Inorganics

Case Narrative

COGCC

Inspection 697601450

Work Order Number: 2107471

1. This report consists of 2 soil samples and 2 saturation extracts.

2. The samples were received intact at varying temperatures by ALS on 07/22/2021.

3. The samples were prepared for analysis based on USDA Handbook 60 Chapter 6 procedures.

4. The samples were analyzed following USDA Handbook 60 Chapter 6 procedures for the current revision of the following SOP and method:

Analyte	Method	SOP #
Electrical conductivity	USDA60	810 Draft
Sodium Adsorption Ratio	USDA60	810 Draft
Paste pH	USDA60	810 Draft

5. All standards and solutions were used within their recommended shelf life.

All in house quality control procedures were followed, as described below.

6. General quality control procedures.

   - All initial and continuing calibration blanks were below the reporting limit for the requested analytes.

   - All initial and continuing calibration verifications were within the acceptance criteria for the requested analytes.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

Inorganics Final Data Reviewer

8/31/21
Date

Inorganic Data Reporting Qualifiers

The following qualifiers are used by the laboratory when reporting results of inorganic analyses.

- Concentration qualifier -- If the analyte was analyzed for but not detected a “U” is entered.
- QC qualifier -- Specified entries and their meanings are as follows:

  N - Spiked sample recovery not within control limits.

  * - Duplicate analysis (relative percent difference) not within control limits.

  Z - Calibration spike recovery not within control limits.

ALS -- Fort Collins

Sample Number(s) Cross-Reference Table

OrderNum: 2107471
Client Name: COGCC
Client Project Name: Inspection 697601450
Client Project Number:
Client PO Number: GAE- PHAA 2021*056

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
118086 #1 0-8"	2107471-1		SOIL	21-Jul-21	8:26
118086 #2 0-8"	2107471-2		SOIL	21-Jul-21	8:39
118086 #1 0-8"	2107471-3		SatExtract	21-Jul-21	8:26
118086 #2 0-8"	2107471-4		SatExtract	21-Jul-21	8:39

ALS Environmental

225 Commerce Drive, Fort Collins, Colorado 80524
TF: (800) 443-1511 PH: (970) 490-1511 FX: (970) 490-1522

Chain-of-Custody

Turnaround time for samples received after 2 p.m. will be calculated beginning from the next business day.

Turnaround time for samples received Saturday will be calculated beginning from the next business day.

2107471-C

TURNAROUND TIME	5 business days	SAMPLER	PAG	PAGE	1 of 1
				DISPOSAL	BY LAB or

				PARAMETER/METHOD REQUEST FOR ANALYSIS	
PROJECT NAME	Inspection 697601450	SITE ID		A	8015 extended range (DRO and ORO)
PROJECT No.		EDD FORMAT	COGCC	B	8270 SIM PAHs
		PURCHASE ORDER	GAE- PHAA 2021*056	C	SW6010 and/or SW6020 metals
COMPANY NAME	Colorado Oil & Gas Conservation Commission	BILL TO COMPANY		D	
SEND REPORT TO	Peter Gintautas	INVOICE ATTN TO		E	Saturated Paste prep with SAR, pH amd EC on extract
ADDRESS	1120 Lincoln St., Suite 801	ADDRESS		F	Hot water soluble boron extractoion with SW6010 or SW6020 analysis
CITY / STATE / ZIP	Denver, CO 80203	CITY / STATE / ZIP		G	
PHONE	719-679-1326	PHONE		H	
FAX		FAX		I	
E-MAIL	peter.gintautas@state.co.us	E-MAIL		J	

LAB ID	FIELD ID	MATRIX	SAMPLE DATE	SAMPLE TIME	# OF BOTTLES	PRESERVATIVE	QC	A	B	C	D	E	F	G	H	I	J	SEE NOTES SECTION
1	118086 #1 0-8"	S	7/21/21	08:26	1	7		X	X	X								
2	118086 #2 0-8"	S	7/21/21	08:39	1	7		X	X	X								
3	118086 #1 0-8"	S	7/21/21	08:26	1	8						X	X					
4	118086 #2 0-8"	S	7/21/21	08:39	1	8						X	X					

*Time Zone (Circle): MST Matrix: O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

NOTES	REPORT LEVEL / QC REQUIRED	
METALS = As, Ba, Cd, Cu, Pb, Ni, Se, Ag, Zn 1.7		Summary (Standard QC)
	X	LEVEL II (Standard QC)
		LEVEL III (Std QC + forms)
		LEVEL IV (Std QC + forms + raw data)

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PRESERVATION KEY: 1-HCl 2-HNO3 3-H2SO4 4-NaOH 5-NaOH/ZnAcetate 6-NaHSO4 7-4°C 8-Other

Form 202r9

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY	P Gintautas	Peter Gintautas	7/22/2021	1446
RECEIVED BY	Claire Thennes	Claire Thennes	7/22/21	1446
RELINQUISHED BY				
RECEIVED BY				
RELINQUISHED BY				
RECEIVED BY				

ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client: COGCC 3 Workorder No: 2107471

Project Manager: KMO Initials: CXT Date: 07/22/21

	N/A	YES	NO
1. Are airbills / shipping documents present and/or removable? Tracking number:	X		
2. Are custody seals on shipping containers intact?	X		
3. Are custody seals on sample containers intact?	X		
4. Is there a COC (chain-of-custody) present?		X	
5. Is the COC in agreement with samples received? (IDs, dates, times, # of samples, # of containers, matrix, requested analyses, etc.)		X	
6. Are short-hold samples present?			X
7. Are all samples within holding times for the requested analyses?		X	
8. Were all sample containers received intact? (not broken or leaking)		X	
9. Is there sufficient sample for the requested analyses?		X	
10. Are samples in proper containers for requested analyses? (form 250, *Sample Handling Guidelines*)		X	
11. Are all aqueous samples preserved correctly, if required? (excluding volatiles)	X		
12. Are all samples requiring no headspace (VOC, GRO, RSK/MEE, radon) free of bubbles > 6 mm (1/4 inch) diameter? (i.e. size of green pea)	X		
13. Were the samples shipped on ice?		X	
14. Were cooler temperatures measured at 0.1-6.0°C? IR gun used*: #5	RAD ONLY	X	

Cooler #:	1	2	3				
Temperature (°C):	1.7	1.7	! Y ō				
# of custody seals on cooler:	0	0	0				
External µR/hr reading:	NA	NA	NA				
Background µR/hr reading:	11	11	11				

Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? YES

* Please provide details here for NO responses to boxes above - for 2 thru 5 & 7 thru 12, notify PM & continue w/ login.

Were unpreserved bottles pH checked? N/A All client bottle ID's vs ALS lab ID's double-checked by CT

If applicable, was the client contacted? NA Contact: _____ Date/Time: _____

Project Manager Signature / Date: 8/01/21

Form 201r30.xls
03/18/2021

*IR Gun #5, VWR SN 192272629

PASTE PH

Method USDA60

Sample Results

Lab Name: ALS -- Fort Collins
Client Name: COGCC
Client Project ID: Inspection 697601450
Work Order Number: 2107471
Reporting Basis: Dry Weight
Prep Method: NONE
Analyst: Abigail O. Williams

Final Volume: 20 ml
Matrix: SOIL
Result Units: pH

Client Sample ID	Lab ID	Date Collected	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	RptLimit/ LOQ/LOD	Flag	Sample Aliquot
118086 #1 0-8"	2107471-1	07/21/2021	08/13/2021	08/13/2021	N/A	1	7.8	0.1		20 ml
118086 #2 0-8"	2107471-2	07/21/2021	08/13/2021	08/13/2021	N/A	1	7.8	0.1		20 ml

Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

Data Package ID: *pH2107471-1*

ELECTRICAL CONDUCTIVITY @ SATURATION

Method USDA60

Sample Results

Lab Name: ALS -- Fort Collins
Client Name: COGCC
Client Project ID: Inspection 697601450
Work Order Number: 2107471
Reporting Basis: As Received
Prep Method: NONE
Analyst: Lisa M. Champagne

Final Volume: 30 ml
Matrix: SatExtract
Result Units: umhos/cm

Client Sample ID	Lab ID	Date Collected	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	RptLimit/ LOQ/LOD	Flag	Sample Aliquot
118086 #1 0-8"	2107471-3	07/21/2021	08/17/2021	08/17/2021	N/A	1	1600	1		3 ml
118086 #2 0-8"	2107471-4	07/21/2021	08/17/2021	08/17/2021	N/A	1	15000	1		3 ml

Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

Data Package ID: *SC2107471-1*

Total Sodium Adsorption Ratio

Method USDA60 Revision D

Sample Results

Lab Name: ALS -- Fort Collins
Work Order Number: 2107471
Client Name: COGCC
ClientProject ID: Inspection 697601450

Field ID: 118086 #1 0-8"
Lab ID: 2107471-3

Sample Matrix: SatExtract
% Moisture: N/A
Date Collected: 21-Jul-21
Date Extracted: 10-Aug-21
Date Analyzed: 12-Aug-21
Prep Method: SW3010 Rev A

Prep Batch: IP210810-22
QCBatchID: IP210810-22-1
Run ID: IT210812-2A1
Cleanup: NONE
Basis: As Received
File Name: 210812A.

Analyst: Steve Workman
Sample Aliquot: 5 ML
Final Volume: 5 ML
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Result Qualifier	Reporting Limit	DL
7440-70-2	CALCIUM	10	41		10	
7439-95-4	MAGNESIUM	1	42		1	
7440-23-5	SODIUM	10	300		10	
	SODIUM ADSORPTION RATIO	1	8		0.81	

Data Package ID: *it2107471-2*

Total Sodium Adsorption Ratio

Method USDA60 Revision D

Sample Results

Lab Name: ALS -- Fort Collins
Work Order Number: 2107471
Client Name: COGCC
ClientProject ID: Inspection 697601450

Field ID: 118086 #2 0-8"
Lab ID: 2107471-4

Sample Matrix: SatExtract
% Moisture: N/A
Date Collected: 21-Jul-21
Date Extracted: 10-Aug-21
Date Analyzed: 12-Aug-21
Prep Method: SW3010 Rev A

Prep Batch: IP210810-22
QCBatchID: IP210810-22-1
Run ID: IT210812-2A1
Cleanup: NONE
Basis: As Received
File Name: 210812A.

Analyst: Steve Workman
Sample Aliquot: 5 ML
Final Volume: 5 ML
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Result Qualifier	Reporting Limit	DL
7440-70-2	CALCIUM	1	390		1	
7439-95-4	MAGNESIUM	1	36		1	
7440-23-5	SODIUM	100	2600		100	
	SODIUM ADSORPTION RATIO	100	34		17	

Data Package ID: *it2107471-2*