp Received: 7
Date Results Needed: 7/10/24

Origins Laboratory, Inc.

Jen Pellegrini

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Wheat Ridge CO 80033

Martin C Eckert III
Project Number: [none]
Project: Noble - Guttarsen State CC #20-06

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: Y3091646

Client: Eagle

Checklist Completed by: ISH/JS

Client Project ID: Guttarsen St CC #20-01

Date/time completed: 9/27/23

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 / 7 °C 1 / _____ °C 1 / _____ °C (Describe) _____ °C

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 ⁽¹⁾ ?		<input checked="" type="checkbox"/>		<u>SD</u>
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: AB (Project Manager)

Date/Time Reviewed: 9-28-23

Origins Laboratory, Inc.

Jefe Pellegrini

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8000 W 44th Ave
Wheat Ridge CO 80033

Martin C Eckert III
Project Number: [none]
Project: Noble - Gutttersen State CC #20-06

Background-01@2'

8/31/2023 9:18:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. Y309646-01 (Soil)

Table 915 metals by EPA 6020B

Arsenic	1.39	0.0931	mg/kg	10	B312821	CIH	09/28/2023	10/10/2023	
Barium	37.6	9.31	"	"	"	CIH	"	"	
Cadmium	ND	0.0931	"	"	"	CIH	"	"	U
Copper	ND	9.31	"	"	"	CIH	"	"	U
Lead	ND	9.31	"	"	"	CIH	"	"	U
Nickel	ND	9.31	"	"	"	CIH	"	"	U
Selenium	ND	0.0931	"	"	"	CIH	"	"	U
Silver	ND	0.0931	"	"	"	CIH	"	"	U
Zinc	ND	93.1	"	"	"	CIH	"	"	U

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Martin C Eckert III
Project Number: [none]
Project: Noble - Guttarsen State CC #20-06

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 B3I2821 - EPA 3050B

Blank (B3I2821-BLK1)

Prepared: 09/28/2023 Analyzed: 10/10/2023

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

LCS (B3I2821-BS1)

Prepared: 09/28/2023 Analyzed: 10/10/2023

Arsenic	0.0505	0.000100	mg/kg	0.0500	101	80-120	
Barium	5.22	0.0100	"	5.00	104	80-120	
Cadmium	0.0518	0.000100	"	0.0500	104	80-120	
Copper	0.548	0.0100	"	0.500	110	80-120	
Lead	0.0503	0.0100	"	0.0500	101	80-120	
Nickel	0.0489	0.0100	"	0.0500	97.7	80-120	
Selenium	0.0498	0.000100	"	0.0500	99.6	80-120	
Silver	0.0507	0.000100	"	0.0500	101	80-120	
Zinc	0.521	0.100	"	0.500	104	80-120	

Matrix Spike (B3I2821-MS1)

Source: Y309640-01

Prepared: 09/28/2023 Analyzed: 10/10/2023

Arsenic	5.61	0.0953	mg/kg	4.76	1.09	95.1	75-125	
Barium	494	9.53	"	476	20.8	99.3	75-125	
Cadmium	4.82	0.0953	"	4.76	0.0542	100	75-125	
Copper	52.1	9.53	"	47.6	1.69	106	75-125	
Lead	6.99	9.53	"	4.76	2.70	90.1	75-125	U

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Martin C Eckert III
Project Number: [none]
Project: Noble - Guttersen State CC #20-06

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
Batch B3I2821 - EPA 3050B										
Matrix Spike (B3I2821-MS1)		Source: Y309640-01			Prepared: 09/28/2023 Analyzed: 10/10/2023					
Nickel	6.04	9.53	mg/kg	4.76	1.93	86.4	75-125			U
Selenium	4.86	0.0953	"	4.76	0.0551	101	75-125			
Silver	4.55	0.0953	"	4.76	0.0133	95.2	75-125			
Zinc	58.5	95.3	"	47.6	10.3	101	75-125			U
Matrix Spike Dup (B3I2821-MSD1)		Source: Y309640-01			Prepared: 09/28/2023 Analyzed: 10/10/2023					
Arsenic	5.83	0.0931	mg/kg	4.66	1.09	102	75-125	3.72	20	
Barium	487	9.31	"	466	20.8	100	75-125	1.33	20	
Cadmium	4.79	0.0931	"	4.66	0.0542	102	75-125	0.654	20	
Copper	51.9	9.31	"	46.6	1.69	108	75-125	0.442	20	
Lead	7.28	9.31	"	4.66	2.70	98.5	75-125	4.13	20	U
Nickel	6.55	9.31	"	4.66	1.93	99.3	75-125	8.06	20	U
Selenium	4.42	0.0931	"	4.66	0.0551	93.8	75-125	9.39	20	
Silver	4.52	0.0931	"	4.66	0.0133	96.7	75-125	0.683	20	
Zinc	58.1	93.1	"	46.6	10.3	103	75-125	0.693	20	U

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Notes and Definitions

U Sample is Non-Detect.

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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