



August 3, 2023

Nancy Lilrose
PO BOX 263
DAYTON, MT 59914

**RE: GMT Exploration Company, LLC
Sample ID: Lilrose_179067
Water Source Sampling Results**

Dear Ms. Lillrose:

On June 6, 2023, WSP USA Inc. (WSP), on behalf of GMT Exploration Company, LLC (GMT), sampled your water source (well permit #179067, Receipt #368398), located in the northwest quarter of the northeast quarter in section 26, township 6 south, and range 65 west. Per the Colorado Oil and Gas Conservation Commission (COGCC) Rule 609, the water source has been identified within ½-mile of GMT's planned drilling activity. Baseline water samples were collected on January 6, 2022, prior to initially drilling an oil and gas well. The recent post well completion samples were collected to test the water quality of aquifer in the location of your water source after the completion of well and gas drilling.

FIELD WORK

WSP documented the visual appearance and odor (if any) of the water source. Field parameters (specific conductance, dissolved oxygen, pH, and temperature) were measured with instruments calibrated in accordance with manufacturer specifications and recorded prior to sampling.

Disposable or decontaminated equipment was used to collect the sample in containers supplied by the analytical laboratory.

ANALYTICAL RESULTS

WSP submitted the sample, under chain-of-custody procedures, to SGS Laboratories in Wheat Ridge, Colorado for the required water quality analysis. The laboratory analytical report, provided by SGS laboratories, is included as an Attachment. The Colorado Water Quality Control Commission has established regulation 41, the basic standards for groundwater. These standards can be used for general comparison to private water wells and can be accessed at the following internet address:

<https://cdphe.colorado.gov/water-quality-control-commission-regulations>



SUMMARY

The analytical report provided by SGS Laboratories is included as an Attachment with field sampling forms. The laboratory analytical results from the water well sampling is provided to you.

GMT and WSP appreciate your cooperation in this sampling program. Should you have any questions, feel free to call me at 929-230-4126.

Sincerely,

WSP USA Inc.

Alisha D.

Alisha Dahal
Assistant Consultant, Geologist

Enclosure:

SGS Laboratory Analytical Report and Field Notes

ENCLOSURE A – SGS LABORATORY ANALYTICAL REPORT AND
FIELD NOTES

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

WSP

Irwin Taylor/Marble Redstone

TE31403332

SGS Job Number: DA56084

Sampling Date: 06/09/23

Report to:

**WSP Environmental
4600 West 60th Avenue
Arvada, CO 80003
alisha.dahal@wsp.com; david.stainback@wsp.com**

ATTN: Alisha Dahal

Total number of pages in report: 44



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable unless noted in the narrative, comments or footnotes.

A handwritten signature in black ink, appearing to read "Eric Hoffman".

Eric Hoffman

Client Service contact: Kelly Blanchard 303-425-6021

Certifications: CO (CO00049), NE (NE-OS-06-04), ND (R-027), UT (NELAP CO00049)

LA (LA150028), TX (T104704511), WY (8TMS-L), HI (CO00049), NJ (CO011), NV (CO00049)

This report shall not be reproduced, except in its entirety, without the written approval of SGS.
Test results relate only to samples analyzed.

Table of Contents

-1-

Section 1: Sample Summary	3
Section 2: Case Narrative/Conformance Summary	4
Section 3: Summary of Hits	7
Section 4: Sample Results	8
4.1: DA56084-1: NANCY 368398	9
Section 5: Misc. Forms	15
5.1: Chain of Custody	16
Section 6: MS Volatiles - QC Data Summaries	19
6.1: Method Blank Summary	20
6.2: Blank Spike/Blank Spike Duplicate Summary	21
Section 7: GC Volatiles - QC Data Summaries	22
7.1: Method Blank Summary	23
7.2: Blank Spike/Blank Spike Duplicate Summary	25
Section 8: GC/LC Semi-volatiles - QC Data Summaries	27
8.1: Method Blank Summary	28
8.2: Blank Spike Summary	29
8.3: Matrix Spike/Matrix Spike Duplicate Summary	30
Section 9: Metals Analysis - QC Data Summaries	31
9.1: Prep QC MP37527: Ca,Mg,K,Na	32
Section 10: General Chemistry - QC Data Summaries	40
10.1: Method Blank and Spike Results Summary	41
10.2: Duplicate Results Summary	42
10.3: Matrix Spike Results Summary	43
10.4: Matrix Spike Duplicate Results Summary	44

1

2

3

4

5

6

7

8

9

10



Sample Summary

WSP

Job No: DA56084

Irwin Taylor/Marble Redstone
Project No: TE31403332

Sample Number	Collected Date	Time By	Received	Matrix Code Type	Client Sample ID
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This report contains results reported as ND = Not detected. The following applies:
Organics ND = Not detected above the MDL

DA56084-1	06/09/23	12:00 AD	06/09/23	AQ	Ground Water	NANCY 368398
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CASE NARRATIVE / CONFORMANCE SUMMARY

Client: WSP

Job No: DA56084

Site: Irwin Taylor/Marble Redstone

Report Date 6/28/2023 8:01:24 AM

On 06/09/2023, 1 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at SGS North America Inc. (SGS) at a temperature of 3.4 °C. The samples were intact and properly preserved, unless noted below. An SGS Job Number of DA56084 was assigned to the project. The lab sample ID, client sample ID, and date of sample collection are detailed in the report's Results Summary.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

MS Volatiles By Method SW846 8260B

Matrix: AQ	Batch ID: V7V4436
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- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

GC Volatiles By Method RSK175 MOD

Matrix: AQ	Batch ID: GFK286
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- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

GC Volatiles By Method SW846 8015D

Matrix: AQ	Batch ID: GGA2742
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- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

GC/LC Semi-volatiles By Method SW846-8015D

Matrix: AQ	Batch ID: OP23862
-------------------	--------------------------

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) DA56084-1MS, DA56084-1MSD were used as the QC samples indicated.
- The RPD(s) for the MS and MSD recoveries of TPH-DRO (C10-C28) are outside control limits for sample OP23862-MSD. RPD High, BS within control, good to report

Metals Analysis By Method EPA 200.7

Matrix: AQ	Batch ID: MP37527
-------------------	--------------------------

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) DA56097-1MS, DA56097-1MSD were used as the QC samples for the metals analysis.

SGS certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting SGS's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

SGS is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. This report is authorized by SGS indicated via signature on the report cover.

Summary of Hits

Job Number: DA56084
Account: WSP
Project: Irwin Taylor/Marble Redstone
Collected: 06/09/23



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
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DA56084-1 NANCY 368398

Methane		0.00086	0.00080	0.00070	mg/l	RSK175 MOD
Calcium		40800	400		ug/l	EPA 200.7
Magnesium		5420	200		ug/l	EPA 200.7
Potassium		2340	1000		ug/l	EPA 200.7
Sodium		11700	400		ug/l	EPA 200.7
Fluoride		0.50	0.50		mg/l	EPA300.0
Chloride		5.7	2.5		mg/l	EPA300.0
Bromide		0.11	0.050		mg/l	EPA300.0
Sulfate		13.0	2.5		mg/l	EPA300.0
Alkalinity, Bicarbonate as CaCO3		150	5.0		mg/l	SM 2320B-2011
Alkalinity, Total as CaCO3		150	5.0		mg/l	SM 2320B-2011
Phosphorus, Total		0.12	0.010		mg/l	EPA 365.1
Solids, Total Dissolved		196	10		mg/l	SM 2540C-2011

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: NANCY 368398	Date Sampled: 06/09/23
Lab Sample ID: DA56084-1	Date Received: 06/09/23
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260B	
Project: Irwin Taylor/Marble Redstone	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	7V89283.D	1	06/13/23 17:34	MM	n/a	n/a	V7V4436
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.60	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
1330-20-7	Xylene (total)	ND	1.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	112%		70-130%
17060-07-0	1,2-Dichloroethane-D4	110%		70-130%
2037-26-5	Toluene-D8	100%		70-130%
460-00-4	4-Bromofluorobenzene	97%		70-130%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: NANCY 368398	Date Sampled: 06/09/23
Lab Sample ID: DA56084-1	Date Received: 06/09/23
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8015D	
Project: Irwin Taylor/Marble Redstone	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GA61398.D	1	06/14/23 07:12	MB	n/a	n/a	GGA2742
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	0.050	0.040	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	117%		60-140%		

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.1
4

Report of Analysis

Client Sample ID:	NANCY 368398	Date Sampled:	06/09/23
Lab Sample ID:	DA56084-1	Date Received:	06/09/23
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	RSK175 MOD		
Project:	Irwin Taylor/Marble Redstone		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FK3939.D	1	06/12/23 15:23	MM	n/a	n/a	GFK286
Run #2							

Run #	Initial Volume	Headspace Volume	Volume Injected	Temperature
Run #1	39.0 ml	4.0 ml	500 ul	26.8 Deg. C
Run #2				

Methane, Ethane and Propane

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	0.00086	0.00080	0.00070	mg/l	
74-84-0	Ethane	ND	0.0016	0.0010	mg/l	
74-98-6	Propane	ND	0.0022	0.0017	mg/l	

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

MDL = Method Detection Limit
 J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

4.1
4

Report of Analysis

Client Sample ID: NANCY 368398	Date Sampled: 06/09/23
Lab Sample ID: DA56084-1	Date Received: 06/09/23
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846-8015D SW846 3510C	
Project: Irwin Taylor/Marble Redstone	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LW12222.D	1	06/12/23 16:59	JB	06/12/23 09:30	OP23862	GLW460
Run #2							

Run #	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	0.50	0.19	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	84%		10-131%		

ND = Not detected	MDL = Method Detection Limit	J = Indicates an estimated value
RL = Reporting Limit		B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range		N = Indicates presumptive evidence of a compound

4.1
4

Report of Analysis

Client Sample ID: NANCY 368398	Date Sampled: 06/09/23
Lab Sample ID: DA56084-1	Date Received: 06/09/23
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: Irwin Taylor/Marble Redstone	

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Calcium	40800	400	ug/l	1	06/12/23	06/13/23 MC	EPA 200.7 ¹	EPA 200.7 ²
Magnesium	5420	200	ug/l	1	06/12/23	06/13/23 MC	EPA 200.7 ¹	EPA 200.7 ²
Potassium	2340	1000	ug/l	1	06/12/23	06/13/23 MC	EPA 200.7 ¹	EPA 200.7 ²
Sodium	11700	400	ug/l	1	06/12/23	06/13/23 MC	EPA 200.7 ¹	EPA 200.7 ²

(1) Instrument QC Batch: MA16625

(2) Prep QC Batch: MP37527

RL = Reporting Limit

4.1
4

Report of Analysis

Client Sample ID: NANCY 368398	Date Sampled: 06/09/23
Lab Sample ID: DA56084-1	Date Received: 06/09/23
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: Irwin Taylor/Marble Redstone	

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
300.0							
Fluoride	0.50	0.50	mg/l	5	06/26/23 17:51	JB	EPA300.0
Chloride	5.7	2.5	mg/l	5	06/26/23 17:51	JB	EPA300.0
Bromide	0.11	0.050	mg/l	1	06/19/23 12:12	CS	EPA300.0
Sulfate	13.0	2.5	mg/l	5	06/26/23 17:51	JB	EPA300.0
Alkalinity, Bicarbonate as CaC	150	5.0	mg/l	1	06/16/23 11:00	JW	SM 2320B-2011
Alkalinity, Carbonate	< 5.0	5.0	mg/l	1	06/16/23 11:00	JW	SM 2320B-2011
Alkalinity, Total as CaCO3	150	5.0	mg/l	1	06/16/23 11:00	JW	SM 2320B-2011
Phosphorus, Total	0.12	0.010	mg/l	1	06/14/23 14:06	MB	EPA 365.1
Solids, Total Dissolved	196	10	mg/l	1	06/13/23	KH	SM 2540C-2011

RL = Reporting Limit

4.1
4

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody



CHAIN OF CUSTODY

SGS North America Inc. - Wheat Ridge
 4036 Youngfield Street, Wheat Ridge, CO 80033
 TEL: 303-425-6021 FAX: 303-425-6854
 www.sgs.com/ehsusa

Bottle Order Control #		FED-EX Tracking #	
SGS Quote #		SGS Job # DA 56084	
Client / Reporting Information		Project Information	
Company: WSP USA		Project Name: Travis Taylor	
Street: 7205 W Alaska Dr Sk200		Street: Travis Taylor	
City, State, ZIP: Durewood, CO, 80206		Billing Information (if different from Report to)	
Project Contact: Alisha Dahal		Company:	
Phone: 729 230 4126		Street Address:	
Email: alisha.dahal@wsp.com		City, State, ZIP:	
Sampler(s) Name(s): Alisha Dahal		Project #: TE31403332	
Project Manager: Alisha Dahal		Client Purchase Order #:	
Attention:		City, State, ZIP:	
Requested Analysis (see TEST CODE sheet)		Matrix Codes	
ALX BROISGR BRO, F, Cl, SO4, CHL BTEX HEXALS TDS TP04 18015GR VR SKIT 7 SDY MEP		GW - Drinking Water GV - Ground Water WW - Water SW - Surface Water SO - Soil SL - Sludge SED - Sediment OI - Oil LIQ - Other Liquid AIR - Air SOL - Other Solid WP - Wipe FB - Field Blank EB - Equipment Blank RB - Rinse Blank TB - Trip Blank D - dissolved metals PD - Potentially dissolved TR - Total recoverable	
Collection		Number of preserved Bottles	
Field ID / Point of Collection	Date	Time	Sampled by
Nancy 368398	06/09/23	12:00	Ad 4W
Matrix	# of bottles	NONE	HCl
		NiOH	HNO3
		H2SO4	D/Water
		MeOH	ENCORE
		INSTRUC	INSTRUC
		INSTRUC	INSTRUC
Turnaround Time (Business days)		Data Deliverable Information	
<input checked="" type="checkbox"/> Standard 10 Business Days <input type="checkbox"/> 5 Business Days RUSH <input type="checkbox"/> 3 Business Days RUSH <input type="checkbox"/> 2 Business Days RUSH <input type="checkbox"/> 1 Business Day EMERGENCY		<input type="checkbox"/> Commercial "A" (Level 1, Results Only) <input type="checkbox"/> Commercial "B" (Level 2, Results + QC Summary) <input type="checkbox"/> COMMBN (Results/QC/Narrative) <input type="checkbox"/> COMMBN+ (Results/QC/Narrative (+ chromatograms)) <input type="checkbox"/> REDT2 (Results/QC Summary/partial raw data) <input type="checkbox"/> FULT1 <input type="checkbox"/> EDD Format	
Special Reporting Instructions		Comments / Special Instructions	
<input type="checkbox"/> Report in PPB <input type="checkbox"/> Report in PPM <input type="checkbox"/> Report MDLs		**Metals: specify metal(s), method, and type (D, PD, TR) COCC Rule 318 A 6 Subsequent sampling Magnesium, Calcium, Sodium & Potassium Total bicarbonate as CaCO3 / carbonate as CO3	
Emergency & Rush T/A data available via Email or LabLink. RUSH TAT approval needed <input type="checkbox"/>			
Sample Custody must be documented below each time samples change possession, including courier, Fed Ex, USP, USPS delivery.			
Relinquished By/Affiliation:	Date/Time:	Received By/Affiliation:	Date/Time:
1 Alisha WSP	06/09/23 15:00	1 [Signature]	
Relinquished By/Affiliation:	Date/Time:	Received By/Affiliation:	Date/Time:
3		2	
Relinquished By/Affiliation:	Date/Time:	Received By/Affiliation:	Date/Time:
3		4	
Custody Seal #:	Intact <input checked="" type="checkbox"/> Not intact <input type="checkbox"/> Absent <input type="checkbox"/>	Preserved where applicable <input checked="" type="checkbox"/>	Cooler Temp. °C (corrected): 3.4 Therm. ID: 100 On Ice <input checked="" type="checkbox"/>
http://www.sgs.com/en/terms-and-conditions			

Current Regular COC 23MAY23.xls, FORM EHAS-QAC-0027-01-FORM-Wheat Ridge - COC, RV 9/2/21

DA56084: Chain of Custody

Page 1 of 3



SGS Sample Receipt Summary

Job Number: DA56084

Client: WSP

Project: IRWIN TAYLOR

Date / Time Received: 6/9/2023 3:00:00 PM

Delivery Method: HD

Airbill #s:

Cooler Temps (Initial/Adjusted): #1: (3.4/3.4):

Cooler Security

Y or N

Y or N

- | | | | | | |
|---------------------------|-------------------------------------|--------------------------|-----------------------|-------------------------------------|--------------------------|
| 1. Custody Seals Present: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 3. COC Present: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Custody Seals Intact: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 4. Smpl Dates/Time OK | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Cooler Temperature

Y or N

- | | | |
|----------------------------|-------------------------------------|--------------------------|
| 1. Temp criteria achieved: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Thermometer ID: | IR Gun; | |
| 3. Cooler media: | Ice (Bag) | |
| 4. No. Coolers: | 1 | |

Quality Control Preservation

Y or N

N/A

- | | | | |
|---------------------------------|-------------------------------------|-------------------------------------|--------------------------|
| 1. Trip Blank present / cooler: | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Trip Blank listed on COC: | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Samples preserved properly: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. VOCs headspace free: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Sample Integrity - Documentation

Y or N

- | | | |
|--|-------------------------------------|--------------------------|
| 1. Sample labels present on bottles: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Container labeling complete: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Sample container label / COC agree: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Sample Integrity - Condition

Y or N

- | | | |
|----------------------------------|-------------------------------------|--------------------------|
| 1. Sample recvd within HT: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. All containers accounted for: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Condition of sample: | Intact | |

Sample Integrity - Instructions

Y or N

N/A

- | | | | |
|---|-------------------------------------|-------------------------------------|-------------------------------------|
| 1. Analysis requested is clear: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 2. Bottles received for unspecified tests | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3. Sufficient volume recvd for analysis: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 4. Compositing instructions clear: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 5. Filtering instructions clear: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Comments

DA56084: Chain of Custody

Page 2 of 3

5.1
5

Problem Resolution

Page 2 of 2

Job Number: DA56084

CSR: _____

Response Date: _____

Response:

5.1

5

DA56084: Chain of Custody
Page 3 of 3

MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: DA56084
Account: LTENCODE WSP
Project: Irwin Taylor/Marble Redstone

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V7V4436-MB	7V89268.D	1	06/13/23	MM	n/a	n/a	V7V4436

The QC reported here applies to the following samples:

Method: SW846 8260B

DA56084-1

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.60	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
1330-20-7	Xylene (total)	ND	1.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	99% 70-130%
17060-07-0	1,2-Dichloroethane-D4	96% 70-130%
2037-26-5	Toluene-D8	104% 70-130%
460-00-4	4-Bromofluorobenzene	98% 70-130%

6.1.1
6

Blank Spike/Blank Spike Duplicate Summary

Job Number: DA56084
 Account: LTENCODE WSP
 Project: Irwin Taylor/Marble Redstone

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V7V4436-BS	7V89265.D	1	06/13/23	MM	n/a	n/a	V7V4436
V7V4436-BSD	7V89266.D	1	06/13/23	MM	n/a	n/a	V7V4436

The QC reported here applies to the following samples:

Method: SW846 8260B

DA56084-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	50	56.6	113	56.5	113	0	70-130/30
100-41-4	Ethylbenzene	50	57.8	116	57.8	116	0	70-130/30
108-88-3	Toluene	50	58.0	116	58.9	118	2	70-130/30
1330-20-7	Xylene (total)	150	174	116	175	117	1	70-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	102%	103%	70-130%
17060-07-0	1,2-Dichloroethane-D4	104%	88%	70-130%
2037-26-5	Toluene-D8	102%	100%	70-130%
460-00-4	4-Bromofluorobenzene	95%	98%	70-130%

* = Outside of Control Limits.

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: DA56084
Account: LTENCODE WSP
Project: Irwin Taylor/Marble Redstone

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGA2742-MB	GA61394.D	1	06/14/23	MB	n/a	n/a	GGA2742

The QC reported here applies to the following samples:

Method: SW846 8015D

DA56084-1

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	0.050	0.040	mg/l	

CAS No.	Surrogate Recoveries	Limits
120-82-1	1,2,4-Trichlorobenzene	114% 60-140%

7.1.1

7

Method Blank Summary

Job Number: DA56084
Account: LTENCODE WSP
Project: Irwin Taylor/Marble Redstone

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GFK286-MB	FK3925.D	1	06/12/23	MM	n/a	n/a	GFK286

The QC reported here applies to the following samples:

Method: RSK175 MOD

DA56084-1

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	ND	0.00080	0.00070	mg/l	
74-84-0	Ethane	ND	0.0016	0.0010	mg/l	
74-98-6	Propane	ND	0.0022	0.0017	mg/l	

7.1.2

7

Blank Spike/Blank Spike Duplicate Summary

Job Number: DA56084
 Account: LTENCODE WSP
 Project: Irwin Taylor/Marble Redstone

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGA2742-BS	GA61391.D	1	06/14/23	MB	n/a	n/a	GGA2742
GGA2742-BSD	GA61392.D	1	06/14/23	MB	n/a	n/a	GGA2742

The QC reported here applies to the following samples:

Method: SW846 8015D

DA56084-1

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	BSD mg/l	BSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	2.2	1.66	75	1.70	77	2	64-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
120-82-1	1,2,4-Trichlorobenzene	119%	118%	60-140%

* = Outside of Control Limits.

7.2.1
7

Blank Spike/Blank Spike Duplicate Summary

Job Number: DA56084
 Account: LTENCODE WSP
 Project: Irwin Taylor/Marble Redstone

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GFK286-BS	FK3926.D	10	06/12/23	MM	n/a	n/a	GFK286
GFK286-BSD	FK3927.D	10	06/12/23	MM	n/a	n/a	GFK286

The QC reported here applies to the following samples:

Method: RSK175 MOD

DA56084-1

CAS No.	Compound	Spike	BSP	BSP	BSD	BSD	RPD	Limits
		mg/l	mg/l	%	mg/l	%		Rec/RPD
74-82-8	Methane	0.512	0.576	113	0.572	112	1	70-135/30
74-84-0	Ethane	0.923	1.11	120	1.10	119	1	70-147/30
74-98-6	Propane	1.38	1.58	115	1.57	114	1	70-140/30

7.2.2
7

* = Outside of Control Limits.

GC/LC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: DA56084
 Account: LTENCODE WSP
 Project: Irwin Taylor/Marble Redstone

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP23862-MB	LW12215.D	1	06/12/23	JB	06/12/23	OP23862	GLW460

The QC reported here applies to the following samples:

Method: SW846-8015D

DA56084-1

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	0.20	0.19	mg/l	

CAS No.	Surrogate Recoveries	Limits
84-15-1	o-Terphenyl	76% 10-131%

8.1.1
8

Blank Spike Summary

Job Number: DA56084
 Account: LTENCODE WSP
 Project: Irwin Taylor/Marble Redstone

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP23862-BS	LW12216.D	1	06/12/23	JB	06/12/23	OP23862	GLW460

The QC reported here applies to the following samples:

Method: SW846-8015D

DA56084-1

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	Limits
	TPH-DRO (C10-C28)	5	3.82	76	20-130

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	95%	10-131%

8.2.1
8

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: DA56084
 Account: LTENCODE WSP
 Project: Irwin Taylor/Marble Redstone

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP23862-MS	LW12217.D	1	06/12/23	JB	06/12/23	OP23862	GLW460
OP23862-MSD ^a	LW12218.D	1	06/12/23	JB	06/12/23	OP23862	GLW460
DA56084-1	LW12222.D	1	06/12/23	JB	06/12/23	OP23862	GLW460

The QC reported here applies to the following samples:

Method: SW846-8015D

DA56084-1

CAS No.	Compound	DA56084-1 mg/l	Spike Q mg/l	MS mg/l	MS %	Spike mg/l	MSD mg/l	MSD %	RPD	Limits Rec/RPD
	TPH-DRO (C10-C28)	ND	5	3.76	75	5	2.27	45	49*	20-130/30

CAS No.	Surrogate Recoveries	MS	MSD	DA56084-1	Limits
84-15-1	o-Terphenyl	90%	57%	84%	10-131%

(a) RPD High, BS within control, good to report

* = Outside of Control Limits.

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: DA56084
Account: LTENCODE - WSP
Project: Irwin Taylor/Marble Redstone

QC Batch ID: MP37527
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 06/12/23

Metal	RL	IDL	MDL	MB raw	final
Aluminum	100	46	50		
Antimony	30	14	20		
Arsenic	25	22	7		
Barium	10	.3	3		
Beryllium	10	1	2		
Boron	50	3.3	10		
Cadmium	10	1.9	5		
Calcium	400	6.6	61	-6.5	<400
Chromium	10	1.1	2		
Cobalt	5.0	2.7	4		
Copper	10	4.6	6		
Iron	20	8.9	10		
Lead	50	13	15		
Lithium	5.0	.6	4		
Magnesium	200	50	40	2.8	<200
Manganese	5.0	.5	1		
Molybdenum	10	8.5	3		
Nickel	30	6.2	10		
Phosphorus	150	91	110		
Potassium	1000	84	300	-26	<1000
Selenium	50	30	30		
Silicon	100	41	50		
Silver	30	.6	5		
Sodium	400	13	150	27.9	<400
Strontium	5.0	.1	1		
Thallium	12	17	11		
Tin	60	41	51		
Titanium	10	.5	2		
Uranium	50	3.9	20		
Vanadium	10	.9	2		
Zinc	30	9	7		

Associated samples MP37527: DA56084-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: DA56084
Account: LTENCODE - WSP
Project: Irwin Taylor/Marble Redstone

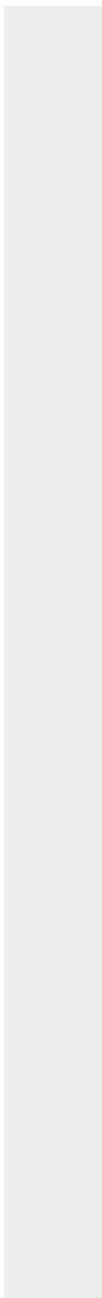
QC Batch ID: MP37527
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 06/12/23

Metal	RL	IDL	MDL	MB raw	final
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(anr) Analyte not requested



MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA56084
 Account: LTENCODE - WSP
 Project: Irwin Taylor/Marble Redstone

QC Batch ID: MP37527
 Matrix Type: AQUEOUS

Methods: EPA 200.7
 Units: ug/l

Prep Date: 06/12/23

Metal	DA56097-1 Original MS		SpikeLot ICPAL5	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic					
Barium					
Beryllium					
Boron					
Cadmium	anr				
Calcium	40500	64600	25000	96.4	70-130
Chromium	anr				
Cobalt					
Copper	anr				
Iron	anr				
Lead	anr				
Lithium	anr				
Magnesium	10000	35900	25000	103.6	70-130
Manganese	anr				
Molybdenum					
Nickel	anr				
Phosphorus					
Potassium	3110	28800	25000	102.8	70-130
Selenium					
Silicon					
Silver					
Sodium	32400	56500	25000	96.4	70-130
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc	anr				

Associated samples MP37527: DA56084-1

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

9.1.2
 9

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA56084
Account: LTENCODE - WSP
Project: Irwin Taylor/Marble Redstone

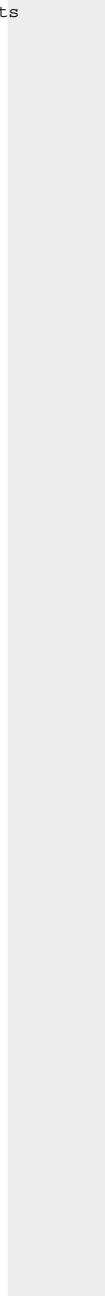
QC Batch ID: MP37527
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 06/12/23

Metal	DA56097-1 Original MS	SpikeLot ICPAL5	% Rec	QC Limits
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(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested



MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA56084
 Account: LTENCODE - WSP
 Project: Irwin Taylor/Marble Redstone

QC Batch ID: MP37527
 Matrix Type: AQUEOUS

Methods: EPA 200.7
 Units: ug/l

Prep Date: 06/12/23

Metal	DA56097-1 Original MSD		SpikeLot ICPAL5	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic						
Barium						
Beryllium						
Boron						
Cadmium	anr					
Calcium	40500	65000	25000	98.0	0.6	20
Chromium	anr					
Cobalt						
Copper	anr					
Iron	anr					
Lead	anr					
Lithium	anr					
Magnesium	10000	36000	25000	104.0	0.3	20
Manganese	anr					
Molybdenum						
Nickel	anr					
Phosphorus						
Potassium	3110	28800	25000	102.8	0.0	20
Selenium						
Silicon						
Silver						
Sodium	32400	56700	25000	97.2	0.4	20
Strontium						
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc	anr					

Associated samples MP37527: DA56084-1

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

9.12
9

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA56084
Account: LTENCODE - WSP
Project: Irwin Taylor/Marble Redstone

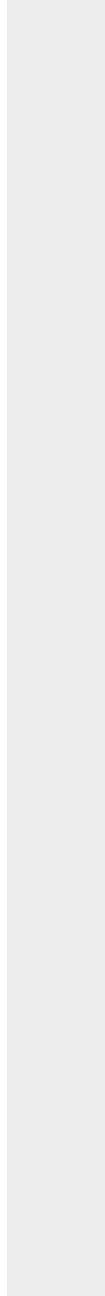
QC Batch ID: MP37527
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 06/12/23

Metal	DA56097-1 Original MSD	SpikeLot ICPALS5 % Rec	MSD RPD	QC Limit
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(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested



9.1.2
9

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: DA56084
 Account: LTENCODE - WSP
 Project: Irwin Taylor/Marble Redstone

QC Batch ID: MP37527
 Matrix Type: AQUEOUS

Methods: EPA 200.7
 Units: ug/l

Prep Date: 06/12/23

Metal	BSP Result	SpikeLot ICPALL5	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium	anr			
Calcium	25000	25000	100.0	85-115
Chromium	anr			
Cobalt				
Copper	anr			
Iron	anr			
Lead	anr			
Lithium	anr			
Magnesium	26200	25000	104.8	85-115
Manganese	anr			
Molybdenum				
Nickel	anr			
Phosphorus				
Potassium	25700	25000	102.8	85-115
Selenium				
Silicon				
Silver				
Sodium	25300	25000	101.2	85-115
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc	anr			

Associated samples MP37527: DA56084-1

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

9.1.3
 9

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: DA56084
Account: LTENCODE - WSP
Project: Irwin Taylor/Marble Redstone

QC Batch ID: MP37527
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 06/12/23

Metal	BSP Result	Spikelot ICPALL5	% Rec	QC Limits
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(anr) Analyte not requested



General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: DA56084
Account: LTENCODE - WSP
Project: Irwin Taylor/Marble Redstone

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Alkalinity, Bicarbonate as CaC	GN60442	5.0	0.0	mg/l	100	103	102.5	90-110%
Alkalinity, Carbonate	GN60443	5.0	0.0	mg/l	100	103	102.5	90-110%
Alkalinity, Total as CaCO3	GN60441	5.0	0.0	mg/l	100	103	102.5	90-110%
Bromide	GP34494/GN60481	0.050	0.0	mg/l	0.5	0.536	107.2	90-110%
Bromide	GP34529/GN60520	0.050	0.0	mg/l	0.5	0.513	102.6	90-110%
Chloride	GP34494/GN60481	0.50	0.0	mg/l	5	5.25	105.0	90-110%
Chloride	GP34529/GN60520	0.50	0.0	mg/l	5	4.86	97.2	90-110%
Fluoride	GP34529/GN60520	0.10	0.0	mg/l	1	0.996	99.6	90-110%
Nitrogen, Nitrate	GP34494/GN60481	0.010	0.0	mg/l	0.1	0.105	105.0	90-110%
Nitrogen, Nitrate	GP34529/GN60520	0.010	0.0	mg/l	0.1	0.102	102.0	90-110%
Nitrogen, Nitrite	GP34494/GN60481	0.0040	0.0	mg/l	0.05	0.0529	105.8	90-110%
Nitrogen, Nitrite	GP34529/GN60520	0.0040	0.0	mg/l	0.05	0.0496	99.2	90-110%
Phosphate, Ortho	GP34529/GN60520	0.050	0.0	mg/l	0.5	0.516	103.2	90-110%
Phosphorus, Total	GP34454/GN60428	0.010	0.0	mg/l	0.2	0.183	91.5	90-110%
Solids, Total Dissolved	GN60408	10	0.0	mg/l	250	243	97.2	90-110%
Sulfate	GP34494/GN60481	0.50	0.0	mg/l	5	5.21	104.2	90-110%
Sulfate	GP34529/GN60520	0.50	0.0	mg/l	5	4.98	99.6	90-110%

Associated Samples:

Batch GN60408: DA56084-1
 Batch GN60441: DA56084-1
 Batch GN60442: DA56084-1
 Batch GN60443: DA56084-1
 Batch GP34454: DA56084-1
 Batch GP34494: DA56084-1
 Batch GP34529: DA56084-1
 (*) Outside of QC limits

10.1
10

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: DA56084
Account: LTENCODE - WSP
Project: Irwin Taylor/Marble Redstone

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Alkalinity, Total as CaCO3	GN60441	DA56053-1	mg/l	625	630	0.8	0-20%
Phosphorus, Total	GP34454/GN60428	DA56055-1	mg/l	0.028	0.028	0.0	0-20%
Solids, Total Dissolved	GN60408	DA56085-1	mg/l	163	165	1.2	0-5.44%

Associated Samples:

Batch GN60408: DA56084-1

Batch GN60441: DA56084-1

Batch GP34454: DA56084-1

(*) Outside of QC limits

10.2
10

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: DA56084
Account: LTENCODE - WSP
Project: Irwin Taylor/Marble Redstone

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Alkalinity, Total as CaCO3	GN60441	DA56053-1	mg/l	625	100	715	90.0	80-120%
Bromide	GP34494/GN60481	DA56241-2	mg/l	0.63 U	12.5	13.1	104.8	80-120%
Bromide	GP34529/GN60520	DA56080-1	mg/l	0.0	12.5	12.8	102.4	80-120%
Chloride	GP34494/GN60481	DA56241-2	mg/l	138	125	266	102.4	80-120%
Chloride	GP34529/GN60520	DA56080-1	mg/l	36.7	125	159	97.8	80-120%
Fluoride	GP34529/GN60520	DA56080-1	mg/l	0.0	25	25.5	102.0	80-120%
Nitrogen, Nitrate	GP34494/GN60481	DA56241-2	mg/l	2.4	2.5	4.9	100.0	80-120%
Nitrogen, Nitrate	GP34529/GN60520	DA56080-1	mg/l	0.57	2.5	3.1	101.2	80-120%
Nitrogen, Nitrite	GP34494/GN60481	DA56241-2	mg/l	0.48	1.25	1.8	105.6	80-120%
Nitrogen, Nitrite	GP34529/GN60520	DA56080-1	mg/l	1.3	1.25	1.2	-8.0N(a)	80-120%
Phosphate, Ortho	GP34529/GN60520	DA56080-1	mg/l	0.0	12.5	12.9	103.2	80-120%
Phosphorus, Total	GP34454/GN60428	DA56055-1	mg/l	0.028	0.2	0.22	96.0	90-110%
Sulfate	GP34494/GN60481	DA56241-2	mg/l	196	125	321	100.0	80-120%
Sulfate	GP34529/GN60520	DA56080-1	mg/l	268	125	394	100.8	80-120%

Associated Samples:

Batch GN60441: DA56084-1

Batch GP34454: DA56084-1

Batch GP34494: DA56084-1

Batch GP34529: DA56084-1

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

10.3
10

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: DA56084
Account: LTENCODE - WSP
Project: Irwin Taylor/Marble Redstone

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Alkalinity, Total as CaCO3	GN60441	DA56053-1	mg/l	625	100	720	0.7	20%
Bromide	GP34494/GN60481	DA56241-2	mg/l	0.63 U	12.5	12.9	1.5	20%
Bromide	GP34529/GN60520	DA56080-1	mg/l	0.0	12.5	12.8	0.0	20%
Chloride	GP34494/GN60481	DA56241-2	mg/l	138	125	265	0.4	20%
Chloride	GP34529/GN60520	DA56080-1	mg/l	36.7	125	159	0.0	20%
Fluoride	GP34529/GN60520	DA56080-1	mg/l	0.0	25	25.6	0.4	20%
Nitrogen, Nitrate	GP34494/GN60481	DA56241-2	mg/l	2.4	2.5	4.8	2.1	20%
Nitrogen, Nitrate	GP34529/GN60520	DA56080-1	mg/l	0.57	2.5	3.1	0.0	20%
Nitrogen, Nitrite	GP34494/GN60481	DA56241-2	mg/l	0.48	1.25	1.8	0.0	20%
Nitrogen, Nitrite	GP34529/GN60520	DA56080-1	mg/l	1.3	1.25	1.2	0.0	20%
Phosphate, Ortho	GP34529/GN60520	DA56080-1	mg/l	0.0	12.5	12.9	0.0	20%
Phosphorus, Total	GP34454/GN60428	DA56055-1	mg/l	0.028	0.2	0.23	4.4	20%
Sulfate	GP34494/GN60481	DA56241-2	mg/l	196	125	319	0.6	20%
Sulfate	GP34529/GN60520	DA56080-1	mg/l	268	125	394	0.0	20%

Associated Samples:

Batch GN60441: DA56084-1

Batch GP34454: DA56084-1

Batch GP34494: DA56084-1

Batch GP34529: DA56084-1

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

10.4
10

ATTACHMENT 1 - Example Field Sampling Data Sheet

Field Sampling Data Sheet

COGCC Facility ID _____ Facility Name Irwin-Taylor Date of Sample 06/09/23

Site Address _____ Site Contact _____ Phone # _____

Sample Type (baseline, post-drill, etc.): Post Drill O&G API Number _____

Property Owner Name Nancy Lillrose Phone # 303-489-6671

Mailing Address 1857 carlson RD, Parker CO 80138

Individuals Present (Who was on-site during the sampling?) Alisha Dahal

Handed Out:

Introduction Letter? **Y** **N** FAQ Sheet? **Y** **N** How Well Do You Know Your Water Well Booklet? **Y** **N**

Water Well Information from Permit Records

Permit Number: 179067 Receipt Number: 368398 Total Depth (ft): 320 Static Water Level (ft): _____

Yield (GPM): 11 Well Diameter (in): _____

Water Well Information Onsite

GPS Location (field): _____

GPS Location (post-processed): 39.5040200182642, -104.629865570205

Legal Location (qtrqtr Section Township Range): NWNE Sec 26 T6S R65W

Casing height (in.): _____ Ground Elevation (ft): _____ How determined: _____

Approximate distance to the Oil & Gas well pad: 2,400'

%LEL at wellhead (if measured): _____ %CH₄ (by volume) at wellhead (if measured): _____

Photo(s) Taken? **Y** **N** Weather conditions: Sunny

Where was the sample taken? (Outside Tap, Well House, Kitchen Tap, Spring, Seep, etc.) Hydrant in front of the house

Condition of the Well, Spring or Seep (Wellhead sealed? Does the ground slope away from the well? Visible contamination of spring/seep? etc.): Sealed Well head, Clear no odor, No comment from Land owner on taste/odor



WELL DEVELOPMENT/PURGING FORM

Project Name: Travin Taylor

Project Number: 31403339

Well ID: Nancy - 268398

Developer's Initials: AD Purging Method: Pump Bailer Other

PURGING REQUIREMENTS

When using bailers, remove from 3 to 5 casing volumes and sample when pH, S.C. and Temp are +/- 10% for 2 successive readings.

When using a low-flow pump, there is no casing volume requirement. An equilibrium flow rate must first be established, and then sample when the following criteria are met for 3 successive readings:

Well Stabilization Criteria:

pH	+/- 0.1 standard units
S.C.	+/- 3% microemens
D.O.	+/- 0.3 mg/L
ORP	+/- 10 millivolts
Turbidity	+/- 10% NTUs
Discharge	0.2 to 0.5 liters/min
Drawdown	<0.33 ft once discharge is met
Temp	no specific criteria

Date	Time	Initial Water Depth	pH	Temp (C)	S.C. (u-S)	Dissolved Oxygen (mg/L)	ORP (mV)	Volume Removed (gallons)	Casing Volumes Removed	Comments (Color, Turbidity, Odor, NAPL)
06/09/23	11:20		7.20	13.4	288.3	11.30	93.8	110		Clear, NO Odor
	11:25		7.02	13.2	273.2	8.60	94.4			Clear, NO Odor
	11:30		6.93	12.9	272.9	8.66	116.2			Clear, NO Odor
	11:35		6.99	12.9	273.4	8.52	115.1			Clear, NO Odor
	11:40		6.99	13.2	272.5	8.19	100.6	1120		Clear, NO Odor
										Sampled @ 12:00
										YSI Calibration
										Standard Initial Final Temp
										pH 7 6.99 7.00 19.71
										PH 4 3.78 4.00 19.66
										ORP 235 mV 220 mV 20.01
										Splend 1399 us/cm 1413 us/cm 19.50

Casing Volume = 0.163 (for 2" diameter wells) x (Total Depth of Well from measuring point - Initial Water Depth) = _____ x 3 well volumes = _____

(Use 0.653 for 4" diameter wells or 1.469 for 6" diameter wells or 0.041 for 1" diameter wells.)