

Wellhead Closure Checklist

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

Additional attachments (optional):		Pit Closure <u> </u>		Tank Battery Closure <u> </u>		Flowline Closure <u> </u>		Partially Buried Vault Closure <u> </u>	
Site Name & COGCC Facility Number: Sater USX CC #19-10		Date: 04/04/23				Remediation Project #: 26903			
Associated Wells: 05-123-24128		Age of Site: Years				Number of Photos Attached: 1			
Location: (GPS coordinates of wellhead or southeastern most wellhead for multiple)						40.296173 / -104.478160			
Estimated Facility Size (acres):									
General Condition of Site: (General observations regarding housekeeping, corrosion, waste management, etc.)									
Good Condition									
USCS Soil Type: Silty SAND				Estimated Depth to Groundwater: Approx. 20-30'					
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	05-123-24128								
Age	Years								
Condition of surface around wellhead	Good - Per Crew								
PID Readings	N/A - Excavated Upon Arrival								
Condition of subsurface (staining present)	Good - No Odor/Staining								
PID Readings	0.0	0.2	0.3	0.4	1.2				
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?									
<input checked="" type="checkbox"/> No			Yes - less than 10 cubic yards			Yes - more than 10 cubic yards			
Total number of samples field screened: 5				Total number of samples collected: 5					
Highest PID Reading: 1.2				Total number of samples submitted to lab for analysis: 1					
If more than 10 cubic yards of impacted soil were observed:									
Vertical extent:				Estimated spill volume:					
N/A									
Lateral extent:				Volume of soil removed:					
Is additional investigation required?									
Was groundwater encountered during the investigation?									
<input checked="" type="checkbox"/> 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				N/A					
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:									

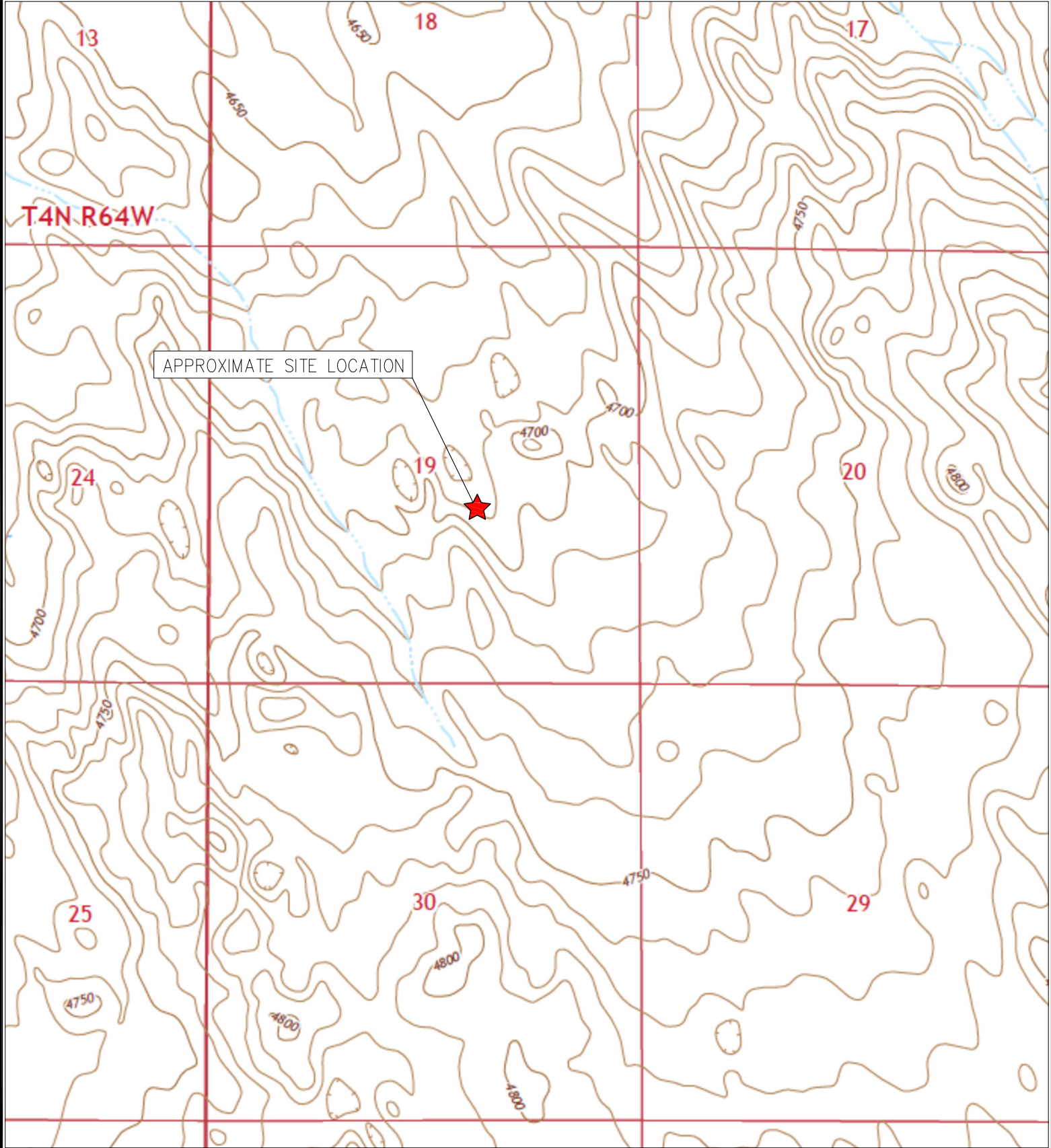


FIGURES

Figure 1: Topographic Site Location Map

Figure 2: Aerial Site Location Map

Figure 3: Soil Analytical Map



APPROXIMATE SITE LOCATION

TOPOGRAPHIC SITE LOCATION MAP
 CLOSURE ASSESSMENT
 SATER USX CC #19-10
 40.296173 / -104.478160
 NW¼ SE¼ SEC.19 T4N R63W 6PM
 WELD COUNTY, COLORADO
 API # 05-123-24128
 REMEDIATION # 26903



EAGLE
 ENVIRONMENTAL
 CONSULTING, LLC

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

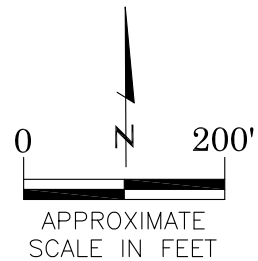
SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC MAP
 HARDIN, CO QUADRANGLE 2022

FIGURE NO. 1



LEGEND

- FORMER SATER USX CC #19-10 WELLHEAD (PLUGGED AND ABANDONED)
- ASSOCIATED SEPARATOR
- APPROXIMATE FLOWLINE LOCATION



AERIAL SITE LOCATION MAP
 SATER USX CC #19-10
 CLOSURE ASSESSMENT
 40.296173 / -104.478160
 NW¼ SE¼ SEC.19 T4N R63W 6PM
 WELD COUNTY, COLORADO
 API # 05-123-24128
 REMEDIATION # 26903

FIGURE NO.
2

DRAWN BY:
CT



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LEGEND

- — WELLHEAD 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

PARAMETERS

SAMPLE LOCATION
DATE
DEPTH (FEET)
B = BENZENE (mg/kg)
T = TOLUENE (mg/kg)
E = ETHYLBENZENE (mg/kg)
X = TOTAL XYLENES (mg/kg)
G = TPH-GRO (mg/kg)
D = TPH-DRO (mg/kg)
R = TPH-RRO (mg/kg)
1,2,4-TMB = 1,2,4 TRIMETHYLBENZENE (mg/kg)
1,3,5-TMB = 1,3,5 TRIMETHYLBENZENE (mg/kg)
Brn= BORON (mg/L)
EC = SPECIFIC CONDUCTANCE (mmhos/cm)
SAR= SODIUM ADSORPTION RATIO
pH = pH (pH UNITS)
POLYCYCLIC AROMATIC HYDROCARBONS (PAHs) (mg/kg)

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

(BRL) - ALL VALUES BELOW REGULATORY LIMITS

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

ECMC = ENERGY & CARBON MANAGEMENT COMMISSION

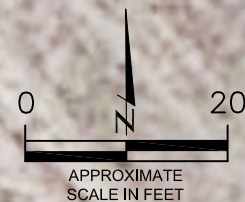
SOIL ANALYTICAL MAP
 SATER USX CC #19-10
 CLOSURE ASSESSMENT
 40.296173 / -104.478160
 NW¼ SE¼ SEC.19 T4N R63W 6PM
 WELD COUNTY, COLORADO
 API # 05-123-24128
 REMEDIATION # 26903

FIGURE NO.
3

DRAWN BY:
CT



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 Ph: 303-433-0479 • F: 303-325-5449



WH-FS-01@6'
 04/04/23
 6'
 (BRL)





TABLES

Table 1: Photoionization Detector Reading Summary

Table 2: Soil Analytical Results Summary

TABLE 1
PHOTOIONIZATION DETECTOR READING SUMMARY
SATER USX CC #19-10
CLOSURE ASSESSMENT
40.296173 / -104.478160
NW¼ SE¼ SEC.19 T4N R63W 6PM
WELD COUNTY, COLORADO
API # 05-123-24128
REMEDIATION # 26903

Sample Location (Latitude/Longitude)	Date	Approximate Depth (feet)	PID Reading (ppm-v)	Lab Submission (Y/N)
WH-SS-01 @ 5' (40.296195 / -104.478161)	04/04/23	5	0.0	N
WH-SS-02 @ 5' (40.296174 / -104.478138)	04/04/23	5	0.2	N
WH-SS-03 @ 5' (40.296152 / -104.478158)	04/04/23	5	0.3	N
WH-SS-04 @ 5' (40.296173 / -104.478181)	04/04/23	5	0.4	N
WH-FS-01 @ 6' (40.296173 / -104.478160)	04/04/23	6	1.2	Y
(Y/N) = Yes or No ppm-v = parts per million by volume PID = Photoionization Detector				



TABLE 2
SOIL ANALYTICAL RESULTS SUMMARY
SATER USX CC #19-10
CLOSURE ASSESSMENT
40.296173 / -104.478160
NW¼ SE¼ SEC.19 T4N R63W 6PM
WELD COUNTY, COLORADO
API # 05-123-24128
REMEDIATION # 26903

Sample Location		WH-FS-01 @ 6'		
(Latitude / Longitude)		(40.296173 / -104.478160)		
Sample Date		4/4/2023		
Sample Depth		6'		
PID Reading (ppm-v)		1.2		
Regulatory Limits				
Chemical of Concern	Units	ECMC Table 915-1 RSSLs	ECMC Table 915-1 GSSLs	
VOCs				
Benzene	mg/kg	1.2	0.0026	<0.00200
Toluene	mg/kg	490	0.69	<0.00200
Ethylbenzene	mg/kg	5.8	0.78	<0.00200
Total Xylenes	mg/kg	58	9.9	<0.00200
1,2,4-Trimethylbenzene	mg/kg	30	0.0081	<0.00200
1,3,5-Trimethylbenzene	mg/kg	27	0.0087	<0.00200
TOTAL PETROLEUM HYDROCARBONS				
TPH-GRO	mg/kg	500	--	0.311
TPH-DRO	mg/kg	500	--	<25.0
TPH-RRO	mg/kg	500	--	<100
POLYCYCLIC AROMATIC HYDROCARBONS				
1-Methyl-naphthalene	mg/kg	18	0.006	<0.00201
2-Methyl-naphthalene	mg/kg	24	0.019	<0.00201
Acenaphthene	mg/kg	360	0.55	<0.00067
Anthracene	mg/kg	1800	5.8	<0.00067
Benzo(a)-anthracene	mg/kg	1.1	0.011	<0.00067
Benzo(a)-pyrene	mg/kg	0.11	0.24	<0.00067
Benzo(b)-fluoranthene	mg/kg	1.1	0.3	<0.00067
Benzo(k)-fluoranthene	mg/kg	11	2.9	<0.00067
Chrysene	mg/kg	110	9	<0.00067
Dibenzo(a,h)-anthracene	mg/kg	0.11	0.096	<0.00067
Fluoranthene	mg/kg	240	8.9	<0.00067
Fluorene	mg/kg	240	0.54	0.000424
Indeno(1,2,3-cd)-pyrene	mg/kg	1.1	0.98	<0.00067
Naphthalene	mg/kg	2	0.0038	<0.00201
Pyrene	mg/kg	180	1.3	<0.00067
SOIL SUITABILITY (Inorganics)				
Boron	mg/L	2	--	0.253
pH	standard unit	6-8.3	--	7.54
Sodium Adsorption Ratio (SAR)	--	<6	--	0.740
Specific Conductance (EC)	mmhos/cm	<4	--	0.423
ECMC - Energy & Carbon Management Commission		VOCs - Volatile Organic Compounds		
mg/kg = milligrams per kilogram		RSSLs = Residential Soil Screening Levels		
mmhos/cm = millimhos per centimeter		GSSLs = Protection of Groundwater Soil Screening Levels		
PID = Photoionization Detector		TPH-GRO = Total Petroleum Hydrocarbons - Gasoline Range Organics		
ppm-v = parts per million by volume		TPH-DRO = Total Petroleum Hydrocarbons - Diesel Range Organics		
mg/L = milligrams per liter		TPH-RRO = Total Petroleum Hydrocarbons - Residual Range Organics		
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.				



ATTACHMENT A

Photo Log

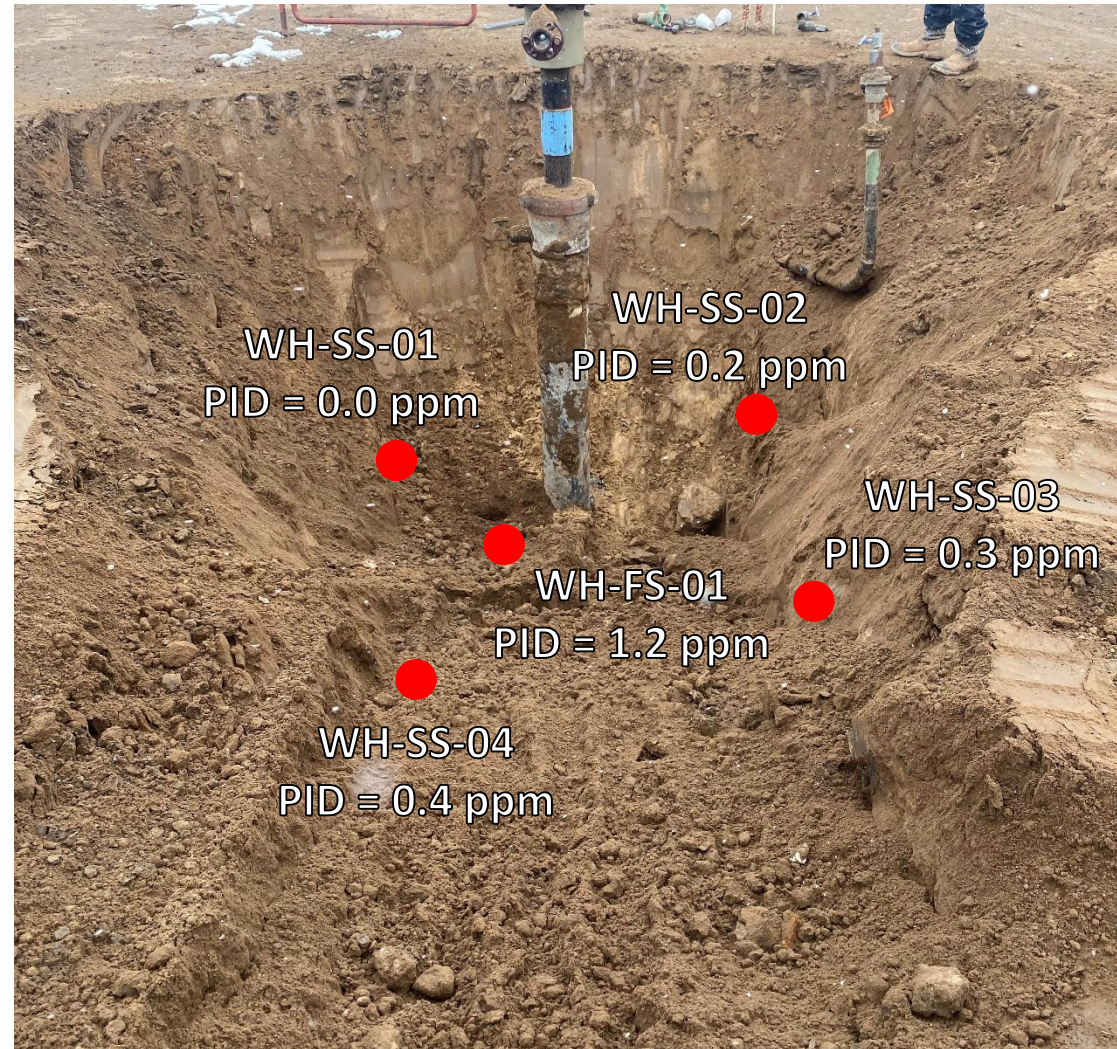
Sater USX CC #19-10
API # 05-123-24128
Remediation # 26903

Closure Assessment

April 2023



Wellhead Excavation – 04/04/23



Looking northeast

No petroleum hydrocarbon staining or odor observed



ATTACHMENT B

Laboratory Analytical Report



April 17, 2023

Eagle Environmental Consulting, LLC

Martin C Eckert III

8000 W 44th Ave

Wheat Ridge CO 80033

Project Name - Noble - Sater USX CC #19-10

Project Number - [none]

Attached are your analytical results for Noble - Sater USX CC #19-10 received by Origins Laboratory, Inc. April 04, 2023. This project is associated with Origins project number Y304042-01.

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 - Sater USX CC #19-10

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
WH-FS-01@6'	Y304042-01	Soil	April 4, 2023 11:40	04/04/2023 13:10

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 - Sater USX CC #19-10

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: 4304042

Client: Eagle

Client Project ID: Sater USX CC #19-10

Checklist Completed by: EHS/TJM

Shipped Via: HD

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

Date/time completed: 4/14/23

Airbill #: NA

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

Cooler Number/Temperature: 1 5.1 °C _____ °C _____ °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⁾ ?	/			
Is there ice present (document if blue ice is used)	/			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)			/	
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)			/	
Were all samples received intact ⁽¹⁾ ?	/			
Was adequate sample volume provided ⁽¹⁾ ?	/			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?		/		
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	/			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	/			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	/			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	/			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.			/	
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 HNO3, HCL, H2SO4) / (pH >10 for samples preserved with NaAsO2+NaOH, ZnAc+NaOH)			/	
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: JTB (Project Manager)

Date/Time Reviewed: 4-9-23

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 - Sater USX CC #19-10

WH-FS-01@6'
4/4/2023 11:40:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y304042-01 (Soil)

Boron (DTPA Sorbitol)

Boron	0.253		0.0980	mg/L	1	B3D0617	04/06/2023	04/07/2023	
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DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND		25.0	mg/kg	1	B3D0501	04/05/2023	04/07/2023	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

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

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B3D0519	04/05/2023	04/10/2023	U
1,3,5-Trimethylbenzene	ND		0.00200	"	"	"	"	"	U
Benzene	ND		0.00200	"	"	"	"	"	U
Ethylbenzene	ND		0.00200	"	"	"	"	"	U
Toluene	ND		0.00200	"	"	"	"	"	U
Xylenes, total	ND		0.00200	"	"	"	"	"	U
Gasoline Range Hydrocarbons	0.311		0.200	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4	75.5 %		70-130			"	"	"	
Surrogate: Toluene-d8	92.2 %		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 - Sater USX CC #19-10

WH-FS-01@6'
4/4/2023 11:40:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y304042-01 (Soil)

GBTEX+TMBs by 8260D

Surrogate: 4-Bromofluorobenzene	99.9 %		70-130			B3D05 19	04/05/2023	04/10/2023	
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Metals by Saturated Paste by EPA 6010

Calcium	1.28		0.499	meq/L	10	[CALC]	04/05/2023	04/07/2023	
Magnesium	ND		0.823	"	"	"	"	"	
Sodium	0.664		0.435	"	"	"	"	"	

PAH by 8270D SIM

1-Methylnaphthalene	ND	0.00109	0.00201	mg/Kg	1	L674692	04/07/2023	04/07/2023	
2-Methylnaphthalene	ND	0.00194	0.00201	"	"	"	"	"	
Acenaphthene	ND	0.000304	0.00067	"	"	"	"	"	
Anthracene	ND	0.000334	0.00067	"	"	"	"	"	
Benzo(a)anthracene	ND	0.000493	0.00067	"	"	"	"	"	
Benzo(a)pyrene	ND	0.000468	0.00067	"	"	"	"	"	
Benzo(b)fluoranthene	ND	0.000585	0.00067	"	"	"	"	"	
Benzo(k)fluoranthene	ND	0.000437	0.00067	"	"	"	"	"	
Chrysene	ND	0.000624	0.00067	"	"	"	"	"	
Dibenz(a,h)anthracene	ND	0.000614	0.00067	"	"	"	"	"	
Fluoranthene	ND	0.000394	0.00067	"	"	"	"	"	
Fluorene	0.000424	0.000286	0.00067	"	"	"	"	"	J

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 - Sater USX CC #19-10

WH-FS-01@6'
4/4/2023 11:40:00AM

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

Waypoint Analytical, LLC.
Y304042-01 (Soil)

PAH by 8270D SIM

Indeno(1,2,3-cd)pyrene	ND	0.000627	0.00067	mg/Kg	1	L674692	04/07/2023	04/07/2023	
Naphthalene	ND	0.00145	0.00201	"	"	"	"	"	
Pyrene	ND	0.000643	0.00067	"	"	"	"	"	

Surrogate: 2-Fluorobiphenyl	52.9 %		33-115			"	"	"	
Surrogate: 4-Terphenyl-d14	55.6 %		33-122			"	"	"	
Surrogate: Nitrobenzene-d5	52.6 %		29-110			"	"	"	

pH in Soil by 9045D

pH	7.54			pH Units	1	B3D0515	04/05/2023	04/06/2023	
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SAR by 20B Saturated Paste

SAR	0.740			SAR	1	B3D0511	04/05/2023	04/07/2023	
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.423		0.00500	mmhos/cm	1	B3D0515	04/05/2023	04/06/2023	
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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 - Sater USX CC #19-10

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 B3D0501 - EPA 3580										
Blank (B3D0501-BLK1)										
					Prepared: 04/05/2023 Analyzed: 04/07/2023					
Diesel (C10-C28)	ND	25.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	100	"							U
Surrogate: o-Terphenyl	26		"	24.9		104	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 - Sater USX CC #19-10

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 B3D0501 - EPA 3580

LCS (B3D0501-BS1)

Prepared: 04/05/2023 Analyzed: 04/07/2023

Diesel (C10-C28)	1120	50.0	mg/kg	1000		112	70-130			
Residual Range Organics (C28-C40)	1180	200	"	1000		118	70-130			
Surrogate: o-Terphenyl	56		"	49.8		113	50-150			

Origins Laboratory, Inc.



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 8000 W 44th Ave
 Wheat Ridge CO 80033

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Sater USX CC #19-10

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 B3D0501 - EPA 3580

Matrix Spike (B3D0501-MS1)	Source: Y304035-01			Prepared: 04/05/2023 Analyzed: 04/07/2023						
Diesel (C10-C28)	1080	50.0	mg/kg	1000	ND	108	70-130			
Residual Range Organics (C28-C40)	1160	200	"	1000	ND	116	70-130			
Surrogate: o-Terphenyl	59		"	49.8		119	50-150			

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Jordan A. Bynon, Project Manager

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

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Sater USX CC #19-10

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 B3D0501 - EPA 3580										
Matrix Spike Dup (B3D0501-MSD1)					Source: Y304035-01					Prepared: 04/05/2023 Analyzed: 04/07/2023
Diesel (C10-C28)	999	50.0	mg/kg	1000	ND	99.9	70-130	7.59	35	
Residual Range Organics (C28-C40)	1050	200	"	1000	ND	105	70-130	9.47	35	
Surrogate: o-Terphenyl	48		"	49.8		96.1	50-150			

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 Wheat Ridge CO 80033

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Sater USX CC #19-10

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 B3D0519 - EPA 5030 (soil)

Blank (B3D0519-BLK1)

Prepared: 04/05/2023 Analyzed: 04/07/2023

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	0.091		"	0.125	73.0		70-130			
Surrogate: Toluene-d8	0.12		"	0.125	96.4		70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125	98.9		70-130			

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 Wheat Ridge CO 80033

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Sater USX CC #19-10

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 B3D0519 - EPA 5030 (soil)

LCS (B3D0519-BS1)

Prepared: 04/05/2023 Analyzed: 04/07/2023

1,2,4-Trimethylbenzene	0.112	0.00200	mg/kg	0.100		112	70-130			
1,3,5-Trimethylbenzene	0.112	0.00200	"	0.100		112	70-130			
Benzene	0.106	0.00200	"	0.100		106	70-130			
Ethylbenzene	0.108	0.00200	"	0.100		108	70-130			
Naphthalene	0.114	0.00380	"	0.100		114	70-130			
Toluene	0.0968	0.00200	"	0.100		96.8	70-130			
o-Xylene	0.106	0.00200	"	0.100		106	70-130			
m,p-Xylene	0.222	0.00400	"	0.200		111	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.090		"	0.125		72.0	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		96.6	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		103	70-130			

Origins Laboratory, Inc.



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Martin C Eckert III
 Project Number: [none]
 Project: Noble - Sater USX CC #19-10

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 B3D0519 - EPA 5030 (soil)

Matrix Spike (B3D0519-MS1)	Source: Y304004-01			Prepared: 04/05/2023 Analyzed: 04/07/2023						
1,2,4-Trimethylbenzene	0.0953	0.00200	mg/kg	0.100	ND	95.3	70-130			
1,3,5-Trimethylbenzene	0.0972	0.00200	"	0.100	ND	97.2	70-130			
Benzene	0.0882	0.00200	"	0.100	ND	88.2	70-130			
Ethylbenzene	0.0983	0.00200	"	0.100	ND	98.3	70-130			
Naphthalene	0.0882	0.00380	"	0.100	0.00536	82.8	70-130			
Toluene	0.0856	0.00200	"	0.100	ND	85.6	70-130			
o-Xylene	0.0998	0.00200	"	0.100	ND	99.8	70-130			
m,p-Xylene	0.200	0.00400	"	0.200	ND	100	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.084		"	0.125		67.5	70-130			S-GC
Surrogate: Toluene-d8	0.13		"	0.125		100	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		108	70-130			

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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 - Sater USX CC #19-10

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 B3D0519 - EPA 5030 (soil)

Matrix Spike Dup (B3D0519-MSD1)	Source: Y304004-01		Prepared: 04/05/2023 Analyzed: 04/07/2023							
1,2,4-Trimethylbenzene	0.0909	0.00200	mg/kg	0.100	ND	90.9	70-130	4.70	20	
1,3,5-Trimethylbenzene	0.0913	0.00200	"	0.100	ND	91.3	70-130	6.30	20	
Benzene	0.0919	0.00200	"	0.100	ND	91.9	70-130	4.18	20	
Ethylbenzene	0.0944	0.00200	"	0.100	ND	94.4	70-130	4.03	20	
Naphthalene	0.0923	0.00380	"	0.100	0.00536	86.9	70-130	4.50	20	
Toluene	0.0860	0.00200	"	0.100	ND	86.0	70-130	0.466	20	
o-Xylene	0.0976	0.00200	"	0.100	ND	97.6	70-130	2.21	20	
m,p-Xylene	0.195	0.00400	"	0.200	ND	97.3	70-130	2.85	20	
Surrogate: 1,2-Dichloroethane-d4	0.086		"	0.125		68.9	70-130			S-GC
Surrogate: Toluene-d8	0.12		"	0.125		98.5	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		105	70-130			

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 Wheat Ridge CO 80033

Martin C Eckert III
 Project Number: [none]
 Project: Noble - Sater USX CC #19-10

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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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 B3D0511 - Saturated Paste Metals

Blank (B3D0511-BLK1)

Prepared: 04/05/2023 Analyzed: 04/07/2023

Calcium PPM	ND	10.0	mg/L							
SAR	0.00		SAR							
Magnesium PPM	ND	10.0	mg/L							
Sodium PPM	ND	10.0	"							

Duplicate (B3D0511-DUP1)

Source: Y304033-11

Prepared: 04/05/2023 Analyzed: 04/07/2023

SAR	0.00		SAR		3.17			200	200	
Calcium PPM	37.0	10.0	mg/L		37.4			1.18	50	
Magnesium PPM	17.8	10.0	"		18.2			1.96	50	
Sodium PPM	97.7	10.0	"		94.5			3.29	50	

Batch B3D0617 - DTPA Sorbitol Preparation

Blank (B3D0617-BLK1)

Prepared: 04/06/2023 Analyzed: 04/07/2023

Boron	ND	0.100	mg/L							
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Duplicate (B3D0617-DUP1)

Source: Y304033-14

Prepared: 04/06/2023 Analyzed: 04/07/2023

Boron	0.131	0.101	mg/L		0.125			3.94	50	
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Martin C Eckert III
 Project Number: [none]
 Project: Noble - Sater USX CC #19-10

Saturated Paste - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B3D0515 - Saturated Paste pH/EC										
Blank (B3D0515-BLK1)					Prepared: 04/05/2023 Analyzed: 04/06/2023					
Specific Conductance (EC)	ND	0.00500	mmhos/cm							
Duplicate (B3D0515-DUP1)					Source: Y304033-11 Prepared: 04/05/2023 Analyzed: 04/06/2023					
pH	7.67		pH Units		7.66			0.130	25	
Specific Conductance (EC)	0.766	0.00500	mmhos/cm		0.739			3.54	25	

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Martin C Eckert III
 Project Number: [none]
 Project: Noble - Sater USX CC #19-10

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch L674692 - 3550B

MSD (L 93577-MSD-L674692)	Source: 93577			Prepared: 04/07/2023 Analyzed: 04/07/2023						
2-Methylnaphthalene	0.0975	0.00201	mg/Kg	0.165	<0.00194	59	30-130	2.4	30	
Fluorene	0.105	0.00067	"	0.165	<0.000286	63.6	30-130	1.9	30	
Pyrene	0.0822	0.00067	"	0.165	<0.000643	49.8	30-130	10.5	30	
Indeno(1,2,3-cd)pyrene	0.0952	0.00067	"	0.165	<0.000627	57.6	30-130	1.9	30	
Fluoranthene	0.0904	0.00067	"	0.165	<0.000394	54.7	30-130	7.6	30	
Dibenz(a,h)anthracene	0.103	0.00067	"	0.165	<0.000614	62.4	30-130	4.4	30	
Chrysene	0.103	0.00067	"	0.165	<0.000624	62.4	30-130	6.4	30	
Naphthalene	0.0913	0.00201	"	0.165	<0.00145	55.3	30-130	1.2	30	
1-Methylnaphthalene	0.0967	0.00201	"	0.165	<0.00109	58.6	30-130	1.9	30	
Benzo(k)fluoranthene	0.059	0.00067	"	0.165	<0.000437	35.7	30-130	0.6	30	
Acenaphthene	0.0999	0.00067	"	0.165	<0.000304	60.5	30-130	3.7	30	
Anthracene	0.106	0.00067	"	0.165	<0.000334	64.2	30-130	0.9	30	
Benzo(a)anthracene	0.106	0.00067	"	0.165	<0.000493	64.2	30-130	5.5	30	
Benzo(a)pyrene	0.112	0.00067	"	0.165	<0.000468	67.8	30-130	1.8	30	
Benzo(b)fluoranthene	0.0499	0.00067	"	0.165	<0.000585	30.2	30-130	22.4	30	
Surrogate: 2-Fluorobiphenyl	50.9		"	0.33	155	50.9	33-115			
Surrogate: Nitrobenzene-d5	50.9		"	0.33	155	50.9	29-110			
Surrogate: 4-Terphenyl-d14	45.7		"	0.33	167	45.7	33-122			

MS (L 93577-MS-L674692)	Source: 93577			Prepared: 04/07/2023 Analyzed: 04/07/2023						
Benzo(k)fluoranthene	0.0586	0.00067	mg/Kg	0.162	<0.000437	36.1	30-130			
Acenaphthene	0.0962	0.00067	"	0.162	<0.000304	59.3	30-130			
Naphthalene	0.0902	0.00201	"	0.162	<0.00145	55.6	30-130			
Indeno(1,2,3-cd)pyrene	0.0934	0.00067	"	0.162	<0.000627	57.6	30-130			
Fluorene	0.103	0.00067	"	0.162	<0.000286	63.5	30-130			
Fluoranthene	0.0976	0.00067	"	0.162	<0.000394	60.2	30-130			
Dibenz(a,h)anthracene	0.0985	0.00067	"	0.162	<0.000614	60.8	30-130			

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Martin C Eckert III
 Project Number: [none]
 Project: Noble - Sater USX CC #19-10

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch L674692 - 3550B

MS (L 93577-MS-L674692)		Source: 93577			Prepared: 04/07/2023 Analyzed: 04/07/2023					
Chrysene	0.0966	0.00067	mg/Kg	0.162	<0.000624	59.6	30-130			
1-Methylnaphthalene	0.0948	0.00201	"	0.162	<0.00109	58.5	30-130			
Benzo(a)pyrene	0.11	0.00067	"	0.162	<0.000468	67.9	30-130			
Anthracene	0.107	0.00067	"	0.162	<0.000334	66	30-130			
Pyrene	0.0914	0.00067	"	0.162	<0.000643	56.4	30-130			
2-Methylnaphthalene	0.0951	0.00201	"	0.162	<0.00194	58.7	30-130			
Benzo(b)fluoranthene	0.0625	0.00067	"	0.162	<0.000585	38.5	30-130			
Benzo(a)anthracene	0.112	0.00067	"	0.162	<0.000493	69.1	30-130			
Surrogate: Nitrobenzene-d5	45.8		"	0.325	155	45.8	29-110			
Surrogate: 4-Terphenyl-d14	51.3		"	0.325	167	51.3	33-122			
Surrogate: 2-Fluorobiphenyl	46.4		"	0.325	155	46.4	33-115			

LCS (LCS-L674692)		Prepared: 04/07/2023 Analyzed: 04/07/2023								
Chrysene	0.111	0.00067	mg/Kg	0.167		66.4	30-130			
Dibenz(a,h)anthracene	0.109	0.00067	"	0.167		65.2	30-130			
Fluoranthene	0.112	0.00067	"	0.167		67	30-130			
Fluorene	0.116	0.00067	"	0.167		69.4	30-130			
Indeno(1,2,3-cd)pyrene	0.0979	0.00067	"	0.167		58.6	30-130			
Naphthalene	0.102	0.00201	"	0.167		61	30-130			
Benzo(k)fluoranthene	0.0791	0.00067	"	0.167		47.3	30-130			
Pyrene	0.107	0.00067	"	0.167		64	30-130			
Benzo(a)pyrene	0.123	0.00067	"	0.167		73.6	30-130			
Benzo(a)anthracene	0.127	0.00067	"	0.167		76	30-130			
Anthracene	0.116	0.00067	"	0.167		69.4	30-130			
Acenaphthene	0.107	0.00067	"	0.167		64	30-130			
2-Methylnaphthalene	0.105	0.00201	"	0.167		62.8	30-130			
1-Methylnaphthalene	0.104	0.00201	"	0.167		62.2	30-130			

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Martin C Eckert III
 Project Number: [none]
 Project: Noble - Sater USX CC #19-10

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch L674692 - 3550B

LCS (LCS-L674692)

Prepared: 04/07/2023 Analyzed: 04/07/2023

Benzo(b)fluoranthene	0.0811	0.00067	mg/Kg	0.167		48.5	30-130			
Surrogate: Nitrobenzene-d5	57		"	0.333		57	29-110			
Surrogate: 4-Terphenyl-d14	63.3		"	0.333		63.3	33-122			
Surrogate: 2-Fluorobiphenyl	57		"	0.333		57	33-115			

LRB (LRB-L674692)

Prepared: 04/07/2023 Analyzed: 04/07/2023

Chrysene	ND	0.00067	mg/Kg				-			
Dibenz(a,h)anthracene	ND	0.00067	"				-			
Fluoranthene	ND	0.00067	"				-			
Fluorene	ND	0.00067	"				-			
Benzo(k)fluoranthene	ND	0.00067	"				-			
Naphthalene	ND	0.00201	"				-			
Indeno(1,2,3-cd)pyrene	ND	0.00067	"				-			
Benzo(b)fluoranthene	ND	0.00067	"				-			
Benzo(a)pyrene	ND	0.00067	"				-			
Benzo(a)anthracene	ND	0.00067	"				-			
Acenaphthene	ND	0.00067	"				-			
2-Methylnaphthalene	ND	0.00201	"				-			
1-Methylnaphthalene	ND	0.00201	"				-			
Pyrene	ND	0.00067	"				-			
Anthracene	ND	0.00067	"				-			
Surrogate: Nitrobenzene-d5	57		"	0.333		57	29-110			
Surrogate: 4-Terphenyl-d14	68.1		"	0.333		68.1	33-122			
Surrogate: 2-Fluorobiphenyl	56.7		"	0.333		56.7	33-115			

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Wheat Ridge CO 80033

Martin C Eckert III
Project Number: [none]
Project: Noble - Sater USX CC #19-10

Notes and Definitions

U Sample is Non-Detect.

S-GC Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.

J Estimated Value. Analyte below reported quantitation limit.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported on a wet weight basis.

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

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Jordan A. Bynon, Project Manager