

Wellhead Closure Checklist

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

Additional attachments (optional): <u> </u>		Pit Closure <u> </u>		Tank Battery Closure <u> </u>		Flowline Closure <u> </u>		Partially Buried Vault Closure <u> </u>
Site Name & COGCC Facility Number: Frank C #12-22		Date: 02/09/24					Remediation Project #: 32151	
Associated Wells: 05-123-29564		Age of Site: years					Number of Photos Attached: 5	
Location: (GPS coordinates of wellhead or southeastern most wellhead for multiple)							Estimated Facility Size (acres): <u> </u>	
General Condition of Site: (General observations regarding housekeeping, corrosion, waste management, etc.)								
Good condition								
USCS Soil Type: Sandy CLAY					Estimated Depth to Groundwater: ~10-20'			
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	05-123-29564							
Age	years							
Condition of surface around wellhead	Good - No odor/no staining							
PID Readings	WH-N: 0.4	WH-E: 0.2	WH-S: 0.6	WH-W: 0.2				
Condition of subsurface (staining present)	Good - No odor/no staining							
PID Readings	0.7	0.3	0.1	0.4	0.9			
Sample taken? Location/Sample ID#	WH-SS-01	WH-SS-02	WH-SS-03	WH-SS-04	WH-FS-01			
Photo Number(s)	See photo log							
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: 0.9					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:			
Lateral extent:					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

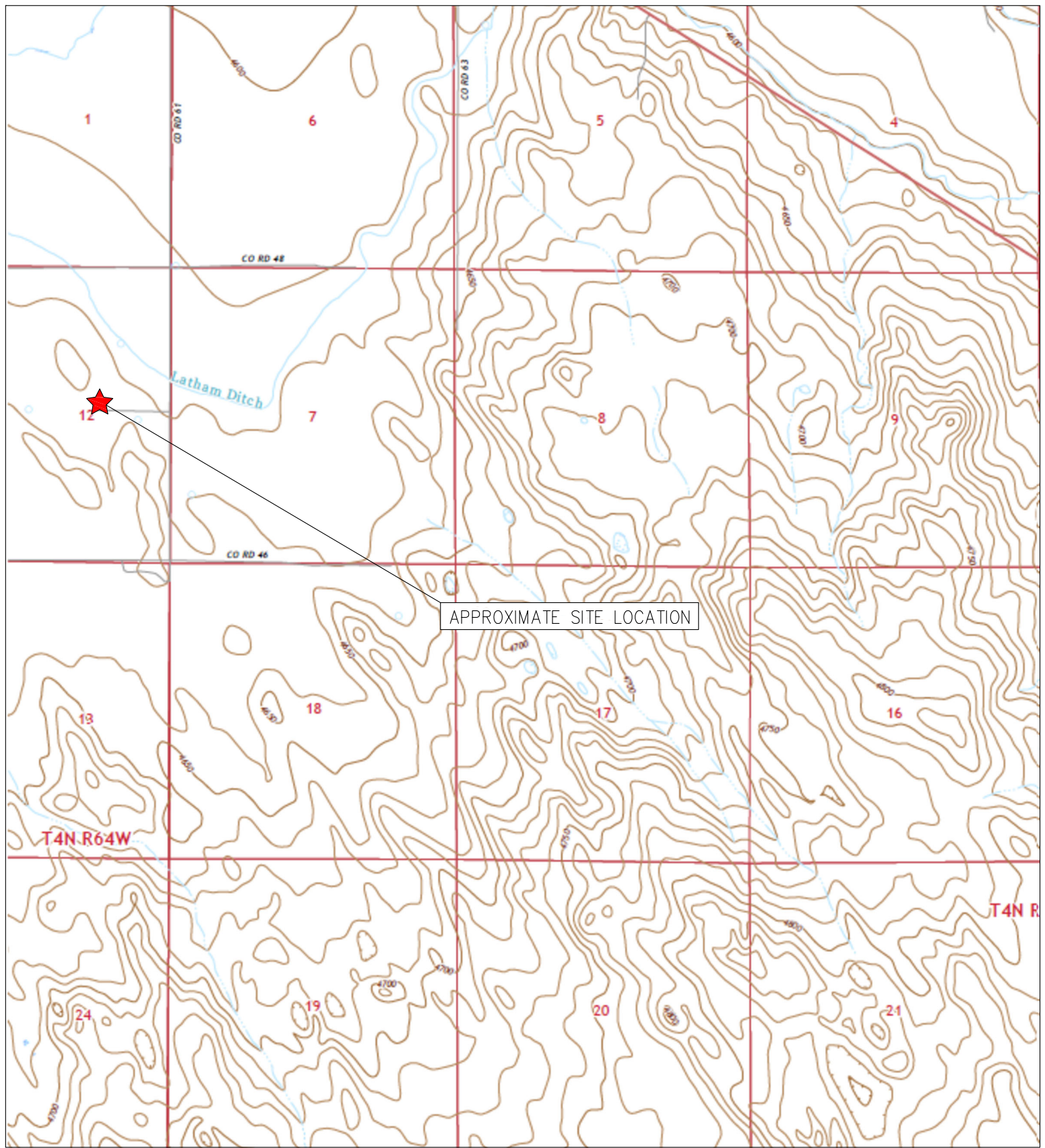
Figure 1: Topographic Site Location Map

Figure 2: Aerial Site Location Map

Figure 3: Soil Sampling Location Map

Figure 4: Soil Analytical Map

Figure 5: Metals in Soil Map



TOPOGRAPHIC SITE LOCATION MAP
 FRANK C #12-22
 CLOSURE ASSESSMENT
 40.327428 / -104.494070
 SE¼ NE¼ SEC.12 T4N R64W 6PM
 WELD COUNTY, COLORADO
 API # 05-123-29564
 REMEDIATION # 32151



EAGLE
 ENVIRONMENTAL
 CONSULTING, LLC

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

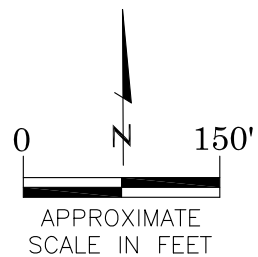
SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC MAP,
 HARDIN, CO QUADRANGLE 2022

FIGURE NO. 1



LEGEND

FORMER FRANK C #12-22 WELLHEAD (PLUGGED AND ABANDONED)



AERIAL SITE LOCATION MAP
FRANK C #12-22
CLOSURE ASSESSMENT
40.327428 / -104.494070
SE¼ NE¼ SEC.12 T4N R64W 6PM
WELD COUNTY, COLORADO
API # 05-123-29564
REMEDiation # 32151

FIGURE NO.
2

DRAWN BY:
RS



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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

SAMPLE LOCATION MAP
FRANK C #12-22
CLOSURE ASSESSMENT
40.327428 / -104.494070
SE¼ NE¼ SEC.12 T4N R64W 6PM
WELD COUNTY, COLORADO
API # 05-123-29564
REMEDIAL # 32151

FIGURE NO.
3

DRAWN BY:
RS



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LEGEND

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

PARAMETERS

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

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

(BRL) = ALL VALUES BELOW REGULATORY LIMITS

TPH-GRO = TOTAL PETROLEUM HYDROCARBONS – GASOLINE RANGE ORGANICS
TPH-DRO = TOTAL PETROLEUM HYDROCARBONS – DIESEL RANGE ORGANICS
TPH-RRO = TOTAL PETROLEUM HYDROCARBONS – RESIDUAL RANGE ORGANICS

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

ECMC = ENERGY & CARBON MANAGEMENT COMMISSION

SOIL ANALYTICAL MAP
FRANK C #12-22
CLOSURE ASSESSMENT
40.327428 / -104.494070
SE¼ NE¼ SEC.12 T4N R64W 6PM
WELD COUNTY, COLORADO
API # 05-123-29564
REMEDATION # 32151

FIGURE NO.
4

DRAWN BY:
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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 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

NOTES:

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

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

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

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

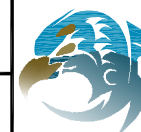
**ACHIEVABLE PRACTICAL QUANTITATIVE LIMITS FOR HEXAVALENT CHROMIUM (Cr VI) IN SOILS IS IN THE RANGE OF 0.1 TO 1 mg/kg.

ECMC = ENERGY & CARBON MANAGEMENT COMMISSION

METALS IN SOIL MAP
FRANK C #12-22
CLOSURE ASSESSMENT
40.327428 / -104.494070
SE¼ NE¼ SEC.12 T4N R64W 6PM
WELD COUNTY, COLORADO
API # 05-123-29564
REMEDIAION # 32151

FIGURE NO.
5

DRAWN BY:
RS



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TABLES

Table 1: Photoionization Detector Reading Summary

Table 2: Soil Analytical Results Summary

TABLE 1
PHOTOIONIZATION DETECTOR READING SUMMARY
FRANK C #12-22
CLOSURE ASSESSMENT
40.327428 / -104.494070
SE¼ NE¼ SEC.12 T4N R64W 6PM
WELD COUNTY, COLORADO
API # 05-123-29564
REMEDIALATION # 32151

Sample Location (Latitude/Longitude)	Date	Approximate Depth (feet)	PID Reading (ppm-v)	Lab Submission (Y/N)
WH-FS-01 @ 6' (40.327425 / -104.493715)	02/09/24	6	0.9	Y
WH-SS-01 @ 5' (40.327434 / -104.493715)	02/09/24	5	0.7	N
WH-SS-02 @ 5' (40.327425 / -104.493703)	02/09/24	5	0.3	N
WH-SS-03 @ 5' (40.327415 / -104.493715)	02/09/24	5	0.1	N
WH-SS-04 @ 5' (40.327425 / -104.493728)	02/09/24	5	0.4	N
WH-N @ 0.5' (40.327456 / -104.493715)	02/09/24	0.5	0.4	N
WH-E @ 0.5' (40.327424 / -104.493660)	02/09/24	0.5	0.2	N
WH-S @ 0.5' (40.327390 / -104.493715)	02/09/24	0.5	0.6	N
WH-W @ 0.5' (40.327424 / -104.493761)	02/09/24	0.5	0.2	N
Background-01 @ 2' (40.327463 / -104.493661)	02/09/24	2	0.3	Y
(Y/N) = Yes or No ppm-v = parts per million by volume PID = Photoionization Detector				

TABLE 2
SOIL ANALYTICAL RESULTS SUMMARY
FRANK C #12-22
CLOSURE ASSESSMENT
40.327428 / -104.494070
SE¼ NE¼ SEC.12 T4N R64W 6PM
WELD COUNTY, COLORADO
API # 05-123-29564
REMEDATION # 32151

Sample Location				WH-FS-01 @ 6'		Background-01 @ 2'	
(Latitude / Longitude)				(40.327425 / -104.493715)		(40.327463 / -104.493661)	
Sample Date				2/9/2024		2/9/2024	
Sample Depth				6'		2'	
PID Reading (ppm-v)				0.9		0.3	
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		NA
Toluene	mg/kg	490	0.69	--	<0.00200		NA
Ethylbenzene	mg/kg	5.8	0.78	--	<0.00200		NA
Total Xylenes	mg/kg	58	9.9	--	<0.00200		NA
Naphthalene	mg/kg	2	0.0038	--	<0.00380		NA
1,2,4-Trimethylbenzene	mg/kg	30	0.0081	--	<0.00200		NA
1,3,5-Trimethylbenzene	mg/kg	27	0.0087	--	<0.00200		NA
TOTAL PETROLEUM HYDROCARBONS							
TPH-GRO	mg/kg	500	--	--	<0.200		NA
TPH-DRO	mg/kg	500	--	--	<25.0		NA
TPH-RRO	mg/kg	500	--	--	<100		NA
POLYCYCLIC AROMATIC HYDROCARBONS							
1-Methyl-naphthalene	mg/kg	18	0.006	--	<0.002		NA
2-Methyl-naphthalene	mg/kg	24	0.019	--	<0.002		NA
Acenaphthene	mg/kg	360	0.55	--	<0.020		NA
Anthracene	mg/kg	1800	5.8	--	<0.020		NA
Benzo(a)-anthracene	mg/kg	1.1	0.011	--	<0.005		NA
Benzo(a)-pyrene	mg/kg	0.11	0.24	--	<0.020		NA
Benzo(b)-fluoranthene	mg/kg	1.1	0.3	--	<0.020		NA
Benzo(k)-fluoranthene	mg/kg	11	2.9	--	<0.020		NA
Chrysene	mg/kg	110	9	--	<0.020		NA
Dibenzo(a,h)-anthracene	mg/kg	0.11	0.096	--	<0.020		NA
Fluoranthene	mg/kg	240	8.9	--	<0.020		NA
Fluorene	mg/kg	240	0.54	--	<0.020		NA
Indeno(1,2,3-cd)-pyrene	mg/kg	1.1	0.98	--	<0.020		NA
Pyrene	mg/kg	180	1.3	--	<0.020		NA
SOIL SUITABILITY (Inorganics)							
Boron	mg/L	2	--	--	0.549		0.839
pH	standard unit	6-8.3	--	--	8.02		8.05
Sodium Adsorption Ratio (SAR)	--	<6	--	--	4.24		4.09
Specific Conductance (EC)	mmhos/cm	<4	--	--	2.50		3.21
METALS							
Arsenic	mg/kg	0.68	0.29	4.34	3.66		3.47
Barium	mg/kg	15000	82	101	89.5*		80.6
Cadmium	mg/kg	71	0.38	--	0.128		0.134
Copper	mg/kg	3100	46	--	<9.55		<8.72
Lead	mg/kg	400	14	18.8	9.34		15.0*
Nickel	mg/kg	1500	26	--	7.87		7.17
Selenium	mg/kg	390	0.26	--	0.118		0.177
Silver	mg/kg	390	0.8	--	<0.0955		<0.0872
Zinc	mg/kg	23000	370	--	38.1		41.0
Hexavalent Chromium	mg/kg	0.3**	0.00067**	0.1 to 1.0**	<0.244**		0.244**
ECMC = Energy & Carbon Management Commission		NA - Not Analyzed		VOCs - Volatile Organic Compounds			
mg/kg = milligrams per kilogram							
mmhos/cm = millimhos per centimeter		RSSLs = Residential Soil Screening Levels					
PID = Photoionization Detector		GSSLs = Protection of Groundwater Soil Screening Levels					
ppm-v = parts per million by volume		TPH-GRO = Total Petroleum Hydrocarbons - Gasoline Range Organics					
mg/L = milligrams per liter		TPH-DRO = Total Petroleum Hydrocarbons - Diesel Range Organics					
SAR = Sodium Adsorption Ratio		TPH-RRO = Total Petroleum Hydrocarbons - Residual Range Organics					
Notes:							
Values presented with a less than symbol (<) did not contain concentrations at or above the laboratory reporting limit and/or minimum detection limit.							
Elevated metals are naturally occurring in Colorado. Local Clean-up Levels are 1.25*Background concentrations where applicable.							
Values presented in BOLD exceed ECMC Table 915-1 Regulatory Limits and applicable Local Clean-up Levels.							
Values presented with asterisk (*) exceed ECMC Table 915-1 GSSLs, only.							
**Achievable practical quantitative limits for Hexavalent Chromium in soils is in the range of 0.1 to 1 mg/kg.							



ATTACHMENT A

Photo Log

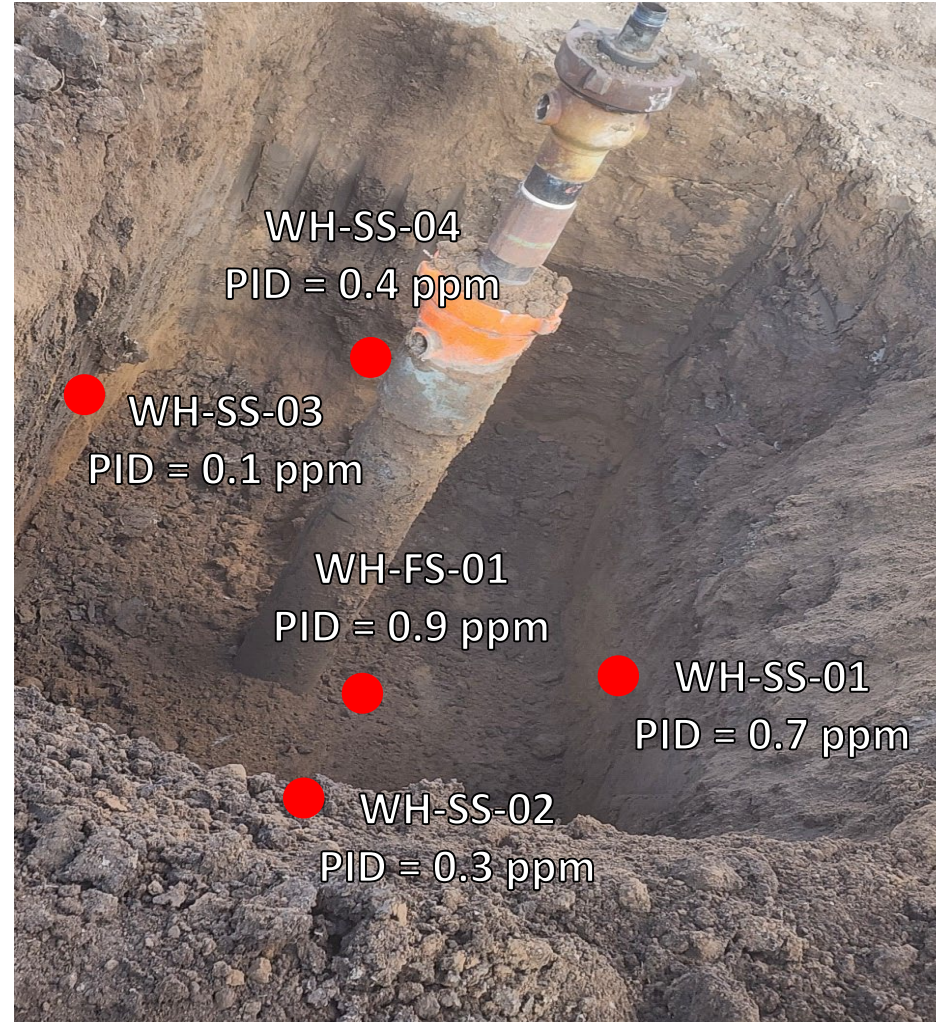
Frank C #12-22
API # 05-123-29564
Remediation # 32151

Closure Assessment

February 2024



Wellhead Excavation – 02/09/24



Looking west

No petroleum hydrocarbon staining or odor observed

Wellhead Surface – 02/09/24



Looking north

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



Looking east

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

Wellhead Surface – 02/09/24



Looking south

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



Looking west

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



ATTACHMENT B

Laboratory Analytical Report



February 23, 2024

Eagle Environmental Consulting, LLC

Andrew Newberry

8000 W 44th Ave

Wheat Ridge CO 80033

Project Name - Noble - Frank C #12-22

Project Number - [none]

Attached are your analytical results for Noble - Frank C #12-22 received by Origins Laboratory, Inc. February 09, 2024. This project is associated with Origins project number Y402270-01.

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

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

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

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

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

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



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

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

Andrew Newberry
Project Number: [none]
Project: Noble - Frank C #12-22

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
WH-FS-01@6'	Y402270-01	Soil	February 9, 2024 14:20	02/09/2024 16:00
Background-01@2'	Y402270-02	Soil	February 9, 2024 13:55	02/09/2024 16:00

Origins Laboratory, Inc.



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

Jordan A. Bynon, Project Manager

Andrew Newberry
Project Number: [none]
Project: Noble - Frank C #12-22

ORIGINS

LABORATORY, INC

www.originslaboratory.com

4402270

page 1 of 1

Client: Eagle Environmental Consulting

Address: 800 W 44th Ave

Wheat Ridge, CO 80033

Telephone Number: 303-433-0479

Email Address: anewberry@eagle-enviro.com

Project Manager: Andrew Newberry

Project Name: Frank C #12-22

Project Number: —

Samples Collected By: TC

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			analysis	Sample Instructions
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summa Canister #		
WH-F5-01061	2-9-24	1420	3	X					X		X	EC, SAR, pH = 1
Bulgand-01021	2-9-24	1355	3	X					X		X	Standard Arsenic pg 2
												3
												4
												5
												6
												7
												8
												9
												10
Relinquished By: <u>Trent Capple</u>	Date: <u>2-9-24</u>	Time: <u>1600</u>	Received By: <u>[Signature]</u>	Date: <u>2/9/24</u>	Time: <u>1600</u>	Turnaround Time: Same Day ☐ 24 Hr ☐ 48 Hr ☐ 72 Hr ☒ Standard ☒						
Relinquished By:	Date:	Time:	Received By:	Date:	Time:							

Fax: 303.265.9645

Phone: 303.433.1322

Denver, CO 80211

1725 Elk Place

Bill To Jeff

Temp Received- 2

Date Results Needed

At Noble

Origins Laboratory, Inc.

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

Andrew Newberry
Project Number: [none]
Project: Noble - Frank C #12-22

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: 4402270

Client: Eagle

Client Project ID: Frank C #12-22

Checklist Completed by: TST/ENG

Shipped Via: HV

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

Date/time completed: 2/12/24

Airbill #: N/A

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

Cooler Number/Temperature: 1, 2 °C _____ °C _____ °C (Describe) _____ °C

Thermometer ID: TOOT

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 HNO ₃ , HCL, H ₂ SO ₄) / (pH >10 for samples preserved with NaAsO ₂ +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 (Project Manager)

2/13/24
Date/Time Reviewed

Origins Laboratory, Inc.

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

Andrew Newberry
Project Number: [none]
Project: Noble - Frank C #12-22

WH-FS-01@6'

2/9/2024 2:20:00PM

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

Origins Laboratory, Inc.
Y402270-01 (Soil)

Boron (DTPA Sorbitol)

Boron	0.549	0.0996	mg/L	1	B4B1211	02/12/2024	02/13/2024	
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DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	25.0	mg/kg	1	B4B1401	02/14/2024	02/20/2024	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	U

Surrogate: o-Terphenyl	93.1 %	50-150			"	"	"	
------------------------	--------	--------	--	--	---	---	---	--

GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND	0.00200	mg/kg	1	B4B1335	02/13/2024	02/14/2024	U
1,3,5-Trimethylbenzene	ND	0.00200	"	"	"	"	"	U
Benzene	ND	0.00200	"	"	"	"	"	U
Ethylbenzene	ND	0.00200	"	"	"	"	"	U
Naphthalene	ND	0.00380	"	"	"	"	"	U
Toluene	ND	0.00200	"	"	"	"	"	U
Xylenes, total	ND	0.00200	"	"	"	"	"	U
Gasoline Range Hydrocarbons	ND	0.200	"	"	"	"	"	U

Origins Laboratory, Inc.



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

Andrew Newberry
Project Number: [none]
Project: Noble - Frank C #12-22

WH-FS-01@6'

2/9/2024 2:20:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y402270-01 (Soil)

GBTEX+TMBs by 8260D

Surrogate: 1,2-Dichloroethane-d4	99.3 %	70-130	B4B13 35	02/13/2024	02/14/2024
Surrogate: Toluene-d8	103 %	70-130	"	"	"
Surrogate: 4-Bromofluorobenzene	102 %	70-130	"	"	"

Metals by Saturated Paste by EPA 6010

Calcium	13.5	0.499	meq/L	10	[CALC]	02/12/2024	02/13/2024
Magnesium	5.51	0.823	"	"	"	"	"
Sodium	13.1	0.435	"	"	"	"	"

PAH by EPA 8270E

1-Methylnaphthalene	ND	0.002	mg/kg	1	B4B1321	02/13/2024	02/15/2024	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.



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

Andrew Newberry
Project Number: [none]
Project: Noble - Frank C #12-22

WH-FS-01@6'

2/9/2024 2:20:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y402270-01 (Soil)

PAH by EPA 8270E

Fluoranthene	ND	0.020	mg/kg	1	B4B1321	02/13/2024	02/15/2024	U
Fluorene	ND	0.020	"	"	"	"	"	U
Indeno (1,2,3-cd) pyrene	ND	0.020	"	"	"	"	"	U
Pyrene	ND	0.020	"	"	"	"	"	U

Surrogate: Fluorene-d10	96.9 %	60-130	"	"	"
Surrogate: Anthracene-d10	103 %	60-130	"	"	"
Surrogate: Pyrene-d10	98.2 %	60-130	"	"	"
Surrogate: Benzo (a) pyrene-d12	102 %	60-130	"	"	"

pH in Soil by 9045D

pH	8.02	pH Units	1	B4B1216	02/12/2024	02/13/2024
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SAR by 20B Saturated Paste

SAR	4.24	0.0100	SAR	1	B4B1206	02/12/2024	02/13/2024
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	2.50	0.00500	mmhos/cm	1	B4B1216	02/12/2024	02/13/2024
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Table 915 metals by EPA 6020B

Origins Laboratory, Inc.



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

Andrew Newberry
Project Number: [none]
Project: Noble - Frank C #12-22

WH-FS-01@6'

2/9/2024 2:20:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y402270-01 (Soil)

Table 915 metals by EPA 6020B

Arsenic	3.66	0.0955	mg/kg	10	B4B0946	02/12/2024	02/17/2024
Barium	89.5	9.55	"	"	"	"	"
Cadmium	0.128	0.0955	"	"	"	"	"
Copper	ND	9.55	"	"	"	"	"
Lead	9.34	0.955	"	"	"	"	"
Nickel	7.87	0.955	"	"	"	"	"
Selenium	0.118	0.0955	"	"	"	"	"
Silver	ND	0.0955	"	"	"	"	"
Zinc	38.1	9.55	"	"	"	"	"

Total Metals by 7196A

Chromium, Hexavalent	ND	0.244	0.5	mg/Kg	1	L733239	02/09/2024	02/16/2024
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Origins Laboratory, Inc.



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

Andrew Newberry
Project Number: [none]
Project: Noble - Frank C #12-22

Background-01@2'
2/9/2024 1:55:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y402270-02 (Soil)

Boron (DTPA Sorbitol)

Boron	0.839	0.100	mg/L	1	B4B1211	02/12/2024	02/13/2024
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Metals by Saturated Paste by EPA 6010

Calcium	22.2	0.499	meq/L	10	[CALC]	02/12/2024	02/13/2024
Magnesium	7.56	0.823	"	"	"	"	"
Sodium	15.8	0.435	"	"	"	"	"

pH in Soil by 9045D

pH	8.05		pH Units	1	B4B1216	02/12/2024	02/13/2024
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SAR by 20B Saturated Paste

SAR	4.09	0.0100	SAR	1	B4B1206	02/12/2024	02/13/2024
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	3.21	0.00500	mmhos/cm	1	B4B1216	02/12/2024	02/13/2024
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Table 915 metals by EPA 6020B

Arsenic	3.47	0.0872	mg/kg	10	B4B0946	02/12/2024	02/17/2024
Barium	80.6	8.72	"	"	"	"	"
Cadmium	0.134	0.0872	"	"	"	"	"
Copper	ND	8.72	"	"	"	"	"

Origins Laboratory, Inc.



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

Andrew Newberry
Project Number: [none]
Project: Noble - Frank C #12-22

Background-01@2'
2/9/2024 1:55:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y402270-02 (Soil)

Table 915 metals by EPA 6020B

Lead	15.0	0.872	mg/kg	10	B4B0946	02/12/2024	02/17/2024
Nickel	7.17	0.872	"	"	"	"	"
Selenium	0.177	0.0872	"	"	"	"	"
Silver	ND	0.0872	"	"	"	"	"
Zinc	41.0	8.72	"	"	"	"	"

Total Metals by 7196A

Chromium, Hexavalent	ND	0.244	0.5	mg/Kg	1	L733239	02/09/2024	02/16/2024
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Origins Laboratory, Inc.



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

Andrew Newberry
Project Number: [none]
Project: Noble - Frank C #12-22

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 B4B1335 - EPA 5030 (soil)										
Blank (B4B1335-BLK1)					Prepared: 02/13/2024 Analyzed: 02/13/2024					
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	101		70-130			
Surrogate: Toluene-d8	0.13		"	0.125	100		70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125	101		70-130			

Origins Laboratory, Inc.



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

Andrew Newberry
Project Number: [none]
Project: Noble - Frank C #12-22

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 B4B1335 - EPA 5030 (soil)										
LCS (B4B1335-BS1)					Prepared: 02/13/2024 Analyzed: 02/13/2024					
1,2,4-Trimethylbenzene	0.106	0.00200	mg/kg	0.100		106	70-130			
1,3,5-Trimethylbenzene	0.107	0.00200	"	0.100		107	70-130			
Benzene	0.0988	0.00200	"	0.100		98.8	70-130			
Ethylbenzene	0.103	0.00200	"	0.100		103	70-130			
Naphthalene	0.114	0.00380	"	0.100		114	70-130			
Toluene	0.103	0.00200	"	0.100		103	70-130			
o-Xylene	0.104	0.00200	"	0.100		104	70-130			
m,p-Xylene	0.201	0.00400	"	0.200		101	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		98.3	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		99.7	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		95.4	70-130			

Origins Laboratory, Inc.



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

Andrew Newberry
Project Number: [none]
Project: Noble - Frank C #12-22

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 B4B1335 - EPA 5030 (soil)										
Matrix Spike (B4B1335-MS1)		Source: Y402307-02			Prepared: 02/13/2024 Analyzed: 02/13/2024					
1,2,4-Trimethylbenzene	0.115	0.00200	mg/kg	0.100	ND	115	70-130			
1,3,5-Trimethylbenzene	0.115	0.00200	"	0.100	ND	115	70-130			
Benzene	0.107	0.00200	"	0.100	ND	107	70-130			
Ethylbenzene	0.110	0.00200	"	0.100	ND	110	70-130			
Naphthalene	0.125	0.00380	"	0.100	ND	125	70-130			
Toluene	0.111	0.00200	"	0.100	ND	111	70-130			
o-Xylene	0.112	0.00200	"	0.100	ND	112	70-130			
m,p-Xylene	0.217	0.00400	"	0.200	ND	109	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		102	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		98.1	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		95.4	70-130			

Origins Laboratory, Inc.



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

Andrew Newberry
Project Number: [none]
Project: Noble - Frank C #12-22

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 B4B1335 - EPA 5030 (soil)										
Matrix Spike Dup (B4B1335-MSD1)		Source: Y402307-02			Prepared: 02/13/2024 Analyzed: 02/13/2024					
1,2,4-Trimethylbenzene	0.107	0.00200	mg/kg	0.100	ND	107	70-130	7.32	20	
1,3,5-Trimethylbenzene	0.106	0.00200	"	0.100	ND	106	70-130	7.81	20	
Benzene	0.103	0.00200	"	0.100	ND	103	70-130	4.43	20	
Ethylbenzene	0.103	0.00200	"	0.100	ND	103	70-130	6.74	20	
Naphthalene	0.119	0.00380	"	0.100	ND	119	70-130	5.42	20	
Toluene	0.106	0.00200	"	0.100	ND	106	70-130	4.94	20	
o-Xylene	0.106	0.00200	"	0.100	ND	106	70-130	6.20	20	
m,p-Xylene	0.204	0.00400	"	0.200	ND	102	70-130	5.98	20	
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		101	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		98.5	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		95.9	70-130			

Origins Laboratory, Inc.



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

Andrew Newberry
Project Number: [none]
Project: Noble - Frank C #12-22

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 B4B1401 - EPA 3550B										
Blank (B4B1401-BLK1)					Prepared: 02/14/2024 Analyzed: 02/20/2024					
Diesel (C10-C28)	ND	25.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	100	"							U
Surrogate: o-Terphenyl	23		"	24.9		91.9	50-150			

Origins Laboratory, Inc.



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

Andrew Newberry
Project Number: [none]
Project: Noble - Frank C #12-22

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 B4B1401 - EPA 3550B										
LCS (B4B1401-BS1)					Prepared: 02/14/2024 Analyzed: 02/20/2024					
Diesel (C10-C28)	892	50.0	mg/kg	1000		89.2	70-130			
Residual Range Organics (C28-C40)	1100	200	"	1000		110	70-130			
Surrogate: o-Terphenyl	46		"	49.8		91.5	50-150			

Origins Laboratory, Inc.



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

Andrew Newberry
Project Number: [none]
Project: Noble - Frank C #12-22

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 B4B1401 - EPA 3550B

Matrix Spike (B4B1401-MS1)		Source: Y402244-01			Prepared: 02/14/2024 Analyzed: 02/20/2024					
Diesel (C10-C28)	932	50.0	mg/kg	1000	ND	93.2	70-130			
Residual Range Organics (C28-C40)	1180	200	"	1000	ND	118	70-130			
Surrogate: o-Terphenyl	57		"	49.8		114	50-150			

Origins Laboratory, Inc.



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Jordan A. Bynon, Project Manager

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

Andrew Newberry
Project Number: [none]
Project: Noble - Frank C #12-22

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 B4B1401 - EPA 3550B										
Matrix Spike Dup (B4B1401-MSD1)		Source: Y402244-01			Prepared: 02/14/2024 Analyzed: 02/20/2024					
Diesel (C10-C28)	868	50.0	mg/kg	1000	ND	86.8	70-130	7.14	35	
Residual Range Organics (C28-C40)	1130	200	"	1000	ND	113	70-130	4.97	35	
Surrogate: o-Terphenyl	42		"	49.8		83.8	50-150			

Origins Laboratory, Inc.



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

Andrew Newberry
Project Number: [none]
Project: Noble - Frank C #12-22

Extractable Petroleum Hydrocarbons by 8015D - Quality Control

Origins Laboratory, Inc.

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

Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B4B0946 - EPA 3050B

Blank (B4B0946-BLK1)

Prepared: 02/12/2024 Analyzed: 02/16/2024

Arsenic	ND	0.0100	mg/kg
Barium	ND	1.00	"
Cadmium	ND	0.0100	"
Copper	ND	1.00	"
Lead	ND	0.100	"
Nickel	ND	0.100	"
Selenium	ND	0.0100	"
Silver	ND	0.0100	"
Zinc	ND	1.00	"

LCS (B4B0946-BS1)

Prepared: 02/12/2024 Analyzed: 02/16/2024

Arsenic	4.97	0.0100	mg/kg	5.00	99.5	80-120
Barium	502	1.00	"	500	100	80-120
Cadmium	4.97	0.0100	"	5.00	99.3	80-120
Copper	47.5	1.00	"	50.0	95.0	80-120
Lead	5.11	0.100	"	5.00	102	80-120
Nickel	4.93	0.100	"	5.00	98.5	80-120
Selenium	4.97	0.0100	"	5.00	99.3	80-120
Silver	5.16	0.0100	"	5.00	103	80-120
Zinc	48.5	1.00	"	50.0	97.0	80-120

Matrix Spike (B4B0946-MS1)

Source: Y402269-02

Prepared: 02/12/2024 Analyzed: 02/16/2024

Origins Laboratory, Inc.



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

Andrew Newberry
Project Number: [none]
Project: Noble - Frank C #12-22

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 B4B0946 - EPA 3050B										
Matrix Spike (B4B0946-MS1)			Source: Y402269-02		Prepared: 02/12/2024 Analyzed: 02/16/2024					
Arsenic	11.7	0.0944	mg/kg	4.72	5.41	134	75-125			QM-07
Barium	606	9.44	"	472	69.7	114	75-125			
Cadmium	5.72	0.0944	"	4.72	0.122	119	75-125			
Copper	59.6	9.44	"	47.2	6.54	112	75-125			
Lead	13.9	0.944	"	4.72	7.68	133	75-125			QM-07
Nickel	13.3	0.944	"	4.72	7.39	125	75-125			
Selenium	5.90	0.0944	"	4.72	0.264	119	75-125			
Silver	5.56	0.0944	"	4.72	0.0244	117	75-125			
Zinc	90.0	9.44	"	47.2	33.0	121	75-125			
Matrix Spike Dup (B4B0946-MSD1)			Source: Y402269-02		Prepared: 02/12/2024 Analyzed: 02/16/2024					
Arsenic	10.8	0.0942	mg/kg	4.71	5.41	114	75-125	8.35	20	
Barium	567	9.42	"	471	69.7	106	75-125	6.57	20	
Cadmium	5.48	0.0942	"	4.71	0.122	114	75-125	4.19	20	
Copper	57.9	9.42	"	47.1	6.54	109	75-125	2.88	20	
Lead	13.7	0.942	"	4.71	7.68	127	75-125	2.03	20	QM-07
Nickel	12.3	0.942	"	4.71	7.39	105	75-125	7.54	20	
Selenium	5.13	0.0942	"	4.71	0.264	103	75-125	13.8	20	
Silver	5.33	0.0942	"	4.71	0.0244	113	75-125	4.17	20	
Zinc	85.0	9.42	"	47.1	33.0	110	75-125	5.62	20	

Origins Laboratory, Inc.



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

Andrew Newberry
Project Number: [none]
Project: Noble - Frank C #12-22

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 B4B1321 - EPA 3580

Blank (B4B1321-BLK1)

Prepared: 02/13/2024 Analyzed: 02/14/2024

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	190		ug/kg	200		94.4	60-130			
Surrogate: Anthracene-d10	190		"	200		95.1	60-130			
Surrogate: Pyrene-d10	200		"	200		102	60-130			
Surrogate: Benzo (a) pyrene-d12	200		"	200		99.7	60-130			

LCS (B4B1321-BS1)

Prepared: 02/13/2024 Analyzed: 02/14/2024

1-Methylnaphthalene	0.195	0.002	mg/kg	0.200		97.6	70-130			
2-Methylnaphthalene	0.194	0.002	"	0.200		97.2	70-130			
Acenaphthene	0.182	0.020	"	0.200		91.2	70-130			
Anthracene	0.194	0.020	"	0.200		96.9	70-130			

Origins Laboratory, Inc.



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

Andrew Newberry
Project Number: [none]
Project: Noble - Frank C #12-22

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 B4B1321 - EPA 3580

LCS (B4B1321-BS1)

Prepared: 02/13/2024 Analyzed: 02/14/2024

Benzo (a) anthracene	0.183	0.005	mg/kg	0.200		91.7	70-130
Benzo (a) pyrene	0.179	0.020	"	0.200		89.5	70-130
Benzo (b) fluoranthene	0.201	0.020	"	0.200		100	70-130
Benzo (g,h,i) perylene	0.195	0.020	"	0.200		97.3	70-130
Benzo (k) fluoranthene	0.196	0.020	"	0.200		97.9	70-130
Chrysene	0.184	0.020	"	0.200		92.2	70-130
Dibenz (a,h) anthracene	0.200	0.020	"	0.200		99.8	70-130
Fluoranthene	0.187	0.020	"	0.200		93.6	70-130
Fluorene	0.178	0.020	"	0.200		89.1	70-130
Indeno (1,2,3-cd) pyrene	0.189	0.020	"	0.200		94.7	70-130
Naphthalene	0.195	0.002	"	0.200		97.3	70-130
Phenanthrene	0.202	0.020	"	0.200		101	70-130
Pyrene	0.186	0.020	"	0.200		93.0	70-130
Surrogate: Fluorene-d10	190		ug/kg	200		93.4	60-130
Surrogate: Anthracene-d10	200		"	200		102	60-130
Surrogate: Pyrene-d10	200		"	200		98.1	60-130
Surrogate: Benzo (a) pyrene-d12	210		"	200		103	60-130

Matrix Spike (B4B1321-MS1)

Source: Y402231-01

Prepared: 02/13/2024 Analyzed: 02/14/2024

1-Methylnaphthalene	0.200	0.002	mg/kg	0.200	0.010	94.7	70-130
2-Methylnaphthalene	0.206	0.002	"	0.200	0.029	88.9	70-130
Acenaphthene	0.174	0.020	"	0.200	0.0004	86.7	70-130
Anthracene	0.178	0.020	"	0.200	ND	88.9	70-130
Benzo (a) anthracene	0.177	0.005	"	0.200	0.0004	88.2	70-130
Benzo (a) pyrene	0.175	0.020	"	0.200	0.002	86.2	70-130
Benzo (b) fluoranthene	0.193	0.020	"	0.200	ND	96.6	70-130
Benzo (g,h,i) perylene	0.181	0.020	"	0.200	ND	90.3	70-130

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Andrew Newberry
Project Number: [none]
Project: Noble - Frank C #12-22

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 B4B1321 - EPA 3580

Matrix Spike (B4B1321-MS1)		Source: Y402231-01			Prepared: 02/13/2024 Analyzed: 02/14/2024					
Benzo (k) fluoranthene	0.196	0.020	mg/kg	0.200	ND	98.0	70-130			
Chrysene	0.178	0.020	"	0.200	0.0007	88.7	70-130			
Dibenz (a,h) anthracene	0.181	0.020	"	0.200	ND	90.6	70-130			
Fluoranthene	0.197	0.020	"	0.200	0.003	96.6	70-130			
Fluorene	0.188	0.020	"	0.200	0.001	93.5	70-130			
Indeno (1,2,3-cd) pyrene	0.173	0.020	"	0.200	ND	86.7	70-130			
Naphthalene	0.191	0.002	"	0.200	0.012	89.4	70-130			
Phenanthrene	0.187	0.020	"	0.200	0.003	91.8	70-130			
Pyrene	0.196	0.020	"	0.200	0.0007	97.8	70-130			
Surrogate: Fluorene-d10	220		ug/kg	200		108	60-130			
Surrogate: Anthracene-d10	190		"	200		93.2	60-130			
Surrogate: Pyrene-d10	210		"	200		105	60-130			
Surrogate: Benzo (a) pyrene-d12	210		"	200		103	60-130			

Matrix Spike Dup (B4B1321-MSD1)		Source: Y402231-01			Prepared: 02/13/2024 Analyzed: 02/14/2024					
1-Methylnaphthalene	0.211	0.002	mg/kg	0.200	0.010	100	70-130	5.60	20	
2-Methylnaphthalene	0.220	0.002	"	0.200	0.029	95.9	70-130	6.61	20	
Acenaphthene	0.178	0.020	"	0.200	0.0004	88.9	70-130	2.48	20	
Anthracene	0.186	0.020	"	0.200	ND	93.2	70-130	4.65	20	
Benzo (a) anthracene	0.181	0.005	"	0.200	0.0004	90.1	70-130	2.23	20	
Benzo (a) pyrene	0.180	0.020	"	0.200	0.002	88.8	70-130	2.88	20	
Benzo (b) fluoranthene	0.203	0.020	"	0.200	ND	102	70-130	5.16	20	
Benzo (g,h,i) perylene	0.188	0.020	"	0.200	ND	94.2	70-130	4.22	20	
Benzo (k) fluoranthene	0.204	0.020	"	0.200	ND	102	70-130	4.16	20	
Chrysene	0.179	0.020	"	0.200	0.0007	88.9	70-130	0.273	20	
Dibenz (a,h) anthracene	0.197	0.020	"	0.200	ND	98.4	70-130	8.17	20	
Fluoranthene	0.207	0.020	"	0.200	0.003	102	70-130	5.03	20	

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Andrew Newberry
Project Number: [none]
Project: Noble - Frank C #12-22

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 B4B1321 - EPA 3580

Matrix Spike Dup (B4B1321-MSD1)		Source: Y402231-01			Prepared: 02/13/2024 Analyzed: 02/14/2024					
Fluorene	0.187	0.020	mg/kg	0.200	0.001	93.0	70-130	0.475	20	
Indeno (1,2,3-cd) pyrene	0.191	0.020	"	0.200	ND	95.6	70-130	9.73	20	
Naphthalene	0.198	0.002	"	0.200	0.012	93.0	70-130	3.71	20	
Phenanthrene	0.196	0.020	"	0.200	0.003	96.3	70-130	4.72	20	
Pyrene	0.215	0.020	"	0.200	0.0007	107	70-130	9.34	20	
Surrogate: Fluorene-d10	210		ug/kg	200		104	60-130			
Surrogate: Anthracene-d10	200		"	200		101	60-130			
Surrogate: Pyrene-d10	210		"	200		107	60-130			
Surrogate: Benzo (a) pyrene-d12	210		"	200		106	60-130			

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Jordan A. Bynon, Project Manager

Eagle Environmental Consulting, LLC
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Wheat Ridge CO 80033

Andrew Newberry
Project Number: [none]
Project: Noble - Frank C #12-22

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 B4B1206 - Saturated Paste Metals

Blank (B4B1206-BLK1)

Prepared: 02/12/2024 Analyzed: 02/13/2024

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

Duplicate (B4B1206-DUP1)

Source: Y402268-04

Prepared: 02/12/2024 Analyzed: 02/13/2024

SAR	ND	0.0100	SAR	6.61		200
Calcium PPM	119	10.0	mg/L	96.9	20.1	50
Magnesium PPM	37.1	10.0	"	33.0	11.8	50
Sodium PPM	283	10.0	"	295	4.04	50

Batch B4B1211 - DTPA Sorbitol Preparation

Blank (B4B1211-BLK1)

Prepared: 02/12/2024 Analyzed: 02/13/2024

Boron	ND	0.100	mg/L
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Duplicate (B4B1211-DUP1)

Source: Y402268-01

Prepared: 02/12/2024 Analyzed: 02/13/2024

Boron	0.331	0.0999	mg/L	0.304	8.62	50
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Jordan A. Bynon, Project Manager

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Andrew Newberry
Project Number: [none]
Project: Noble - Frank C #12-22

Saturated Paste - Quality Control Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B4B1216 - Saturated Paste pH/EC										
Blank (B4B1216-BLK1)					Prepared: 02/12/2024 Analyzed: 02/13/2024					
Specific Conductance (EC)	ND	0.00500	mmhos/cm							
Duplicate (B4B1216-DUP1)					Source: Y402268-04 Prepared: 02/12/2024 Analyzed: 02/13/2024					
pH	8.07		pH Units		8.10			0.371	25	
Specific Conductance (EC)	2.01	0.00500	mmhos/cm		2.14			6.30	25	

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Andrew Newberry
Project Number: [none]
Project: Noble - Frank C #12-22

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 L733239 -										
DUP (L 95863-DUP)		Source: 95863			Prepared: Analyzed: 02/16/2024					
Chromium, Hexavalent	ND	0.5	mg/Kg		<0.500	-		0	20	
MS (L 95863-MS)		Source: 95863			Prepared: Analyzed: 02/16/2024					
Chromium, Hexavalent	19.2	2.5	mg/Kg	39.4	< 0.244	49	75-125			*
LCS (LCS)					Prepared: Analyzed: 02/16/2024					
Chromium, Hexavalent	6.11	0.5	mg/Kg	8		76	75-125			
LRB (LRB)					Prepared: Analyzed: 02/16/2024					
Chromium, Hexavalent	ND	0.5	mg/Kg				-			

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Andrew Newberry
Project Number: [none]
Project: Noble - Frank C #12-22

Notes and Definitions

U Sample is Non-Detect.

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

* QC Failure

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.



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Jordan A. Bynon, Project Manager