



Facility Closure Investigation and Environmental Summary

Ocoma C17-16 Wellhead

ECMC Remediation Project # 34684

Weld County, Colorado

Attachments:

Figure 1 – General Location Map

Figure 2 – Wellhead Soil Sample and Field Screening Locations

Table 1 – Soil Sample and Field Screening Location Information

Table 2 – Soil Analytical Results Summary Table – Volatile Organics

Table 3 – Soil Analytical Results Summary Table – PAHs

Table 4 – Soil Analytical Results Summary Table – Soil Suitability

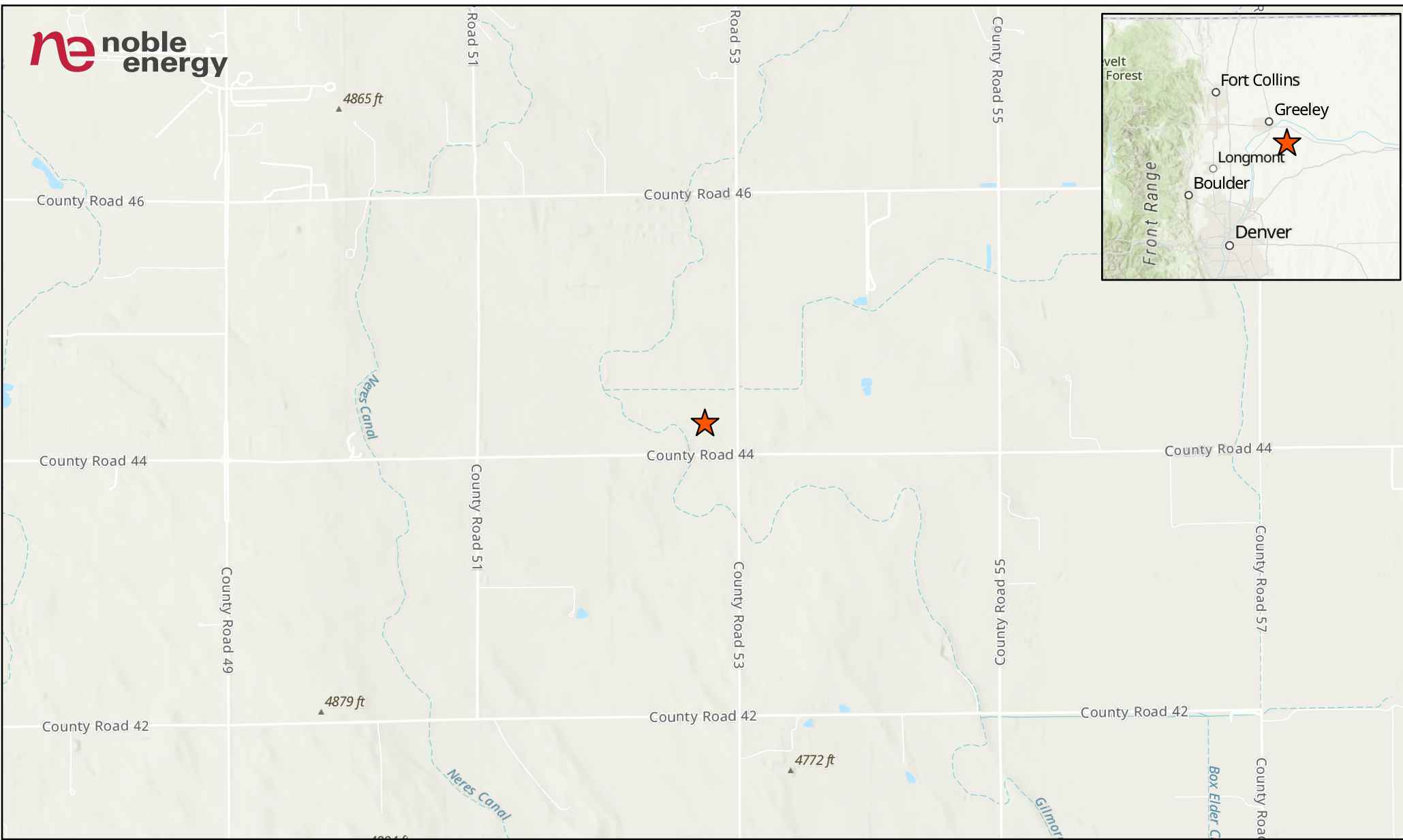
Table 5 – Soil Analytical Results Summary Table – Metals

Attachment A: Photographic Log

Attachment B: Facility Closure Checklists

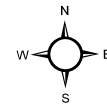
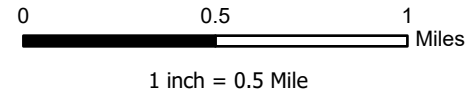
Attachment C: Laboratory Analytical Reports


FIGURES



LEGEND

 Site Location



Project No: 024-365	OCOMA C17-16 WELLHEAD GENERAL LOCATION MAP NOBLE ENERGY SE 1/4 SE 1/4 SECTION 17 T4N R64W, 6TH PM WELD COUNTY, COLORADO	 <div>1843 Sunlight Dr. Longmont, CO 80504 303.378.4036</div>	Figure
Map By: JW			1
Date: 09/03/2024			

FLR01@4	
7/17/2024	
Arsenic (mg/kg):	2.19
Lead (mg/kg):	21.1

WH01@6	
7/17/2024	
Arsenic (mg/kg):	2.10
Lead (mg/kg):	34.7

WH01-W@4 (0.0)

WH01-E@4 (2.1)

WH01-S@4 (2.6)

LABEL LEGEND

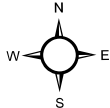
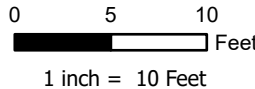
XXXX@X: SAMPLE NAME @ DEPTH IN FEET
 WH: WELLHEAD SAMPLE
 FLR: FLOWLINE RISER SAMPLE
RED: ABOVE ECMC TABLE 915-1 GWSSL

Legend

● Soil Sample ● Screening Location

NOTES:

- Sample Label (PID Result in ppm)
- ppm = parts per million
- PID = photoionization detector



Project No: 024-365

Map By: JW

Date: 09/03/2024

OCOMA C17-16 WELLHEAD
SOIL SAMPLE AND FIELD SCREENING LOCATIONS
 NOBLE ENERGY
 SE 1/4 SE 1/4 SECTION 17
 T4N R64W, 6TH PM
 WELD COUNTY, COLORADO



1843 Sunlight Drive
 Longmont, CO 80504
 303.378.4036

Figure

2

TABLES

TABLE 1
FIELD DATA SUMMARY TABLE
NOBLE 100322
OCOMA C17-16 WELLHEAD, WELD COUNTY, COLORADO
REM # 34684

Sample ID	Sample Date	Depth (ft-bgs)	GPS Data Latitude/Longitude		VOC Concentration (ppm)
WH01@6	7/17/2024	6	40.306973	-104.567493	8.2
FLR01@4	7/17/2024	4	40.306987	-104.567493	5.2
WH01-S@4	7/17/2024	4	40.306962	-104.567492	2.6
WH01-W@4	7/17/2024	4	40.306973	-104.567511	0.0
WH01-E@4	7/17/2024	4	40.306974	-104.567479	2.1

1. Global Positioning System (GPS) data is provided in decimal degrees using North American Datum (NAD) 83 UTMZone 13 North.

2. Volatile organic compound (VOC) concentrations are measured in the field using a photoionization detector (PID).

ppm - Parts per million

ft-bgs - feet below ground surface

TABLE 2
SUMMARY OF VOLATILE ORGANIC SOIL CHEMISTRY DATA
NOBLE 100322
OCOMA C17-16 WELLHEAD, WELD COUNTY, COLORADO
REM # 34684

Sample ID	Sample Date	Depth (ft-bgs)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-Benzene (mg/kg)	Xylenes (mg/kg)	1,2,4- Trimethyl- Benzene (mg/kg)	1,3,5- Trimethyl- Benzene (mg/kg)	Naphthalene (mg/kg)	TPH (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)
ECMC Table 915-1 Limits (Residential SSL)			1.2	490	5.8	58	30	27	2	500	500**		
ECMC Table 915-1 Limits (Protection of Groundwater SSL)			0.0026	0.69	0.78	9.9	0.0081	0.0087	0.0038	500	500**		
WH01@6	7/17/2024	6	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.002	<125.200	<0.200	<25.0	<100
FLR01@4	7/17/2024	4	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.002	0.203	0.203	<25.0	<100

1. Grey highlighted soil analytical values indicate result is less than laboratory reporting limit

2. ** Summation of GRO+DRO+ORO must be less than 500 mg/kg

ft-bgs - feet below ground surface

mg/kg - milligrams per kilogram

TABLE 3
SUMMARY OF POLYCYCLIC AROMATIC HYDROCARBON SOIL CHEMISTRY DATA
NOBLE 100322
OCOMA C17-16 WELLHEAD, WELD COUNTY, COLORADO
REM # 34684

Sample ID	Sample Date	Depth (ft-bgs)	Acenaphthene (mg/kg)	Anthracene (mg/kg)	Benzo (a) Anthracene (mg/kg)	Benzo (a) Pyrene (mg/kg)	Benzo (b) Fluoranthene (mg/kg)	Benzo (k) Fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo (a,h) Anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3- cd) Pyrene (mg/kg)	Pyrene (mg/kg)	1-Methyl - Naphthalene (mg/kg)	2-Methyl- Naphthalene (mg/kg)
ECMC Table 915-1 Limits (Residential SSL)			360	1800	1.1	0.11	1.1	11	110	0.11	240	240	1.1	180	18	24
ECMC Table 915-1 Limits (Protection of Groundwater SSL)			0.55	5.8	0.011	0.24	0.3	2.9	9	0.096	8.9	0.54	0.98	1.3	0.006	0.019
WH01@6	7/17/2024	6	<0.020	<0.020	<0.005	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.002	<0.002
FLR01@4	7/17/2024	4	<0.020	<0.020	<0.005	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.002	0.003

1. Grey highlighted soil analytical values indicate result is less than laboratory reporting limit

ft-bgs - feet below ground surface

mg/kg - milligrams per kilogram

TABLE 4
SUMMARY OF SOIL SUITABILITY FOR RECLAMATION
NOBLE 100322
OCOMA C17-16 WELLHEAD, WELD COUNTY, COLORADO
REM # 34684

Sample ID	Sample Date	Depth (ft-bgs)	pH (Standard Units)	EC (mmhos/cm)	SAR (Standard Units)	Boron (mg/L)
ECMC Table 915-1 Soil Suitability Limits			6 - 8.3	<4	<6	2
WH01@6	7/17/2024	6	7.83	1.54	4.78	1.20
FLR01@4	7/17/2024	4	8.20	1.61	5.15	1.12

ft-bgs - feet below ground surface

EC - Electrical Conductivity

SAR - Sodium adsorption ratio

mmhos/cm - millimhos per centimeter

mg/L - milligrams per liter

TABLE 5
SUMMARY OF METALS IN SOIL CHEMISTRY DATA
NOBLE 100322
OCOMA C17-16 WELLHEAD, WELD COUNTY, COLORADO
REM # 34684

Sample ID	Sample Date	Depth (ft-bgs)	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)
ECMC Table 915-1 Limits (Residential SSL)			0.68	15000	71	0.3	3100	400	1500	390	390	23000
ECMC Table 915-1 Limits (Protection of Groundwater SSL)			0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370
WH01@6	7/17/2024	6	2.10	64.9	0.158	<0.160*	<8.71	34.7	6.01	<0.226	<0.0871	38.4
FLR01@4	7/17/2024	4	2.19	71.2	0.127	<0.159*	<8.50	21.1	6.20	<0.221	<0.0850	31.5

1. **RED** - Above ECMC Table 915-1 Standards
 2. Red & blue highlighted soil analytical values indicate an exceedance of the referenced soil screening level (SSL)
 3. Grey highlighted soil analytical values indicate result is less than laboratory reporting limit
- * Indicates laboratory reporting or minimum detection limit in excess of SSL
- ft-bgs - feet below ground surface
mg/kg - milligrams per kilogram

ATTACHMENT A
PHOTOGRAPHIC LOG

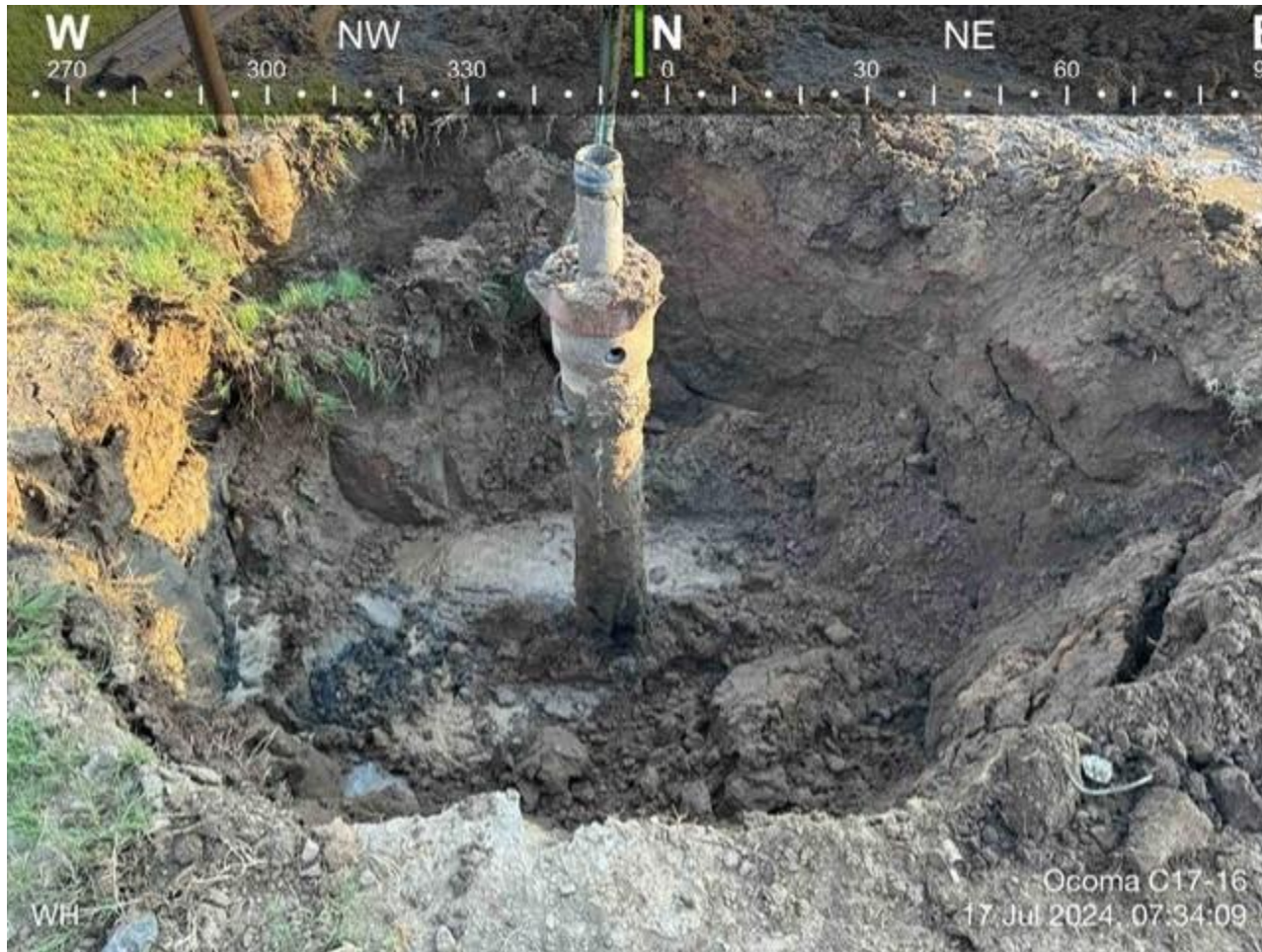
Ocoma C17-16 Wellhead Photographic Log



Ocoma C17-16 Wellhead Photographic Log



Ocoma C17-16 Wellhead Photographic Log



ATTACHMENT B
FACILITY CLOSURE CHECKLISTS

Wellhead Closure Checklist

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

Additional attachments (optional):		Pit Closure		Tank Battery Closure		Flowline Closure		Partially Buried Vault Closure
Site Name & COGCC Facility Number: Ocoma C17-16, 245975		Date: 7/17/2024						Remediation Project #: 34684
Associated Wells: NA		Age of Site: 1/16/1988-spud date						Number of Photos Attached: 3
Location: (GPS coordinates of wellhead or southeastern most wellhead for multiple) 40.306990 / -104.567490							Estimated Facility Size (acres): ~0.01	
General Condition of Site: (General observations regarding housekeeping, corrosion, waste management, etc.)								
Overall good, some staining observed								
USCS Soil Type: Clayey Sand (SC)					Estimated Depth to Groundwater: Unknown as none encountered			
Hydrocarbon Impacted Soils / Spills: (Note estimated size and if impact appears to be surficial or extends to an unknown depth)								
None encountered or observed								
Salt Crusted Soils or Impacted Vegetation: (Note estimated size and if impact appears to be surficial or extends to an unknown depth)								
None encountered or observed								
Wellhead(s)								
Well API	05-123-13771							
Age	1/16/1988-spud date							
Condition of surface around wellhead	Good							
PID Readings	0.0 to 8.2 ppm							
Condition of subsurface (staining present)	Good							
PID Readings	0.0 to 8.2 ppm							
Sample taken? Location/Sample ID#	WH01@6, FLR01@4							
Photo Number(s)	1-3							
Other observations regarding wellheads:								
Staining was observed at the floor and south sidewall of the excavation								
Summary								
Was impacted soil identified?								
<input checked="" type="checkbox"/> No		Yes - less than 10 cubic yards			Yes - more than 10 cubic yards			
Total number of samples field screened: 5					Total number of samples collected: 5			
Highest PID Reading: 8.2 ppm					Total number of samples submitted to lab for analysis: 2			
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?								
<input checked="" type="checkbox"/> No		Yes - not impacted or in contact with impacted soils			Yes - groundwater impacted and/or in contact with impacted soils			
Measured depth to groundwater:					Was remedial groundwater removal conducted? Yes No			
Date Groundwater was encountered:					Commencement date of removal:			
Sheen on groundwater? Yes No					Volume of groundwater removed prior to sampling:			
Free product observed? Yes No					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:								

ATTACHMENT C
LABORATORY ANALYTICAL REPORTS



August 20, 2024

Entrada Consulting Group

Chelsea Veryser

330 Grand Ave. Unit C

Grand Junction CO 81501

Project Name - Chevron - Ocoma C17-16

Project Number - [none]

Attached are your analytical results for Chevron - Ocoma C17-16 received by Origins Laboratory, Inc. July 17, 2024. This project is associated with Origins project number Y407460-01.

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

Entrada Consulting Group

330 Grand Ave. Unit C

Grand Junction CO 81501

Chelsea Veryser

Project Number: [none]

Project: Chevron - Ocoma C17-16

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
WH01@6	Y407460-01	Soil	July 17, 2024 8:00	07/17/2024 16:55
FLR01@4	Y407460-02	Soil	July 17, 2024 8:05	07/17/2024 16:55

Origins Laboratory, Inc.



Jen Pellegrini, 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.

Entrada Consulting Group
330 Grand Ave. Unit C
Grand Junction CO 81501

Chelsea Veryser
Project Number: [none]
Project: Chevron - Ocoma C17-16

ORIGINS

LABORATORY INC

ORIGINS WORK ORDER #

1107400

Page 1 of 1

Address:

Entrada

Project Manager:

Chelsea Veryser

Key:

Project Name:

Ocoma C17-16

W=Water

Project Number:

GW=Groundwater

Telephone Number: 303-319-8703

Collected By:

Jan Lohr

SW=Surface Water

Email Address:

Entrada Distribution Co. R04E1F27@chevron.com

Invoice Billing Info:

Bill to Chevron (Betsy Smith)

WW=Waste Water

S=Soil | SO=Solid | O=Oil | A=Air | G=Gas | UNP=Unpres | HCL=Hydrochloric | HNO3=Nitric | H2SO4=Sulfuric | NaOH=Sodium Hydroxide

L=Liquid

#	Sample ID	Date	Time	# of Containers	Matrix	Preservative	Analysis	Comments
1	WH01 Q1	7/17/24	0800	2	S	UNP	Table 915	
2	FE01 Q4		0805					
3	WH01-W Q4		0810					H2O-D
4	WH01-E Q4		0815					H2O-D
5	WH01-S Q4		0820					H2O-D
6								
7								
8								
9								
10								

Relinquished By:	Date:	Time:	Received By:	Date:	Time:
<i>[Signature]</i>	7/17/24	1430	<i>[Signature]</i>	07/17/24	1530
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
<i>[Signature]</i>	07/17/24	1635	<i>[Signature]</i>	7/17/24	1655

1725 Elk Place Denver, Co. 80211 | # 303.433.1322 | originslab.com |

For Lab Sample Receiving Only:

Temp Received-

10°C

Received On Ice?

☐ Yes ☐ No

☒ Standard

☐ 48 Hr ☐ 72 Hr

☐ SAME DAY ☐ 24 Hr

Turnaround Time

Origins Laboratory, Inc.

[Signature]

Jen Pellegrini, Project Manager

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Entrada Consulting Group

330 Grand Ave. Unit C

Grand Junction CO 81501

Chelsea Veryser

Project Number: [none]

Project: Chevron - Ocoma C17-16

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: 44074100 Client: Entrada
Client Project ID: Ocoma

Checklist Completed by: CH Shipped Via: HD
(UPS, FedEx, Hand Delivered, Pick-up, etc.)
Date/time completed: 7/17/24 Airbill #: N/A

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

Cooler Number/Temperature: 1/16 °C / _____ °C / _____ °C (Describe) _____ °C

Thermometer ID: 7005

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?		<input checked="" type="checkbox"/>		<u>SD</u>
Is there ice present (document if blue ice is used)		<input checked="" type="checkbox"/>		
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?		<input checked="" type="checkbox"/>		
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.			<input checked="" type="checkbox"/>	
Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH < 2 for samples preserved with HNO ₃ , HCL, H ₂ SO ₄) / (pH > 10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH)			<input checked="" type="checkbox"/>	
Additional Comments (if any):				

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

Reviewed by (Project Manager) [Signature]

Date/Time Reviewed 7/19/24

Origins Laboratory, Inc.

Jen Pellegrini

Jen Pellegrini, 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.

Entrada Consulting Group
330 Grand Ave. Unit C
Grand Junction CO 81501

Chelsea Veryser
Project Number: [none]
Project: Chevron - Ocoma C17-16

WH01@6

7/17/2024 8:00:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y407460-01 (Soil)

Boron (DTPA Sorbitol)

Boron	1.20	0.101	mg/L	1	B4G1919	07/19/2024	07/22/2024	
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DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	25.0	mg/kg	1	B4G1803	07/18/2024	07/19/2024	Ua
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	Ua

Surrogate: o-Terphenyl	88.1 %	50-150	"	"	"	"	"	
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GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND	0.00200	mg/kg	1	B4G1842	07/18/2024	07/20/2024	Ua
1,3,5-Trimethylbenzene	ND	0.00200	"	"	"	"	"	Ua
Benzene	ND	0.00200	"	"	"	"	"	Ua
Ethylbenzene	ND	0.00200	"	"	"	"	"	Ua
Toluene	ND	0.00200	"	"	"	"	"	Ua
Xylenes, total	ND	0.00200	"	"	"	"	"	Ua
Gasoline Range Hydrocarbons	ND	0.200	"	"	"	"	"	Ua

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



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Jen Pellegrini, Project Manager

Entrada Consulting Group

330 Grand Ave. Unit C

Grand Junction CO 81501

Chelsea Veryser

Project Number: [none]

Project: Chevron - Ocoma C17-16

WH01@6

7/17/2024 8:00:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.

Y407460-01 (Soil)

GBTEX+TMBs by 8260D

Surrogate: Toluene-d8	95.6 %	70-130				B4G18 42	07/18/2024	07/20/2024	
Surrogate: 4-Bromofluorobenzene	104 %	70-130				"	"	"	

Metals by Saturated Paste by EPA 6010

Calcium	3.73	0.499	meq/L	10	[CALC]	07/19/2024	07/22/2024	
Magnesium	2.44	0.823	"	"	"	"	"	
Sodium	8.40	0.435	"	"	"	"	"	

PAH by EPA 8270E

1-Methylnaphthalene	ND	0.002	mg/kg	1	B4G1829	07/18/2024	07/20/2024	Ua
2-Methylnaphthalene	ND	0.002	"	"	"	"	"	Ua
Acenaphthene	ND	0.020	"	"	"	"	"	Ua
Anthracene	ND	0.020	"	"	"	"	"	Ua
Benzo (a) anthracene	ND	0.005	"	"	"	"	"	Ua
Benzo (a) pyrene	ND	0.020	"	"	"	"	"	Ua
Benzo (b) fluoranthene	ND	0.020	"	"	"	"	"	Ua
Benzo (k) fluoranthene	ND	0.020	"	"	"	"	"	Ua
Chrysene	ND	0.020	"	"	"	"	"	Ua
Dibenz (a,h) anthracene	ND	0.020	"	"	"	"	"	Ua
Fluoranthene	ND	0.020	"	"	"	"	"	Ua

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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Entrada Consulting Group

330 Grand Ave. Unit C

Grand Junction CO 81501

Chelsea Veryser

Project Number: [none]

Project: Chevron - Ocoma C17-16

WH01@6

7/17/2024 8:00:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.

Y407460-01 (Soil)

PAH by EPA 8270E

Fluorene	ND	0.020	mg/kg	1	B4G1829	07/18/2024	07/20/2024	Ua
Indeno (1,2,3-cd) pyrene	ND	0.020	"	"	"	"	"	Ua
Naphthalene	ND	0.002	"	"	"	"	"	Ua
Pyrene	ND	0.020	"	"	"	"	"	Ua

Surrogate: Fluorene-d10	102 %	60-130	"	"	"
Surrogate: Anthracene-d10	83.5 %	60-130	"	"	"
Surrogate: Pyrene-d10	97.1 %	60-130	"	"	"
Surrogate: Benzo (a) pyrene-d12	103 %	60-130	"	"	"

pH in Soil by 9045D

pH	7.83	pH Units	1	B4G1926	07/19/2024	07/20/2024
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SAR by 20B Saturated Paste

SAR	4.78	0.0100	SAR	1	B4G1913	07/19/2024	07/22/2024
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	1.54	0.00500	mmhos/cm	1	B4G1926	07/19/2024	07/20/2024
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Table 915 metals by EPA 6020B

Origins Laboratory, Inc.



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Jen Pellegrini, Project Manager

Entrada Consulting Group

330 Grand Ave. Unit C

Grand Junction CO 81501

Chelsea Veryser

Project Number: [none]

Project: Chevron - Ocoma C17-16

WH01@6

7/17/2024 8:00:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.

Y407460-01 (Soil)

Table 915 metals by EPA 6020B

Arsenic	2.10	0.253	mg/kg	10	B4G1627	07/18/2024	07/20/2024	
Barium	64.9	8.71	"	"	"	"	"	
Cadmium	0.158	0.0871	"	"	"	"	"	
Copper	ND	8.71	"	"	"	"	"	Ua
Lead	34.7	0.871	"	"	"	"	"	
Nickel	6.01	0.871	"	"	"	"	"	
Selenium	ND	0.226	"	"	"	"	"	Ua
Silver	ND	0.0871	"	"	"	"	"	Ua
Zinc	38.4	32.2	"	"	"	"	"	

Total Metals 7196A

Hexavalent Chromium	ND	0.160	0.400	mg/kg dry	1	2656424	08/15/2024	08/16/2024	U
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Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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Entrada Consulting Group

330 Grand Ave. Unit C

Grand Junction CO 81501

Chelsea Veryser

Project Number: [none]

Project: Chevron - Ocoma C17-16

FLR01@4

7/17/2024 8:05:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.

Y407460-02 (Soil)

Boron (DTPA Sorbitol)

Boron	1.12	0.101	mg/L	1	B4G1919	07/19/2024	07/22/2024	
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DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	25.0	mg/kg	1	B4G1803	07/18/2024	07/19/2024	Ua
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	Ua

Surrogate: o-Terphenyl	95.3 %	50-150	"	"	"
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GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND	0.00200	mg/kg	1	B4G1842	07/18/2024	07/20/2024	Ua
1,3,5-Trimethylbenzene	ND	0.00200	"	"	"	"	"	Ua
Benzene	ND	0.00200	"	"	"	"	"	Ua
Ethylbenzene	ND	0.00200	"	"	"	"	"	Ua
Toluene	ND	0.00200	"	"	"	"	"	Ua
Xylenes, total	ND	0.00200	"	"	"	"	"	Ua
Gasoline Range Hydrocarbons	0.203	0.200	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4	108 %	70-130	"	"	"
Surrogate: Toluene-d8	97.1 %	70-130	"	"	"

Origins Laboratory, Inc.



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Jen Pellegrini, Project Manager

Entrada Consulting Group

330 Grand Ave. Unit C

Grand Junction CO 81501

Chelsea Veryser

Project Number: [none]

Project: Chevron - Ocoma C17-16

FLR01@4

7/17/2024 8:05:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.

Y407460-02 (Soil)

GBTEX+TMBs by 8260D

Surrogate: 4-Bromofluorobenzene

103 %

70-130

B4G18
42

07/18/2024

07/20/2024

Metals by Saturated Paste by EPA 6010

Calcium	4.07	0.499	meq/L	10	[CALC]	07/19/2024	07/22/2024
Magnesium	2.79	0.823	"	"	"	"	"
Sodium	9.54	0.435	"	"	"	"	"

PAH by EPA 8270E

1-Methylnaphthalene	0.002	0.002	mg/kg	1	B4G1829	07/18/2024	07/20/2024
2-Methylnaphthalene	0.003	0.002	"	"	"	"	"
Acenaphthene	ND	0.020	"	"	"	"	Ua
Anthracene	ND	0.020	"	"	"	"	Ua
Benzo (a) anthracene	ND	0.005	"	"	"	"	Ua
Benzo (a) pyrene	ND	0.020	"	"	"	"	Ua
Benzo (b) fluoranthene	ND	0.020	"	"	"	"	Ua
Benzo (k) fluoranthene	ND	0.020	"	"	"	"	Ua
Chrysene	ND	0.020	"	"	"	"	Ua
Dibenz (a,h) anthracene	ND	0.020	"	"	"	"	Ua
Fluoranthene	ND	0.020	"	"	"	"	Ua
Fluorene	ND	0.020	"	"	"	"	Ua

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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Entrada Consulting Group

330 Grand Ave. Unit C

Grand Junction CO 81501

Chelsea Veryser

Project Number: [none]

Project: Chevron - Ocoma C17-16

FLR01@4

7/17/2024 8:05:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.

Y407460-02 (Soil)

PAH by EPA 8270E

Indeno (1,2,3-cd) pyrene	ND	0.020	mg/kg	1	B4G1829	07/18/2024	07/20/2024	Ua
Naphthalene	ND	0.002	"	"	"	"	"	Ua
Pyrene	ND	0.020	"	"	"	"	"	Ua

Surrogate: Fluorene-d10	98.5 %	60-130	"	"	"
Surrogate: Anthracene-d10	83.8 %	60-130	"	"	"
Surrogate: Pyrene-d10	99.7 %	60-130	"	"	"
Surrogate: Benzo (a) pyrene-d12	105 %	60-130	"	"	"

pH in Soil by 9045D

pH	8.20	pH Units	1	B4G1926	07/19/2024	07/20/2024
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SAR by 20B Saturated Paste

SAR	5.15	0.0100	SAR	1	B4G1913	07/19/2024	07/22/2024
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	1.61	0.00500	mmhos/cm	1	B4G1926	07/19/2024	07/20/2024
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Table 915 metals by EPA 6020B

Arsenic	2.19	0.246	mg/kg	10	B4G1627	07/18/2024	07/20/2024
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Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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Entrada Consulting Group

330 Grand Ave. Unit C

Grand Junction CO 81501

Chelsea Veryser

Project Number: [none]

Project: Chevron - Ocoma C17-16

FLR01@4

7/17/2024 8:05:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.

Y407460-02 (Soil)

Table 915 metals by EPA 6020B

Barium	71.2	8.50	mg/kg	10	B4G1627	07/18/2024	07/20/2024	
Cadmium	0.127	0.0850	"	"	"	"	"	
Copper	ND	8.50	"	"	"	"	"	Ua
Lead	21.1	0.850	"	"	"	"	"	
Nickel	6.20	0.850	"	"	"	"	"	
Selenium	ND	0.221	"	"	"	"	"	Ua
Silver	ND	0.0850	"	"	"	"	"	Ua
Zinc	31.5	31.4	"	"	"	"	"	

Total Metals 7196A

Hexavalent Chromium	ND	0.159	0.397	mg/kg dry	1	2656424	08/15/2024	08/16/2024	U
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Origins Laboratory, Inc.



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Entrada Consulting Group

330 Grand Ave. Unit C

Grand Junction CO 81501

Chelsea Veryser

Project Number: [none]

Project: Chevron - Ocoma C17-16

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 B4G1803 - EPA 3550B

Blank (B4G1803-BLK1)

Prepared: 07/18/2024 Analyzed: 07/19/2024

Diesel (C10-C28)	ND	25.0	mg/kg							Ua
Residual Range Organics (C28-C40)	ND	100	"							Ua
Surrogate: o-Terphenyl	25		"	24.9		98.7	50-150			

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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Entrada Consulting Group

330 Grand Ave. Unit C

Grand Junction CO 81501

Chelsea Veryser

Project Number: [none]

Project: Chevron - Ocoma C17-16

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 B4G1803 - EPA 3550B

LCS (B4G1803-BS1)

Prepared: 07/18/2024 Analyzed: 07/19/2024

Diesel (C10-C28)	896	50.0	mg/kg	1000		89.6	70-130			
Residual Range Organics (C28-C40)	951	200	"	1000		95.1	70-130			
Surrogate: o-Terphenyl	44		"	49.8		88.2	50-150			

Origins Laboratory, Inc.



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Entrada Consulting Group

330 Grand Ave. Unit C

Grand Junction CO 81501

Chelsea Veryser

Project Number: [none]

Project: Chevron - Ocoma C17-16

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 B4G1803 - EPA 3550B

Matrix Spike (B4G1803-MS1)		Source: Y407420-02			Prepared: 07/18/2024 Analyzed: 07/19/2024					
Diesel (C10-C28)	851	50.0	mg/kg	1000	ND	85.1	70-130			
Residual Range Organics (C28-C40)	922	200	"	1000	ND	92.2	70-130			
Surrogate: o-Terphenyl	57		"	49.8		115	50-150			

Origins Laboratory, Inc.



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Entrada Consulting Group

330 Grand Ave. Unit C

Grand Junction CO 81501

Chelsea Veryser

Project Number: [none]

Project: Chevron - Ocoma C17-16

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 B4G1803 - EPA 3550B

Matrix Spike Dup (B4G1803-MSD1)		Source: Y407420-02			Prepared: 07/18/2024 Analyzed: 07/19/2024					
Diesel (C10-C28)	872	50.0	mg/kg	1000	ND	87.2	70-130	2.37	35	
Residual Range Organics (C28-C40)	956	200	"	1000	ND	95.6	70-130	3.59	35	
Surrogate: o-Terphenyl	43		"	49.8		87.1	50-150			

Origins Laboratory, Inc.



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Entrada Consulting Group

330 Grand Ave. Unit C

Grand Junction CO 81501

Chelsea Veryser

Project Number: [none]

Project: Chevron - Ocoma C17-16

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 B4G1842 - EPA 5030 (soil)										
Blank (B4G1842-BLK1)					Prepared: 07/18/2024 Analyzed: 07/20/2024					
1,2,4-Trimethylbenzene	ND	0.00200	mg/kg							Ua
1,3,5-Trimethylbenzene	ND	0.00200	"							Ua
Benzene	ND	0.00200	"							Ua
Ethylbenzene	ND	0.00200	"							Ua
Naphthalene	ND	0.00380	"							Ua
Toluene	ND	0.00200	"							Ua
Xylenes, total	ND	0.00200	"							Ua
Gasoline Range Hydrocarbons	ND	0.200	"							Ua
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		104	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		100	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		107	70-130			

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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Entrada Consulting Group

330 Grand Ave. Unit C

Grand Junction CO 81501

Chelsea Verysen

Project Number: [none]

Project: Chevron - Ocoma C17-16

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 B4G1842 - EPA 5030 (soil)

LCS (B4G1842-BS1)

Prepared: 07/18/2024 Analyzed: 07/20/2024

1,2,4-Trimethylbenzene	0.101	0.00200	mg/kg	0.100		101	70-130			
1,3,5-Trimethylbenzene	0.101	0.00200	"	0.100		101	70-130			
Benzene	0.0941	0.00200	"	0.100		94.1	70-130			
Ethylbenzene	0.0995	0.00200	"	0.100		99.5	70-130			
Naphthalene	0.100	0.00380	"	0.100		100	70-130			
Toluene	0.0922	0.00200	"	0.100		92.2	70-130			
o-Xylene	0.100	0.00200	"	0.100		100	70-130			
m,p-Xylene	0.197	0.00400	"	0.200		98.4	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		102	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		99.5	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		99.8	70-130			

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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Entrada Consulting Group

330 Grand Ave. Unit C

Grand Junction CO 81501

Chelsea Veryser

Project Number: [none]

Project: Chevron - Ocoma C17-16

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 B4G1842 - EPA 5030 (soil)										
Matrix Spike (B4G1842-MS1)		Source: Y407425-01			Prepared: 07/18/2024 Analyzed: 07/20/2024					
1,2,4-Trimethylbenzene	0.0776	0.00200	mg/kg	0.100	ND	77.6	70-130			
1,3,5-Trimethylbenzene	0.0783	0.00200	"	0.100	ND	78.3	70-130			
Benzene	0.0781	0.00200	"	0.100	ND	78.1	70-130			
Ethylbenzene	0.0719	0.00200	"	0.100	ND	71.9	70-130			
Naphthalene	0.0808	0.00380	"	0.100	ND	80.8	70-130			
Toluene	0.0742	0.00200	"	0.100	ND	74.2	70-130			
o-Xylene	0.0685	0.00200	"	0.100	ND	68.5	70-130			QM-07
m,p-Xylene	0.136	0.00400	"	0.200	ND	68.0	70-130			QM-07
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		107	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		99.6	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		98.2	70-130			

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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Entrada Consulting Group
330 Grand Ave. Unit C
Grand Junction CO 81501

Chelsea Verysen
Project Number: [none]
Project: Chevron - Ocoma C17-16

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 B4G1842 - EPA 5030 (soil)										
Matrix Spike Dup (B4G1842-MSD1)		Source: Y407425-01			Prepared: 07/18/2024 Analyzed: 07/20/2024					
1,2,4-Trimethylbenzene	0.0777	0.00200	mg/kg	0.100	ND	77.7	70-130	0.129	20	
1,3,5-Trimethylbenzene	0.0773	0.00200	"	0.100	ND	77.3	70-130	1.26	20	
Benzene	0.0791	0.00200	"	0.100	ND	79.1	70-130	1.22	20	
Ethylbenzene	0.0715	0.00200	"	0.100	ND	71.5	70-130	0.474	20	
Naphthalene	0.0886	0.00380	"	0.100	ND	88.6	70-130	9.11	20	
Toluene	0.0730	0.00200	"	0.100	ND	73.0	70-130	1.58	20	
o-Xylene	0.0680	0.00200	"	0.100	ND	68.0	70-130	0.791	20	QM-07
m,p-Xylene	0.136	0.00400	"	0.200	ND	68.2	70-130	0.191	20	QM-07
Surrogate: 1,2-Dichloroethane-d4	0.14		"	0.125		112	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		98.0	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		97.3	70-130			

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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Entrada Consulting Group
330 Grand Ave. Unit C
Grand Junction CO 81501

Chelsea Veryser
Project Number: [none]
Project: Chevron - Ocoma C17-16

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

Origins Laboratory, Inc.

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

Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B4G1627 - EPA 3050B

Blank (B4G1627-BLK1)

Prepared: 07/18/2024 Analyzed: 07/20/2024

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

LCS (B4G1627-BS1)

Prepared: 07/18/2024 Analyzed: 07/20/2024

Arsenic	5.32	0.290	mg/kg	5.00		106	80-120
Barium	538	10.0	"	500		108	80-120
Cadmium	5.49	0.100	"	5.00		110	80-120
Copper	54.3	10.0	"	50.0		109	80-120
Lead	5.32	1.00	"	5.00		106	80-120
Nickel	5.61	1.00	"	5.00		112	80-120
Selenium	5.25	0.260	"	5.00		105	80-120
Silver	5.47	0.100	"	5.00		109	80-120
Zinc	55.5	37.0	"	50.0		111	80-120

Matrix Spike (B4G1627-MS1)

Source: Y407378-01

Prepared: 07/18/2024 Analyzed: 07/20/2024

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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Entrada Consulting Group
330 Grand Ave. Unit C
Grand Junction CO 81501

Chelsea Veryser
Project Number: [none]
Project: Chevron - Ocoma C17-16

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 B4G1627 - EPA 3050B

Matrix Spike (B4G1627-MS1)		Source: Y407378-01			Prepared: 07/18/2024 Analyzed: 07/20/2024					
Arsenic	9.16	0.258	mg/kg	4.45	4.57	103	75-125			
Barium	603	8.89	"	445	186	93.8	75-125			
Cadmium	4.84	0.0889	"	4.45	0.177	105	75-125			
Copper	58.2	8.89	"	44.5	11.7	105	75-125			
Lead	12.9	0.889	"	4.45	8.90	89.3	75-125			
Nickel	19.2	0.889	"	4.45	14.0	116	75-125			
Selenium	4.70	0.231	"	4.45	0.154	102	75-125			
Silver	4.58	0.0889	"	4.45	0.0291	102	75-125			
Zinc	92.2	32.9	"	44.5	46.3	103	75-125			
Matrix Spike Dup (B4G1627-MSD1)		Source: Y407378-01			Prepared: 07/18/2024 Analyzed: 07/20/2024					
Arsenic	10.3	0.286	mg/kg	4.93	4.57	116	75-125	11.8	20	
Barium	765	9.85	"	493	186	118	75-125	23.7	20	QR-02
Cadmium	5.93	0.0985	"	4.93	0.177	117	75-125	20.1	20	QR-02
Copper	66.9	9.85	"	49.3	11.7	112	75-125	13.9	20	
Lead	14.7	0.985	"	4.93	8.90	118	75-125	13.3	20	
Nickel	20.8	0.985	"	4.93	14.0	138	75-125	8.22	20	QM-07
Selenium	5.68	0.256	"	4.93	0.154	112	75-125	18.8	20	
Silver	5.71	0.0985	"	4.93	0.0291	115	75-125	22.1	20	QR-02
Zinc	104	36.5	"	49.3	46.3	116	75-125	11.7	20	

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Entrada Consulting Group
330 Grand Ave. Unit C
Grand Junction CO 81501

Chelsea Veryser
Project Number: [none]
Project: Chevron - Ocoma C17-16

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 B4G1829 - EPA 3580

Blank (B4G1829-BLK1)

Prepared: 07/18/2024 Analyzed: 07/19/2024

1-Methylnaphthalene	ND	0.002	mg/kg							Ua
2-Methylnaphthalene	ND	0.002	"							Ua
Acenaphthene	ND	0.020	"							Ua
Anthracene	ND	0.020	"							Ua
Benzo (a) anthracene	ND	0.005	"							Ua
Benzo (a) pyrene	ND	0.020	"							Ua
Benzo (b) fluoranthene	ND	0.020	"							Ua
Benzo (g,h,i) perylene	ND	0.020	"							Ua
Benzo (k) fluoranthene	ND	0.020	"							Ua
Chrysene	ND	0.020	"							Ua
Dibenz (a,h) anthracene	ND	0.020	"							Ua
Fluoranthene	ND	0.020	"							Ua
Fluorene	ND	0.020	"							Ua
Indeno (1,2,3-cd) pyrene	ND	0.020	"							Ua
Naphthalene	ND	0.002	"							Ua
Phenanthrene	ND	0.020	"							Ua
Pyrene	ND	0.020	"							Ua

Surrogate: Fluorene-d10	200		ug/kg	200	101	60-130
Surrogate: Anthracene-d10	170		"	200	84.8	60-130
Surrogate: Pyrene-d10	190		"	200	94.1	60-130
Surrogate: Benzo (a) pyrene-d12	210		"	200	106	60-130

LCS (B4G1829-BS1)

Prepared: 07/18/2024 Analyzed: 07/19/2024

1-Methylnaphthalene	0.187	0.002	mg/kg	0.200	93.3	70-130
2-Methylnaphthalene	0.183	0.002	"	0.200	91.5	70-130
Acenaphthene	0.189	0.020	"	0.200	94.6	70-130
Anthracene	0.188	0.020	"	0.200	94.0	70-130

Origins Laboratory, Inc.



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Entrada Consulting Group

330 Grand Ave. Unit C

Grand Junction CO 81501

Chelsea Veryser

Project Number: [none]

Project: Chevron - Ocoma C17-16

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 B4G1829 - EPA 3580

LCS (B4G1829-BS1)

Prepared: 07/18/2024 Analyzed: 07/19/2024

Benzo (a) anthracene	0.165	0.005	mg/kg	0.200		82.5	70-130
Benzo (a) pyrene	0.192	0.020	"	0.200		95.9	70-130
Benzo (b) fluoranthene	0.217	0.020	"	0.200		108	70-130
Benzo (g,h,i) perylene	0.216	0.020	"	0.200		108	70-130
Benzo (k) fluoranthene	0.199	0.020	"	0.200		99.6	70-130
Chrysene	0.178	0.020	"	0.200		89.0	70-130
Dibenz (a,h) anthracene	0.229	0.020	"	0.200		115	70-130
Fluoranthene	0.178	0.020	"	0.200		89.2	70-130
Fluorene	0.193	0.020	"	0.200		96.6	70-130
Indeno (1,2,3-cd) pyrene	0.230	0.020	"	0.200		115	70-130
Naphthalene	0.192	0.002	"	0.200		96.2	70-130
Phenanthrene	0.208	0.020	"	0.200		104	70-130
Pyrene	0.179	0.020	"	0.200		89.7	70-130
Surrogate: Fluorene-d10	200		ug/kg	200		98.6	60-130
Surrogate: Anthracene-d10	180		"	200		90.7	60-130
Surrogate: Pyrene-d10	190		"	200		96.7	60-130
Surrogate: Benzo (a) pyrene-d12	210		"	200		106	60-130

Matrix Spike (B4G1829-MS1)

Source: Y407411-01

Prepared: 07/18/2024 Analyzed: 07/22/2024

1-Methylnaphthalene	0.196	0.002	mg/kg	0.200	0.0005	97.6	70-130
2-Methylnaphthalene	0.196	0.002	"	0.200	ND	97.8	70-130
Acenaphthene	0.199	0.020	"	0.200	0.0002	99.5	70-130
Anthracene	0.212	0.020	"	0.200	ND	106	70-130
Benzo (a) anthracene	0.209	0.005	"	0.200	0.001	104	70-130
Benzo (a) pyrene	0.213	0.020	"	0.200	ND	106	70-130
Benzo (b) fluoranthene	0.211	0.020	"	0.200	ND	106	70-130
Benzo (g,h,i) perylene	0.208	0.020	"	0.200	ND	104	70-130

Origins Laboratory, Inc.



Jen Pellegrini, Project Manager

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Entrada Consulting Group
330 Grand Ave. Unit C
Grand Junction CO 81501

Chelsea Verysen
Project Number: [none]
Project: Chevron - Ocoma C17-16

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 B4G1829 - EPA 3580

Matrix Spike (B4G1829-MS1)		Source: Y407411-01			Prepared: 07/18/2024 Analyzed: 07/22/2024					
Benzo (k) fluoranthene	0.214	0.020	mg/kg	0.200	ND	107	70-130			
Chrysene	0.205	0.020	"	0.200	0.0005	102	70-130			
Dibenz (a,h) anthracene	0.209	0.020	"	0.200	ND	104	70-130			
Fluoranthene	0.209	0.020	"	0.200	ND	105	70-130			
Fluorene	0.202	0.020	"	0.200	ND	101	70-130			
Indeno (1,2,3-cd) pyrene	0.204	0.020	"	0.200	ND	102	70-130			
Naphthalene	0.193	0.002	"	0.200	ND	96.4	70-130			
Phenanthrene	0.208	0.020	"	0.200	0.0002	104	70-130			
Pyrene	0.212	0.020	"	0.200	0.0005	106	70-130			
Surrogate: Fluorene-d10	200		ug/kg	200		99.9	60-130			
Surrogate: Anthracene-d10	200		"	200		102	60-130			
Surrogate: Pyrene-d10	200		"	200		101	60-130			
Surrogate: Benzo (a) pyrene-d12	200		"	200		97.5	60-130			

Matrix Spike Dup (B4G1829-MSD1)		Source: Y407411-01			Prepared: 07/18/2024 Analyzed: 07/19/2024					
1-Methylnaphthalene	0.173	0.002	mg/kg	0.200	0.0005	86.4	70-130	12.1	20	
2-Methylnaphthalene	0.178	0.002	"	0.200	ND	88.9	70-130	9.54	20	
Acenaphthene	0.196	0.020	"	0.200	0.0002	97.7	70-130	1.77	20	
Anthracene	0.180	0.020	"	0.200	ND	90.1	70-130	16.0	20	
Benzo (a) anthracene	0.172	0.005	"	0.200	0.001	85.5	70-130	19.3	20	
Benzo (a) pyrene	0.188	0.020	"	0.200	ND	93.8	70-130	12.6	20	
Benzo (b) fluoranthene	0.228	0.020	"	0.200	ND	114	70-130	7.88	20	
Benzo (g,h,i) perylene	0.215	0.020	"	0.200	ND	108	70-130	3.59	20	
Benzo (k) fluoranthene	0.203	0.020	"	0.200	ND	101	70-130	5.43	20	
Chrysene	0.206	0.020	"	0.200	0.0005	103	70-130	0.274	20	
Dibenz (a,h) anthracene	0.245	0.020	"	0.200	ND	123	70-130	16.0	20	
Fluoranthene	0.194	0.020	"	0.200	ND	97.0	70-130	7.59	20	

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Entrada Consulting Group

330 Grand Ave. Unit C

Grand Junction CO 81501

Chelsea Veryser

Project Number: [none]

Project: Chevron - Ocoma C17-16

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 B4G1829 - EPA 3580

Matrix Spike Dup (B4G1829-MSD1)		Source: Y407411-01			Prepared: 07/18/2024 Analyzed: 07/19/2024					
Fluorene	0.204	0.020	mg/kg	0.200	ND	102	70-130	0.791	20	
Indeno (1,2,3-cd) pyrene	0.235	0.020	"	0.200	ND	118	70-130	13.9	20	
Naphthalene	0.194	0.002	"	0.200	ND	97.1	70-130	0.746	20	
Phenanthrene	0.221	0.020	"	0.200	0.0002	110	70-130	6.22	20	
Pyrene	0.196	0.020	"	0.200	0.0005	97.7	70-130	8.01	20	
Surrogate: Fluorene-d10	200		ug/kg	200		99.1	60-130			
Surrogate: Anthracene-d10	170		"	200		85.9	60-130			
Surrogate: Pyrene-d10	190		"	200		95.6	60-130			
Surrogate: Benzo (a) pyrene-d12	200		"	200		101	60-130			

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Entrada Consulting Group
330 Grand Ave. Unit C
Grand Junction CO 81501

Chelsea Veryser
Project Number: [none]
Project: Chevron - Ocoma C17-16

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 B4G1913 - Saturated Paste Metals

Blank (B4G1913-BLK1)

Prepared: 07/19/2024 Analyzed: 07/22/2024

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

Duplicate (B4G1913-DUP1)

Source: Y407456-06

Prepared: 07/19/2024 Analyzed: 07/22/2024

Calcium PPM	21.5	10.0	mg/L		20.4			5.54	50	
SAR	ND	0.0100	SAR		0.0658				200	Ua
Magnesium PPM	6.63	10.0	mg/L		6.41			3.37	50	Ua
Sodium PPM	1.82	10.0	"		1.33			31.1	50	Ua

Batch B4G1919 - DTPA Sorbitol Preparation

Blank (B4G1919-BLK1)

Prepared: 07/19/2024 Analyzed: 07/22/2024

Boron	ND	0.100	mg/L							Ua
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Duplicate (B4G1919-DUP1)

Source: Y407455-02

Prepared: 07/19/2024 Analyzed: 07/22/2024

Boron	0.112	0.0999	mg/L		0.105			6.29	50	
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Entrada Consulting Group
330 Grand Ave. Unit C
Grand Junction CO 81501

Chelsea Veryser
Project Number: [none]
Project: Chevron - Ocoma C17-16

Saturated Paste - Quality Control

Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B4G1926 - Saturated Paste pH/EC										
Blank (B4G1926-BLK1)					Prepared: 07/19/2024 Analyzed: 07/20/2024					
Specific Conductance (EC)	ND	0.00500	mmhos/cm							Ua
Duplicate (B4G1926-DUP1)					Source: Y407456-06 Prepared: 07/19/2024 Analyzed: 07/20/2024					
pH	8.00		pH Units		8.30			3.68	25	
Specific Conductance (EC)	0.228	0.00500	mmhos/cm		0.194			16.4	25	

Origins Laboratory, Inc.



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Entrada Consulting Group
330 Grand Ave. Unit C
Grand Junction CO 81501

Chelsea Veryser
Project Number: [none]
Project: Chevron - Ocoma C17-16

Total Metals 7196A - Quality Control GEL Laboratories, LLC

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2656424 - SW846 3060A										
BLANK (1205821325-BLK)					Prepared: 08/15/2024 Analyzed: 08/16/2024					
Hexavalent Chromium	ND	0.277	mg/kg				-			U
LCS (1205821326-BKS)					Prepared: 08/15/2024 Analyzed: 08/16/2024					
Hexavalent Chromium	3.13	0.315	mg/kg	3.15		99.3	80-120			
DUP (1205821327 D)					Source: 676580001 Prepared: 08/15/2024 Analyzed: 08/16/2024					
Hexavalent Chromium	ND	0.396	mg/kg dry		<0.159		0-50	N/A	50	U
MS (1205821328 S)					Source: 676580001 Prepared: 08/15/2024 Analyzed: 08/16/2024					
Hexavalent Chromium	1.58	0.396	mg/kg dry	3.96	<0.159	38.6	75-125			
DUP (1205821329 D)					Source: 676580002 Prepared: 08/15/2024 Analyzed: 08/16/2024					
Hexavalent Chromium	ND	0.380	mg/kg dry		0.174		0-50	N/A	50	U
MS (1205821330 S)					Source: 676580002 Prepared: 08/15/2024 Analyzed: 08/16/2024					
Hexavalent Chromium	2.18	0.380	mg/kg dry	3.80	0.174	52.9	75-125			
ILCS (1205821331-ILCS)					Prepared: 08/15/2024 Analyzed: 08/16/2024					
Hexavalent Chromium	7.49	0.367	mg/kg	7.42		101	80-120			

Origins Laboratory, Inc.



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Entrada Consulting Group

330 Grand Ave. Unit C

Grand Junction CO 81501

Chelsea Veryser

Project Number: [none]

Project: Chevron - Ocoma C17-16

Notes and Definitions

Ua Sample is Non-Detect.

U Result not detected above the detection limit

QR-02 The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.

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

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported on a wet weight basis.

Origins Laboratory, Inc.



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