

ANALYTICAL REPORT

PREPARED FOR

Attn: Austin Lindsay
Topographic
1900 NW Expressway, Ste. 1500
Oklahoma City, Oklahoma 73118

Generated 4/10/2025 2:37:26 PM Revision 1

JOB DESCRIPTION

DEO Red Rocks, Colorado

JOB NUMBER

280-202468-1

Eurofins Denver

Job Notes

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The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins TestAmerica Project Manager.

Authorization



Authorized for release by
Cassie Servas, Project Manager
Cassie.Servas@et.eurofinsus.com
(303)736-0100

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Revision 1



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Definitions/Glossary

Client: Topographic
Project/Site: DEO Red Rocks, Colorado

Job ID: 280-202468-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high biased.

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1+	Surrogate recovery exceeds control limits, high biased.

GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
HF	Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points

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Definitions/Glossary

Client: Topographic
Project/Site: DEO Red Rocks, Colorado

Job ID: 280-202468-1

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

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Case Narrative

Client: Topographic
Project: DEO Red Rocks, Colorado

Job ID: 280-202468-1

Job ID: 280-202468-1

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Job Narrative 280-202468-1

REVISION

The report being provided is a revision of the original report sent on 2/27/2025. The report (revision 1) is being revised due to the client requesting a secured file. This will cause the original modified date to differ from the issued date.

Report Revision History:

Revision 1- 4/10/2025- Reason- The client requested to have the results in a secured PDF. This could create a discrepancy between the creation/modified date vs secured date.

The report being provided is a revision of the original report sent on 2/27/2025. The report (revision 1) is being revised due to 4/10/2025- Reason- The client requested to have the results in a secured PDF. This could create a discrepancy between the creation and modified date vs secured date..

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 1/31/2025 12:15 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 0.3°C, 0.6°C and 0.8°C.

Receipt Exceptions

The Terracore VOA vials were received with client labels on them. RR3508-DCA01 (280-202468-1) and RR3508-BG01 (280-202468-2)

GC/MS VOA

Method 8260D: Surrogate recovery for the following samples was outside the upper control limit: RR3508-DCA01 (280-202468-1) and RR3508-BG01 (280-202468-2). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

Method 8260D: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 280-683599 and analytical batch 280-683617. RR3508-DCA01 (280-202468-1) and RR3508-BG01 (280-202468-2)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC/MS Semi VOA

Method 8270E_SIM: Surrogate recovery for the following samples was outside the upper control limit: RR3508-BG01 (280-202468-2). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Gasoline Range Organics

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Diesel Range Organics

Method 8015D_DRO: Due to the matrix being rocky non-homogenous clay, an initial volume of five grams instead of fifteen grams was used for the following samples, which deviated from the standard procedure in order to prevent venting and microwave

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Case Narrative

Client: Topographic
Project: DEO Red Rocks, Colorado

Job ID: 280-202468-1

Job ID: 280-202468-1 (Continued)

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equipment damage: RR3508-DCA01 (280-202468-1) and RR3508-BG01 (280-202468-2) in preparation batch 280-683693. The reporting limits (RLs) have been adjusted proportionately.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Metals

Method 6020B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 280-683485 and analytical batch 280-683829 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference, high targets and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 6020B: The method blank associated with preparation batch 280-683485 and analytical batch 280-683829 contained Cu greater than one-half the reporting limit (RL). The samples were not re-analyzed because they were >10x the blank. The sample results have been qualified and reported.

Method 6020B: The instrument blank for analytical batch 280-683829 contained Ba greater than one-half the reporting limit (RL), and were not re-analyzed because sample > 10x the blank. The data have been qualified and reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

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Detection Summary

Client: Topographic
Project/Site: DEO Red Rocks, Colorado

Job ID: 280-202468-1

Client Sample ID: RR3508-DCA01

Lab Sample ID: 280-202468-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Fluorene	0.0069	J	0.031	0.0061	mg/Kg	1	✱		8270E SIM	Total/NA
ORO (C20-C38)	20	J	34	13	mg/Kg	1	✱		8015D	Total/NA
Sodium Adsorption Ratio	0.32		0.10	0.10	NONE	1			29B SAR	Soluble
Boron	11		10	5.2	mg/Kg	1	✱		6010D	Total/NA
Silver	0.043	J	0.11	0.027	mg/Kg	1	✱		6020B	Total/NA
Arsenic	6.9		0.21	0.053	mg/Kg	1	✱		6020B	Total/NA
Barium	220		0.43	0.16	mg/Kg	1	✱		6020B	Total/NA
Cadmium	0.22		0.11	0.027	mg/Kg	1	✱		6020B	Total/NA
Chromium	16		0.64	0.27	mg/Kg	1	✱		6020B	Total/NA
Copper	14	B	0.64	0.32	mg/Kg	1	✱		6020B	Total/NA
Nickel	15		0.64	0.27	mg/Kg	1	✱		6020B	Total/NA
Lead	10		0.43	0.16	mg/Kg	1	✱		6020B	Total/NA
Selenium	0.38		0.21	0.053	mg/Kg	1	✱		6020B	Total/NA
Zinc	41		2.1	1.1	mg/Kg	1	✱		6020B	Total/NA
Specific Conductance	470		10	10	umho/cm	1			29B_EC	Total/NA
Electrical Conductivity	1300		10	10	umho/cm	1			29B_EC	Total/NA
pH	8.4	HF	0.10	0.10	S.U.	1			29B_pH	Total/NA
Temperature	17	HF	0.10	0.10	Deg. C	1			29B_pH	Total/NA
Chromium, hexavalent	0.19	J	0.47	0.15	mg/Kg	1	✱		7196A	Total/NA

Client Sample ID: RR3508-BG01

Lab Sample ID: 280-202468-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
ORO (C20-C38)	15	J	32	13	mg/Kg	1	✱		8015D	Total/NA
Sodium Adsorption Ratio	0.19		0.10	0.10	NONE	1			29B SAR	Soluble
Boron	10		9.1	4.5	mg/Kg	1	✱		6010D	Total/NA
Silver	0.056	J	0.091	0.023	mg/Kg	1	✱		6020B	Total/NA
Arsenic	6.9		0.18	0.045	mg/Kg	1	✱		6020B	Total/NA
Barium	270		0.36	0.14	mg/Kg	1	✱		6020B	Total/NA
Cadmium	0.24		0.091	0.023	mg/Kg	1	✱		6020B	Total/NA
Chromium	20		0.55	0.23	mg/Kg	1	✱		6020B	Total/NA
Copper	15	B	0.55	0.27	mg/Kg	1	✱		6020B	Total/NA
Nickel	16		0.55	0.23	mg/Kg	1	✱		6020B	Total/NA
Lead	11		0.36	0.14	mg/Kg	1	✱		6020B	Total/NA
Selenium	0.32		0.18	0.045	mg/Kg	1	✱		6020B	Total/NA
Zinc	51		1.8	0.91	mg/Kg	1	✱		6020B	Total/NA
Specific Conductance	300		10	10	umho/cm	1			29B_EC	Total/NA
Electrical Conductivity	810		10	10	umho/cm	1			29B_EC	Total/NA
pH	8.3	HF	0.10	0.10	S.U.	1			29B_pH	Total/NA
Temperature	17	HF	0.10	0.10	Deg. C	1			29B_pH	Total/NA

This Detection Summary does not include radiochemical test results.

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Method Summary

Client: Topographic
Project/Site: DEO Red Rocks, Colorado

Job ID: 280-202468-1

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	EET DEN
8270E SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	EET DEN
8015D	Gasoline Range Organics (GRO) (GC)	SW846	EET DEN
8015D	Diesel Range Organics (DRO) (GC)	SW846	EET DEN
29B SAR	Sodium Adsorption Ratio	LA	EET HOU
6010D	Metals (ICP)	SW846	EET DEN
6020B	Metals (ICP/MS)	SW846	EET DEN
29B_EC	Conductivity, Electrical	LA	EET HOU
29B_pH	pH	LA	EET HOU
7196A	Chromium, Hexavalent	SW846	EET HOU
D 2216	Percent Moisture	ASTM	EET DEN
29B	Preparation, Dry, Grind and Sieve	LA	EET HOU
29B	Preparation, Sodium Absorption Ratio	LA	EET HOU
3050B	Preparation, Metals	SW846	EET DEN
3060A	Alkaline Digestion (Chromium, Hexavalent)	SW846	EET HOU
3546	Microwave Extraction	SW846	EET DEN
5030A	Purge and Trap	SW846	EET DEN
5035	Closed System Purge and Trap	SW846	EET DEN
Sat Paste Ext	Saturated Paste Extraction	TAL SOP	EET HOU

Protocol References:

ASTM = ASTM International

LA = Statewide Order No. 29-B, State Of Louisiana

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

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Sample Summary

Client: Topographic
Project/Site: DEO Red Rocks, Colorado

Job ID: 280-202468-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-202468-1	RR3508-DCA01	Solid	01/29/25 15:33	01/31/25 12:15
280-202468-2	RR3508-BG01	Solid	01/29/25 14:30	01/31/25 12:15

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Client Sample Results

Client: Topographic
Project/Site: DEO Red Rocks, Colorado

Job ID: 280-202468-1

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Client Sample ID: RR3508-DCA01

Date Collected: 01/29/25 15:33

Date Received: 01/31/25 12:15

Lab Sample ID: 280-202468-1

Matrix: Solid

Percent Solids: 84.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0050	0.0010	mg/Kg	☆	01/29/25 15:33	02/04/25 16:18	1
1,2,4-Trimethylbenzene	ND		0.0050	0.0010	mg/Kg	☆	01/29/25 15:33	02/04/25 16:18	1
Naphthalene	ND		5.0	1.0	ug/Kg	☆	01/29/25 15:33	02/04/25 16:18	1
Ethylbenzene	ND		0.0050	0.0010	mg/Kg	☆	01/29/25 15:33	02/04/25 16:18	1
1,3,5-Trimethylbenzene	ND		0.0050	0.0010	mg/Kg	☆	01/29/25 15:33	02/04/25 16:18	1
Toluene	ND		0.0050	0.0020	mg/Kg	☆	01/29/25 15:33	02/04/25 16:18	1
Xylenes, Total	ND		0.0050	0.0010	mg/Kg	☆	01/29/25 15:33	02/04/25 16:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	126	S1+	80 - 120	01/29/25 15:33	02/04/25 16:18	1
Toluene-d8 (Surr)	98		80 - 120	01/29/25 15:33	02/04/25 16:18	1
4-Bromofluorobenzene (Surr)	99		80 - 120	01/29/25 15:33	02/04/25 16:18	1
Dibromofluoromethane (Surr)	108		80 - 120	01/29/25 15:33	02/04/25 16:18	1

Client Sample ID: RR3508-BG01

Date Collected: 01/29/25 14:30

Date Received: 01/31/25 12:15

Lab Sample ID: 280-202468-2

Matrix: Solid

Percent Solids: 85.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0048	0.00097	mg/Kg	☆	01/29/25 14:30	02/04/25 16:38	1
1,2,4-Trimethylbenzene	ND		0.0048	0.00097	mg/Kg	☆	01/29/25 14:30	02/04/25 16:38	1
Naphthalene	ND		4.8	0.97	ug/Kg	☆	01/29/25 14:30	02/04/25 16:38	1
Ethylbenzene	ND		0.0048	0.00097	mg/Kg	☆	01/29/25 14:30	02/04/25 16:38	1
1,3,5-Trimethylbenzene	ND		0.0048	0.00097	mg/Kg	☆	01/29/25 14:30	02/04/25 16:38	1
Toluene	ND		0.0048	0.0019	mg/Kg	☆	01/29/25 14:30	02/04/25 16:38	1
Xylenes, Total	ND		0.0048	0.00097	mg/Kg	☆	01/29/25 14:30	02/04/25 16:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	124	S1+	80 - 120	01/29/25 14:30	02/04/25 16:38	1
Toluene-d8 (Surr)	97		80 - 120	01/29/25 14:30	02/04/25 16:38	1
4-Bromofluorobenzene (Surr)	99		80 - 120	01/29/25 14:30	02/04/25 16:38	1
Dibromofluoromethane (Surr)	104		80 - 120	01/29/25 14:30	02/04/25 16:38	1

Method: SW846 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Client Sample ID: RR3508-DCA01

Date Collected: 01/29/25 15:33

Date Received: 01/31/25 12:15

Lab Sample ID: 280-202468-1

Matrix: Solid

Percent Solids: 84.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Anthracene	ND		0.031	0.0061	mg/Kg	☆	02/06/25 09:47	02/07/25 15:47	1
Benzo[a]anthracene	ND		0.031	0.0061	mg/Kg	☆	02/06/25 09:47	02/07/25 15:47	1
Benzo[a]pyrene	ND		0.031	0.0061	mg/Kg	☆	02/06/25 09:47	02/07/25 15:47	1
Benzo[b]fluoranthene	ND		0.031	0.0061	mg/Kg	☆	02/06/25 09:47	02/07/25 15:47	1
Benzo[k]fluoranthene	ND		0.031	0.0061	mg/Kg	☆	02/06/25 09:47	02/07/25 15:47	1
Chrysene	ND		0.031	0.0061	mg/Kg	☆	02/06/25 09:47	02/07/25 15:47	1
Dibenz(a,h)anthracene	ND		0.031	0.0061	mg/Kg	☆	02/06/25 09:47	02/07/25 15:47	1
Fluoranthene	ND		0.031	0.0061	mg/Kg	☆	02/06/25 09:47	02/07/25 15:47	1
Fluorene	0.0069	J	0.031	0.0061	mg/Kg	☆	02/06/25 09:47	02/07/25 15:47	1
2-Methylnaphthalene	ND		0.031	0.0061	mg/Kg	☆	02/06/25 09:47	02/07/25 15:47	1
Acenaphthene	ND		0.031	0.0061	mg/Kg	☆	02/06/25 09:47	02/07/25 15:47	1
Indeno[1,2,3-cd]pyrene	ND		0.031	0.0061	mg/Kg	☆	02/06/25 09:47	02/07/25 15:47	1
Naphthalene	ND		0.031	0.0061	mg/Kg	☆	02/06/25 09:47	02/07/25 15:47	1

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Client Sample Results

Client: Topographic
Project/Site: DEO Red Rocks, Colorado

Job ID: 280-202468-1

Method: SW846 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Client Sample ID: RR3508-DCA01

Date Collected: 01/29/25 15:33

Date Received: 01/31/25 12:15

Lab Sample ID: 280-202468-1

Matrix: Solid

Percent Solids: 84.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pyrene	ND		0.031	0.0061	mg/Kg	☆	02/06/25 09:47	02/07/25 15:47	1
1-Methylnaphthalene	ND		0.031	0.0061	mg/Kg	☆	02/06/25 09:47	02/07/25 15:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	96		46 - 115				02/06/25 09:47	02/07/25 15:47	1
Nitrobenzene-d5	66		22 - 120				02/06/25 09:47	02/07/25 15:47	1
Terphenyl-d14	66		46 - 122				02/06/25 09:47	02/07/25 15:47	1
2-methylnaphthalene-d10	58		24 - 150				02/06/25 09:47	02/07/25 15:47	1
Fluoranthene-d10	57		45 - 121				02/06/25 09:47	02/07/25 15:47	1

Client Sample ID: RR3508-BG01

Date Collected: 01/29/25 14:30

Date Received: 01/31/25 12:15

Lab Sample ID: 280-202468-2

Matrix: Solid

Percent Solids: 85.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Anthracene	ND		0.031	0.0063	mg/Kg	☆	02/06/25 09:47	02/07/25 16:13	1
Benzo[a]anthracene	ND		0.031	0.0063	mg/Kg	☆	02/06/25 09:47	02/07/25 16:13	1
Benzo[a]pyrene	ND		0.031	0.0063	mg/Kg	☆	02/06/25 09:47	02/07/25 16:13	1
Benzo[b]fluoranthene	ND		0.031	0.0063	mg/Kg	☆	02/06/25 09:47	02/07/25 16:13	1
Benzo[k]fluoranthene	ND		0.031	0.0063	mg/Kg	☆	02/06/25 09:47	02/07/25 16:13	1
Chrysene	ND		0.031	0.0063	mg/Kg	☆	02/06/25 09:47	02/07/25 16:13	1
Dibenz(a,h)anthracene	ND		0.031	0.0063	mg/Kg	☆	02/06/25 09:47	02/07/25 16:13	1
Fluoranthene	ND		0.031	0.0063	mg/Kg	☆	02/06/25 09:47	02/07/25 16:13	1
Fluorene	ND		0.031	0.0063	mg/Kg	☆	02/06/25 09:47	02/07/25 16:13	1
2-Methylnaphthalene	ND		0.031	0.0063	mg/Kg	☆	02/06/25 09:47	02/07/25 16:13	1
Acenaphthene	ND		0.031	0.0063	mg/Kg	☆	02/06/25 09:47	02/07/25 16:13	1
Indeno[1,2,3-cd]pyrene	ND		0.031	0.0063	mg/Kg	☆	02/06/25 09:47	02/07/25 16:13	1
Naphthalene	ND		0.031	0.0063	mg/Kg	☆	02/06/25 09:47	02/07/25 16:13	1
Pyrene	ND		0.031	0.0063	mg/Kg	☆	02/06/25 09:47	02/07/25 16:13	1
1-Methylnaphthalene	ND		0.031	0.0063	mg/Kg	☆	02/06/25 09:47	02/07/25 16:13	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	138	S1+	46 - 115				02/06/25 09:47	02/07/25 16:13	1
Nitrobenzene-d5	77		22 - 120				02/06/25 09:47	02/07/25 16:13	1
Terphenyl-d14	147	S1+	46 - 122				02/06/25 09:47	02/07/25 16:13	1
2-methylnaphthalene-d10	69		24 - 150				02/06/25 09:47	02/07/25 16:13	1
Fluoranthene-d10	68		45 - 121				02/06/25 09:47	02/07/25 16:13	1

Method: SW846 8015D - Gasoline Range Organics (GRO) (GC)

Client Sample ID: RR3508-DCA01

Date Collected: 01/29/25 15:33

Date Received: 01/31/25 12:15

Lab Sample ID: 280-202468-1

Matrix: Solid

Percent Solids: 84.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C10)	ND		2.1	0.78	mg/Kg	☆	01/29/25 15:33	02/06/25 23:28	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		80 - 120				01/29/25 15:33	02/06/25 23:28	1

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Client Sample Results

Client: Topographic
Project/Site: DEO Red Rocks, Colorado

Job ID: 280-202468-1

Method: SW846 8015D - Gasoline Range Organics (GRO) (GC)

Client Sample ID: RR3508-BG01

Date Collected: 01/29/25 14:30

Date Received: 01/31/25 12:15

Lab Sample ID: 280-202468-2

Matrix: Solid

Percent Solids: 85.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C10)	ND		1.9	0.71	mg/Kg	☆	01/29/25 14:30	02/06/25 23:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		80 - 120				01/29/25 14:30	02/06/25 23:50	1

Method: SW846 8015D - Diesel Range Organics (DRO) (GC)

Client Sample ID: RR3508-DCA01

Date Collected: 01/29/25 15:33

Date Received: 01/31/25 12:15

Lab Sample ID: 280-202468-1

Matrix: Solid

Percent Solids: 84.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C28)	ND		34	13	mg/Kg	☆	02/05/25 11:41	02/07/25 21:10	1
ORO (C20-C38)	20	J	34	13	mg/Kg	☆	02/05/25 11:41	02/07/25 21:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	82		48 - 139				02/05/25 11:41	02/07/25 21:10	1
n-Octacosane (Surr)	81		33 - 136				02/05/25 11:41	02/07/25 21:10	1

Client Sample ID: RR3508-BG01

Date Collected: 01/29/25 14:30

Date Received: 01/31/25 12:15

Lab Sample ID: 280-202468-2

Matrix: Solid

Percent Solids: 85.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C28)	ND		32	13	mg/Kg	☆	02/05/25 11:41	02/07/25 21:30	1
ORO (C20-C38)	15	J	32	13	mg/Kg	☆	02/05/25 11:41	02/07/25 21:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	77		48 - 139				02/05/25 11:41	02/07/25 21:30	1
n-Octacosane (Surr)	78		33 - 136				02/05/25 11:41	02/07/25 21:30	1

Method: LA 29B SAR - Sodium Adsorption Ratio - Soluble

Client Sample ID: RR3508-DCA01

Date Collected: 01/29/25 15:33

Date Received: 01/31/25 12:15

Lab Sample ID: 280-202468-1

Matrix: Solid

Percent Solids: 84.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium Adsorption Ratio	0.32		0.10	0.10	NONE		02/05/25 16:42	02/13/25 15:10	1

Client Sample ID: RR3508-BG01

Date Collected: 01/29/25 14:30

Date Received: 01/31/25 12:15

Lab Sample ID: 280-202468-2

Matrix: Solid

Percent Solids: 85.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium Adsorption Ratio	0.19		0.10	0.10	NONE		02/05/25 16:42	02/13/25 15:10	1

Method: SW846 6010D - Metals (ICP)

Client Sample ID: RR3508-DCA01

Date Collected: 01/29/25 15:33

Date Received: 01/31/25 12:15

Lab Sample ID: 280-202468-1

Matrix: Solid

Percent Solids: 84.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	11		10	5.2	mg/Kg	☆	02/04/25 15:00	02/05/25 16:08	1

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Client Sample Results

Client: Topographic
Project/Site: DEO Red Rocks, Colorado

Job ID: 280-202468-1

Method: SW846 6010D - Metals (ICP)

Client Sample ID: RR3508-BG01
Date Collected: 01/29/25 14:30
Date Received: 01/31/25 12:15

Lab Sample ID: 280-202468-2
Matrix: Solid
Percent Solids: 85.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	10		9.1	4.5	mg/Kg	☆	02/04/25 15:00	02/05/25 16:28	1

Method: SW846 6020B - Metals (ICP/MS)

Client Sample ID: RR3508-DCA01
Date Collected: 01/29/25 15:33
Date Received: 01/31/25 12:15

Lab Sample ID: 280-202468-1
Matrix: Solid
Percent Solids: 84.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	0.043	J	0.11	0.027	mg/Kg	☆	02/04/25 15:00	02/05/25 15:07	1
Arsenic	6.9		0.21	0.053	mg/Kg	☆	02/04/25 15:00	02/05/25 15:07	1
Barium	220		0.43	0.16	mg/Kg	☆	02/04/25 15:00	02/05/25 15:07	1
Cadmium	0.22		0.11	0.027	mg/Kg	☆	02/04/25 15:00	02/05/25 15:07	1
Chromium	16		0.64	0.27	mg/Kg	☆	02/04/25 15:00	02/05/25 15:07	1
Copper	14	B	0.64	0.32	mg/Kg	☆	02/04/25 15:00	02/05/25 15:07	1
Nickel	15		0.64	0.27	mg/Kg	☆	02/04/25 15:00	02/05/25 15:07	1
Lead	10		0.43	0.16	mg/Kg	☆	02/04/25 15:00	02/05/25 15:07	1
Selenium	0.38		0.21	0.053	mg/Kg	☆	02/04/25 15:00	02/05/25 15:07	1
Zinc	41		2.1	1.1	mg/Kg	☆	02/04/25 15:00	02/05/25 15:07	1

Client Sample ID: RR3508-BG01
Date Collected: 01/29/25 14:30
Date Received: 01/31/25 12:15

Lab Sample ID: 280-202468-2
Matrix: Solid
Percent Solids: 85.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	0.056	J	0.091	0.023	mg/Kg	☆	02/04/25 15:00	02/05/25 15:25	1
Arsenic	6.9		0.18	0.045	mg/Kg	☆	02/04/25 15:00	02/05/25 15:25	1
Barium	270		0.36	0.14	mg/Kg	☆	02/04/25 15:00	02/05/25 15:25	1
Cadmium	0.24		0.091	0.023	mg/Kg	☆	02/04/25 15:00	02/05/25 15:25	1
Chromium	20		0.55	0.23	mg/Kg	☆	02/04/25 15:00	02/05/25 15:25	1
Copper	15	B	0.55	0.27	mg/Kg	☆	02/04/25 15:00	02/05/25 15:25	1
Nickel	16		0.55	0.23	mg/Kg	☆	02/04/25 15:00	02/05/25 15:25	1
Lead	11		0.36	0.14	mg/Kg	☆	02/04/25 15:00	02/05/25 15:25	1
Selenium	0.32		0.18	0.045	mg/Kg	☆	02/04/25 15:00	02/05/25 15:25	1
Zinc	51		1.8	0.91	mg/Kg	☆	02/04/25 15:00	02/05/25 15:25	1

General Chemistry

Client Sample ID: RR3508-DCA01
Date Collected: 01/29/25 15:33
Date Received: 01/31/25 12:15

Lab Sample ID: 280-202468-1
Matrix: Solid
Percent Solids: 84.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance (LA 29B_EC)	470		10	10	umho/cm		02/11/25 15:07	02/16/25 09:56	1
Electrical Conductivity (LA 29B_EC)	1300		10	10	umho/cm		02/11/25 15:07	02/16/25 09:56	1
pH (LA 29B_pH)	8.4	HF	0.10	0.10	S.U.		02/11/25 15:07	02/16/25 09:59	1
Temperature (LA 29B_pH)	17	HF	0.10	0.10	Deg. C		02/11/25 15:07	02/16/25 09:59	1
Chromium, hexavalent (SW846 7196A)	0.19	J	0.47	0.15	mg/Kg	☆	02/06/25 13:20	02/11/25 14:40	1
Percent Moisture (ASTM D 2216)	15.7		0.1	0.1	%			01/31/25 15:54	1

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Client Sample Results

Client: Topographic
Project/Site: DEO Red Rocks, Colorado

Job ID: 280-202468-1

General Chemistry

Client Sample ID: RR3508-BG01							Lab Sample ID: 280-202468-2		
Date Collected: 01/29/25 14:30							Matrix: Solid		
Date Received: 01/31/25 12:15							Percent Solids: 85.4		
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance (LA 29B_EC)	300		10	10	umho/cm		02/11/25 15:07	02/16/25 09:56	1
Electrical Conductivity (LA 29B_EC)	810		10	10	umho/cm		02/11/25 15:07	02/16/25 09:56	1
pH (LA 29B_pH)	8.3	HF	0.10	0.10	S.U.		02/11/25 15:07	02/16/25 09:59	1
Temperature (LA 29B_pH)	17	HF	0.10	0.10	Deg. C		02/11/25 15:07	02/16/25 09:59	1
Chromium, hexavalent (SW846 7196A)	ND		0.46	0.14	mg/Kg	☆	02/06/25 13:20	02/11/25 14:40	1
Percent Moisture (ASTM D 2216)	14.6		0.1	0.1	%			01/31/25 15:54	1

Surrogate Summary

Client: Topographic
Project/Site: DEO Red Rocks, Colorado

Job ID: 280-202468-1

Method: 8260D - Volatile Organic Compounds by GC/MS

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (80-120)	TOL (80-120)	BFB (80-120)	DBFM (80-120)
280-202468-1	RR3508-DCA01	126 S1+	98	99	108
280-202468-2	RR3508-BG01	124 S1+	97	99	104
LCS 280-683599/2-A	Lab Control Sample	111	100	102	104
LCSD 280-683599/3-A	Lab Control Sample Dup	110	98	99	102
MB 280-683599/1-A	Method Blank	116	101	97	104

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

TOL = Toluene-d8 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)				
		FBP (46-115)	NBZ (22-120)	TPHL (46-122)	2MN (24-150)	FLN (45-121)
280-202468-1	RR3508-DCA01	96	66	66	58	57
280-202468-2	RR3508-BG01	138 S1+	77	147 S1+	69	68
LCS 280-683840/2-A	Lab Control Sample	88	61	67	66	65
MB 280-683840/1-A	Method Blank	67	51	82	55	71

Surrogate Legend

FBP = 2-Fluorobiphenyl

NBZ = Nitrobenzene-d5

TPHL = Terphenyl-d14

2MN = 2-methylnaphthalene-d10

FLN = Fluoranthene-d10

Method: 8015D - Gasoline Range Organics (GRO) (GC)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		BFB1 (80-120)			
280-202468-1	RR3508-DCA01	103			
280-202468-2	RR3508-BG01	103			
LCS 280-683935/1-A	Lab Control Sample	107			
LCSD 280-683935/2-A	Lab Control Sample Dup	108			
MB 280-683935/3-A	Method Blank	106			

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Method: 8015D - Diesel Range Organics (DRO) (GC)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		OTPH (48-139)	OTCN (33-136)
280-202468-1	RR3508-DCA01	82	81

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Surrogate Summary

Client: Topographic
Project/Site: DEO Red Rocks, Colorado

Job ID: 280-202468-1

Method: 8015D - Diesel Range Organics (DRO) (GC) (Continued)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	OTPH (48-139)	OTCN (33-136)
280-202468-2	RR3508-BG01	77	78
LCS 280-683693/2-A	Lab Control Sample	81	81
MB 280-683693/1-A	Method Blank	100	100
Surrogate Legend			
OTPH = o-Terphenyl (Surr)			
OTCN = n-Octacosane (Surr)			

QC Sample Results

Client: Topographic
Project/Site: DEO Red Rocks, Colorado

Job ID: 280-202468-1

Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 280-683599/1-A

Matrix: Solid

Analysis Batch: 683617

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 683599

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.0050	0.0010	mg/Kg		02/04/25 07:00	02/04/25 12:59	1
1,2,4-Trimethylbenzene	ND		0.0050	0.0010	mg/Kg		02/04/25 07:00	02/04/25 12:59	1
Naphthalene	ND		5.0	1.0	ug/Kg		02/04/25 07:00	02/04/25 12:59	1
Ethylbenzene	ND		0.0050	0.0010	mg/Kg		02/04/25 07:00	02/04/25 12:59	1
1,3,5-Trimethylbenzene	ND		0.0050	0.0010	mg/Kg		02/04/25 07:00	02/04/25 12:59	1
Toluene	ND		0.0050	0.0020	mg/Kg		02/04/25 07:00	02/04/25 12:59	1
Xylenes, Total	ND		0.0050	0.0010	mg/Kg		02/04/25 07:00	02/04/25 12:59	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	116		80 - 120	02/04/25 07:00	02/04/25 12:59	1
Toluene-d8 (Surr)	101		80 - 120	02/04/25 07:00	02/04/25 12:59	1
4-Bromofluorobenzene (Surr)	97		80 - 120	02/04/25 07:00	02/04/25 12:59	1
Dibromofluoromethane (Surr)	104		80 - 120	02/04/25 07:00	02/04/25 12:59	1

Lab Sample ID: LCS 280-683599/2-A

Matrix: Solid

Analysis Batch: 683617

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 683599

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.0500	0.0498		mg/Kg		100	76 - 120
1,2,4-Trimethylbenzene	0.0500	0.0524		mg/Kg		105	71 - 121
Naphthalene	50.0	53.0		ug/Kg		106	73 - 120
Ethylbenzene	0.0500	0.0516		mg/Kg		103	75 - 120
1,3,5-Trimethylbenzene	0.0500	0.0534		mg/Kg		107	73 - 121
Toluene	0.0500	0.0496		mg/Kg		99	72 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	111		80 - 120
Toluene-d8 (Surr)	100		80 - 120
4-Bromofluorobenzene (Surr)	102		80 - 120
Dibromofluoromethane (Surr)	104		80 - 120

Lab Sample ID: LCSD 280-683599/3-A

Matrix: Solid

Analysis Batch: 683617

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 683599

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.0500	0.0495		mg/Kg		99	76 - 120	1	20
1,2,4-Trimethylbenzene	0.0500	0.0497		mg/Kg		99	71 - 121	5	20
Naphthalene	50.0	50.0		ug/Kg		100	73 - 120	6	20
Ethylbenzene	0.0500	0.0506		mg/Kg		101	75 - 120	2	20
1,3,5-Trimethylbenzene	0.0500	0.0505		mg/Kg		101	73 - 121	5	20
Toluene	0.0500	0.0497		mg/Kg		99	72 - 120	0	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	110		80 - 120
Toluene-d8 (Surr)	98		80 - 120

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QC Sample Results

Client: Topographic
Project/Site: DEO Red Rocks, Colorado

Job ID: 280-202468-1

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 280-683599/3-A

Matrix: Solid

Analysis Batch: 683617

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 683599

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	102		80 - 120

Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

Lab Sample ID: MB 280-683840/1-A

Matrix: Solid

Analysis Batch: 683968

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 683840

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Anthracene	ND		0.010	0.0020	mg/Kg		02/06/25 09:47	02/07/25 10:24	1
Benzo[a]anthracene	ND		0.010	0.0020	mg/Kg		02/06/25 09:47	02/07/25 10:24	1
Benzo[a]pyrene	ND		0.010	0.0020	mg/Kg		02/06/25 09:47	02/07/25 10:24	1
Benzo[b]fluoranthene	ND		0.010	0.0020	mg/Kg		02/06/25 09:47	02/07/25 10:24	1
Benzo[k]fluoranthene	ND		0.010	0.0020	mg/Kg		02/06/25 09:47	02/07/25 10:24	1
Chrysene	ND		0.010	0.0020	mg/Kg		02/06/25 09:47	02/07/25 10:24	1
Dibenz(a,h)anthracene	ND		0.010	0.0020	mg/Kg		02/06/25 09:47	02/07/25 10:24	1
Fluoranthene	ND		0.010	0.0020	mg/Kg		02/06/25 09:47	02/07/25 10:24	1
Fluorene	ND		0.010	0.0020	mg/Kg		02/06/25 09:47	02/07/25 10:24	1
2-Methylnaphthalene	ND		0.010	0.0020	mg/Kg		02/06/25 09:47	02/07/25 10:24	1
Acenaphthene	ND		0.010	0.0020	mg/Kg		02/06/25 09:47	02/07/25 10:24	1
Indeno[1,2,3-cd]pyrene	ND		0.010	0.0020	mg/Kg		02/06/25 09:47	02/07/25 10:24	1
Naphthalene	ND		0.010	0.0020	mg/Kg		02/06/25 09:47	02/07/25 10:24	1
Pyrene	ND		0.010	0.0020	mg/Kg		02/06/25 09:47	02/07/25 10:24	1
1-Methylnaphthalene	ND		0.010	0.0020	mg/Kg		02/06/25 09:47	02/07/25 10:24	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	67		46 - 115	02/06/25 09:47	02/07/25 10:24	1
Nitrobenzene-d5	51		22 - 120	02/06/25 09:47	02/07/25 10:24	1
Terphenyl-d14	82		46 - 122	02/06/25 09:47	02/07/25 10:24	1
2-methylnaphthalene-d10	55		24 - 150	02/06/25 09:47	02/07/25 10:24	1
Fluoranthene-d10	71		45 - 121	02/06/25 09:47	02/07/25 10:24	1

Lab Sample ID: LCS 280-683840/2-A

Matrix: Solid

Analysis Batch: 683968

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 683840

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Anthracene	0.0600	0.0407		mg/Kg		68	34 - 120
Benzo[a]anthracene	0.0600	0.0408		mg/Kg		68	43 - 120
Benzo[a]pyrene	0.0600	0.0415		mg/Kg		69	29 - 129
Benzo[b]fluoranthene	0.0600	0.0419		mg/Kg		70	41 - 127
Benzo[k]fluoranthene	0.0600	0.0428		mg/Kg		71	41 - 126
Chrysene	0.0600	0.0449		mg/Kg		75	43 - 122
Dibenz(a,h)anthracene	0.0600	0.0396		mg/Kg		66	34 - 135
Fluoranthene	0.0600	0.0398		mg/Kg		66	43 - 120
Fluorene	0.0600	0.0415		mg/Kg		69	36 - 120
2-Methylnaphthalene	0.0600	0.0396		mg/Kg		66	24 - 120

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QC Sample Results

Client: Topographic
Project/Site: DEO Red Rocks, Colorado

Job ID: 280-202468-1

Method: 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: LCS 280-683840/2-A

Matrix: Solid

Analysis Batch: 683968

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 683840

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acenaphthene	0.0600	0.0389		mg/Kg		65	29 - 120
Indeno[1,2,3-cd]pyrene	0.0600	0.0388		mg/Kg		65	33 - 133
Naphthalene	0.0600	0.0353		mg/Kg		59	23 - 120
Pyrene	0.0600	0.0397		mg/Kg		66	43 - 121
1-Methylnaphthalene	0.0600	0.0394		mg/Kg		66	25 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl	88		46 - 115
Nitrobenzene-d5	61		22 - 120
Terphenyl-d14	67		46 - 122
2-methylnaphthalene-d10	66		24 - 150
Fluoranthene-d10	65		45 - 121

Method: 8015D - Gasoline Range Organics (GRO) (GC)

Lab Sample ID: MB 280-683935/3-A

Matrix: Solid

Analysis Batch: 683934

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 683935

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C10)	ND		2.0	0.75	mg/Kg		02/06/25 16:46	02/06/25 20:14	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		80 - 120	02/06/25 16:46	02/06/25 20:14	1

Lab Sample ID: LCS 280-683935/1-A

Matrix: Solid

Analysis Batch: 683934

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 683935

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
GRO (C6-C10)	9.99	8.86		mg/Kg		89	70 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	107		80 - 120

Lab Sample ID: LCSD 280-683935/2-A

Matrix: Solid

Analysis Batch: 683934

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 683935

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
GRO (C6-C10)	9.99	8.48		mg/Kg		85	70 - 120	4	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	108		80 - 120

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QC Sample Results

Client: Topographic
Project/Site: DEO Red Rocks, Colorado

Job ID: 280-202468-1

Method: 8015D - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 280-683693/1-A

Matrix: Solid

Analysis Batch: 683993

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 683693

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DRO (C10-C28)	ND		10	4.0	mg/Kg		02/05/25 11:41	02/07/25 14:51	1
ORO (C20-C38)	ND		10	4.0	mg/Kg		02/05/25 11:41	02/07/25 14:51	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl (Surr)	100		48 - 139				02/05/25 11:41	02/07/25 14:51	1
n-Octacosane (Surr)	100		33 - 136				02/05/25 11:41	02/07/25 14:51	1

Lab Sample ID: LCS 280-683693/2-A

Matrix: Solid

Analysis Batch: 683993

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 683693

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
DRO (C10-C28)	133	102		mg/Kg		77	46 - 120
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
o-Terphenyl (Surr)	81		48 - 139				
n-Octacosane (Surr)	81		33 - 136				

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 280-683485/1-A

Matrix: Solid

Analysis Batch: 683854

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 683485

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		10	5.0	mg/Kg		02/04/25 15:00	02/05/25 16:01	1

Lab Sample ID: LCS 280-683485/2-A

Matrix: Solid

Analysis Batch: 683854

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 683485

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	200	195		mg/Kg		97	85 - 115

Lab Sample ID: 280-202468-1 MS

Matrix: Solid

Analysis Batch: 683854

Client Sample ID: RR3508-DCA01

Prep Type: Total/NA

Prep Batch: 683485

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	11		206	210		mg/Kg	✱	97	75 - 125

Lab Sample ID: 280-202468-1 MSD

Matrix: Solid

Analysis Batch: 683854

Client Sample ID: RR3508-DCA01

Prep Type: Total/NA

Prep Batch: 683485

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Boron	11		214	217		mg/Kg	✱	96	75 - 125	4	20

Eurofins Denver

QC Sample Results

Client: Topographic
Project/Site: DEO Red Rocks, Colorado

Job ID: 280-202468-1

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 280-683485/1-A
Matrix: Solid
Analysis Batch: 683829

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 683485

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		0.10	0.025	mg/Kg		02/04/25 15:00	02/05/25 15:00	1
Arsenic	ND		0.20	0.050	mg/Kg		02/04/25 15:00	02/05/25 15:00	1
Barium	ND		0.40	0.15	mg/Kg		02/04/25 15:00	02/05/25 15:00	1
Cadmium	ND		0.10	0.025	mg/Kg		02/04/25 15:00	02/05/25 15:00	1
Chromium	ND		0.60	0.25	mg/Kg		02/04/25 15:00	02/05/25 15:00	1
Copper	0.407	J	0.60	0.30	mg/Kg		02/04/25 15:00	02/05/25 15:00	1
Nickel	ND		0.60	0.25	mg/Kg		02/04/25 15:00	02/05/25 15:00	1
Lead	ND		0.40	0.15	mg/Kg		02/04/25 15:00	02/05/25 15:00	1
Selenium	ND		0.20	0.050	mg/Kg		02/04/25 15:00	02/05/25 15:00	1
Zinc	ND		2.0	1.0	mg/Kg		02/04/25 15:00	02/05/25 15:00	1

Lab Sample ID: LCS 280-683485/23-A
Matrix: Solid
Analysis Batch: 683829

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 683485

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Silver	20.0	19.8		mg/Kg		99	85 - 115
Arsenic	20.0	19.1		mg/Kg		96	85 - 115
Barium	20.0	19.8		mg/Kg		99	85 - 115
Cadmium	20.0	20.4		mg/Kg		102	85 - 115
Chromium	20.0	19.4		mg/Kg		97	85 - 115
Copper	20.0	20.1		mg/Kg		100	85 - 115
Nickel	20.0	19.9		mg/Kg		99	85 - 115
Lead	20.0	19.8		mg/Kg		99	85 - 115
Selenium	20.0	19.9		mg/Kg		99	85 - 115
Zinc	20.0	19.7		mg/Kg		99	85 - 115

Lab Sample ID: 280-202468-1 MS
Matrix: Solid
Analysis Batch: 683829

Client Sample ID: RR3508-DCA01
Prep Type: Total/NA
Prep Batch: 683485

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Silver	0.043	J	21.1	19.6		mg/Kg	☼	93	75 - 125
Arsenic	6.9		21.1	27.1		mg/Kg	☼	96	75 - 125
Barium	220		21.1	254	4	mg/Kg	☼	148	75 - 125
Cadmium	0.22		21.1	21.1		mg/Kg	☼	99	75 - 125
Chromium	16		21.1	38.6		mg/Kg	☼	106	75 - 125
Copper	14	B	21.1	33.8		mg/Kg	☼	94	75 - 125
Nickel	15		21.1	35.1		mg/Kg	☼	96	75 - 125
Lead	10		21.1	29.7		mg/Kg	☼	92	75 - 125
Selenium	0.38		21.1	21.3		mg/Kg	☼	100	75 - 125
Zinc	41		21.1	62.0		mg/Kg	☼	99	75 - 125

Lab Sample ID: 280-202468-1 MSD
Matrix: Solid
Analysis Batch: 683829

Client Sample ID: RR3508-DCA01
Prep Type: Total/NA
Prep Batch: 683485

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Silver	0.043	J	20.8	19.7		mg/Kg	☼	95	75 - 125	1	20

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QC Sample Results

Client: Topographic
Project/Site: DEO Red Rocks, Colorado

Job ID: 280-202468-1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: 280-202468-1 MSD

Matrix: Solid

Analysis Batch: 683829

Client Sample ID: RR3508-DCA01

Prep Type: Total/NA

Prep Batch: 683485

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	6.9		20.8	27.0		mg/Kg	⊛	97	75 - 125	0	20
Barium	220		20.8	250	4	mg/Kg	⊛	131	75 - 125	2	20
Cadmium	0.22		20.8	20.8		mg/Kg	⊛	99	75 - 125	2	20
Chromium	16		20.8	38.9		mg/Kg	⊛	109	75 - 125	1	20
Copper	14	B	20.8	33.5		mg/Kg	⊛	94	75 - 125	1	20
Nickel	15		20.8	35.8		mg/Kg	⊛	100	75 - 125	2	20
Lead	10		20.8	29.9		mg/Kg	⊛	95	75 - 125	1	20
Selenium	0.38		20.8	21.3		mg/Kg	⊛	101	75 - 125	0	20
Zinc	41		20.8	64.5		mg/Kg	⊛	113	75 - 125	4	20

Method: 29B_EC - Conductivity, Electrical

Lab Sample ID: MB 860-216935/2

Matrix: Solid

Analysis Batch: 216935

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	ND		10	10	umho/cm			02/16/25 09:56	1
Electrical Conductivity	ND		10	10	umho/cm			02/16/25 09:56	1

Lab Sample ID: LCS 860-216935/3

Matrix: Solid

Analysis Batch: 216935

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Specific Conductance	1410	1420		umho/cm		100	90 - 110
Electrical Conductivity	1410	1420		umho/cm		100	90 - 110

Lab Sample ID: LCSD 860-216935/4

Matrix: Solid

Analysis Batch: 216935

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Specific Conductance	1410	1410		umho/cm		100	90 - 110	0	20
Electrical Conductivity	1410	1410		umho/cm		100	90 - 110	0	20

Method: 7196A - Chromium, Hexavalent

Lab Sample ID: MB 860-215115/3-A

Matrix: Solid

Analysis Batch: 216024

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 215115

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hexavalent	ND		0.40	0.12	mg/Kg		02/06/25 13:20	02/11/25 14:40	1

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QC Sample Results

Client: Topographic
Project/Site: DEO Red Rocks, Colorado

Job ID: 280-202468-1

Method: 7196A - Chromium, Hexavalent (Continued)

Lab Sample ID: LCS 860-215115/4-A
Matrix: Solid
Analysis Batch: 216024

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 215115

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chromium, hexavalent	20.0	19.6		mg/Kg		98	80 - 120

Lab Sample ID: LCSD 860-215115/5-A
Matrix: Solid
Analysis Batch: 216024

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 215115

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chromium, hexavalent	20.0	19.4		mg/Kg		97	80 - 120	1	20

Lab Sample ID: 280-202468-1 MS
Matrix: Solid
Analysis Batch: 216024

Client Sample ID: RR3508-DCA01
Prep Type: Total/NA
Prep Batch: 215115

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chromium, hexavalent	0.19	J	23.4	20.5		mg/Kg	⚠	87	75 - 125

Lab Sample ID: 280-202468-1 MSD
Matrix: Solid
Analysis Batch: 216024

Client Sample ID: RR3508-DCA01
Prep Type: Total/NA
Prep Batch: 215115

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chromium, hexavalent	0.19	J	23.4	20.4		mg/Kg	⚠	86	75 - 125	1	20

QC Association Summary

Client: Topographic
Project/Site: DEO Red Rocks, Colorado

Job ID: 280-202468-1

GC/MS VOA

Prep Batch: 683599

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-202468-1	RR3508-DCA01	Total/NA	Solid	5035	
280-202468-2	RR3508-BG01	Total/NA	Solid	5035	
MB 280-683599/1-A	Method Blank	Total/NA	Solid	5035	
LCS 280-683599/2-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 280-683599/3-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 683617

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-202468-1	RR3508-DCA01	Total/NA	Solid	8260D	683599
280-202468-2	RR3508-BG01	Total/NA	Solid	8260D	683599
MB 280-683599/1-A	Method Blank	Total/NA	Solid	8260D	683599
LCS 280-683599/2-A	Lab Control Sample	Total/NA	Solid	8260D	683599
LCSD 280-683599/3-A	Lab Control Sample Dup	Total/NA	Solid	8260D	683599

GC/MS Semi VOA

Prep Batch: 683840

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-202468-1	RR3508-DCA01	Total/NA	Solid	3546	
280-202468-2	RR3508-BG01	Total/NA	Solid	3546	
MB 280-683840/1-A	Method Blank	Total/NA	Solid	3546	
LCS 280-683840/2-A	Lab Control Sample	Total/NA	Solid	3546	

Analysis Batch: 683968

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-202468-1	RR3508-DCA01	Total/NA	Solid	8270E SIM	683840
280-202468-2	RR3508-BG01	Total/NA	Solid	8270E SIM	683840
MB 280-683840/1-A	Method Blank	Total/NA	Solid	8270E SIM	683840
LCS 280-683840/2-A	Lab Control Sample	Total/NA	Solid	8270E SIM	683840

GC VOA

Analysis Batch: 683934

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-202468-1	RR3508-DCA01	Total/NA	Solid	8015D	683935
280-202468-2	RR3508-BG01	Total/NA	Solid	8015D	683935
MB 280-683935/3-A	Method Blank	Total/NA	Solid	8015D	683935
LCS 280-683935/1-A	Lab Control Sample	Total/NA	Solid	8015D	683935
LCSD 280-683935/2-A	Lab Control Sample Dup	Total/NA	Solid	8015D	683935

Prep Batch: 683935

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-202468-1	RR3508-DCA01	Total/NA	Solid	5030A	
280-202468-2	RR3508-BG01	Total/NA	Solid	5030A	
MB 280-683935/3-A	Method Blank	Total/NA	Solid	5030A	
LCS 280-683935/1-A	Lab Control Sample	Total/NA	Solid	5030A	
LCSD 280-683935/2-A	Lab Control Sample Dup	Total/NA	Solid	5030A	

QC Association Summary

Client: Topographic
Project/Site: DEO Red Rocks, Colorado

Job ID: 280-202468-1

GC Semi VOA

Prep Batch: 683693

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-202468-1	RR3508-DCA01	Total/NA	Solid	3546	
280-202468-2	RR3508-BG01	Total/NA	Solid	3546	
MB 280-683693/1-A	Method Blank	Total/NA	Solid	3546	
LCS 280-683693/2-A	Lab Control Sample	Total/NA	Solid	3546	

Analysis Batch: 683993

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-202468-1	RR3508-DCA01	Total/NA	Solid	8015D	683693
280-202468-2	RR3508-BG01	Total/NA	Solid	8015D	683693
MB 280-683693/1-A	Method Blank	Total/NA	Solid	8015D	683693
LCS 280-683693/2-A	Lab Control Sample	Total/NA	Solid	8015D	683693

Metals

Prep Batch: 214912

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-202468-1	RR3508-DCA01	Soluble	Solid	29B	
280-202468-2	RR3508-BG01	Soluble	Solid	29B	

Analysis Batch: 216588

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-202468-1	RR3508-DCA01	Soluble	Solid	29B SAR	214912
280-202468-2	RR3508-BG01	Soluble	Solid	29B SAR	214912

Prep Batch: 683485

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-202468-1	RR3508-DCA01	Total/NA	Solid	3050B	
280-202468-1	RR3508-DCA01	Total/NA	Solid	3050B	
280-202468-2	RR3508-BG01	Total/NA	Solid	3050B	
MB 280-683485/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 280-683485/23-A	Lab Control Sample	Total/NA	Solid	3050B	
LCS 280-683485/2-A	Lab Control Sample	Total/NA	Solid	3050B	
280-202468-1 MS	RR3508-DCA01	Total/NA	Solid	3050B	
280-202468-1 MS	RR3508-DCA01	Total/NA	Solid	3050B	
280-202468-1 MSD	RR3508-DCA01	Total/NA	Solid	3050B	
280-202468-1 MSD	RR3508-DCA01	Total/NA	Solid	3050B	

Analysis Batch: 683829

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-202468-1	RR3508-DCA01	Total/NA	Solid	6020B	683485
280-202468-2	RR3508-BG01	Total/NA	Solid	6020B	683485
MB 280-683485/1-A	Method Blank	Total/NA	Solid	6020B	683485
LCS 280-683485/23-A	Lab Control Sample	Total/NA	Solid	6020B	683485
280-202468-1 MS	RR3508-DCA01	Total/NA	Solid	6020B	683485
280-202468-1 MSD	RR3508-DCA01	Total/NA	Solid	6020B	683485

Analysis Batch: 683854

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-202468-1	RR3508-DCA01	Total/NA	Solid	6010D	683485
280-202468-2	RR3508-BG01	Total/NA	Solid	6010D	683485
MB 280-683485/1-A	Method Blank	Total/NA	Solid	6010D	683485

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QC Association Summary

Client: Topographic
Project/Site: DEO Red Rocks, Colorado

Job ID: 280-202468-1

Metals (Continued)

Analysis Batch: 683854 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 280-683485/2-A	Lab Control Sample	Total/NA	Solid	6010D	683485
280-202468-1 MS	RR3508-DCA01	Total/NA	Solid	6010D	683485
280-202468-1 MSD	RR3508-DCA01	Total/NA	Solid	6010D	683485

General Chemistry

Prep Batch: 215115

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-202468-1	RR3508-DCA01	Total/NA	Solid	3060A	
280-202468-2	RR3508-BG01	Total/NA	Solid	3060A	
MB 860-215115/3-A	Method Blank	Total/NA	Solid	3060A	
LCS 860-215115/4-A	Lab Control Sample	Total/NA	Solid	3060A	
LCSD 860-215115/5-A	Lab Control Sample Dup	Total/NA	Solid	3060A	
280-202468-1 MS	RR3508-DCA01	Total/NA	Solid	3060A	
280-202468-1 MSD	RR3508-DCA01	Total/NA	Solid	3060A	

Analysis Batch: 216024

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-202468-1	RR3508-DCA01	Total/NA	Solid	7196A	215115
280-202468-2	RR3508-BG01	Total/NA	Solid	7196A	215115
MB 860-215115/3-A	Method Blank	Total/NA	Solid	7196A	215115
LCS 860-215115/4-A	Lab Control Sample	Total/NA	Solid	7196A	215115
LCSD 860-215115/5-A	Lab Control Sample Dup	Total/NA	Solid	7196A	215115
280-202468-1 MS	RR3508-DCA01	Total/NA	Solid	7196A	215115
280-202468-1 MSD	RR3508-DCA01	Total/NA	Solid	7196A	215115

Prep Batch: 216043

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-202468-1	RR3508-DCA01	Total/NA	Solid	29B	
280-202468-2	RR3508-BG01	Total/NA	Solid	29B	

Prep Batch: 216344

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-202468-1	RR3508-DCA01	Total/NA	Solid	Sat Paste Ext	216043
280-202468-2	RR3508-BG01	Total/NA	Solid	Sat Paste Ext	216043

Analysis Batch: 216935

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-202468-1	RR3508-DCA01	Total/NA	Solid	29B_EC	216344
280-202468-2	RR3508-BG01	Total/NA	Solid	29B_EC	216344
MB 860-216935/2	Method Blank	Total/NA	Solid	29B_EC	
LCS 860-216935/3	Lab Control Sample	Total/NA	Solid	29B_EC	
LCSD 860-216935/4	Lab Control Sample Dup	Total/NA	Solid	29B_EC	

Analysis Batch: 216936

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-202468-1	RR3508-DCA01	Total/NA	Solid	29B_pH	216344
280-202468-2	RR3508-BG01	Total/NA	Solid	29B_pH	216344

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QC Association Summary

Client: Topographic
Project/Site: DEO Red Rocks, Colorado

Job ID: 280-202468-1

General Chemistry

Analysis Batch: 683339

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-202468-1	RR3508-DCA01	Total/NA	Solid	D 2216	
280-202468-2	RR3508-BG01	Total/NA	Solid	D 2216	

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Lab Chronicle

Client: Topographic
Project/Site: DEO Red Rocks, Colorado

Job ID: 280-202468-1

Client Sample ID: RR3508-DCA01

Lab Sample ID: 280-202468-1

Date Collected: 01/29/25 15:33

Matrix: Solid

Date Received: 01/31/25 12:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Prep	29B			30 g	30 mL	214912	02/05/25 16:42	PB	EET HOU
Soluble	Analysis	29B SAR		1			216588	02/13/25 15:10	DP	EET HOU
Total/NA	Prep	29B			149.36 g	132.89 g	216043	02/11/25 15:07	CT	EET HOU
Total/NA	Prep	Sat Paste Ext			60.03 g	1.0 mL	216344	02/12/25 16:10	CT	EET HOU
Total/NA	Analysis	29B_EC		1			216935	02/16/25 09:56	MR	EET HOU
Total/NA	Prep	29B			149.36 g	132.89 g	216043	02/11/25 15:07	CT	EET HOU
Total/NA	Prep	Sat Paste Ext			60.03 g	1.0 mL	216344	02/12/25 16:10	CT	EET HOU
Total/NA	Analysis	29B_pH		1			216936	02/16/25 09:59	MR	EET HOU
Total/NA	Analysis	D 2216		1			683339	01/31/25 15:54	JRR	EET DEN

Client Sample ID: RR3508-DCA01

Lab Sample ID: 280-202468-1

Date Collected: 01/29/25 15:33

Matrix: Solid

Date Received: 01/31/25 12:15

Percent Solids: 84.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.946 g	5 mL	683599	01/29/25 15:33	JLS	EET DEN
Total/NA	Analysis	8260D		1	5 g	5 mL	683617	02/04/25 16:18	JLS	EET DEN
Total/NA	Prep	3546			5.8 g	1 mL	683840	02/06/25 09:47	JC	EET DEN
Total/NA	Analysis	8270E SIM		1	200 uL	200 uL	683968	02/07/25 15:47	RJC	EET DEN
Total/NA	Prep	5030A			5.705 g	5 mL	683935	01/29/25 15:33	CCF	EET DEN
Total/NA	Analysis	8015D		1	0.1 mL	5 mL	683934	02/06/25 23:28	CCF	EET DEN
Total/NA	Prep	3546			5.3 g	1 mL	683693	02/05/25 11:41	NMC	EET DEN
Total/NA	Analysis	8015D		1			683993	02/07/25 21:10	LKB	EET DEN
Total/NA	Prep	3050B			1.131 g	100 mL	683485	02/04/25 15:00	AMH	EET DEN
Total/NA	Analysis	6010D		1			683854	02/05/25 16:08	NKC	EET DEN
Total/NA	Prep	3050B			1.116 g	100 mL	683485	02/04/25 15:00	AMH	EET DEN
Total/NA	Analysis	6020B		1			683829	02/05/25 15:07	LMT	EET DEN
Total/NA	Prep	3060A			2.51 g	100 mL	215115	02/06/25 13:20	SCI	EET HOU
Total/NA	Analysis	7196A		1	25 mL	25 mL	216024	02/11/25 14:40	SCI	EET HOU

Client Sample ID: RR3508-BG01

Lab Sample ID: 280-202468-2

Date Collected: 01/29/25 14:30

Matrix: Solid

Date Received: 01/31/25 12:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Prep	29B			30 g	30 mL	214912	02/05/25 16:42	PB	EET HOU
Soluble	Analysis	29B SAR		1			216588	02/13/25 15:10	DP	EET HOU
Total/NA	Prep	29B			145.49 g	130.96 g	216043	02/11/25 15:07	CT	EET HOU
Total/NA	Prep	Sat Paste Ext			60.06 g	1.0 mL	216344	02/12/25 16:10	CT	EET HOU
Total/NA	Analysis	29B_EC		1			216935	02/16/25 09:56	MR	EET HOU
Total/NA	Prep	29B			145.49 g	130.96 g	216043	02/11/25 15:07	CT	EET HOU
Total/NA	Prep	Sat Paste Ext			60.06 g	1.0 mL	216344	02/12/25 16:10	CT	EET HOU
Total/NA	Analysis	29B_pH		1			216936	02/16/25 09:59	MR	EET HOU
Total/NA	Analysis	D 2216		1			683339	01/31/25 15:54	JRR	EET DEN

Eurofins Denver

Lab Chronicle

Client: Topographic
Project/Site: DEO Red Rocks, Colorado

Job ID: 280-202468-1

Client Sample ID: RR3508-BG01

Lab Sample ID: 280-202468-2

Date Collected: 01/29/25 14:30

Matrix: Solid

Date Received: 01/31/25 12:15

Percent Solids: 85.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.045 g	5 mL	683599	01/29/25 14:30	JLS	EET DEN
Total/NA	Analysis	8260D		1	5 g	5 mL	683617	02/04/25 16:38	JLS	EET DEN
Total/NA	Prep	3546			5.6 g	1 mL	683840	02/06/25 09:47	JC	EET DEN
Total/NA	Analysis	8270E SIM		1	200 uL	200 uL	683968	02/07/25 16:13	RJC	EET DEN
Total/NA	Prep	5030A			6.208 g	5 mL	683935	01/29/25 14:30	CCF	EET DEN
Total/NA	Analysis	8015D		1	0.1 mL	5 mL	683934	02/06/25 23:50	CCF	EET DEN
Total/NA	Prep	3546			5.5 g	1 mL	683693	02/05/25 11:41	NMC	EET DEN
Total/NA	Analysis	8015D		1			683993	02/07/25 21:30	LKB	EET DEN
Total/NA	Prep	3050B			1.287 g	100 mL	683485	02/04/25 15:00	AMH	EET DEN
Total/NA	Analysis	6010D		1			683854	02/05/25 16:28	NKC	EET DEN
Total/NA	Prep	3050B			1.287 g	100 mL	683485	02/04/25 15:00	AMH	EET DEN
Total/NA	Analysis	6020B		1			683829	02/05/25 15:25	LMT	EET DEN
Total/NA	Prep	3060A			2.54 g	100 mL	215115	02/06/25 13:20	SCI	EET HOU
Total/NA	Analysis	7196A		1	25 mL	25 mL	216024	02/11/25 14:40	SCI	EET HOU

Laboratory References:

EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

EET HOU = Eurofins Houston, 4145 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

Accreditation/Certification Summary

Client: Topographic
Project/Site: DEO Red Rocks, Colorado

Job ID: 280-202468-1

Laboratory: Eurofins Denver

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-26
A2LA	ISO/IEC 17025	2907.01	10-31-26
Alabama	State Program	40730	09-30-12 *
Alaska (UST)	State	18-001	11-30-25
Arizona	State	AZ0713	12-20-25
Arkansas DEQ	State	88-00687	04-02-25
California	State	2513	02-13-25
Colorado	Petroleum Storage Tank Program	2907.01 (A2LA)	10-31-26
Colorado	State	CO00026	06-30-25
Connecticut	State	PH-0686	09-30-26
Florida	NELAP	E87667	02-23-25
Georgia	State	4025	01-08-26
Illinois	NELAP	200017	05-31-25
Iowa	State	370	12-01-26
Kansas	NELAP	E-10166	03-06-25
Kentucky (WW)	State	KY98047	12-31-25
Louisiana	NELAP	30785	06-30-14 *
Louisiana (All)	NELAP	30785	06-30-25
Minnesota	NELAP	1788752	04-03-25
Nevada	State	CO00026	07-31-25
New Hampshire	NELAP	2053	04-28-25
New Jersey	NELAP	230001	03-30-25
New York	NELAP	11964	03-31-25
North Dakota	State	R-034	01-08-25 *
Oklahoma	NELAP	8614	08-31-25
Oregon	NELAP	4025	03-05-25
Pennsylvania	NELAP	013	07-31-25
South Carolina	State	72002001	01-18-25 *
Texas	NELAP	TX104704183-08-TX	09-30-09 *
Texas	NELAP	T104704183	09-30-25
US Fish & Wildlife	US Federal Programs	058448	07-31-25
USDA	US Federal Programs	P330-20-00065	12-19-25
Utah	NELAP	QUAN5	06-30-13 *
Utah	NELAP	CO00026	07-31-25
Virginia	NELAP	460232	06-14-25
Washington	State	C583	04-06-25
West Virginia DEP	State	354	11-30-25
Wisconsin	State	999615430	02-11-25
Wyoming (UST)	A2LA	2907.01	10-31-26

Laboratory: Eurofins Houston

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	88-00759	08-04-25
Florida	NELAP	E871002	03-06-25
Louisiana (All)	NELAP	03054	12-20-25
Oklahoma	NELAP	1306	02-23-25
Texas	NELAP	T104704215	07-01-26
Texas	TCEQ Water Supply	T104704215	12-28-25

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Denver

Accreditation/Certification Summary

Client: Topographic
Project/Site: DEO Red Rocks, Colorado

Job ID: 280-202468-1

Laboratory: Eurofins Houston (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
USDA	US Federal Programs	525-23-79-79507	03-20-26

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Login Sample Receipt Checklist

Client: Topographic

Job Number: 280-202468-1

Login Number: 202468

List Number: 1

Creator: Roehsner, Karen P

List Source: Eurofins Denver

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	False	Refer to Job Narrative for details.
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Topographic

Job Number: 280-202468-1

Login Number: 202468

List Number: 2

Creator: Baker, Jeremiah

List Source: Eurofins Houston

List Creation: 02/04/25 02:06 PM

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	