

# 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>
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Site Name & COGCC Facility Number: <b>Howard USX A #9-10</b>	Date: <b>02/14/24</b>	Remediation Project #: <b>32221</b>
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Associated Wells: <b>05-123-24495</b>	Age of Site: <b>years</b>	Number of Photos Attached: <b>6</b>
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Location: (GPS coordinates of wellhead or southeastern most wellhead for multiple) <b>40.498780 / -104.552830</b>	Estimated Facility Size (acres): <u>      </u>
---	--

General Condition of Site: (General observations regarding housekeeping, corrosion, waste management, etc.)

**Good condition**

USCS Soil Type: <b>Clayey SAND</b>	Estimated Depth to Groundwater: <b>~10-20'</b>
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Hydrocarbon Impacted Soils / Spills: (Note estimated size and if impact appears to be surficial or extends to an unknown depth)

**None observed**

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

**None observed**

### Wellhead(s)

Well API	05-123-24495				
Age	years				
Condition of surface around wellhead	Good - No odor/no staining				
PID Readings	WH-N: 1.1	WH-E: 0.3	WH-S: 1.0	WH-W: 1.4	
Condition of subsurface (staining present)	Good - No odor/no staining				
PID Readings	2.1	2.4	2.8	2.7	2.9
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: <b>9</b>	Total number of samples collected: <b>9</b>
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Highest PID Reading: <b>2.9</b>	Total number of samples submitted to lab for analysis: <b>1</b>
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If more than 10 cubic yards of impacted soil were observed:

Vertical extent:	Estimated spill volume:
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Lateral extent: <b>N/A</b>	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
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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:
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Total number of samples collected:	Total Volume of groundwater removed:
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Total number of samples submitted to lab for analysis:	
--	--



## **FIGURES**

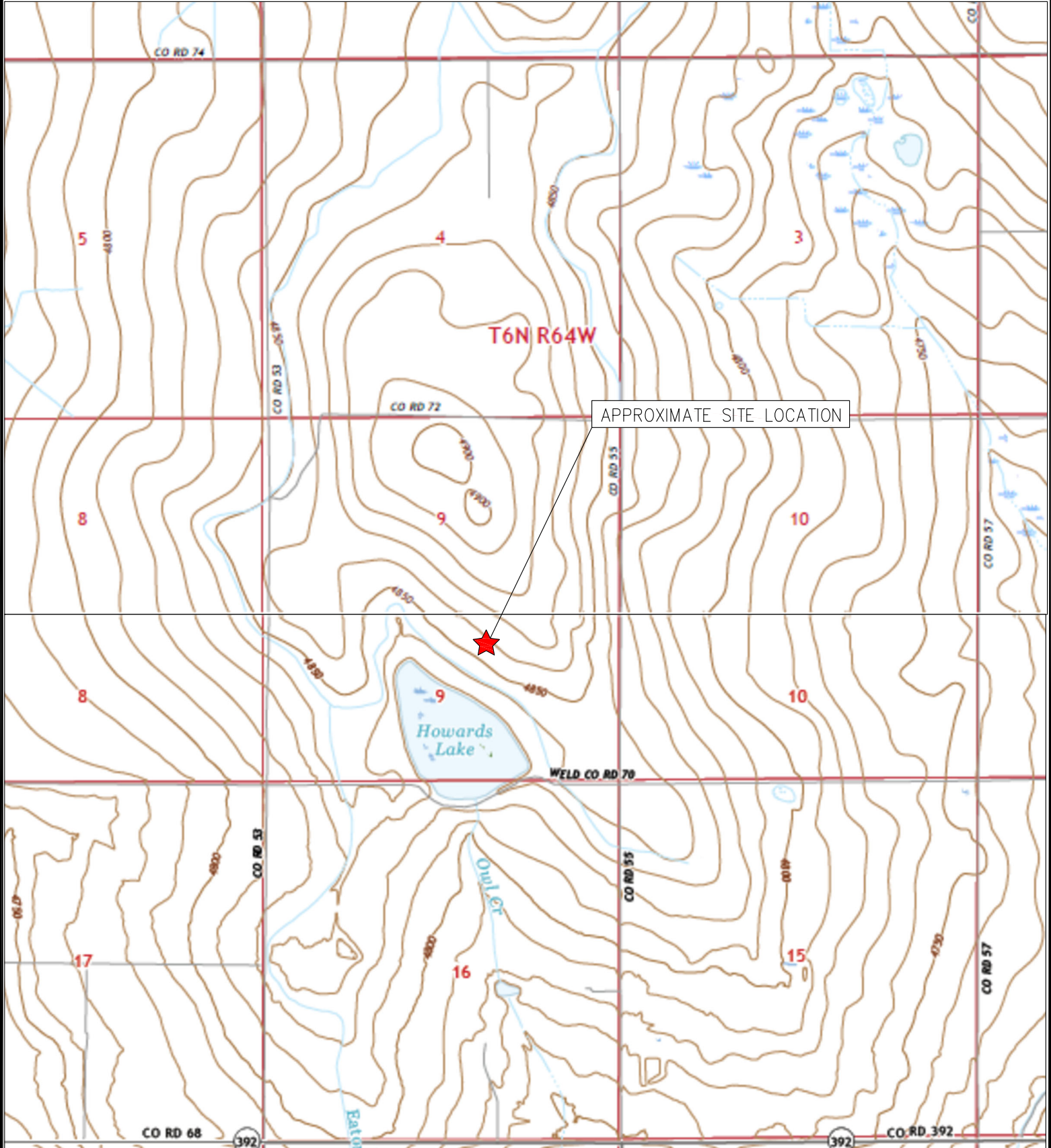
**Figure 1: Topographic Site Location Map**

**Figure 2: Aerial Site Location Map**

**Figure 3: Sample Location Map**

**Figure 4: Soil Analytical Map**

**Figure 5: Metals in Soil Map**



APPROXIMATE SITE LOCATION



T6N R64W

CO RD 72

WELD CO RD 70

Howards Lake

Owl Cr

CO RD 68

392

CO RD 55

392

CO RD 392

TOPOGRAPHIC SITE LOCATION MAP  
 HOWARD USX A #9-10  
 CLOSURE ASSESSMENT  
 40.498780 / -104.552830  
 NW¼ SE¼ SEC.9 T6N R64W 6PM  
 WELD COUNTY, COLORADO  
 API # 05-123-24495  
 REMEDIATION # 32221






**EAGLE**  
 ENVIRONMENTAL  
 CONSULTING, LLC

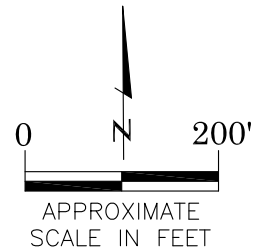
8000 W 44th Ave, Wheat Ridge, CO 80033  
 Ph: 303-433-0479 • F: 303-325-5449





LEGEND

-  FORMER HOWARD USX A #9-10 WELLHEAD (PLUGGED AND ABANDONED)
-  ASSOCIATED SEPARATOR
-  APPROXIMATE FLOWLINE LOCATION



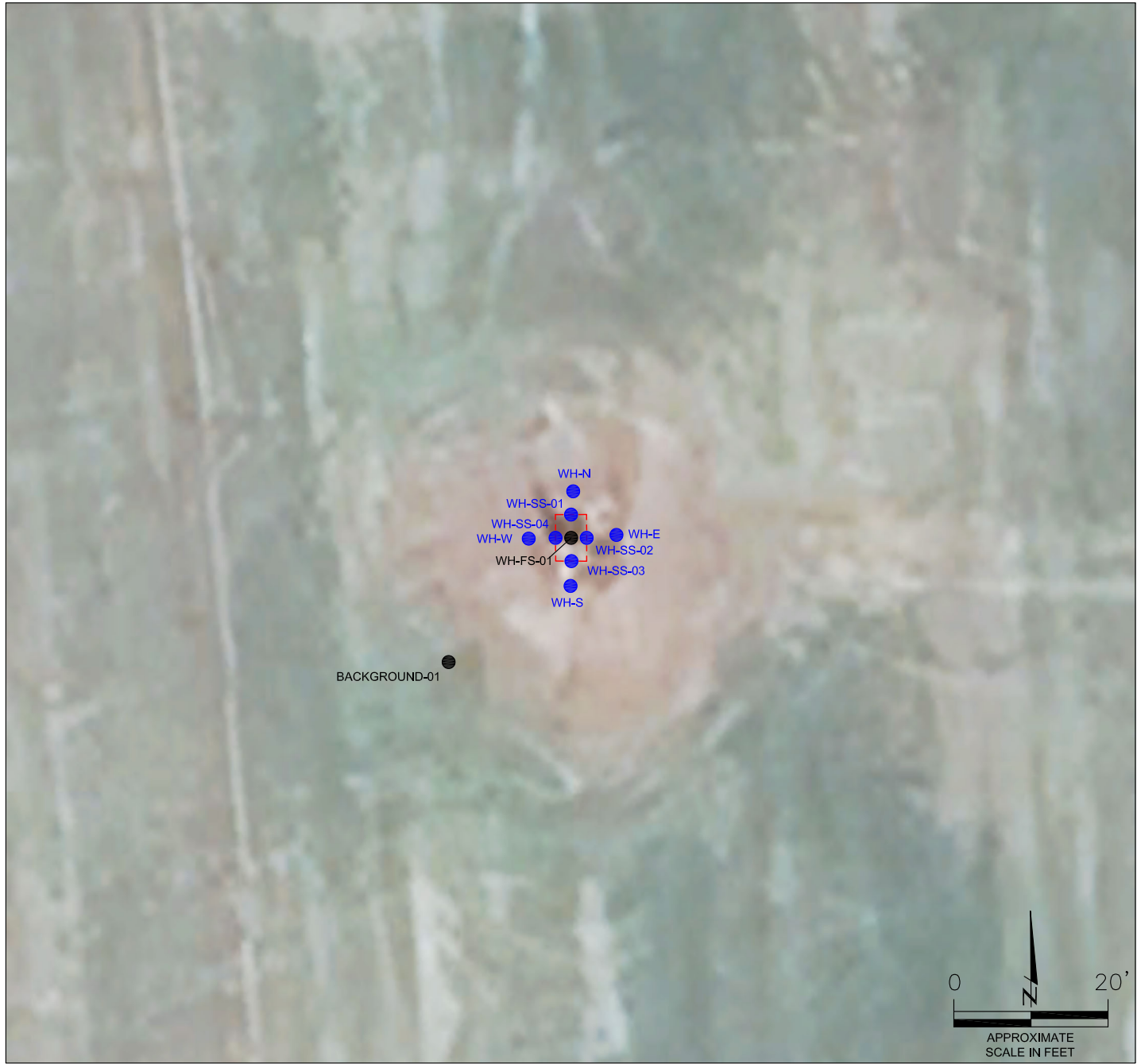
AERIAL SITE LOCATION MAP  
HOWARD USX A #9-10  
CLOSURE ASSESSMENT  
40.498780 / -104.552830  
NW¼ SE¼ SEC.9 T6N R64W 6PM  
WELD COUNTY, COLORADO  
API # 05-123-24495  
REMEDATION # 32221

FIGURE NO.  
2

DRAWN BY:  
RS



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



**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  
 HOWARD USX A #9-10  
 CLOSURE ASSESSMENT  
 40.498780 / -104.552830  
 NW¼ SE¼ SEC.9 T6N R64W 6PM  
 WELD COUNTY, COLORADO  
 API # 05-123-24495  
 REMEDIATION # 32221

FIGURE NO.  
3  
 DRAWN BY:  
RS



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**LEGEND**

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

**PARAMETERS**

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

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

(BRL) = ALL VALUES BELOW REGULATORY LIMITS

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

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

ECMC = ENERGY & CARBON MANAGEMENT COMMISSION

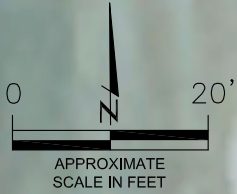
SOIL ANALYTICAL MAP  
 HOWARD USX A #9-10  
 CLOSURE ASSESSMENT  
 40.498780 / -104.552830  
 NW¼ SE¼ SEC.9 T6N R64W 6PM  
 WELD COUNTY, COLORADO  
 API # 05-123-24495  
 REMEDIATION # 32221

FIGURE NO.  
4

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 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.

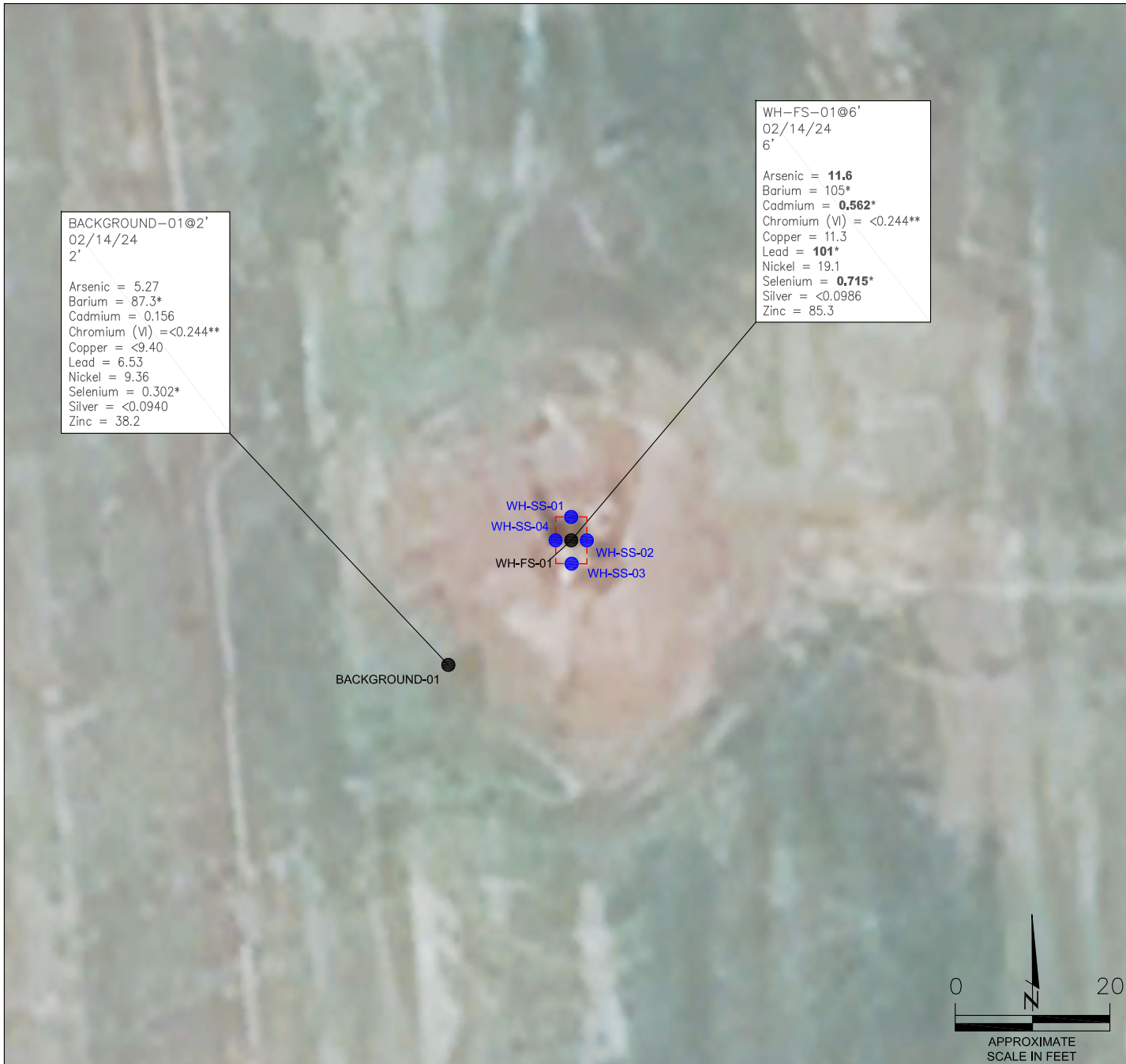
\*\*ACHIEVABLE PRACTICAL QUANTITATIVE LIMITS FOR HEXAVALENT CHROMIUM (Cr VI) IN SOILS IS IN THE RANGE OF 0.1 TO 1 mg/kg.

ECMC = ENERGY & CARBON MANAGEMENT COMMISSION

METALS IN SOIL MAP  
 HOWARD USX A #9-10  
 CLOSURE ASSESSMENT  
 40.498780 / -104.552830  
 NW¼ SEC.9 T6N R64W 6PM  
 WELD COUNTY, COLORADO  
 API # 05-123-24495  
 REMEDIATION # 32221

FIGURE NO.  
5

DRAWN BY:  
RS





## **TABLES**

**Table 1: Photoionization Detector Reading Summary**

**Table 2: Soil Analytical Results Summary**

**TABLE 1**  
**PHOTOIONIZATION DETECTOR READING SUMMARY**  
**HOWARD USX A #9-10**  
**CLOSURE ASSESSMENT**  
**40.498780 / -104.552830**  
**NW¼ SE¼ SEC.9 T6N R64W 6PM**  
**WELD COUNTY, COLORADO**  
**API # 05-123-24495**  
**REMEDIATION # 32221**

Sample Location (Latitude/Longitude)	Date	Approximate Depth (feet)	PID Reading (ppm-v)	Lab Submission (Y/N)
WH-FS-01 @ 6' (40.498782 / -104.552829)	02/14/24	6	2.9	Y
WH-SS-01 @ 5' (40.498791 / -104.552829)	02/14/24	5	2.1	N
WH-SS-02 @ 5' (40.498782 / -104.552821)	02/14/24	5	2.4	N
WH-SS-03 @ 5' (40.498775 / -104.552829)	02/14/24	5	2.8	N
WH-SS-04 @ 5' (40.498782 / -104.552836)	02/14/24	5	2.7	N
WH-N @ 0.5' (40.498799 / -104.552827)	02/14/24	0.5	1.1	N
WH-E @ 0.5' (40.498783 / -104.552809)	02/14/24	0.5	0.3	N
WH-S @ 0.5' (40.498766 / -104.552829)	02/14/24	0.5	1.0	N
WH-W @ 0.5' (40.498782 / -104.552848)	02/14/24	0.5	1.4	N
Background-01 @ 2' (40.498739 / -104.552886)	02/14/24	2	1.1	Y
(Y/N) = Yes or No ppm-v = parts per million by volume PID = Photoionization Detector				



TABLE 2  
SOIL ANALYTICAL RESULTS SUMMARY  
HOWARD USX A #9-10  
CLOSURE ASSESSMENT  
40.498780 / -104.552830  
NW¼ SE¼ SEC.9 T6N R64W 6PM  
WELD COUNTY, COLORADO  
API # 05-123-24495  
REMEDATION # 32221

Sample Location		WH-FS-01 @ 6'		Background-01 @ 2'		
(Latitude / Longitude)		(40.498782 / -104.552829)		(40.498739 / -104.552886)		
Sample Date		2/14/2024		2/14/2024		
Sample Depth		6'		2'		
PID Reading (ppm-v)		2.9		1.1		
Regulatory Limits						
Chemical of Concern	Units	ECMC Table 915-1 RSSLs	ECMC Table 915-1 GSSLs	Local Clean-Up Level		
<b>VOCs</b>						
Benzene	mg/kg	1.2	0.0026	--	<0.00200	NA
Toluene	mg/kg	490	0.69	--	<0.00200	NA
Ethylbenzene	mg/kg	5.8	0.78	--	<0.00200	NA
Total Xylenes	mg/kg	58	9.9	--	<0.00200	NA
Naphthalene	mg/kg	2	0.0038	--	<0.00380	NA
1,2,4-Trimethylbenzene	mg/kg	30	0.0081	--	<0.00200	NA
1,3,5-Trimethylbenzene	mg/kg	27	0.0087	--	<0.00200	NA
<b>TOTAL PETROLEUM HYDROCARBONS</b>						
TPH-GRO	mg/kg	500	--	--	<0.200	NA
TPH-DRO	mg/kg	500	--	--	<25.0	NA
TPH-RRO	mg/kg	500	--	--	<100	NA
<b>POLYCYCLIC AROMATIC HYDROCARBONS</b>						
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
<b>SOIL SUITABILITY (Inorganics)</b>						
Boron	mg/L	2	--	--	0.216	0.184
pH	standard unit	6-8.3	--	--	8.26	8.29
Sodium Adsorption Ratio (SAR)	--	<6	--	--	0.532	1.05
Specific Conductance (EC)	mmhos/cm	<4	--	--	0.418	0.311
<b>METALS</b>						
Arsenic	mg/kg	0.68	0.29	6.59	<b>11.6</b>	5.27
Barium	mg/kg	15000	82	109	<b>105*</b>	87.3*
Cadmium	mg/kg	71	0.38	--	<b>0.562*</b>	0.156
Copper	mg/kg	3100	46	--	11.3	<9.40
Lead	mg/kg	400	14	--	<b>101*</b>	6.53
Nickel	mg/kg	1500	26	--	19.1	9.36
Selenium	mg/kg	390	0.26	0.378	<b>0.715*</b>	0.302*
Silver	mg/kg	390	0.8	--	<0.0986	<0.0940
Zinc	mg/kg	23000	370	--	85.3	38.2
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 <b>BOLD</b> exceed ECMC Table 915-1 Regulatory Limits and applicable Local Clean-up Levels. Values presented with asterisk (*) exceed ECMC Table 915-1 GSSLs, only. **Achievable practical quantitative limits for Hexavalent Chromium in soils is in the range of 0.1 to 1 mg/kg.						



## **ATTACHMENT A**

### **Photo Log**

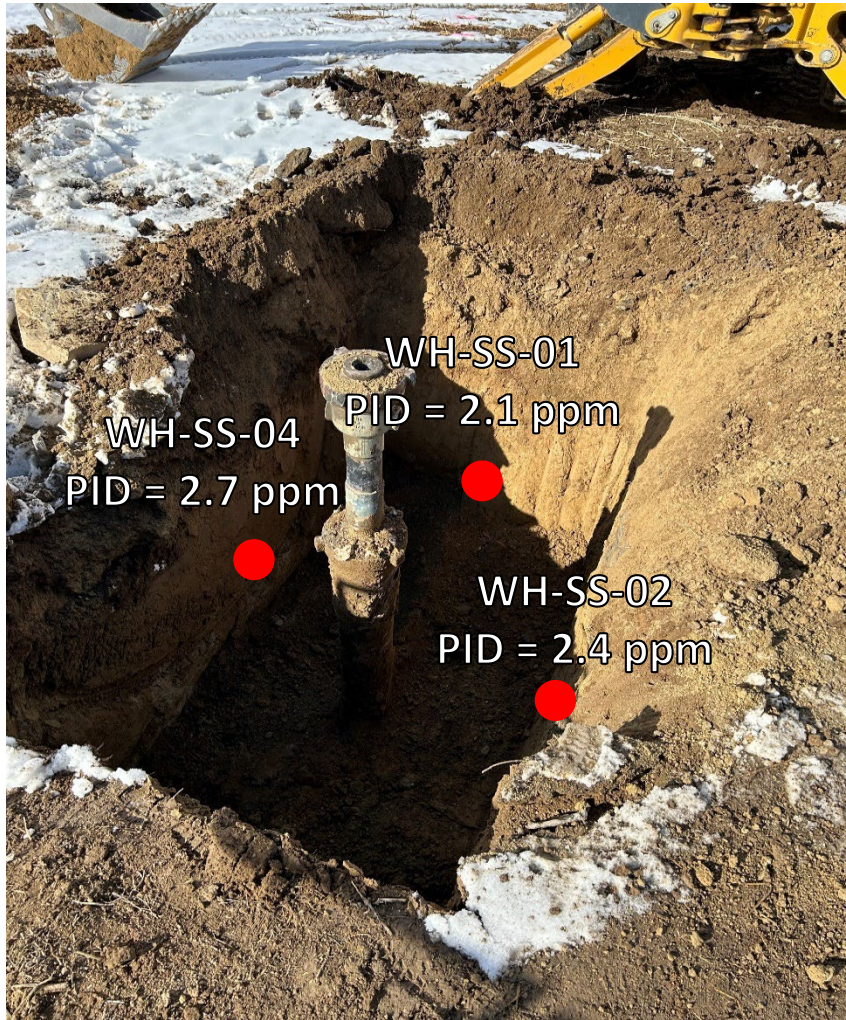
Howard USX A #9-10  
API # 05-123-24495  
Remediation # 32221

Closure Assessment

February 2024

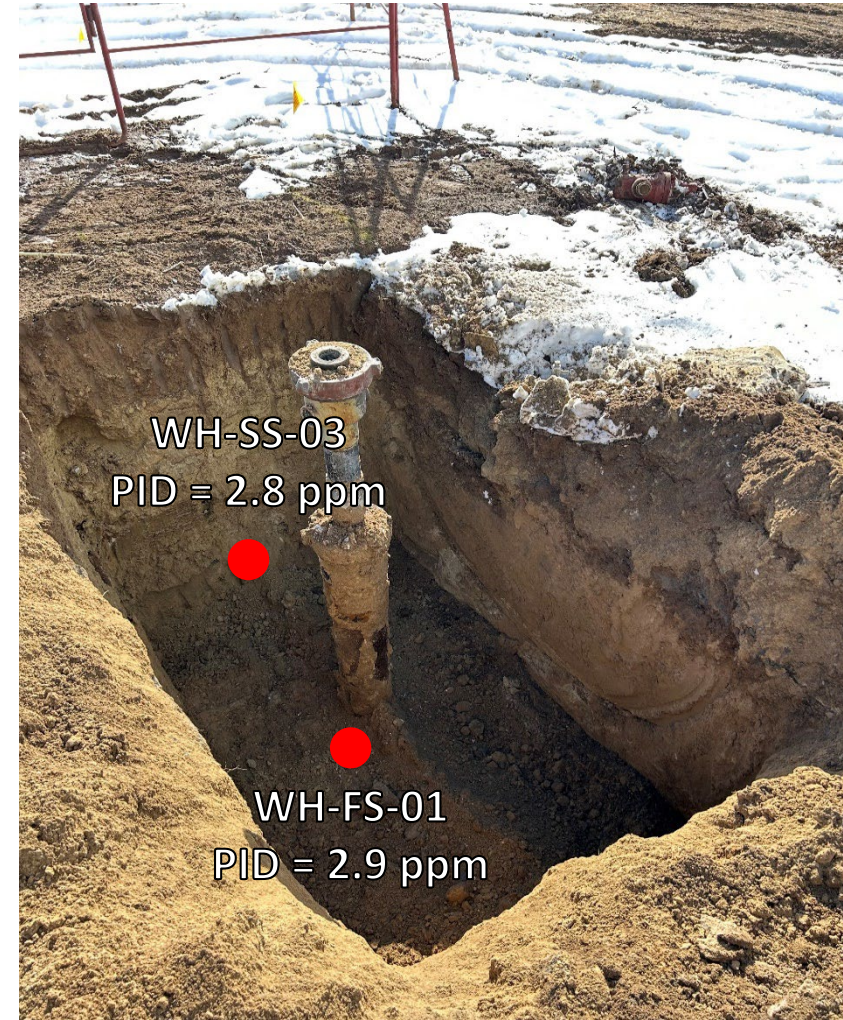


# Wellhead Excavation – 02/14/24



Looking northwest

No petroleum hydrocarbon staining or odor observed



Looking southwest

No petroleum hydrocarbon staining or odor observed

# Wellhead Surface – 02/14/24



Looking northeast

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



Looking east

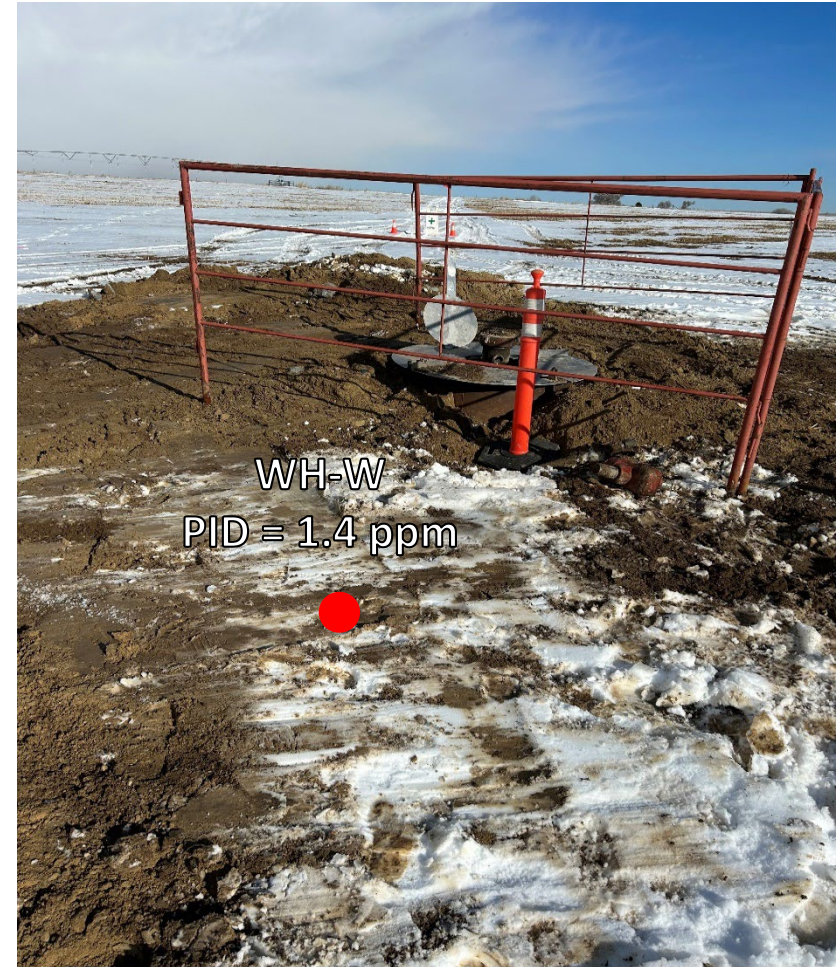
Site in good condition – no petroleum hydrocarbon staining or odor  
Observed on surface around wellhead

# Wellhead Surface – 02/14/24



Looking southeast

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



## **ATTACHMENT B**

### **Laboratory Analytical Report**



March 15, 2024

Eagle Environmental Consulting, LLC

Andrew Newberry

8000 W 44th Ave

Wheat Ridge CO 80033

Project Name - Noble - Howard USX A #9-10

Project Number - [none]

Attached are your analytical results for Noble - Howard USX A #9-10 received by Origins Laboratory, Inc. February 14, 2024. This project is associated with Origins project number Y402352-01.

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 - Howard USX A #9-10

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
WH-FS-01@6'	Y402352-01	Soil	February 14, 2024 14:50	02/14/2024 16:44
Background-01@2'	Y402352-02	Soil	February 14, 2024 14:35	02/14/2024 16:44

Origins Laboratory, Inc.



Jen Pellegrini For Jordan A. Bynon, Project Manager

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

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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Howard USX A #9-10



www.originslaboratory.com

Y4023SZ

page 1 of 1

Client: Eagle Environmental Consulting  
 Address: 8000 W 44th Ave  
Wheat Ridge, CO 80033  
 Telephone Number: 303-433-6479  
 Email Address: andrewnewberry@eagle-environment.com

Project Manager: Andrew Newberry  
 Project Name: Howard USX A #9-10  
 Project Number: \_\_\_\_\_  
 Samples Collected By: EL

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis	Sample Instructions
				Unpreserved	HCl	HNO <sub>3</sub>	Other	Groundwater	Soil	Air Summa #		
1011-PS-01(10)	2/14/24	1450	3	X				X			EC, SAR, pH =	1
Background - vial 2	↓	1435	2	X				X			Saturated paste	2
											pop	3
											* 10% needed	4
												5
												6
												7
												8
												9
												10

Relinquished By: [Signature] Date: 2/14/24 Time: 1044  
 Relinquished By: [Signature] Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received By: [Signature] Date: 2/14/24 Time: 1044  
 Received By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Turnaround Time: Same Day  24 Hr  48 Hr  72 Hr  Standard

Temp Received: 5 off  
 Date Results Needed: 3  
 Date Results Needed: None

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

Origins Laboratory, Inc.

Jefe Pellegrini

Jen Pellegrini For Jordan A. Bynon, Project Manager

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

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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Howard USX A #9-10

Origins Laboratory

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

**Sample Receipt Checklist**

Origins Work Order: 4402352

Client: Eagle

Client Project ID: Howard USX A9-10

Checklist Completed by: CHS

Shipped Via: HO

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

Date/time completed: 2/14/24

Airbill #: N/A

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

Cooler Number/Temperature: 1 / 3 °c / °c / °c (Describe) °c

Thermometer ID: 1004

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Were all samples received intact <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Are short holding time analytes or samples with HTs due within 48 hours present <sup>(1)</sup> ?		<input checked="" type="checkbox"/>		
Is a chain-of-custody (COC) present and filled out completely <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client with date and time recorded <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.			<input checked="" type="checkbox"/>	
Are samples preserved that require preservation and was it checked <sup>(1)</sup> ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH <2 for samples preserved with HNO3, HCL, H2SO4) / (pH >10 for samples preserved with NaAsO2+NaOH, ZnAc+NaOH)			<input checked="" type="checkbox"/>	
Additional Comments (if any):				

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

Reviewed by: AN (Project Manager)

Date/Time Reviewed: 2-16-24

Origins Laboratory, Inc.



Jen Pellegrini For Jordan A. Bynon, Project Manager

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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Howard USX A #9-10

**WH-FS-01@6'**  
**2/14/2024 2:50:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y402352-01 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.216		0.101	mg/L	1	B4B1610	02/16/2024	02/19/2024	
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**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND		25.0	mg/kg	1	B4B1602	02/16/2024	02/23/2024	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: o-Terphenyl	89.3 %		50-150			"	"	"	
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**GBTEX+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B4B1555	02/15/2024	02/16/2024	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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Jen Pellegrini For Jordan A. Bynon, Project Manager

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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Howard USX A #9-10

**WH-FS-01@6'**  
**2/14/2024 2:50:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y402352-01 (Soil)**

**GBTEX+TMBs by 8260D**

Surrogate: 1,2-Dichloroethane-d4	98.2 %		70-130			B4B15 55	02/15/2024	02/16/2024	
Surrogate: Toluene-d8	99.6 %		70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	103 %		70-130			"	"	"	

**Metals by Saturated Paste by EPA 6010**

Calcium	2.59		0.499	meq/L	10	[CALC]	02/17/2024	02/19/2024	
Magnesium	1.24		0.823	"	"	"	"	"	
Sodium	0.736		0.435	"	"	"	"	"	

**PAH by EPA 8270E**

1-Methylnaphthalene	ND		0.002	mg/kg	1	B4B2006	02/20/2024	02/21/2024	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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Jen Pellegrini For Jordan A. Bynon, Project Manager

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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Howard USX A #9-10

**WH-FS-01@6'**  
**2/14/2024 2:50:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y402352-01 (Soil)**

**PAH by EPA 8270E**

Fluoranthene	ND		0.020	mg/kg	1	B4B2006	02/20/2024	02/21/2024	U
Fluorene	ND		0.020	"	"	"	"	"	U
Indeno (1,2,3-cd) pyrene	ND		0.020	"	"	"	"	"	U
Pyrene	ND		0.020	"	"	"	"	"	U

Surrogate: Fluorene-d10	97.6 %		60-130			"	"	"	
Surrogate: Anthracene-d10	102 %		60-130			"	"	"	
Surrogate: Pyrene-d10	90.7 %		60-130			"	"	"	
Surrogate: Benzo (a) pyrene-d12	97.2 %		60-130			"	"	"	

**pH in Soil by 9045D**

pH	8.26			pH Units	1	B4B1708	02/17/2024	02/19/2024	
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**SAR by 20B Saturated Paste**

SAR	0.532		0.0100	SAR	1	B4B1704	02/17/2024	02/19/2024	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	0.418		0.00500	mmhos/cm	1	B4B1708	02/17/2024	02/19/2024	
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**Table 915 metals by EPA 6020B**

Origins Laboratory, Inc.



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Jen Pellegrini For Jordan A. Bynon, Project Manager

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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Howard USX A #9-10

**WH-FS-01@6'**  
**2/14/2024 2:50:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y402352-01 (Soil)**

**Table 915 metals by EPA 6020B**

Arsenic	11.6	0.286	mg/kg	10	B4B1523	02/15/2024	03/14/2024	
Barium	105	9.86	"	"	"	"	"	
Cadmium	0.562	0.0986	"	"	"	"	"	
Copper	11.3	9.86	"	"	"	"	"	
Lead	101	0.986	"	"	"	"	"	
Nickel	19.1	0.986	"	"	"	"	"	
Selenium	0.715	0.256	"	"	"	"	"	
Silver	ND	0.0986	"	"	"	"	"	U
Zinc	85.3	36.5	"	"	"	"	"	

**Total Metals by 7196A**

Chromium, Hexavalent	ND	0.244	0.5	mg/Kg	1	L734871	02/14/2024	02/26/2024
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Origins Laboratory, Inc.



Jen Pellegrini For Jordan A. Bynon, Project Manager

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 8000 W 44th Ave  
 Wheat Ridge CO 80033

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Howard USX A #9-10

**Background-01@2'**  
**2/14/2024 2:35:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y402352-02 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.184		0.0993	mg/L	1	B4B1610	02/16/2024	02/19/2024	
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**Metals by Saturated Paste by EPA 6010**

Calcium	1.52		0.499	meq/L	10	[CALC]	02/17/2024	02/19/2024	
Magnesium	ND		0.823	"	"	"	"	"	
Sodium	1.13		0.435	"	"	"	"	"	

**pH in Soil by 9045D**

pH	8.29			pH Units	1	B4B1708	02/17/2024	02/19/2024	
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**SAR by 20B Saturated Paste**

SAR	1.05		0.0100	SAR	1	B4B1704	02/17/2024	02/19/2024	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	0.311		0.00500	mmhos/cm	1	B4B1708	02/17/2024	02/19/2024	
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**Table 915 metals by EPA 6020B**

Arsenic	5.27		0.273	mg/kg	10	B4B1523	02/15/2024	03/14/2024	
Barium	87.3		9.40	"	"	"	"	"	
Cadmium	0.156		0.0940	"	"	"	"	"	
Copper	ND		9.40	"	"	"	"	"	U

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Jen Pellegrini For Jordan A. Bynon, Project Manager

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 8000 W 44th Ave  
 Wheat Ridge CO 80033

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Howard USX A #9-10

**Background-01@2'**  
**2/14/2024 2:35:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y402352-02 (Soil)**

**Table 915 metals by EPA 6020B**

Lead	6.53		0.940	mg/kg	10	B4B1523	02/15/2024	03/14/2024	
Nickel	9.36		0.940	"	"	"	"	"	
Selenium	0.302		0.244	"	"	"	"	"	
Silver	ND		0.0940	"	"	"	"	"	U
Zinc	38.2		34.8	"	"	"	"	"	

**Total Metals by 7196A**

Chromium, Hexavalent	ND	0.244	0.5	mg/Kg	1	L734871	02/14/2024	02/26/2024	
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Origins Laboratory, Inc.



Jen Pellegrini For Jordan A. Bynon, Project Manager

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 8000 W 44th Ave  
 Wheat Ridge CO 80033

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Howard USX A #9-10

**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 B4B1555 - EPA 5030 (soil)**

**Blank (B4B1555-BLK1)**

Prepared: 02/15/2024 Analyzed: 02/16/2024

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	0.11		"	0.125	88.9		70-130			
Surrogate: Toluene-d8	0.13		"	0.125	102		70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125	102		70-130			

Origins Laboratory, Inc.



Jen Pellegrini For Jordan A. Bynon, Project Manager

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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Howard USX A #9-10

**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 B4B1555 - EPA 5030 (soil)

**LCS (B4B1555-BS1)**

Prepared: 02/15/2024 Analyzed: 02/16/2024

1,2,4-Trimethylbenzene	0.109	0.00200	mg/kg	0.100		109	70-130			
1,3,5-Trimethylbenzene	0.114	0.00200	"	0.100		114	70-130			
Benzene	0.103	0.00200	"	0.100		103	70-130			
Ethylbenzene	0.114	0.00200	"	0.100		114	70-130			
Naphthalene	0.0974	0.00380	"	0.100		97.4	70-130			
Toluene	0.104	0.00200	"	0.100		104	70-130			
o-Xylene	0.106	0.00200	"	0.100		106	70-130			
m,p-Xylene	0.232	0.00400	"	0.200		116	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.11		"	0.125		88.2	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		102	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		94.6	70-130			

Origins Laboratory, Inc.



Jen Pellegrini For Jordan A. Bynon, Project Manager

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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Howard USX A #9-10

**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 B4B1555 - EPA 5030 (soil)

Matrix Spike (B4B1555-MS1)	Source: Y402350-01			Prepared: 02/15/2024 Analyzed: 02/16/2024						
1,2,4-Trimethylbenzene	0.100	0.00200	mg/kg	0.100	ND	100	70-130			
1,3,5-Trimethylbenzene	0.104	0.00200	"	0.100	ND	104	70-130			
Benzene	0.0993	0.00200	"	0.100	ND	99.3	70-130			
Ethylbenzene	0.104	0.00200	"	0.100	ND	104	70-130			
Naphthalene	0.104	0.00380	"	0.100	ND	104	70-130			
Toluene	0.0977	0.00200	"	0.100	ND	97.7	70-130			
o-Xylene	0.0987	0.00200	"	0.100	ND	98.7	70-130			
m,p-Xylene	0.213	0.00400	"	0.200	ND	106	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		98.9	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		98.8	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		94.7	70-130			

Origins Laboratory, Inc.



Jen Pellegrini For Jordan A. Bynon, Project Manager

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 Wheat Ridge CO 80033

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Howard USX A #9-10

**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 B4B1555 - EPA 5030 (soil)

Matrix Spike Dup (B4B1555-MSD1)	Source: Y402350-01			Prepared: 02/15/2024 Analyzed: 02/16/2024						
1,2,4-Trimethylbenzene	0.0985	0.00200	mg/kg	0.100	ND	98.5	70-130	1.77	20	
1,3,5-Trimethylbenzene	0.102	0.00200	"	0.100	ND	102	70-130	2.05	20	
Benzene	0.0984	0.00200	"	0.100	ND	98.4	70-130	0.951	20	
Ethylbenzene	0.102	0.00200	"	0.100	ND	102	70-130	1.71	20	
Naphthalene	0.105	0.00380	"	0.100	ND	105	70-130	0.230	20	
Toluene	0.0969	0.00200	"	0.100	ND	96.9	70-130	0.843	20	
o-Xylene	0.0969	0.00200	"	0.100	ND	96.9	70-130	1.86	20	
m,p-Xylene	0.209	0.00400	"	0.200	ND	104	70-130	2.04	20	
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		98.5	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		98.2	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		93.7	70-130			

Origins Laboratory, Inc.



Jen Pellegrini For Jordan A. Bynon, Project Manager

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 Wheat Ridge CO 80033

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Howard USX A #9-10

**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
<b>Batch B4B1602 - EPA 3550B</b>										
<b>Blank (B4B1602-BLK1)</b>										
					Prepared: 02/16/2024 Analyzed: 02/23/2024					
Diesel (C10-C28)	ND	25.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	100	"							U
Surrogate: o-Terphenyl	21		"	24.9		84.0	50-150			

Origins Laboratory, Inc.



Jen Pellegrini For Jordan A. Bynon, Project Manager

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 Wheat Ridge CO 80033

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Howard USX A #9-10

**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 B4B1602 - EPA 3550B**

**LCS (B4B1602-BS1)**

Prepared: 02/16/2024 Analyzed: 02/23/2024

Diesel (C10-C28)	873	50.0	mg/kg	1000		87.3	70-130			
Residual Range Organics (C28-C40)	991	200	"	1000		99.1	70-130			
Surrogate: o-Terphenyl	42		"	49.8		83.8	50-150			

Origins Laboratory, Inc.



Jen Pellegrini For Jordan A. Bynon, Project Manager

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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Howard USX A #9-10

**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 B4B1602 - EPA 3550B**

<b>Matrix Spike (B4B1602-MS1)</b>	<b>Source: Y402350-01</b>			Prepared: 02/16/2024 Analyzed: 02/23/2024						
Diesel (C10-C28)	880	50.0	mg/kg	1000	ND	88.0	70-130			
Residual Range Organics (C28-C40)	1010	200	"	1000	ND	101	70-130			
Surrogate: o-Terphenyl	39		"	49.8		78.4	50-150			

Origins Laboratory, Inc.



Jen Pellegrini For Jordan A. Bynon, Project Manager

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 Wheat Ridge CO 80033

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Howard USX A #9-10

**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
<b>Batch B4B1602 - EPA 3550B</b>										
<b>Matrix Spike Dup (B4B1602-MSD1)</b>					<b>Source: Y402350-01</b>					Prepared: 02/16/2024 Analyzed: 02/23/2024
Diesel (C10-C28)	970	50.0	mg/kg	1000	ND	97.0	70-130	9.70	35	
Residual Range Organics (C28-C40)	1100	200	"	1000	ND	110	70-130	8.87	35	
Surrogate: o-Terphenyl	42		"	49.8		84.7	50-150			

Origins Laboratory, Inc.



Jen Pellegrini For Jordan A. Bynon, Project Manager

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Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Howard USX A #9-10

**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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**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 B4B1523 - EPA 3050B**

**Blank (B4B1523-BLK1)**

Prepared: 02/15/2024 Analyzed: 03/13/2024

Arsenic	ND	0.290	mg/kg							U
Barium	ND	10.0	"							U
Cadmium	ND	0.100	"							U
Copper	ND	10.0	"							U
Lead	ND	1.00	"							U
Nickel	ND	1.00	"							U
Selenium	ND	0.260	"							U
Silver	ND	0.100	"							U
Zinc	ND	37.0	"							U

**LCS (B4B1523-BS1)**

Prepared: 02/15/2024 Analyzed: 03/13/2024

Arsenic	5.36	0.290	mg/kg	5.00		107	80-120
Barium	527	10.0	"	500		105	80-120
Cadmium	5.74	0.100	"	5.00		115	80-120
Copper	56.5	10.0	"	50.0		113	80-120
Lead	4.68	1.00	"	5.00		93.7	80-120
Nickel	5.38	1.00	"	5.00		108	80-120
Selenium	5.15	0.260	"	5.00		103	80-120
Silver	5.11	0.100	"	5.00		102	80-120
Zinc	49.9	37.0	"	50.0		99.7	80-120

**Matrix Spike (B4B1523-MS1)**

Source: Y402119-01

Prepared: 02/15/2024 Analyzed: 03/13/2024

Origins Laboratory, Inc.



Jen Pellegrini For Jordan A. Bynon, Project Manager

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 Wheat Ridge CO 80033

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Howard USX A #9-10

**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 B4B1523 - EPA 3050B**

<b>Matrix Spike (B4B1523-MS1)</b>		<b>Source: Y402119-01</b>			<b>Prepared: 02/15/2024 Analyzed: 03/13/2024</b>					
Arsenic	8.86	0.278	mg/kg	4.79	2.45	134	75-125			QM-07
Barium	610	9.57	"	479	43.0	118	75-125			
Cadmium	6.11	0.0957	"	4.79	0.0811	126	75-125			QM-07
Copper	62.0	9.57	"	47.9	5.05	119	75-125			
Lead	12.2	0.957	"	4.79	5.18	147	75-125			QM-07
Nickel	11.5	0.957	"	4.79	4.99	136	75-125			QM-07
Selenium	6.60	0.249	"	4.79	0.103	136	75-125			QM-07
Silver	5.29	0.0957	"	4.79	0.0152	110	75-125			
Zinc	90.8	35.4	"	47.9	25.2	137	75-125			QM-07
<b>Matrix Spike Dup (B4B1523-MSD1)</b>		<b>Source: Y402119-01</b>			<b>Prepared: 02/15/2024 Analyzed: 03/13/2024</b>					
Arsenic	7.71	0.287	mg/kg	4.95	2.45	106	75-125	13.8	20	
Barium	558	9.90	"	495	43.0	104	75-125	8.83	20	
Cadmium	5.55	0.0990	"	4.95	0.0811	111	75-125	9.52	20	
Copper	56.9	9.90	"	49.5	5.05	105	75-125	8.53	20	
Lead	11.9	0.990	"	4.95	5.18	137	75-125	2.20	20	QM-07
Nickel	9.97	0.990	"	4.95	4.99	100	75-125	14.2	20	
Selenium	5.81	0.257	"	4.95	0.103	115	75-125	12.7	20	
Silver	4.83	0.0990	"	4.95	0.0152	97.3	75-125	9.11	20	
Zinc	82.9	36.6	"	49.5	25.2	117	75-125	9.16	20	

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Jen Pellegrini For Jordan A. Bynon, Project Manager

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Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Howard USX A #9-10

**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 B4B2006 - EPA 3580**

**Blank (B4B2006-BLK1)**

Prepared: 02/20/2024 Analyzed: 02/21/2024

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	200		ug/kg	200		99.5	60-130			
Surrogate: Anthracene-d10	190		"	200		93.0	60-130			
Surrogate: Pyrene-d10	190		"	200		94.5	60-130			
Surrogate: Benzo (a) pyrene-d12	210		"	200		104	60-130			

**LCS (B4B2006-BS1)**

Prepared: 02/20/2024 Analyzed: 02/21/2024

1-Methylnaphthalene	0.191	0.002	mg/kg	0.200		95.6	70-130			
2-Methylnaphthalene	0.188	0.002	"	0.200		94.1	70-130			
Acenaphthene	0.193	0.020	"	0.200		96.3	70-130			
Anthracene	0.193	0.020	"	0.200		96.7	70-130			

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Jen Pellegrini For Jordan A. Bynon, Project Manager

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Andrew Newberry  
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**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 B4B2006 - EPA 3580**

**LCS (B4B2006-BS1)**

Prepared: 02/20/2024 Analyzed: 02/21/2024

Benzo (a) anthracene	0.212	0.005	mg/kg	0.200		106	70-130			
Benzo (a) pyrene	0.200	0.020	"	0.200		100	70-130			
Benzo (b) fluoranthene	0.196	0.020	"	0.200		97.8	70-130			
Benzo (g,h,i) perylene	0.202	0.020	"	0.200		101	70-130			
Benzo (k) fluoranthene	0.189	0.020	"	0.200		94.6	70-130			
Chrysene	0.200	0.020	"	0.200		100	70-130			
Dibenz (a,h) anthracene	0.203	0.020	"	0.200		102	70-130			
Fluoranthene	0.191	0.020	"	0.200		95.5	70-130			
Fluorene	0.197	0.020	"	0.200		98.5	70-130			
Indeno (1,2,3-cd) pyrene	0.203	0.020	"	0.200		101	70-130			
Naphthalene	0.197	0.002	"	0.200		98.4	70-130			
Phenanthrene	0.187	0.020	"	0.200		93.6	70-130			
Pyrene	0.181	0.020	"	0.200		90.6	70-130			
Surrogate: Fluorene-d10	200		ug/kg	200		99.9	60-130			
Surrogate: Anthracene-d10	190		"	200		95.0	60-130			
Surrogate: Pyrene-d10	190		"	200		92.9	60-130			
Surrogate: Benzo (a) pyrene-d12	210		"	200		103	60-130			

**Matrix Spike (B4B2006-MS1)**

Source: Y402326-01

Prepared: 02/20/2024 Analyzed: 02/21/2024

1-Methylnaphthalene	0.182	0.002	mg/kg	0.200	ND	90.9	70-130			
2-Methylnaphthalene	0.180	0.002	"	0.200	ND	90.2	70-130			
Acenaphthene	0.186	0.020	"	0.200	ND	92.8	70-130			
Anthracene	0.185	0.020	"	0.200	ND	92.5	70-130			
Benzo (a) anthracene	0.203	0.005	"	0.200	ND	101	70-130			
Benzo (a) pyrene	0.197	0.020	"	0.200	ND	98.5	70-130			
Benzo (b) fluoranthene	0.189	0.020	"	0.200	0.0004	94.5	70-130			
Benzo (g,h,i) perylene	0.195	0.020	"	0.200	0.0006	97.4	70-130			

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Jen Pellegrini For Jordan A. Bynon, Project Manager

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Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Howard USX A #9-10

**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 B4B2006 - EPA 3580**

<b>Matrix Spike (B4B2006-MS1)</b>		<b>Source: Y402326-01</b>			Prepared: 02/20/2024 Analyzed: 02/21/2024					
Benzo (k) fluoranthene	0.187	0.020	mg/kg	0.200	ND	93.6	70-130			
Chrysene	0.194	0.020	"	0.200	ND	96.9	70-130			
Dibenz (a,h) anthracene	0.200	0.020	"	0.200	ND	99.9	70-130			
Fluoranthene	0.186	0.020	"	0.200	ND	93.2	70-130			
Fluorene	0.190	0.020	"	0.200	ND	95.0	70-130			
Indeno (1,2,3-cd) pyrene	0.203	0.020	"	0.200	ND	101	70-130			
Naphthalene	0.187	0.002	"	0.200	ND	93.5	70-130			
Phenanthrene	0.178	0.020	"	0.200	ND	89.1	70-130			
Pyrene	0.174	0.020	"	0.200	ND	86.8	70-130			
Surrogate: Fluorene-d10	200		ug/kg	200		100	60-130			
Surrogate: Anthracene-d10	190		"	200		95.0	60-130			
Surrogate: Pyrene-d10	190		"	200		93.3	60-130			
Surrogate: Benzo (a) pyrene-d12	200		"	200		101	60-130			

<b>Matrix Spike Dup (B4B2006-MSD1)</b>		<b>Source: Y402326-01</b>			Prepared: 02/20/2024 Analyzed: 02/21/2024					
1-Methylnaphthalene	0.171	0.002	mg/kg	0.200	ND	85.3	70-130	6.37	20	
2-Methylnaphthalene	0.169	0.002	"	0.200	ND	84.4	70-130	6.58	20	
Acenaphthene	0.173	0.020	"	0.200	ND	86.4	70-130	7.17	20	
Anthracene	0.167	0.020	"	0.200	ND	83.5	70-130	10.2	20	
Benzo (a) anthracene	0.182	0.005	"	0.200	ND	91.0	70-130	10.8	20	
Benzo (a) pyrene	0.178	0.020	"	0.200	ND	88.8	70-130	10.3	20	
Benzo (b) fluoranthene	0.174	0.020	"	0.200	0.0004	87.0	70-130	8.24	20	
Benzo (g,h,i) perylene	0.177	0.020	"	0.200	0.0006	88.3	70-130	9.81	20	
Benzo (k) fluoranthene	0.161	0.020	"	0.200	ND	80.6	70-130	14.9	20	
Chrysene	0.180	0.020	"	0.200	ND	90.0	70-130	7.32	20	
Dibenz (a,h) anthracene	0.179	0.020	"	0.200	ND	89.6	70-130	10.9	20	
Fluoranthene	0.170	0.020	"	0.200	ND	85.0	70-130	9.21	20	

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Jen Pellegrini For Jordan A. Bynon, Project Manager

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 Wheat Ridge CO 80033

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Howard USX A #9-10

**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 B4B2006 - EPA 3580

Matrix Spike Dup (B4B2006-MSD1)	Source: Y402326-01			Prepared: 02/20/2024 Analyzed: 02/21/2024						
Fluorene	0.175	0.020	mg/kg	0.200	ND	87.5	70-130	8.22	20	
Indeno (1,2,3-cd) pyrene	0.183	0.020	"	0.200	ND	91.3	70-130	10.4	20	
Naphthalene	0.176	0.002	"	0.200	ND	88.2	70-130	5.84	20	
Phenanthrene	0.165	0.020	"	0.200	ND	82.5	70-130	7.67	20	
Pyrene	0.161	0.020	"	0.200	ND	80.4	70-130	7.71	20	
Surrogate: Fluorene-d10	200		ug/kg	200		100	60-130			
Surrogate: Anthracene-d10	190		"	200		94.9	60-130			
Surrogate: Pyrene-d10	190		"	200		93.4	60-130			
Surrogate: Benzo (a) pyrene-d12	200		"	200		102	60-130			

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Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Howard USX A #9-10

**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 B4B1610 - DTPA Sorbitol Preparation**

**Blank (B4B1610-BLK1)**

Prepared: 02/16/2024 Analyzed: 02/19/2024

Boron	ND	0.100	mg/L							U
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**Duplicate (B4B1610-DUP1)**

**Source: Y402328-01**

Prepared: 02/16/2024 Analyzed: 02/19/2024

Boron	0.622	0.100	mg/L		0.603			3.14	50	
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**Batch B4B1704 - Saturated Paste Metals**

**Blank (B4B1704-BLK1)**

Prepared: 02/17/2024 Analyzed: 02/19/2024

Calcium PPM	ND	10.0	mg/L							U
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SAR	ND	0.0100	SAR							U
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Magnesium PPM	ND	10.0	mg/L							U
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Sodium PPM	ND	10.0	"							U
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**Duplicate (B4B1704-DUP1)**

**Source: Y402352-01**

Prepared: 02/17/2024 Analyzed: 02/19/2024

Calcium PPM	49.3	10.0	mg/L		51.9			5.06	50	
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SAR	ND	0.0100	SAR		0.532				200	U
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Magnesium PPM	14.0	10.0	mg/L		15.0			6.87	50	
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Sodium PPM	16.7	10.0	"		16.9			1.31	50	
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 Project Number: [none]  
 Project: Noble - Howard USX A #9-10

**Saturated Paste - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B4B1708 - Saturated Paste pH/EC</b>										
<b>Blank (B4B1708-BLK1)</b>					Prepared: 02/17/2024 Analyzed: 02/19/2024					
Specific Conductance (EC)	ND	0.00500	mmhos/cm							U
<b>Duplicate (B4B1708-DUP1)</b>					<b>Source: Y402352-01</b> Prepared: 02/17/2024 Analyzed: 02/19/2024					
pH	8.28		pH Units		8.26			0.242	25	
Specific Conductance (EC)	0.462	0.00500	mmhos/cm		0.418			9.82	25	

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Jen Pellegrini For Jordan A. Bynon, Project Manager

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**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
<b>Batch L734871 -</b>										
<b>DUP (L 87401-DUP)</b>		<b>Source: 87401</b>			Prepared: Analyzed: 02/26/2024					
Chromium, Hexavalent	ND	0.508	mg/Kg		<0.508		-	1.5	20	
<b>MS (L 87401-MS)</b>		<b>Source: 87401</b>			Prepared: Analyzed: 02/26/2024					
Chromium, Hexavalent	36.5	2.5	mg/Kg	39.6	< 0.244	92	75-125			
<b>LCS (LCS)</b>		Prepared: Analyzed: 02/26/2024								
Chromium, Hexavalent	6.11	0.5	mg/Kg	8		76	75-125			
<b>LRB (LRB)</b>		Prepared: Analyzed: 02/26/2024								
Chromium, Hexavalent	ND	0.5	mg/Kg				-			

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Andrew Newberry  
Project Number: [none]  
Project: Noble - Howard USX A #9-10

### 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.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported on a wet weight basis.

Origins Laboratory, Inc.



Jen Pellegrini For Jordan A. Bynon, Project Manager

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