2023 Annual Monitoring Report

Groundwater Quality Monitoring Program
Multiple Oil & Gas Well Sites

Longmont, Colorado

November 2, 2023 | Terracon Project No. 22227034

Prepared for:

City of Longmont
1100 South Sherman Street
Longmont, Colorado 80501

Prepared by:

Terracon Consultants, Inc.
Longmont, Colorado

Terracon

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- Facilities
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November 2, 2023

City of Longmont
1100 South Sherman Street
Longmont, Colorado 80501

Attn: Dr. Jane Turner, P.E., PhD
P: (303) 774-4545
E: jane.turner@longmontcolorado.gov

RE: 2023 Annual Monitoring Report
Groundwater Quality Monitoring Program
Multiple Oil & Gas Well Sites
Longmont, Colorado
Terracon Project No. 22227034

Dear Dr. Turner:

Terracon Consultants, Inc. (Terracon) is pleased to submit our report of the 2023 Annual Groundwater Quality Monitoring Program activities performed at seventeen plugged and abandoned (PA) oil and gas (O&G) well sites, and one former tank battery site located within the City of Longmont, Colorado. The report presents data from recent field activities that included the collection of groundwater samples for laboratory analysis. Terracon conducted the Investigation in general accordance with our proposal (P22227034), dated April 15, 2022.

Terracon appreciates this opportunity to provide environmental consulting services to The City of Longmont. Should you have any questions or require additional information, please do not hesitate to contact our office.

Sincerely,
Terracon Consultants, Inc.

Travis Whalen
Field Scientist

John C. Graves, P.G.
Senior Principal/Regional Manager

Table of Contents

Appendices

APPENDIX A – EXHIBITS & TABLES

APPENDIX B – ANALYTICAL REPORTS & CHAIN OF CUSTODY DOCUMENT

Executive Summary

In 2013, Terracon installed and/or sampled groundwater monitoring wells at the active oil and gas (O&G) wells located within the City of Longmont (City). The results of these activities are described in the First and Third Quarter 2013 Monitoring Reports (May 31, 2013 and December 31, 2013, respectively). Terracon has continued to execute sampling activities for the City of Longmont Groundwater Quality Monitoring Program, and the results of these activities are described in the subsequent 2014 through 2022 monitoring reports.

Since 2013, Terracon has assisted the City with the investigation of additional active and plugged and abandoned (PA) well sites within Longmont City limits to add to the annual groundwater quality monitoring program. Each of the current program sites were sampled during the 2023 monitoring event.

This groundwater quality sampling event was performed in accordance with the scope of services outlined in Terracon Proposal No. P22227034, dated April 15, 2022. A total of 57 of the planned 59 monitoring wells were sampled on April 11-12, June 19-21, June 23, June 27-28, and August 3, 2023 to evaluate potential impacts to groundwater from current or historical oil and gas (O&G) extraction and production (E&P) operations at the sites. Two monitoring wells (Sherwood 2-MW03 and Serafini MW-07) were not sampled as the wells were observed to have been silted in, and a groundwater sample could not be obtained. Groundwater samples were analyzed in accordance with the procedures outlined in Section 3 of this report.

A summary of our findings, conclusions, and recommendations is provided below. It should be recognized that details were not included or fully developed in this section, and the report must be read in its entirety for a comprehensive understanding of the items contained herein.

Findings and Conclusions

Volatile organic compound (VOC) constituents were not reported at concentrations above laboratory detection limits in groundwater samples collected during this sampling event.

Dissolved methane in groundwater may be an indication of a release at an O&G production well site. Neither the Colorado Oil and Gas Conservation Commission (COGCC) nor the Colorado Department of Public Health and Environment (CDPHE) have developed standards for methane in groundwater. The COGCC has developed standards for source water (e.g., water wells) in the Greater Wattenberg Area (GWA), which includes the project area. Water wells that are registered with Colorado Division of Water Resources (DWR) include:

- Household;
- Domestic;
- Livestock;
- Irrigation;
- Municipal/Public;
- Commercial; and
- permitted or adjudicated springs

Section 318A.f.(8) of the COGCC Rules and Regulations for baseline sampling of water wells in the GWA states that concentrations of methane greater than 1.0 mg/L require a gas compositional and stable isotope analysis of the methane to determine the source of the methane (e.g. thermogenic, biogenic or a mixture of the two). Currently, the reported methane concentrations do not require additional investigation of groundwater.

Several inorganic parameters (nitrogen, sulfates, and chloride) were reported above CDPHE and COGCC Groundwater Standards. However, laboratory analytical results have remained consistent with previous sampling events, and results may be indicative of background concentrations based on former analytical data and lack of production of produced water at currently active sites.

In general, increased chloride and sulfate concentrations correspond to increases in specific conductance and turbidity due to slow recharge of the monitoring well and the presence of clay in the formation. Clay is a smaller particle and passes through the monitoring well filter pack, and inorganics can attach to the clay particles.

Recomendations

The objective of the investigation was to evaluate the presence of constituents of concern in the groundwater above relevant laboratory detection limits and/or regulatory limits associated with historical O&G operations at the sites.

Terracon recommends the continued monitoring of all sites currently enrolled in the City of Longmont Annual Groundwater Quality Monitoring Event on an annual basis. The continued monitoring of the aforementioned sites will work to augment the existing data set. This information will be used to further assess the extent of groundwater impacts present, track trends in the groundwater quality, and to evaluate if sites shall be added or removed from the annual sampling list.

Additionally, Terracon recommends properly abandoning monitoring wells SH2-MW03 and SGU-MW07, at the Sherwood #2 and Serafini Gas Unit sites, respectively, which have been filled in with sediment and are no longer usable. Terracon also recommends replacing these silted in wells with newly installed groundwater monitoring wells for continued monitoring as part of the City of Longmont Annual Groundwater Quality Monitoring Event. Terracon can provide a supplemental proposal and cost estimate for these additional services.

1.0 Introduction

This project consists of sampling monitoring wells associated with seventeen PA O&G well sites and one former tank battery site located in the City of Longmont, Colorado, (City). The 2023 monitoring event analyzed potential impacts to groundwater, in accordance with Terracon Proposal No. P22227034, dated April 15, 2022, at the following sites:

- Domenico #1: three monitoring wells;
- Evans #6 Tank Battery: three monitoring wells;
- Evans #6 Wellhead: three monitoring wells;
- Stamp #1 Well Site: three monitoring wells;
- Stamp 31-2C Well Site: six monitoring wells;
- City of Longmont #1: three monitoring wells;
- Powell #1: three monitoring wells;
- Sherwood #1: three monitoring wells;
- Sherwood #2: three monitoring wells;
- Tabor #1: three monitoring wells;
- Tabor #7: three monitoring wells;
- Longmont 8-10k: three monitoring wells;
- Rider #1: three monitoring wells;
- Maruyama #1: three monitoring wells;
- George Mayeda #1: three monitoring wells;
- Mary #2: three monitoring wells;
- Wertman #1: three monitoring wells; and
- Serafini Gas Unit: five monitoring wells.

2.0 Scope of Services

The 2023 annual groundwater quality monitoring services described below were performed on April 11-12, June 19-21, June 23, June 27-28, and August 3,2023, as a modification to the sampling strategy outlined in the Sampling and Analysis Plan (SAP) prepared and issued by Terracon on February 1, 2013. Based on the initial groundwater sampling results reported in 2013, the sampling frequency and laboratory analyte list have been modified.

The monitoring wells at the following well sites were sampled during this annual event:

- Domenico #1: DM1-MW01, DM1-MW02, and DM1-MW03;
- Evans #6 Tank Battery: E6T-MW01, E6T-MW-02, and E6T-MW03;
- Evans #6 Wellhead: E6W-MW-01, E6W-MW02, and E6W-MW03;
- Stamp #1: ST1-MW02, ST1-MW03 and ST1-MW05;
- Stamp 31-2C Well Site: S31-MW01, S31-MW02, S31-MW03, S31-MW04, S31-MW05, and S31-MW06
- City of Longmont #1: CL1-MW01, CL1-MW02, and CL1-MW03;
- Powell #1: PL1-MW01, PL1-MW02, and PL1-MW03;
- Sherwood #1: SH1-MW01, SH1-MW02, and SH1-MW03;
- Sherwood #2: SH2-MW01 and SH2-MW02*;
- Tabor #1: TB1-MW01, TB1-MW02, and TB1-MW03R;
- Tabor #7: TB7-MW01, TB7-MW02, and TB7-MW03;
- Longmont 8-10K: LM8-MW01, LM8-MW02, and LM8-MW03;
- Rider #1 Well Site: RD1-MW-01, RD1-MW02, and RD1-MW03;
- Maruyama #1: MY1-MW01, MY1-MW02, and MY1-MW03;
- George Mayeda #1: GM1-MW01, GM1-MW02, and GM1-MW03;
- Mary #2: MR2-MW01, MR2-MW02, and MR2-MW03;
- Wertman #1: WT1-MW01, WT1-MW02, and WT1-MW03; and
- Serafini Gas Unit: SGU-MW01, SGU-MW02, SGU-MW03, and SGU-MW-06*

*Monitoring wells SH2-MW03 at the Sherwood #2 site and SGU-MW07 at the Serafini Gas Unit site were not sampled during this annual groundwater sampling event due to both monitoring wells being filled in with sediment. Groundwater samples were not able to be collected.

2.1 Standard of Care

Terracon's services were performed in a manner consistent with generally accepted practices of the profession undertaken in similar studies in the same geographical area during the same time. Terracon makes no warranties, express or implied, regarding the findings, conclusions, or recommendations. Terracon does not warrant the work of laboratories, regulatory agencies, or other third parties supplying information used in the preparation of the report. These Investigation services were performed in accordance with the scope of work agreed with you, our client, as reflected in our proposal and were not intended to be in strict conformance with ASTM E1903-19.

2.2 Additional Scope Limitations

Findings, conclusions, and recommendations resulting from these services are based upon information derived from the on-site activities and other services performed under this scope of work; such information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, nondetectable, or not present during these services. We cannot represent that the site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during this sampling event. Subsurface conditions may vary from those encountered at specific wells or during other surveys, tests, assessments, investigations, or exploratory services. The data, interpretations, findings, and our recommendations are based solely upon data obtained at the time and within the scope of these services.

2.3 Reliance

This report has been prepared for the exclusive use of the City of Longmont, and any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the site) is prohibited without the express written authorization of the City of Longmont and Terracon. Any unauthorized distribution or reuse is at the City of Longmont's sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions, and limitations stated in the proposal, Investigation report, and Terracon's Master Services Agreement (MSA) with the City of Longmont. The limitation of liability defined in the terms and conditions of the MSA is the aggregate limit of Terracon's liability to the City of Longmont and all relying parties unless otherwise agreed in writing.

3.0 Field Investigation

3.1 Safety

Terracon is committed to the safety of all its employees. As such, and in accordance with our Incident and Injury Free® safety goals, Terracon conducted the fieldwork under a site-specific health and safety plan. The plan identified site-specific job hazards and proper pre-task planning procedures. Work was performed using Occupational Safety & Health Administration (OSHA) Level D work attire consisting of hard hats, high-visibility attire, safety glasses, protective gloves, and protective boots.

3.2 Sampling and Analytical Program Summary

Terracon sampled a total of 57 groundwater monitoring wells for the parameters listed in the table below.

Parameters	Analytical Method
Volatile Organic Compounds (VOCs)	EPA Method 8260
Dissolved Gases: Methane, Ethane and Ethylene	RSK 175
Dissolved Gases: Carbon Dioxide	4500CO2 D22011
Chloride	EPA Method 300.0
Sulfate	EPA Method 300.0
Total Dissolved Solids (TDS)	SM 2320B

EPA = Environmental Protection Agency; SW-846 analytical methods; SM = Standard Methods

Additionally, temperature, pH, specific conductance, dissolved oxygen and oxygen reducing potential measurements were collected in the field during groundwater sampling. Specific conductance and pH measurements are summarized on Table 2 in Appendix A of this report.

3.3 Groundwater Sampling

Terracon used hand bailing sampling techniques with a disposable bailer to purge and obtain a representative groundwater sample from the monitoring wells. The monitoring wells were

sampled in accordance with the February 1, 2013 SAP. After groundwater field parameters stabilized, a groundwater sample was collected from each of the monitoring wells. The groundwater samples were placed in laboratory provided, pre-cleaned containers and stored in a cooler with ice during delivery to the laboratory. The samples were submitted under chain-of-custody protocol and analyzed for the parameters summarized in Section 3.2 on a standard turn-around time and according to the appropriate United States Environmental Protection Agency (USEPA) analytical methods.

The groundwater sample naming convention used is as follows:

- [Site Abbreviation]-[Well Designation].
- Example: “SH2-MW01” is the groundwater sample collected from Sherwood #2 well site, monitoring well MW01.

The groundwater samples were submitted to Pace Analytical (Pace) in Mount Juliet, Tennessee. The laboratories performed Quality Analysis/Quality Control (QA/QC) during the analysis process of the groundwater samples. The QA/QC process involved completing a method blank, laboratory control sample, matrix spike, matrix spike duplicate, and a sample duplicate to test the accuracy and calibration of the laboratory equipment and processes.

4.0 Field Investigation Results

4.1 Hydrogeology

Depth to groundwater and groundwater elevation data measured in April and June 2023 were used to generate potentiometric surface maps and estimated groundwater flow direction. Potentiometric surface maps are only available at sites where sufficient wellhead survey information is available. The potentiometric surface maps and groundwater elevation data are included in Appendix A as site-specific Exhibits and Table 1, respectively. As depicted on the potentiometric surface maps groundwater beneath most of the well sites, in general, flows towards the St. Vrain Creek. The well site groundwater flow directions are as follows:

- City of Longmont #1: northeast;
- Serafini Gas Unit: northeast;
- Powell #1: northeast;
- Sherwood #1: northeast;
- Sherwood #2: assumed northeast, towards St. Vrain Creek;

- Evans #6 Wellhead: north-northeast;
- Evans #6 Tank Battery: northeast;
- Domenico #1: north;
- Stamp #1: east-northeast;
- Stamp #31-2C: southwest;
- Tabor #1: north-northeast;
- Tabor #7: north-northwest;
- Longmont 8-10K: southeast;
- Rider #1: assumed east, towards Union Reservoir;
- Maruyama #1: north;
- George Mayeda #1: east;
- Mary #2: northeast; and
- Wertman #1: east-northeast.

5.0 Analytical Results

The laboratory analytical reports and chain-of-custody records are included in Appendix B. The following sections summarize the results of the analytical testing.

Laboratory analytical results for the groundwater samples were compared to the groundwater standard applicable to O&G well sites, COGCC Table 910-1 standards (May 1, 2018) and the CDPHE Regulation 41 Groundwater Quality Standards, December 30, 2016 (GWQS). A summary of constituent concentrations exceeding these standards in the groundwater samples is included in Table 2.

The groundwater analytical results for detected concentrations are discussed in the following sections. Groundwater analytical data and corresponding action levels are summarized in Table 2 (Appendix A).

5.1 Organic Compounds

Dissolved ethane and ethene were not detected above their respective laboratory reporting limit in the groundwater samples collected. Carbon dioxide was reported at a concentration above laboratory detection limits in groundwater samples collected from multiple sites during this annual sampling event. Neither the CDPHE nor the COGCC has set a regulatory standard for these organic compounds in groundwater, but the reported concentrations are observed to be relatively low and are not considered to be indicative of an environmental concern.

Dissolved methane was reported at the Powell #1 Wellsite in sample PL1-MW02 at a concentration of 0.0203 mg/L. Section 318A.f.(8) of the COGCC Rules and Regulations for baseline sampling of water wells in the GWA states that concentrations of methane greater than 1.0 mg/L require a gas compositional and stable isotope analysis of the methane to determine the source of the methane (e.g. thermogenic, biogenic or a mixture of the two). In accordance with the COGCC Rules and Regulations, the reported methane concentrations do not require additional analyses of groundwater to be performed.

5.2 Inorganics in Groundwater

Inorganic cations and anions present in groundwater can be secondary indicators of well site releases associated with produced water. The COGCC has defined the groundwater standard exceedance concentrations for chloride and sulfate to be a regional background concentration with a multiplier of 1.25. Terracon was able to determine regional background concentration levels for chloride and sulfate by comparing current concentrations to data from previous years' monitoring events. Terracon utilized analytical data from the current and previous annual sampling events (as far back as 2013 at some sites) from each of the sites and has determined that the reported concentrations of chloride and sulfate for the 2023 sampling event are within their respective regional background concentrations. Chloride and sulfate concentrations measured at each site are comparable in magnitude with that of previous values and therefore have been determined to exist at elevated concentrations above COGCC and CDPHE regulatory limits, but within the regional background levels.

Elevated concentrations of sulfates and chlorides above their respective laboratory analytical detection limits were reported in groundwater samples collected from monitoring wells at each site sampled during this monitoring event. Please refer to the groundwater analytical results in Table 2 included in this report for a detailed overview of regulatory exceedances. A brief summary of the analytical results is included below.

Sulfate concentrations were reported above COGCC and CDPHE limits, but within regional background levels in groundwater samples collected from monitoring wells at the Powell #1, Evans #6 Tank Battery, Evans #6 Wellhead, Longmont 8-10K, Domenico #1, Sherwood #1,

Sherwood #2, Tabor #1, Tabor #7, Wertman #1, Stamp #1, and Mary #2 well sites. Chloride concentrations were reported above COGCC and CDPHE limits, but within regional background levels in groundwater samples collected from monitoring wells at the Stamp #1 and Stamp 31-2C well sites.

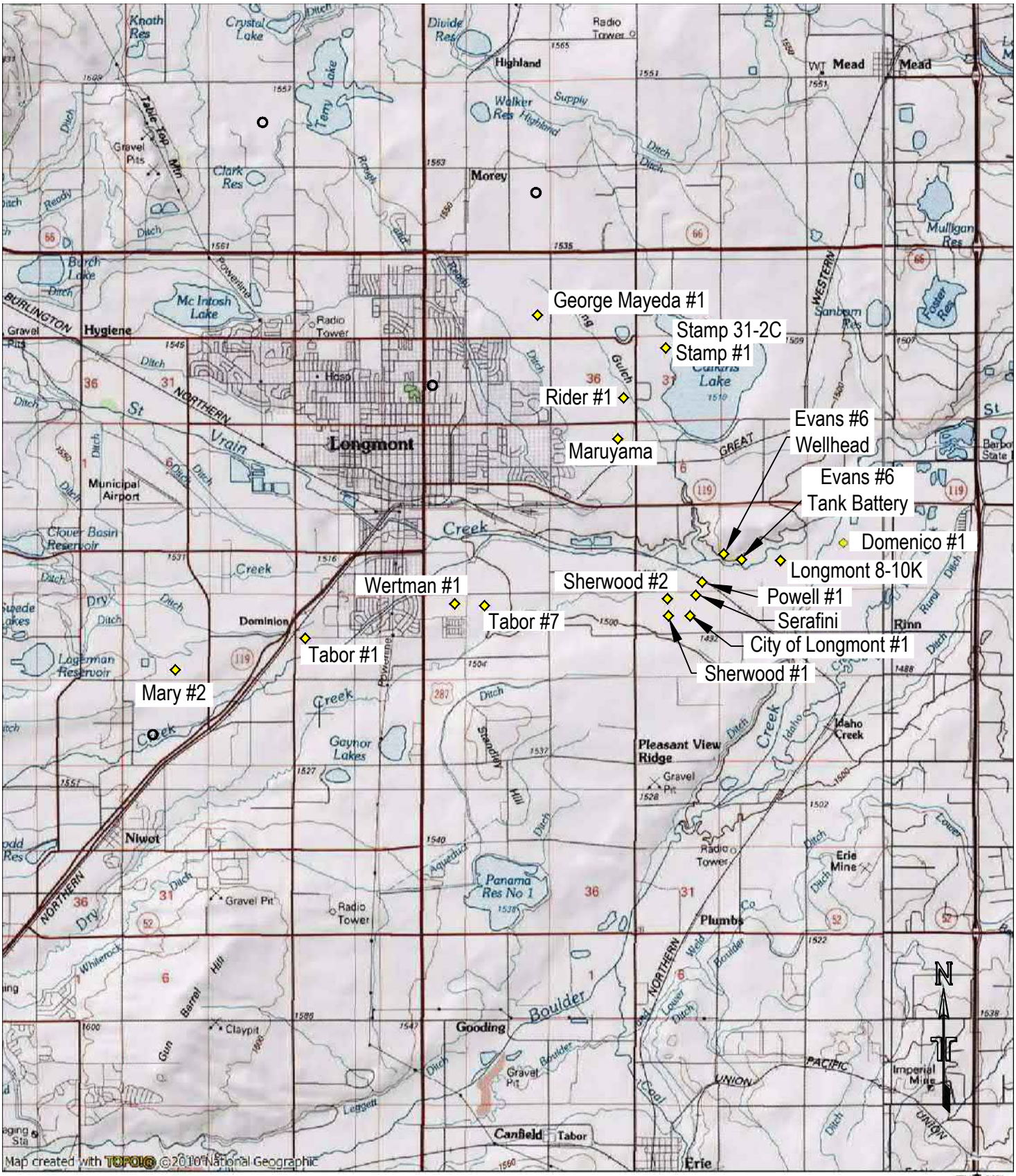
APPENDIX A – EXHIBITS & TABLES

Exhibit 1 – Wellsite Locations Map

Exhibit 2 through 19 – Site and Potentiometric Surface Diagrams: Multiple Well Sites (18)

Table 1 – Groundwater Elevation Data

Table 2 – Groundwater Analytical Results



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Topographic and Site Location Map

City of Longmont Oil and Gas Well Sites

Longmont
Colorado

Exhibit 1

DESIGNED BY:	JAS
DRAWN BY:	JAS
APPVD. BY:	CLR
SCALE:	AS SHOWN
DATE:	10/31/23
JOB NO.	22227034
ACAD NO.	001
SHEET NO.:	1 OF 19

LEGEND

– Approximate Location of Groundwater Monitoring Wells

4851.2 – Approximate Groundwater Elevation (feet above mean sea level) Contours Reported, June 20, 2023

– Approximate Grounwater Flow Direction, June 20, 2023

0' 100'
Approximate Scale

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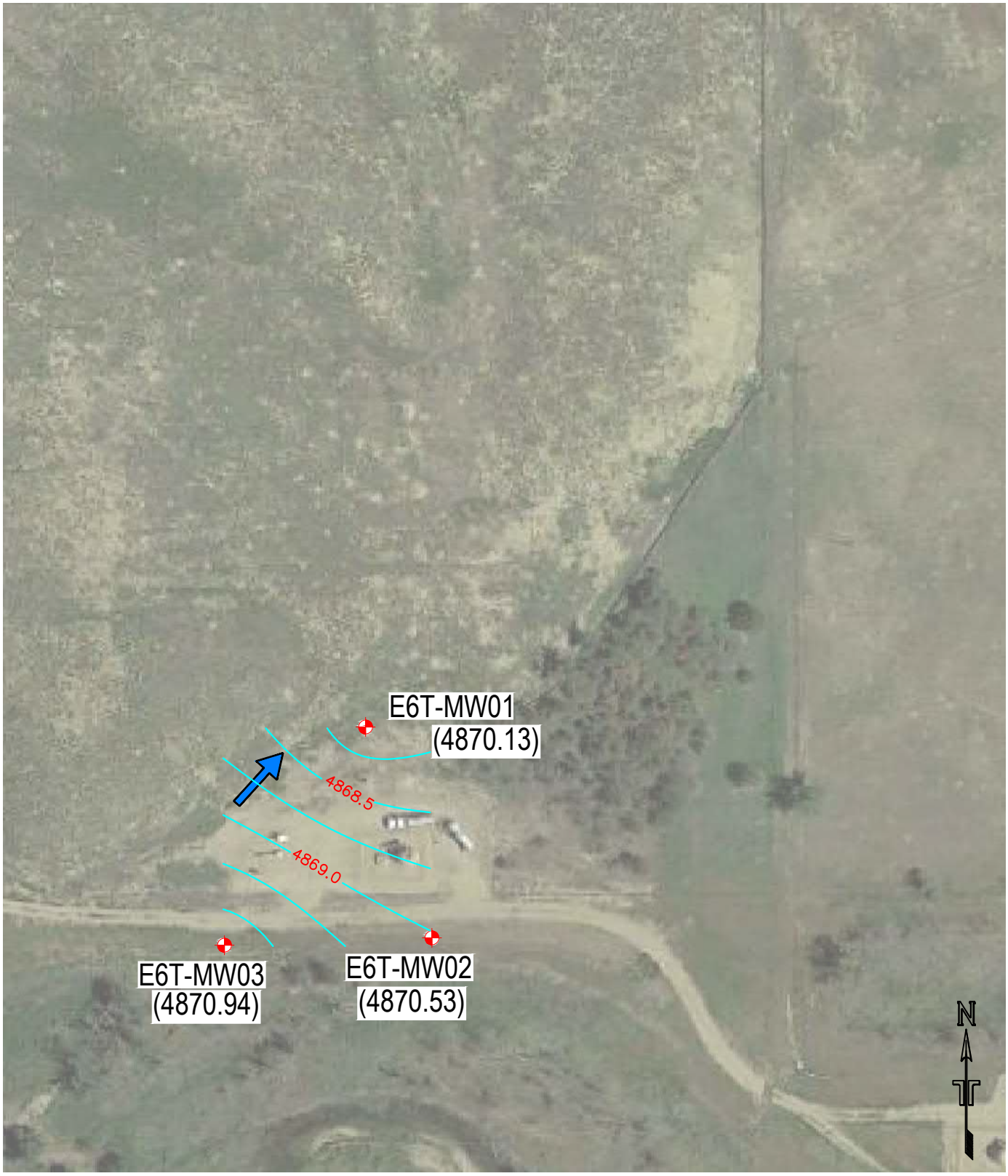
Site and Piezometric Surface Diagram - Domenico #1
City of Longmont Oil and Gas Well Sites
Longmont
Colorado

Exhibit 2

DESIGNED BY:	JAS
DRAWN BY:	VLV
APPVD. BY:	CLR
SCALE:	AS SHOWN
DATE:	7/19/23
JOB NO.	22227034
ACAD NO.	002
SHEET NO.:	2 OF 19



LEGEND

– Approximate Location of Groundwater Monitoring Wells

4851.2 – Approximate Groundwater Elevation (feet above mean sea level) Contours Reported, June 19, 2023

– Approximate Groundwater Flow Direction, June 19, 2023

0' 100'
Approximate Scale

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Site and Piezometric Surface Diagram - Evans #6 Tank Battery

City of Longmont Oil and Gas Well Sites

Longmont
Colorado

Exhibit 3

DESIGNED BY:	JAS
DRAWN BY:	VLV
APPVD. BY:	CLR
SCALE:	AS SHOWN
DATE:	7/21/23
JOB NO.	22227034
ACAD NO.	003
SHEET NO.:	3 OF 19

LEGEND

– Approximate Location of Groundwater Monitoring Wells

4851.2 – Approximate Groundwater Elevation (feet above mean sea level) Contours Reported, June 19, 2023

– Approximate Groundwater Flow Direction, June 19, 2023

0' 100'
Approximate Scale

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Site and Piezometric Surface Diagram - Evans #6 Wellhead

City of Longmont Oil and Gas Well Sites

Longmont
Colorado

Exhibit 4

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DRAWN BY:	VLV
APPVD. BY:	CLR
SCALE:	AS SHOWN
DATE:	7/21/2023
JOB NO.	22227034
ACAD NO.	004
SHEET NO.:	4 OF 19

LEGEND

– Approximate Location of Groundwater Monitoring Wells

0' 100'

Approximate Scale

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Site Diagram - Stamp 1 Well Site

City of Longmont Oil and Gas Well Sites

Longmont

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Exhibit 5

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DRAWN BY:	JAS
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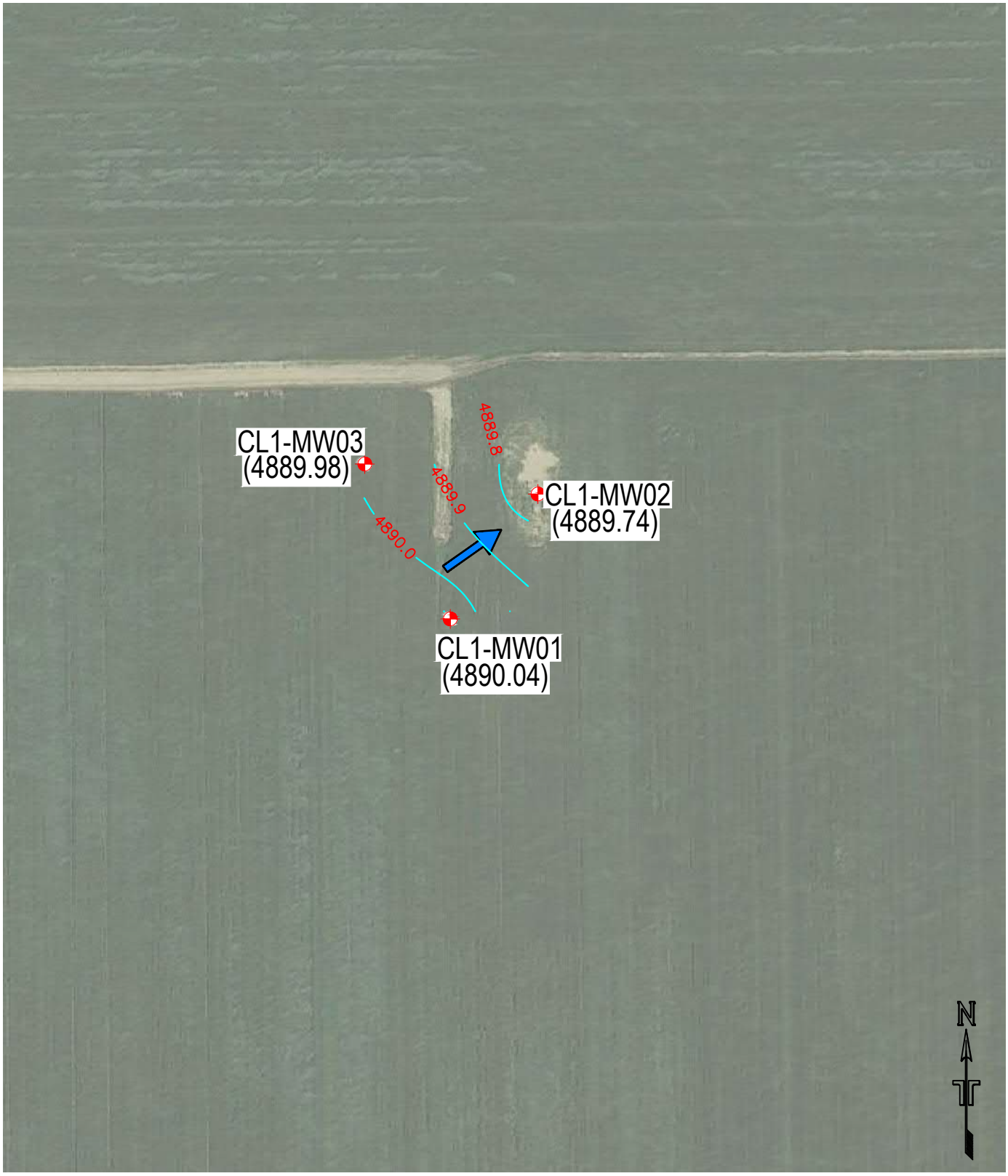
SCALE:	AS SHOWN
DATE:	6/2/22
JOB NO.	22227013
ACAD NO.	005
SHEET NO.:	5 OF 19



LEGEND

– Approximate Location of Groundwater Monitoring Wells

4851.2 – Approximate Groundwater Elevation (feet above mean sea level) Contours Reported, April 12, 2023

– Approximate Grounwater Flow Direction, April 12, 2023

0' 100'
Approximate Scale

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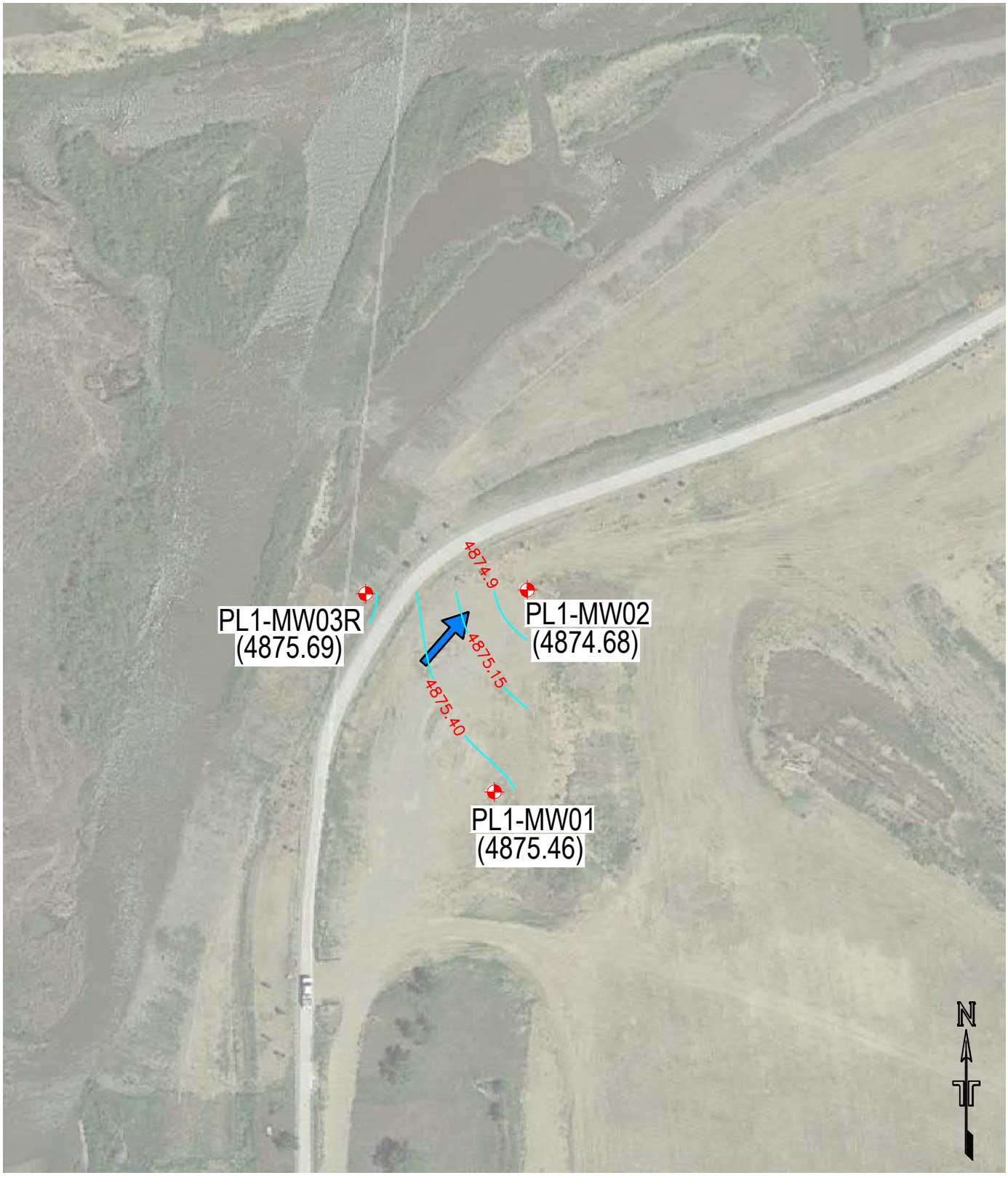
Site and Piezometric Surface Diagram - City of Longmont #1

City of Longmont Oil and Gas Well Sites

Longmont
Colorado

Exhibit 6

DESIGNED BY:	JAS
DRAWN BY:	VLV
APPVD. BY:	CLR
SCALE:	AS SHOWN
DATE:	4/12/23
JOB NO.	22227034
ACAD NO.	006
SHEET NO.:	6 OF 19



LEGEND

– Approximate Location of Groundwater Monitoring Wells

4851.2 – Approximate Groundwater Elevation (feet above mean sea level) Contours Reported, June 20, 2023

– Approximate Groundwater Flow Direction, June 20, 2023

0' 100'
Approximate Scale

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Site and Piezometric Surface Diagram - Powell #1

City of Longmont Oil and Gas Well Sites

Longmont
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Exhibit 7

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SCALE:	AS SHOWN
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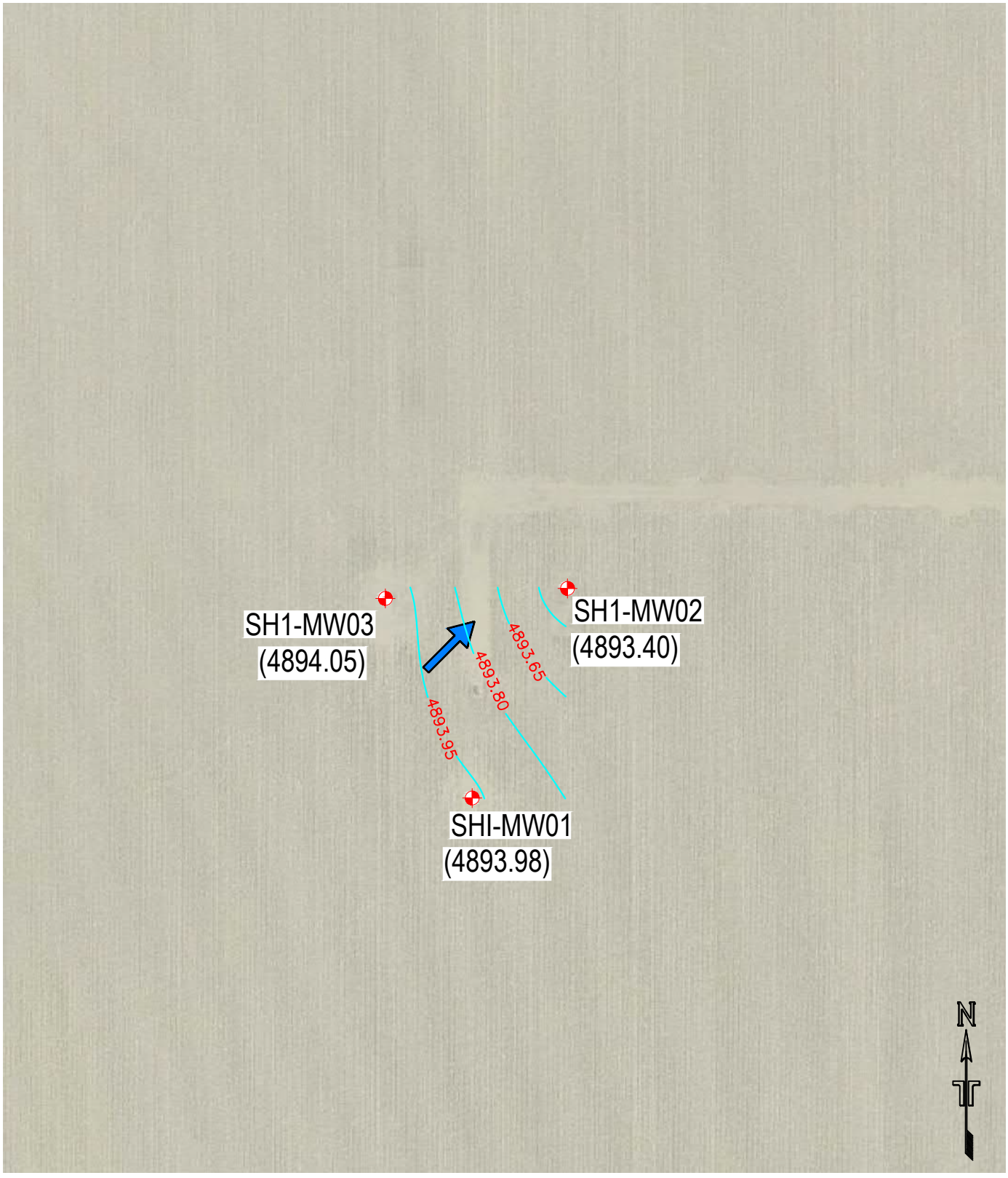
JOB NO.	22227034
ACAD NO.	007
SHEET NO.:	7 OF 19



LEGEND

– Approximate Location of Groundwater Monitoring Wells

4851.2 – Approximate Groundwater Elevation (feet above mean sea level) Contours Reported, April 11, 2023

– Approximate Groundwater Flow Direction, April 11, 2023

0' 100'
Approximate Scale

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Site and Piezometric Surface Diagram - Sherwood #1

City of Longmont Oil and Gas Well Sites

Longmont
Colorado

Exhibit 8

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DRAWN BY:	VLV
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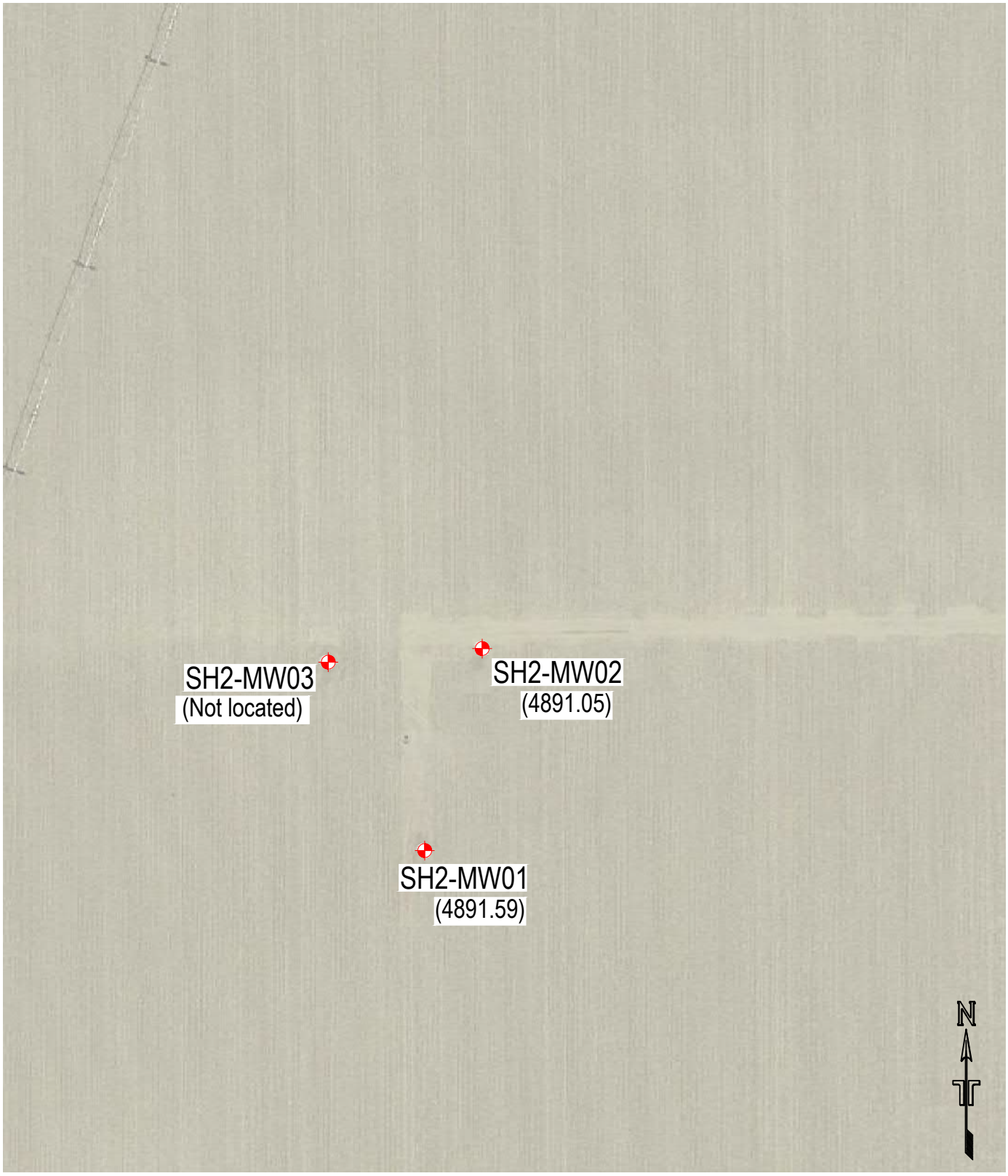
SCALE:	AS SHOWN
DATE:	7/21/2023
JOB NO.	20227034
ACAD NO.	008
SHEET NO.:	8 OF 19



LEGEND

– Approximate Location of Groundwater Monitoring Wells

0' 100'

Approximate Scale

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Site Diagram - Sherwood #2

City of Longmont Oil and Gas Well Sites

Longmont

Colorado

Exhibit 9

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SCALE:	AS SHOWN
DATE:	7/21/2023
JOB NO.	22227034
ACAD NO.	009
SHEET NO.:	9 OF 19

LEGEND

– Approximate Location of Groundwater Monitoring Wells

4851.2 – Approximate Groundwater Elevation (relative elevation) Contours Reported, June 27, 2023

– Approximate Groundwater Flow Direction, June 27, 2023

0' 100'
Approximate Scale

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Site Diagram and Piezometric Surface Diagram - Tabor #1

City of Longmont Oil and Gas Well Sites

Longmont
Colorado

Exhibit 10

DESIGNED BY:	JAS
DRAWN BY:	VLV
APPVD. BY:	CLR
SCALE:	AS SHOWN
DATE:	10/31/23
JOB NO.	22227034
ACAD NO.	010
SHEET NO.:	10 OF 19

LEGEND

– Approximate Location of Groundwater Monitoring Wells

4851.2 – Approximate Groundwater Elevation (relative elevation) Contours Reported, June 21, 2023

– Approximate Groundwater Flow Direction, June 21, 2023

0' 100'
Approximate Scale

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Site Diagram and Piezometric Surface Diagram - Tabor #7

City of Longmont Oil and Gas Well Sites

Longmont
Colorado

Exhibit 11

DESIGNED BY:	JAS
DRAWN BY:	VLV
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SCALE:	AS SHOWN
DATE:	10/31/23
JOB NO.	22227034
ACAD NO.	011
SHEET NO.:	11 OF 19

LEGEND

– Approximate Location of Groundwater Monitoring Wells

4851.2 – Approximate Groundwater Elevation (feet above mean sea level) Contours Reported, June 19, 2023

– Approximate Groundwater Flow Direction, June 19, 2023

0' 100'
Approximate Scale

Terracon
Consulting Engineers and Scientists
1901 Sharp Point Drive, Suite C Fort Collins, Colorado 80525
PH. (970) 484-0359 FAX. (970) 484-0454

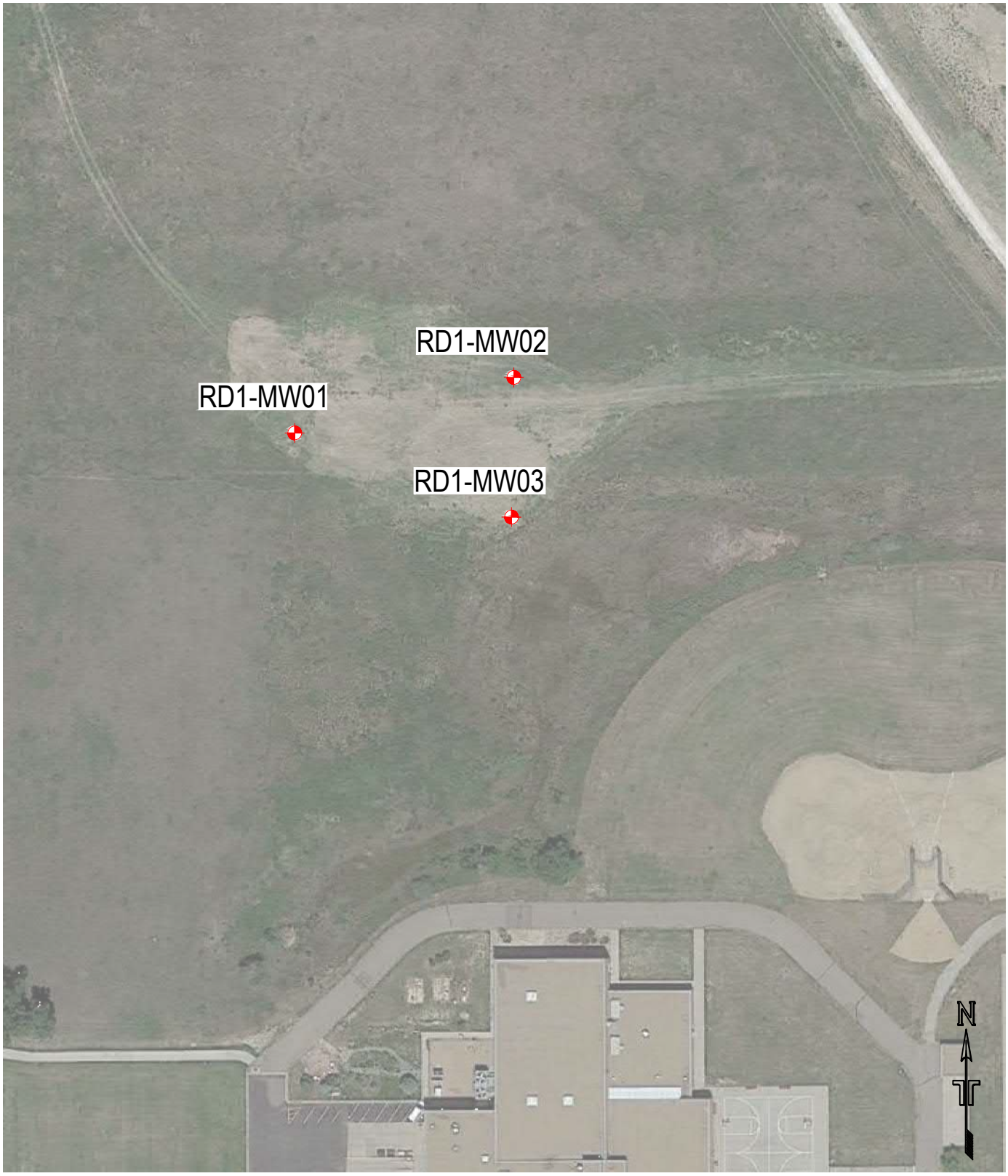
Site and Piezometric Surface Diagram - Longmont 8-10K

City of Longmont Oil and Gas Well Sites

Longmont
Colorado

Exhibit 12

DESIGNED BY:	JAS
DRAWN BY:	VLV
APPVD. BY:	CLR
SCALE:	AS SHOWN
DATE:	10/9/23
JOB NO.	22227034
ACAD NO.	012
SHEET NO.:	12 OF 19



LEGEND

– Approximate Location of Groundwater Monitoring Wells

0' 100'

Approximate Scale

Terracon
Consulting Engineers and Scientists
1901 Sharp Point Drive, Suite C Fort Collins, Colorado 80525
PH. (970) 484-0359 FAX. (970) 484-0454

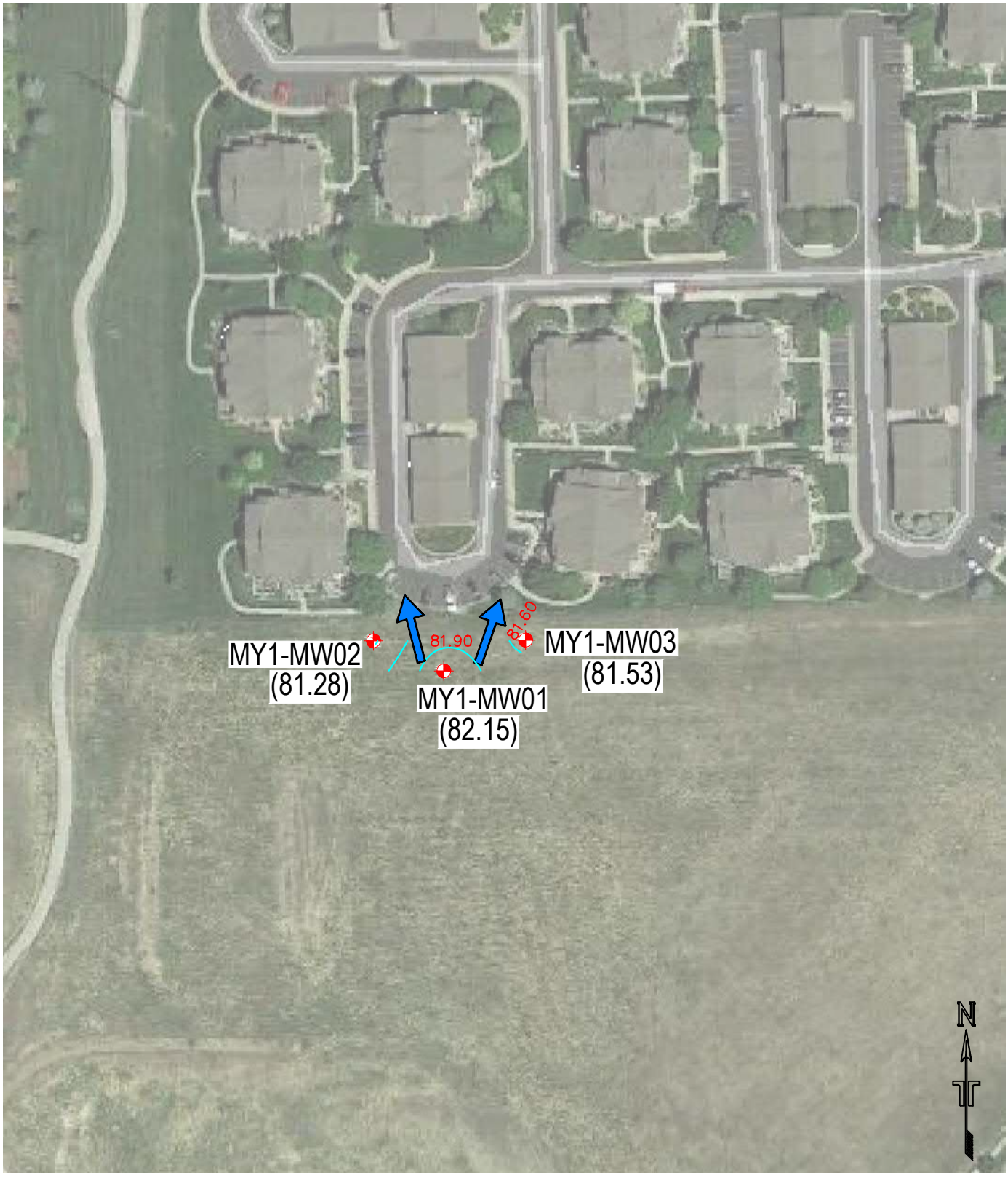
Site Diagram - Rider #1

City of Longmont Oil and Gas Well Sites

Longmont
Colorado

Exhibit 13

DESIGNED BY:	JAS
DRAWN BY:	VLV
APPVD. BY:	CLR
SCALE:	AS SHOWN
DATE:	10/9/23
JOB NO.	22227034
ACAD NO.	013
SHEET NO.:	13 OF 19



LEGEND

– Approximate Location of Groundwater Monitoring Wells

4851.2 – Approximate Groundwater Elevation (relative elevation) Contours Reported, June 28, 2023

– Approximate Grounwater Flow Direction, June 28, 2023

0' 100'
Approximate Scale

Terracon
Consulting Engineers and Scientists
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PH. (970) 484-0359 FAX. (970) 484-0454

Site Diagram and Piezometric Surface Diagram - Maruyama #1

City of Longmont Oil and Gas Well Sites

Longmont
Colorado

Exhibit 14

DESIGNED BY:	JAS
DRAWN BY:	VLV
APPVD. BY:	CLR
SCALE:	AS SHOWN
DATE:	10/9/23
JOB NO.	22227034
ACAD NO.	014
SHEET NO.:	14 OF 19

LEGEND

– Approximate Location of Groundwater Monitoring Wells

4851.2 – Approximate Groundwater Elevation (relative elevation) Contours Reported, June 28, 2023

– Approximate Groundwater Flow Direction, June 28 2023

0' 100'
Approximate Scale

Terracon
Consulting Engineers and Scientists
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PH. (970) 484-0359 FAX. (970) 484-0454

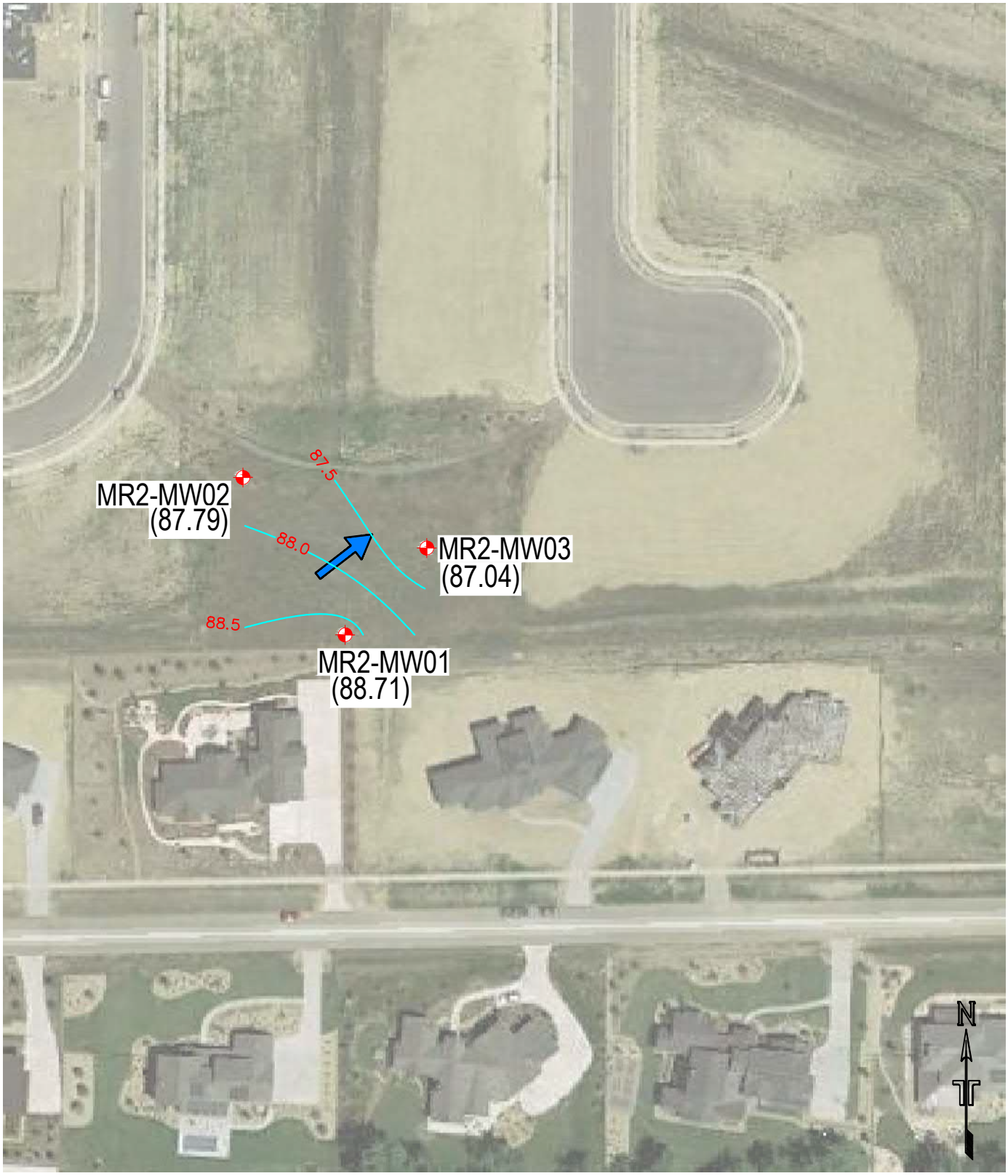
Site Diagram and Piezometric Surface Diagram - George Mayeda #1

City of Longmont Oil and Gas Well Sites

Longmont
Colorado

Exhibit 15

DESIGNED BY:	JAS
DRAWN BY:	VLV
APPVD. BY:	CLR
SCALE:	AS SHOWN
DATE:	10/12/23
JOB NO.	22227034
ACAD NO.	015
SHEET NO.:	15 OF 19



LEGEND

– Approximate Location of Groundwater Monitoring Wells

4851.2 – Approximate Groundwater Elevation (relative elevation) Contours Reported, June 28, 2023

– Approximate Groundwater Flow Direction, June 28, 2023

0' 100'
Approximate Scale

Terracon
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PH. (970) 484-0359 FAX. (970) 484-0454

Site and Piezometric Surface Diagram - Mary #2
City of Longmont Oil and Gas Well Sites
Longmont
Colorado

Exhibit 16

DESIGNED BY:	JAS
DRAWN BY:	JAS
APPVD. BY:	CLR
SCALE:	AS SHOWN
DATE:	10/31/23
JOB NO.	22227034
ACAD NO.	016
SHEET NO.:	16 OF 19

LEGEND

– Approximate Location of Groundwater Monitoring Wells

4851.2 – Approximate Groundwater Elevation (relative elevation) Contours Reported, June 21, 2023

– Approximate Groundwater Flow Direction, June 21, 2023

0' 100'
Approximate Scale

Terracon
Consulting Engineers and Scientists
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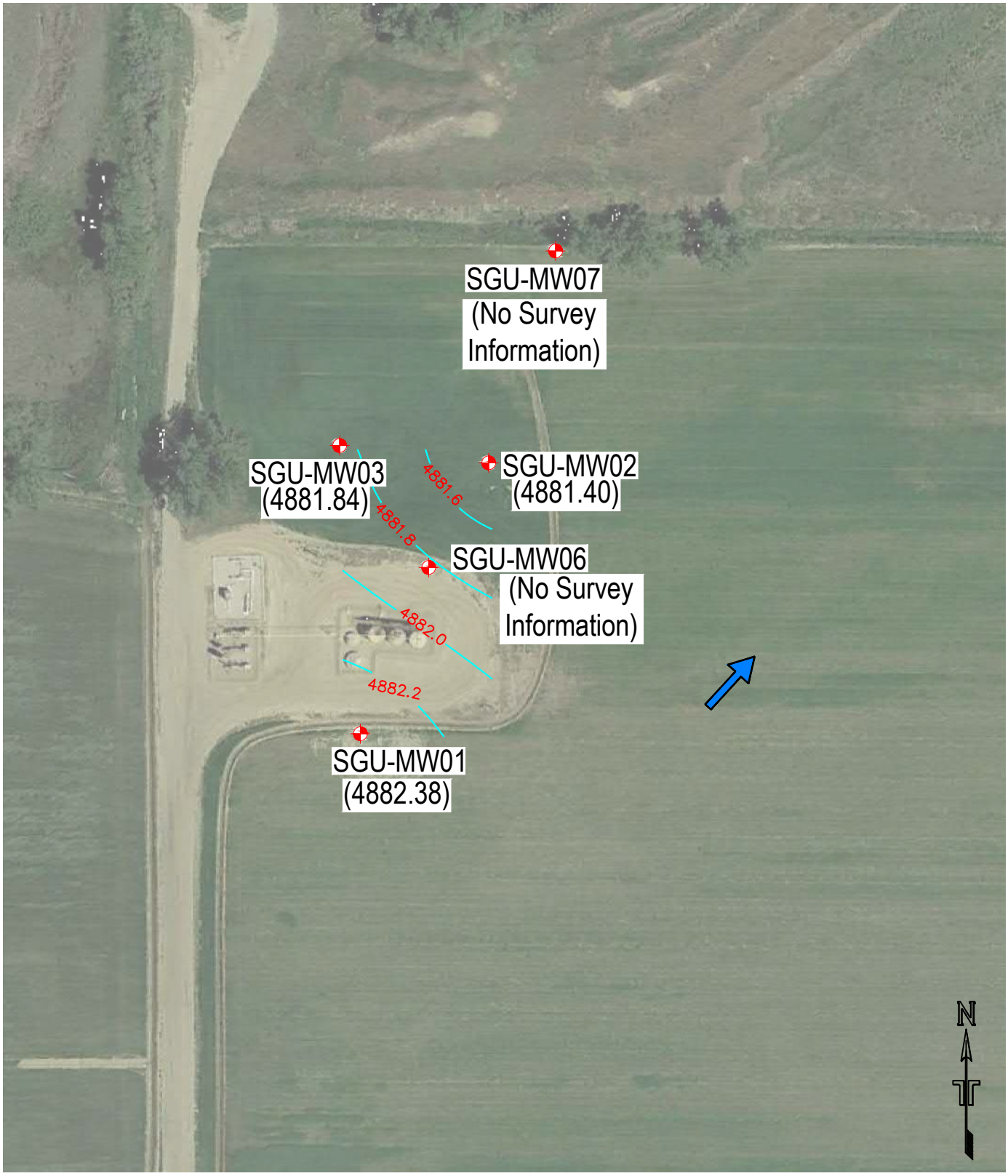
Site Diagram and Piezometric Surface Diagram - Wertman #1

City of Longmont Oil and Gas Well Sites

Longmont
Colorado

Exhibit 17

DESIGNED BY:	JAS
DRAWN BY:	VLV
APPVD. BY:	CLR
SCALE:	AS SHOWN
DATE:	10/11/23
JOB NO.	22227034
ACAD NO.	017
SHEET NO.:	17 OF 19



LEGEND

– Approximate Location of Groundwater Monitoring Wells

4851.2 – Approximate Groundwater Elevation (feet above mean sea level) Contours Reported, April 11, 2023

– Approximate Groundwater Flow Direction, April 11, 2023

0' 100'
Approximate Scale

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PH. (970) 484-0359 FAX. (970) 484-0454

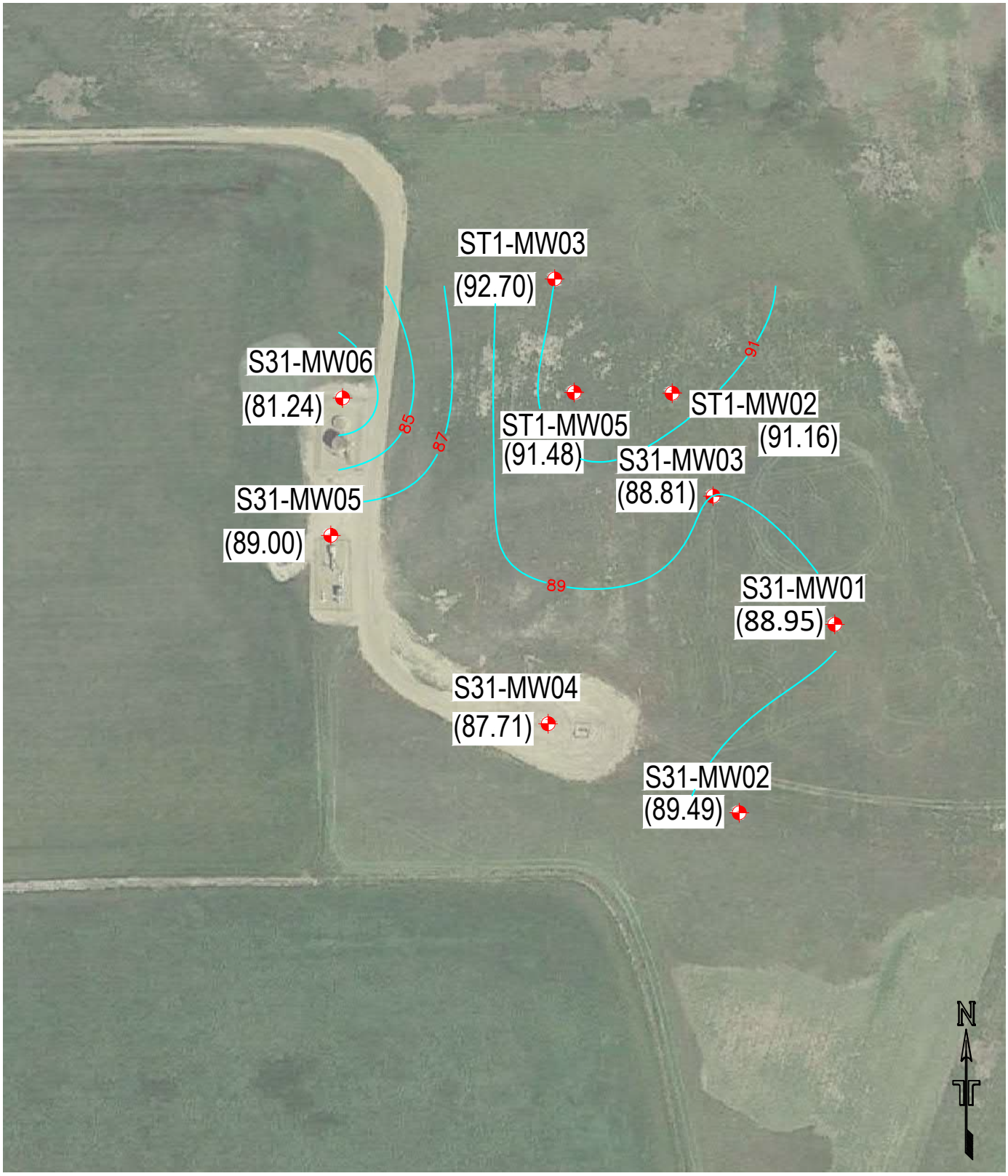
Site and Piezometric Surface Diagram - Serafini Gas Unit

City of Longmont Oil and Gas Well Sites

Longmont
Colorado

Exhibit 18

DESIGNED BY:	JAS
DRAWN BY:	VLV
APPVD. BY:	CLR
SCALE:	AS SHOWN
DATE:	10/12/23
JOB NO.	22227034
ACAD NO.	018
SHEET NO.:	18 OF 19



LEGEND

– Approximate Location of Groundwater Monitoring Wells

4851.2 – Approximate Groundwater Elevation (feet above mean sea level) Contours Reported, August 3, 2023

– Approximate Groundwater Flow Direction, August 3, 2023

0' 100'
Approximate Scale

Terracon
Consulting Engineers and Scientists
1901 Sharp Point Drive, Suite C Fort Collins, Colorado 80525
PH. (970) 484-0359 FAX. (970) 484-0454

Site and Piezometric Surface Diagram - Stamp 31-2C

City of Longmont Oil and Gas Well Sites

Longmont
Colorado

Exhibit 19

DESIGNED BY:	JAS
DRAWN BY:	VLV
APPVD. BY:	CLR
SCALE:	AS SHOWN
DATE:	10/31/23
JOB NO.	22227034
ACAD NO.	019
SHEET NO.:	19 OF 19

Table 1 - Groundwater Elevation Data
City of Longmont - Groundwater Quality Monitoring
Project Number 22227034

Well ID	Top of Casing Elevation[1]	Date Measured	Total Depth[2]	Depth to Groundwater[2]	Groundwater Elevation[3]
Sherwood #1 Wellhead					
SH1-MW01	4902.75	3/18/2013	13.96	8.49	4894.26
		10/23/2013		6.70	4896.05
		7/28/2014		NR	
		3/30/2015		8.11	4894.64
		6/21/2016		NR	
		5/23/2017		NR	
		6/27/2018		7.42	4895.33
		6/10/2019		9.22	4893.53
		5/29/2020		8.62	4894.13
		12/14/2021		8.75	4894.00
		4/5/2022		9.05	4893.70
		4/11/2023		8.77	4893.98
SH1-MW02	4900.99	3/18/2013	14.35	7.41	4893.58
		10/23/2013		6.30	4894.69
		7/28/2014		NR	
		3/30/2015		7.23	4893.76
		6/21/2016		6.87	4894.12
		5/23/2017		6.88	4894.11
		6/27/2018		6.80	4894.19
		6/10/2019		7.95	4893.04
		5/29/2020		7.42	4893.57
		12/14/2021		7.60	4893.39
		4/5/2022		7.80	4893.19
		4/11/2023		7.59	4893.40
SH1-MW03	4901.80	3/18/2013	14.06	7.64	4894.16
		10/23/2013		6.33	4895.47
		7/28/2014		NR	
		3/30/2015		7.35	4894.45
		6/21/2016		NR	
		5/23/2017		NR	
		6/27/2018		7.00	4894.80
		6/10/2019		8.10	4893.70
		5/29/2020		7.66	4894.14
		12/14/2021		7.81	4893.99
		4/5/2022		8.00	4893.80
		4/11/2023		7.75	4894.05
Sherwood #2 Wellhead					
SH2-MW01	4896.76	3/18/2013	10.80	5.20	4891.56
		7/28/2014		NR	
		3/30/2015		4.59	4892.17
		6/21/2016		5.04	4891.72
		5/23/2017		4.33	4892.43
		6/27/2018		4.53	4892.23
		6/17/2019		5.32	4891.44
		6/5/2020		5.12	4891.64
		12/14/2021		5.45	4891.31
		4/5/2022		5.26	4891.50
		4/11/2023		5.17	4891.59
SH2-MW02	4896.15	3/18/2013	12.37	5.71	4890.44
		7/28/2014		NR	
		3/30/2015		4.96	4891.19
		6/21/2016		4.95	4891.20
		5/23/2017		4.34	4891.81
		6/27/2018		4.45	4891.70
		6/17/2018		5.30	4890.85
		6/5/2020		4.95	4891.20
		12/14/2021		5.35	4890.80
		4/5/2022		5.25	4890.90
		4/11/2023		5.10	4891.05
SH2-MW03	4896.32	3/18/2013	9.71	5.11	4891.21
		7/28/2014		NR	
		3/30/2015		4.59	4891.73
		6/21/2016		4.61	4891.71
		5/23/2017		3.80	4892.52
		6/27/2018		3.50	4892.82
		6/17/2019		5.00	4891.32
		6/5/2020		4.60	4891.72
		12/14/2021		Sediment[6]	
		4/5/2022		Sediment[6]	
		4/11/2023		Destroyed	

Table 1 - Groundwater Elevation Data
City of Longmont - Groundwater Quality Monitoring
Project Number 22227034

Well ID	Top of Casing Elevation[1]	Date Measured	Total Depth[2]	Depth to Groundwater[2]	Groundwater Elevation[3]
City of Longmont #1 Wellhead					
CL1-MW01	4896.99	3/20/2013	13.34	6.42	4890.57
		7/28/2014		NR	
		3/30/2015		6.41	4890.58
		6/21/2016		3.87	4893.12
		5/23/2017		NR	
		6/27/2018		4.60	4892.39
		6/17/2019		7.75	4889.24
		6/2/2020		4.69	4892.30
		6/15/2021		5.60	4891.39
		4/5/2022		7.60	4889.39
		4/12/2023		6.95	4890.04
CL1-MW02	4896.04	3/20/2013	12.86	5.75	4890.29
		7/28/2014		NR	
		3/30/2015		5.79	4890.25
		6/22/2016		1.80	4894.24
		5/23/2017		5.35	4890.69
		6/27/2018		3.49	4892.55
		6/17/2018		7.15	4888.89
		6/2/2020		3.22	4892.82
		6/15/2021		4.45	4891.59
		4/5/2022		6.95	4889.09
		4/12/2023		6.30	4889.74
CL1-MW03	4896.33	3/20/2013	13.10	5.86	4890.47
		7/28/2014		NR	
		3/30/2015		5.86	4890.47
		6/21/2016		3.22	4893.11
		5/23/2017		5.34	4890.99
		6/27/2018		4.06	4892.27
		6/17/2019		7.18	4889.15
		6/2/2020		3.55	4892.78
		6/15/2021		3.50	4892.83
		4/5/2022		6.95	4889.38
		4/12/2023		6.35	4889.98

Table 1 - Groundwater Elevation Data
City of Longmont - Groundwater Quality Monitoring
Project Number 22227034

Well ID	Top of Casing Elevation[1]	Date Measured	Total Depth[2]	Depth to Groundwater[2]	Groundwater Elevation[3]
Serafini Gas Unit					
SGU-MW01	4892.37	3/20/2013	12.90	5.52	4886.85
		10/22/2013		3.49	4888.88
		3/30/2015		5.86	4886.51
		6/21/2016		3.68	4888.69
		5/23/2017		5.70	4886.67
		6/10/2020		6.84	4885.53
		6/28/2018		3.65	4888.72
		6/21/2021		7.50	4884.87
		4/6/2022		10.90	4881.47
		4/11/2023		9.99	4882.38
SGU-MW02	4891.42	3/21/2013	8.10	5.17	4886.25
		10/22/2013		3.45	4887.97
		3/30/2015		5.07	4886.35
		6/21/2016		4.24	4887.18
		5/23/2017		5.54	4885.88
		6/28/2018		3.65	4887.77
		6/10/2020		7.50	4883.92
		6/21/2021		7.10	4884.32
		4/6/2022		10.92	4880.50
		4/11/2023		10.02	4881.40
SGU-MW03	4891.72	3/21/2013	12.06	5.59	4886.13
		10/22/2013		3.59	4888.13
		3/30/2015		5.85	4885.87
		6/21/2016		3.52	4888.20
		5/23/2017		5.68	4886.04
		6/28/2018		3.60	4888.12
		6/10/2020		6.10	4885.62
		6/21/2021		6.60	4885.12
		4/6/2022		10.72	4881.00
		4/11/2023		9.88	4881.84
SGU-MW04	4889.76	6/28/2018	9.41	3.10	4886.66
SGU-MW05	4891.69	6/28/2018	10.50	3.55	4888.14
SGU-MW06	No Survey Information Available	6/10/2020	14.90	6.45	No Survey Information Available
		6/21/20210		7.00	
		4/6/2022		10.90	
		4/11/2023		10.02	
SGU-MW07		6/10/2020	9.60	0.60	
		6/21/2021		2.25	
		4/6/2022		Sediment[6]	
Powell #1 Wellhead					
PL1-MW01	4885.90	3/20/2013	17.79	11.91	4873.99
		7/28/2014		NR	
		3/31/2015		12.16	4873.74
		6/22/2016		10.64	4875.26
		5/23/2017		11.40	4874.50
		6/27/2018		11.68	4874.22
		6/10/2019		12.06	4873.84
		5/28/2020		12.31	4873.59
		6/15/2021		10.82	4875.08
		4/22/2022		12.65	4873.25
		6/20/2023		10.44	4875.46
PL1-MW02	4885.58	3/19/2013	19.65	12.00	4873.58
		7/28/2014		NR	
		3/31/2015		12.52	4873.06
		6/22/2016		11.64	4873.94
		5/23/2017		11.15	4874.43
		6/27/2018		12.36	4873.22
		6/10/2019		12.42	4873.16
		5/28/2020		12.60	4872.98
		6/15/2021		11.66	4873.92
		4/22/2022		12.97	4872.61
		6/20/2023		10.90	4874.68
PL1-MW03R	4887.26	3/19/2013	18.06	13.04	4874.22
		7/28/2014		NR	
		3/31/2015		Well Destroyed	
		6/22/2016		Well Destroyed	
		5/23/2017		Well Destroyed	
		6/27/2018		12.97	4874.29
		6/10/2019		12.95	4874.31
		5/28/2020		13.30	4873.96
		6/15/2021		12.15	4875.11
		4/22/2022		13.75	4873.51
		6/20/2023		11.57	4875.69

Table 1 - Groundwater Elevation Data
City of Longmont - Groundwater Quality Monitoring
Project Number 22227034

Well ID	Top of Casing Elevation[1]	Date Measured	Total Depth[2]	Depth to Groundwater[2]	Groundwater Elevation[3]
Evans #6 Wellhead					
E6W-MW01	4882.37	3/22/2013	9.33	4.50	4877.87
		10/23/2013		4.80	4877.57
		7/28/2014		4.85	4877.52
		3/31/2015		3.92	4878.45
		6/22/2016		4.24	4878.13
		5/25/2017		4.38	4877.99
		6/28/2018		3.83	4878.54
		6/6/2019		3.90	4878.47
		8/6/2020		3.61	4878.76
		6/17/2021		4.40	4877.97
		4/21/2022		4.95	4877.42
		6/19/2023		4.95	4877.42
E6W-MW02	4882.45	3/22/2013	12.46	5.19	4877.26
		10/23/2013		6.50	4875.95
		7/28/2014		5.80	4876.65
		3/31/2015		5.14	4877.31
		6/22/2016		5.55	4876.90
		5/25/2017		5.60	4876.85
		6/28/2018		5.45	4877.00
		6/6/2019		4.85	4877.60
		8/6/2020		4.66	4877.79
		6/17/2021		5.42	4877.03
		4/21/2022		5.70	4876.75
		6/19/2023		4.92	4877.53
E6W-MW03	4881.53	3/22/2013	10.89	4.41	4877.12
		10/23/2013		5.15	4876.38
		7/28/2014		4.95	4876.58
		3/31/2015		4.24	4877.29
		6/22/2016		4.74	4876.79
		5/25/2017		4.68	4876.85
		6/6/2019		4.05	4877.48
		8/6/2020		3.78	4877.75
		6/17/2021		4.45	4877.08
		4/21/2022		4.80	4876.73
		6/19/2023		4.05	4877.48
Evans #6 Tank Battery					
E6T-MW01	4879.08	3/22/2013	16.95	8.01	4871.07
		10/23/2013		8.16	4870.92
		7/28/2014		8.93	4870.15
		3/31/2015		9.75	4869.33
		6/22/2016		9.43	4869.65
		5/25/2017		10.25	4868.83
		6/28/2018		14.67	4864.41
		6/6/2019		10.01	4869.07
		6/4/2020		3.50	4875.58
		6/17/2021		9.65	4869.43
		4/21/2022		11.00	4868.08
		6/19/2023		8.95	4870.13
E6T-MW02	4877.68	3/22/2013	12.84	6.40	4871.28
		10/23/2013		7.47	4870.21
		7/28/2014		8.54	4869.14
		3/31/2015		8.84	4868.84
		6/22/2016		8.55	4869.13
		5/25/2017		7.92	4869.76
		6/28/2018		12.87	4864.81
		6/6/2019		7.96	4869.72
		6/4/2020		4.66	4873.02
		6/17/2021		8.50	4869.18
		4/21/2022		8.65	4869.03
		6/19/2023		7.15	4870.53
E6T-MW03	4878.03	3/22/2013	12.30	6.61	4871.42
		10/23/2013		7.62	4870.41
		7/28/2014		8.44	4869.59
		3/31/2015		8.62	4869.41
		6/22/2016		8.75	4869.28
		5/25/2017		7.83	4870.20
		6/28/2018		12.25	4865.78
		6/6/2019		7.95	4870.08
		6/4/2020		3.80	4874.23
		6/17/2021		9.65	4868.38
		4/21/2022		8.32	4869.71
		6/19/2023		7.09	4870.94

Table 1 - Groundwater Elevation Data
City of Longmont - Groundwater Quality Monitoring
Project Number 22227034

Well ID	Top of Casing Elevation[1]	Date Measured	Total Depth[2]	Depth to Groundwater[2]	Groundwater Elevation[3]
Longmont #8-10K Wellhead					
LM8-MW01	4868.80	3/22/2013	18.60	3.64	4865.16
		7/28/2014		NR	
		3/31/2015		Dry	
		6/22/2016		Dry	
		5/23/2017		NR	
		6/5/2019		11.18	4857.62
		6/4/2020		9.66	4859.14
		6/23/2021		10.92	4857.88
		4/21/2022		12.02	4856.78
		6/19/2023		10.37	4858.43
LM8-MW02	4869.03	3/22/2013	18.90	4.32	4864.71
		7/28/2014		NR	
		3/31/2015		Dry	
		6/22/2016		Dry	
		5/23/2017		NR	
		6/5/2019		11.30	4857.73
		6/4/2020		10.75	4858.28
		6/23/2021		11.11	4857.92
		4/21/2022		12.22	4856.81
		6/19/2023		10.58	4858.45
LM8-MW03	4869.11	3/22/2013	18.70	3.21	4865.90
		7/28/2014		NR	
		3/31/2015		Dry	
		6/22/2016		Dry	
		5/23/2017		NR	
		6/5/2019		11.38	4857.73
		6/4/2020		10.90	4858.21
		6/23/2021		11.20	4857.91
		4/21/2022		12.28	4856.83
		6/19/2023		10.83	4858.28
Domenico #1 Wellsite					
DM1-MW01	4857.64	3/19/2013	11.44	7.41	4850.23
		7/29/2014		6.11	4851.53
		3/31/2015		6.33	4851.31
		6/24/2016		5.48	4852.16
		5/23/2017		5.52	4852.12
		6/29/2018		6.41	4851.23
		6/3/2019		6.82	4850.82
		6/8/2020		6.66	4850.98
		6/17/2021		6.10	4851.54
		4/22/2022		7.10	4850.54
		6/20/2023		4.81	4852.83
DM1-MW02	4854.17	3/19/2013	12.70	3.97	4850.20
		7/29/2014		3.18	4850.99
		4/1/2015		3.45	4850.72
		6/24/2016		2.34	4851.83
		5/23/2017		2.35	4851.82
		6/29/2018		3.33	4850.84
		6/3/2019		3.50	4850.67
		6/8/2020		3.40	4850.77
		6/17/2021		3.00	4851.17
		4/22/2022		4.00	4850.17
		6/20/2023		1.70	4852.47
DM1-MW03	4855.27	3/19/2013	12.82	5.15	4850.12
		7/29/2014		9.05	4846.22
		4/1/2015		3.99	4851.28
		6/24/2016		3.34	4851.93
		5/23/2017		3.50	4851.77
		6/29/2018		4.06	4851.21
		6/3/2019		3.61	4851.66
		6/8/2020		4.27	4851.00
		6/17/2021		3.78	4851.49
		4/22/2022		4.70	4850.57
		6/20/2023		2.68	4852.59

Table 1 - Groundwater Elevation Data
City of Longmont - Groundwater Quality Monitoring
Project Number 22227034

Well ID	Top of Casing Elevation[1]	Date Measured	Total Depth[2]	Depth to Groundwater[2]	Groundwater Elevation[3]
Stamp 31-2C Wellsite					
S31-MW01	96.98	3/7/2022	17.00	9.78	87.20
		8/3/2023		8.03	88.95
S31-MW02	96.83	3/7/2022	17.00	10.45	86.38
		6/23/2023		7.34	89.49
S31-MW03	97.01	3/7/2022	17.00	10.23	86.78
		8/3/2023		8.20	88.81
S31-MW04	96.98	3/7/2022	16.00	11.50	85.48
		8/3/2023		9.27	87.71
S31-MW05	96.92	3/7/2022	16.50	15.68	81.24
		6/23/2023		7.92	89.00
S31-MW06	97.32	3/7/2022	16.00	9.48	87.84
		8/3/2023		16.08	81.24
Stamp #1 Wellsite					
ST1-MW02	97.11	7/7/2021	15.00	4.12	92.99
		4/25/2022		7.90	89.21
		8/3/2023		5.95	91.16
ST1-MW03	97.2	7/7/2021	15.40	3.40	93.80
		4/25/2022		7.48	89.72
		6/23/2023		4.50	92.70
ST1-MW05	97.23	7/7/2021	15.40	4.55	92.68
		4/25/2022		7.95	89.28
		8/3/2023		5.75	91.48
Rider #1 Wellsite					
RD1-MW01	No Survey Information Available	4/27/2022	19.88	12.93	No Survey Information Available
		6/28/2023		11.15	
RD1-MW02		4/27/2022	20.25	12.32	
		6/28/2023		10.54	
RD1-MW03R		4/27/2022	20.60	13.65	
		6/28/2023		11.86	
Tabor #1 Wellsite					
TB1-MW01	99.63	5/16/2019	27.85	18.02	81.61
		6/3/2020	Not Located / Destroyed		
		6/16/2021			
		4/19/2022	23.40	13.78	85.85
		6/27/2023		13.08	86.55
TB1-MW02	98.98	5/16/2019	27.22	17.93	81.05
		6/3/2020	Not Located / Destroyed		
		6/16/2021	23.00	15.40	83.58
		4/19/2022		15.85	83.13
		6/27/2023		15.07	83.91
TB1-MW03R	99.05	5/16/2019	Not Located / Destroyed		
		6/3/2020			
		6/16/2021	23.60	15.68	83.37
		4/19/2022		16.18	82.87
		6/27/2023		15.34	83.71
Tabor #7 Wellsite					
TB7-MW01	100.13	5/16/2019	17.90	17.00	83.13
		6/3/2020		15.90	84.23
		6/16/2021		14.90	85.23
		4/18/2022		16.02	84.11
		6/21/2023		14.59	85.54
TB7-MW02	99.4	5/16/2019	19.70	16.64	82.76
		6/3/2020		15.80	83.60
		6/16/2021		15.35	84.05
		4/18/2022		16.47	82.93
		6/21/2023		14.37	85.03
TB7-MW03	98.9	5/16/2019	19.40	16.00	82.90
		6/3/2020		15.22	83.68
		6/16/2021		15.48	83.42
		4/18/2022		15.93	82.97
		6/21/2023		13.87	85.03

Table 1 - Groundwater Elevation Data
City of Longmont - Groundwater Quality Monitoring
Project Number 22227034

Well ID	Top of Casing Elevation[1]	Date Measured	Total Depth[2]	Depth to Groundwater[2]	Groundwater Elevation[3]
Maruyama #1 Wellsite					
MY1-MW01	101.88	5/16/2019	24.85	20.82	81.06
		5/27/2020		20.50	81.38
		6/15/2021		21.60	80.28
		4/26/2022		21.92	79.96
		6/28/2023		19.73	82.15
MY1-MW02	101.32	5/16/2019	24.72	21.20	80.12
		5/27/2020		20.18	81.14
		6/15/2021		21.25	80.07
		4/26/2022		21.65	79.67
		6/28/2023		20.04	81.28
MY1-MW03	101.94	5/16/2019	24.55	21.41	80.53
		5/27/2020		20.90	81.04
		6/15/2021		21.80	80.14
		4/26/2022		22.35	79.59
		6/28/2023		20.41	81.53
Wertman #1 Wellsite					
WT1-MW01	99.56	5/16/2019	16.38	13.65	85.91
		5/28/2020		12.92	86.64
		6/28/2021		12.72	86.84
		4/18/2022		13.57	85.99
		6/21/2023		8.72	90.84
WT1-MW02	100.54	5/16/2019	17.18	14.37	86.17
		5/28/2020		13.64	86.90
		6/28/2021		13.45	87.09
		4/18/2022		14.30	86.24
		6/21/2023		9.22	91.32
WT1-MW03	99.38	5/16/2019	17.16	13.48	85.90
		5/28/2020		12.78	86.60
		6/28/2021		12.62	86.76
		4/18/2022		13.42	85.96
		6/21/2023		8.70	90.68
WT1-MW04	No Survey Information	5/16/2019	Not Located / Destroyed		
		5/28/2020			
George Mayeda #1 Wellsite					
GM1-MW01	99.63	6/3/2019	14.50	11.45	88.18
		5/26/2020		9.85	89.78
		6/21/2021		10.62	89.01
		4/26/2022		12.10	87.53
		6/28/2023		8.73	90.90
GM1-MW02	98.98	6/3/2019	13.55	10.82	88.16
		5/28/2020		8.90	90.08
		6/21/2021		9.98	89.00
		4/26/2022		11.48	87.50
		6/28/2023		9.51	89.47
GM1-MW03	99.05	6/3/2019	14.40	11.20	87.85
		5/28/2020		9.58	89.47
		6/21/2021		10.50	88.55
		4/26/2022		11.64	87.41
		6/28/2023		9.23	89.82
Mary #2 Wellsite					
MR2-MW01	99.54	5/15/2019	24.64	14.45	85.09
		5/27/2020		12.92	86.62
		6/15/2021		11.80	87.74
		4/20/2022		13.95	85.59
		6/27/2023		10.83	88.71
MR2-MW02	99.89	5/15/2019	24.39	16.75	83.14
		5/27/2020		14.85	85.04
		6/15/2021		12.78	87.11
		4/18/2022		15.40	84.49
		6/27/2023		12.10	87.79
MR2-MW03	99.99	5/15/2019	24.54	17.55	82.44
		5/27/2020		15.64	84.35
		6/15/2021		13.62	86.37
		4/18/2022		15.83	84.16
		6/27/2023		12.95	87.04

[1]All survey information is in Datum: NAD 83, Colorado North Zone NAVD 88 or an on-site relative benchmark set to 100 ft.

[2] Depth to groundwater is mesured in feet below top of casing

[3] Elevation in feet above mean sea level

[4/5] Wells were observed to be destroyed. Unable to measure depths to water.

Table 2 - Groundwater Analytical Results
City of Longmont - Groundwater Quality Monitoring
Project Number 22227034

			Volatile Organic Compounds					Other Organic Compounds				Inorganic Parameters															General Parameters		
Parameter			Benzene	Ethylbenzene	Naphthalene	Toluene	Xylenes (Total)	Methane	Ethane	Carbon Dioxide	Ethene	Calcium, Dissolved	Iron, Dissolved	Magnesium, Dissolved	Potassium, Dissolved	Sodium, Dissolved	Strontium	Alkalinity, Carbonate (CaCO3)	Alkalinity, Bicarbonate (CaCO3)	Alkalinity, Total as CaCO3	Bromide	Chloride	Nitrogen as Nitrate	Nitrogen as Nitrite	Nitrogen as Nitrate and Nitrite	Sulfate	Sulfide, Total	Specific Conductance	Total Dissolved Solids (TDS)	pH
CAS #			71-43-2	100-41-4	91-20-3	108-88-3	1330-20-7	74-82-8	74-84-0		74-85-1	7440-70-2	7439-89-6	7439-95-4	7440-09-7	7440-23-5	7440-24-6				24959-67-9	16887-00-6				14808-79-8	18496-25-8			
COGCC Table 910-1[3]			0.005	0.7	---	0.56	1.4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	49.38	---	---	---	430.63	--	---	---	--
			---	---	---	1[M]	10[M]	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
CDPHE Basic Standards for Groundwater			0.005	0.7	0.14	0.56	1.4	---	---	---	---	--	0.3	---	---	---	---	---	---	---	---	250	10	1	10	250	---	---	400-No Limit	6.5 - 8.5
Detection Level			0.001	0.001	0.005	0.001	0.003	0.0066	0.0062	20	0.0062		0.05					20	20	20	1		0.1	0.5	0.1		0.05		200	
Units			mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	umhos/cm	mg/L	Std. Units
Wellsite	Sample ID	Date																												
Sherwood #1 Wellhead	SH1-MW01	3/18/2013	ND	ND	--	ND	ND	ND	ND	--	ND	**92**	ND	**110**	**2.57**	**118**	**5.91**	ND	**345**	**345**	ND	**37.5**	**8.30**	ND	**8.40**	**486**	ND	**1590**	--	**7.60**
		10/23/2013	ND	ND	--	ND	ND	ND	ND	--	ND	**83**	ND	**107**	**1.63**	**110**	**4.56**	ND	**388**	**388**	**1.20**	**35.7**	**8.60**	ND	**8.60**	**415**	ND	**1450**	--	**7.00**
		3/30/2015	ND	ND	--	ND	ND	ND	ND	--	ND	**98**	ND	**137**	**1.43**	**152**	**2.92**	ND	**422**	**422**	**1.80**	**50.6**	**11.2**	ND	**11.2**	**621**	--	**1923**	--	**7.52**
		6/27/2018	ND	ND	--	ND	ND	ND*	ND*	--	ND*	**121**	ND*	**160**	**2.11**	**183**	**2.83**	ND	**450**	**450**	**1.13**	**63.9**	**15.4**	ND	**15.4**	**679**	--	--	--	--
		6/10/2019	ND	ND	--	ND	ND	ND*	ND*	--	ND*	**116**	ND*	**147**	**2.00**	**152**	**3.46**	ND	**408**	**408**	ND	**59.9**	**8.4**	ND	**15.4**	**625**	--	**1738**	--	**7.71**
		5/28/2020	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**65.1**	--	--	--	**723**	--	**2053**	**1310**	**6.92**
		12/14/2021	ND	ND	--	ND	ND	ND	ND	**31.7**	ND	--	--	--	--	--	--	--	--	--	--	**69.5**	--	--	--	**894**	--	**2581**	**1890**	**7.10**
		4/5/2022	ND	ND	--	ND	ND	ND	ND	**26.1**	ND	--	--	--	--	--	--	--	--	--	--	**74.5**	--	--	--	**862**	--	**2464**	**1710**	**8.03**
		4/11/2023	ND	ND	--	ND	ND	ND	ND	**36.6**	ND	--	--	--	--	--	--	--	--	--	--	**72.6**	--	--	--	**853**	--	**2246**	**1800**	**7.53**
	SH1-MW02	3/18/2013	ND	ND	--	ND	ND	**0.0091**	ND	--	ND	**101**	ND	**99.7**	**3.06**	**117**	**3.47**	ND	**365**	**365**	ND	**37.5**	**7.90**	ND	**8.00**	**431**	ND	**1570**	--	**7.50**
		10/23/2013	ND	ND	--	ND	ND	ND	ND	--	ND	**91**	ND	**96.4**	**1.85**	**111**	**2.74**	ND	**388**	**388**	**1.20**	**45.2**	**10.6**	ND*	**10.6**	**428**	ND	**1500**	--	**7.00**
		3/30/2015	ND	ND	--	ND	ND	ND	ND	--	ND	**93**	ND	**122**	**1.37**	**139**	**2.38**	ND	**393**	**393**	**1.50**	**44.4**	**10.5**	ND	**10.5**	**545**	--	**1730**	--	**7.58**
		6/21/2016	ND	ND	--	ND*	ND	ND*	ND*	--	ND*	**125**	ND*	**126**	**2.16**	**143**	**3.43**	ND	**401**	**401**	ND	**55.3**	**9.76**	ND*	**9.76**	**592**	--	**1878**	--	**7.30**
		5/23/2017	ND	ND	--	ND*	ND	ND*	ND*	--	ND*	**168**	ND*	**195**	**2.57**	**194**	**3.80**	ND	**418**	**418**	ND	**72.8**	**15.00**	ND	**15.00**	**930**	--	**2472**	--	**7.37**
		6/27/2018	ND	ND	--	ND	ND	ND*	ND*	--	ND*	**133**	ND*	**145**	**2.17**	**169**	**2.79**	ND	**436**	**436**	ND	**67.1**	**16.60**	ND	**16.60**	**646**	--	--	--	--
		6/10/2019	ND	ND	--	ND	ND	ND*	ND*	--	ND*	**136**	ND*	**151**	**2.10**	**158**	**2.75**	ND	**413**	**413**	ND	**62.5**	**11.70**	ND	**11.70**	**678**	--	**1791**	--	**7.40**
		5/28/2020	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**66.9**	--	--	--	**840**	--	**2145**	**1510**	**6.78**
		12/14/2021	ND	ND	--	ND	ND	ND	ND	**27.9**	ND	--	--	--	--	--	--	--	--	--	--	**71.9**	--	--	--	**835**	--	**2345**	**1720**	**7.00**
		4/5/2022	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**74.6**	--	--	--	**859**	--	**2845**	**1840**	**8.03**
		4/11/2023	ND	ND	--	ND	ND	ND	ND	**48.5**	ND	--	--	--	--	--	--	--	--	--	--	**68.0**	--	--	--	**834**	--	**2198**	**1780**	**7.49**
	SH1-MW03	3/18/2013	ND	ND	--	ND*	ND	ND	ND	--	ND	**93**	ND	**107**	**2.26**	**115**	**2.83**	ND	**349**	**349**	ND	**36.6**	**5.70**	ND	**5.80**	**452**	ND	**1600**	--	**7.60**
		10/23/2013	ND	ND	--	ND	ND	ND	ND	--	ND	**84**	ND	**106**	**1.68**	**107**	**2.51**	ND	**370**	**370**	**1.10**	**35.8**	**7.80**	ND	**7.80**	**425**	ND	**1440**	--	**7.00**
		3/30/2015	ND	ND	--	ND	ND	ND	ND	--	ND	**92**	ND	**126**	**1.42**	**136**	**2.54**	ND	**376**	**376**	**1.40**	**43.9**	**9.80**	ND	**9.80**	**568**	--	**1788**	--	**7.56**
		6/27/2018	ND	ND	--	ND	ND	ND*	ND*	--	ND*	**131**	ND*	**161**	**2.20**	**179**	**3.01**	ND	**436**	**436**	ND	**68.5**	**14.60**	ND	**14.60**	**725**	--	--	--	--
		6/10/2019	ND	ND	--	ND	ND	ND*	ND*	--	ND*	**128**	ND*	**162**	**2.02**	**154**	**2.88**	ND	**383**	**383**	ND	**62.3**	**6.32**	ND	**6.32**	**712**	--	**1754**	--	**7.73**
		5/28/2020	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**66.3**	--	--	--	**893**	--	**2209**	**1450**	**6.54**
		12/14/2021	ND	ND	--	ND	ND	ND	ND	**25.5**	ND	--	--	--	--	--	--	--	--	--	--	**71.0**	--	--	--	**836**	--	**2333**	**1710**	**6.90**
		4/5/2022	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**74.5**	--	--	--	**839**	--	**2469**	**1820**	**7.96**
		4/11/2023	ND	ND	--	ND	ND	ND	ND	**29.4**	ND	--	--	--	--	--	--	--	--	--	--	**65.3**	--	--	--	**861**	--	**2277**	**1770**	**7.52**

Table 2 - Groundwater Analytical Results
City of Longmont - Groundwater Quality Monitoring
Project Number 22227034

			Volatile Organic Compounds					Other Organic Compounds				Inorganic Parameters															General Parameters		
Parameter			Benzene	Ethylbenzene	Naphthalene	Toluene	Xylenes (Total)	Methane	Ethane	Carbon Dioxide	Ethene	Calcium, Dissolved	Iron, Dissolved	Magnesium, Dissolved	Potassium, Dissolved	Sodium, Dissolved	Strontium	Alkalinity, Carbonate (CaCO3)	Alkalinity, Bicarbonate (CaCO3)	Alkalinity, Total as CaCO3	Bromide	Chloride	Nitrogen as Nitrate	Nitrogen as Nitrite	Nitrogen as Nitrate and Nitrite	Sulfate	Sulfide, Total	Specific Conductance	Total Dissolved Solids (TDS)	pH
CAS #			71-43-2	100-41-4	91-20-3	108-88-3	1330-20-7	74-82-8	74-84-0		74-85-1	7440-70-2	7439-89-6	7439-95-4	7440-09-7	7440-23-5	7440-24-6				24959-67-9	16887-00-6				14808-79-8	18496-25-8			
COGCC Table 910-1[3]			0.005	0.7	---	0.56	1.4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	49.38	---	---	---	430.63	--	---	---	--
			---	---	---	1[M]	10[M]	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
CDPHE Basic Standards for Groundwater			0.005	0.7	0.14	0.56	1.4	---	---	---	---	--	0.3	---	---	---	---	---	---	---	---	250	10	1	10	250	---	---	400-No Limit	6.5 - 8.5
Detection Level			0.001	0.001	0.005	0.001	0.003	0.0066	0.0062	20	0.0062		0.05					20	20	20	1		0.1	0.5	0.1		0.05		200	
Units			mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	umhos/cm	mg/L	Std. Units
Sherwood #2 Wellhead	SH2-MW01	3/18/2013	ND	ND	--	ND	ND	ND	ND	--	ND	**189**	ND	**121**	**3.86**	**102**	**3.44**	ND	**345**	**345**	ND	**40.2**	**11.4**	**0.63**	**12.0**	**799**	--	**1940**	--	**7.50**
		3/30/2015	ND	ND	--	ND	ND	ND	ND	--	ND	**169**	ND	**107**	**1.21**	**108**	**3.72**	ND	**386**	**386**	ND	**33.6**	**11.0**	ND	**11.0**	**712**	--	**1935**	--	**7.47**
		6/21/2016	ND	ND	--	ND	ND	ND*	ND*	--	ND*	**186**	ND	**107**	**1.91**	**108**	**3.26**	ND	**371**	**371**	ND	**41.5**	**16.3**	ND*	**16.3**	**613**	--	**1853**	--	**7.30**
		5/23/2017	ND	ND	--	ND	ND	ND*	ND*	--	ND*	**250**	ND	**135**	**2.56**	**116**	**3.65**	ND	**291**	**291**	ND	**52.7**	**11.3**	ND*	**11.3**	**836**	--	**2195**	--	**7.40**
		6/27/2018	ND	ND	--	ND	ND	ND*	ND*	--	ND*	**234**	ND*	**131**	**2.07**	**122**	**3.89**	ND	**349**	**349**	ND	**52.6**	**6.0**	ND*	**6.0**	**899**	--	--	--	--
		6/17/2019	ND	ND	--	ND	ND	ND*	ND*	--	ND*	**240**	**0.10**	**140**	**2.04**	**110**	**4.42**	ND	**390**	**390**	**1.52**	**26.4**	**8.2**	ND*	**8.2**	**640**	--	**2170**	--	**7.49**
		6/5/2020	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**55.9**	--	--	--	**977**	--	**2385**	**1930**	--
		12/14/2021	ND	ND	--	ND	ND	ND	ND	**22.5**	ND	--	--	--	--	--	--	--	--	--	--	**50.2**	--	--	--	**865**	--	**2200**	**1690**	**6.80**
		4/5/2022	ND	ND	--	ND	ND	ND	ND	**23.5**	ND	--	--	--	--	--	--	--	--	--	--	**54.4**	--	--	--	**870**	--	**2230**	**1620**	**8.20**
		4/11/2023	ND	ND	--	ND	ND	ND	ND	**24.6**	ND	--	--	--	--	--	--	--	--	--	--	**54.6**	--	--	--	**890**	--	**2251**	**1630**	**7.33**
	SH2-MW02	3/18/2013	ND	ND	--	ND	ND	ND	ND	--	ND	**225**	ND	**121**	**5.72**	**111**	**3.87**	ND	**315**	**315**	ND	**43.8**	**13.6**	ND	**13.8**	**824**	ND	**2060**	--	**7.40**
		3/30/2015	ND	ND	--	ND	ND	ND	ND	--	ND	**183**	ND	**105**	**3.61**	**110**	**4.18**	ND	**367**	**367**	ND	**37.8**	**11.8**	ND	**11.8**	**749**	--	**2029**	--	**7.43**
		6/21/2016	ND	ND	--	ND	ND	ND*	ND*	--	ND*	**208**	ND*	**108**	**4.36**	**107**	**3.71**	ND	**377**	**377**	ND	**41.8**	**15.5**	ND*	**15.5**	**654**	--	**1918**	--	**7.40**
		5/23/2017	ND	ND	--	ND	ND	ND*	ND*	--	ND*	**233**	ND*	**129**	**3.87**	**115**	**3.64**	ND	**210**	**210**	ND	**47.1**	**8.13**	ND*	**8.13**	**824**	--	**2056**	--	**7.41**
		6/27/2018	ND	ND	--	ND	ND	ND*	ND*	--	ND*	**236**	ND*	**129**	**3.76**	**121**	**4.02**	ND	**351**	**351**	ND	**51.8**	**5.98**	ND*	**5.98**	**904**	--	--	--	--
		6/17/2019	ND	ND	--	ND	ND	ND*	ND*	--	ND*	**247**	ND*	**129**	**4.27**	**113**	**4.72**	ND	**410**	**410**	**1.48**	**26.4**	**8.84**	ND*	**5.98**	**682**	--	**2170**	--	**7.54**
		6/5/2020	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**58.1**	--	--	--	**983**	--	**2420**	**1900**	--
		12/14/2021	ND	ND	--	ND	ND	ND	ND	**33.0**	ND	--	--	--	--	--	--	--	--	--	--	**58.8**	--	--	--	**1,060**	--	**2447**	**1900**	**6.90**
		4/5/2022	ND	ND	--	ND	ND	ND	ND	**25.2**	ND	--	--	--	--	--	--	--	--	--	--	**56.1**	--	--	--	**978**	--	**2381**	**1800**	**7.53**
		4/11/2023	ND	ND	--	ND	ND	ND	ND	**26.9**	ND	--	--	--	--	--	--	--	--	--	--	**53.1**	--	--	--	**901**	--	**2199**	**1810**	**7.37**
	SH2-MW03	3/18/2013	ND	ND	--	ND	ND	ND	ND	--	ND	**220**	ND	**115**	**4.69**	**104**	**4.52**	ND	**324**	**324**	ND	**44.8**	**13**	ND	**13.1**	**847**	ND	**2080**	--	**7.40**
		3/30/2015	ND	ND	--	ND	ND	ND	ND	--	ND	**192**	ND	**93.9**	**5.74**	**109**	**4.46**	ND	**367**	**367**	ND	**37.6**	**11.4**	ND	**11.4**	**802**	--	**2007**	--	**7.36**
		6/21/2016	ND	ND	--	ND	ND	ND*	ND*	--	ND*	**212**	ND*	**97.2**	**7.09**	**105**	**3.85**	ND	**371**	**371**	ND	**41.5**	**16.9**	ND	**16.9**	**624**	--	**1905**	--	**7.30**
		5/23/2017	ND	ND	--	ND	ND	ND*	ND*	--	ND*	**282**	ND*	**116**	**11.7**	**119**	**4.3**	ND	**295**	**295**	ND	**56.3**	**11.5**	ND	**11.5**	**833**	--	**2198**	--	**7.23**
		6/27/2018	ND	ND	--	ND	ND	ND*	ND*	--	ND*	**258**	ND*	**123**	**7.91**	**128**	**4.51**	ND	**349**	**349**	ND	**54.8**	**7.32**	ND*	**7.32**	**944**	--	--	--	--
		6/17/2019	ND	ND	--	ND	ND	ND*	ND*	--	ND*	**246**	**0.022**	**115**	**7.1**	**115**	**4.91**	ND	**410**	**410**	**71.8**	**0.5**	**9.88**	ND*	**7.32**	**944**	--	**2165**	--	**7.45**
		6/5/2020	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**62.7**	--	--	--	**995**	--	**2400**	**2000**	--

Table 2 - Groundwater Analytical Results
City of Longmont - Groundwater Quality Monitoring
Project Number 22227034

			Volatile Organic Compounds					Other Organic Compounds				Inorganic Parameters															General Parameters		
Parameter			Benzene	Ethylbenzene	Naphthalene	Toluene	Xylenes (Total)	Methane	Ethane	Carbon Dioxide	Ethene	Calcium, Dissolved	Iron, Dissolved	Magnesium, Dissolved	Potassium, Dissolved	Sodium, Dissolved	Strontium	Alkalinity, Carbonate (CaCO3)	Alkalinity, Bicarbonate (CaCO3)	Alkalinity, Total as CaCO3	Bromide	Chloride	Nitrogen as Nitrate	Nitrogen as Nitrite	Nitrogen as Nitrate and Nitrite	Sulfate	Sulfide, Total	Specific Conductance	Total Dissolved Solids (TDS)	pH
CAS #			71-43-2	100-41-4	91-20-3	108-88-3	1330-20-7	74-82-8	74-84-0		74-85-1	7440-70-2	7439-89-6	7439-95-4	7440-09-7	7440-23-5	7440-24-6				24959-67-9	16887-00-6				14808-79-8	18496-25-8			
COGCC Table 910-1[3]			0.005	0.7	---	0.56	1.4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	49.38	---	---	---	430.63	--	---	---	--
			---	---	---	1[M]	10[M]	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
CDPHE Basic Standards for Groundwater			0.005	0.7	0.14	0.56	1.4	---	---	---	---	--	0.3	---	---	---	---	---	---	---	---	250	10	1	10	250	---	---	400-No Limit	6.5 - 8.5
Detection Level			0.001	0.001	0.005	0.001	0.003	0.0066	0.0062	20	0.0062		0.05					20	20	20	1		0.1	0.5	0.1		0.05		200	
Units			mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	umhos/cm	mg/L	Std. Units
City of Longmont #1 Wellhead	CL1-MW01	3/20/2013	ND	ND	--	ND	ND	ND	ND	--	ND	**81**	ND	**72.2**	**2.83**	**61.7**	**2.38**	ND	**377**	**377**	ND	**34.1**	**13.9**	ND	**13.9**	**182**	ND	**1160**	--	**7.90**
		3/30/2015	ND	ND	--	ND	ND	ND	ND	--	ND	**92**	ND	**85.5**	**1.45**	**91.8**	**2.53**	ND	**427**	**427**	**1.4**	**43.5**	**16.7**	ND*	**16.7**	**254**	--	**1390**	--	**7.51**
		6/21/2016	ND	ND	--	ND	ND	ND*	ND*	--	ND*	**104**	ND	**83**	**1.94**	**91**	**2.77**	ND	**393**	**393**	ND	**42.7**	**12.2**	ND	**12.2**	**247**	--	**1410**	--	**7.60**
		6/27/2018	ND	ND	--	ND	ND	ND*	ND*	--	ND*	**83**	ND	**66**	**1.71**	**69.1**	**1.86**	ND	**355**	**355**	ND	**34.9**	**8.14**	ND	**8.14**	**140**	--	--	--	--
		6/17/2019	ND	ND	--	ND	ND	ND*	ND*	--	ND*	**83**	ND	**71.1**	**1.6**	**65.7**	**2.53**	ND	**450**	**450**	**1.52**	**16.2**	**10.5**	ND	**10.5**	**217**	--	**1147**	--	**7.61**
		6/2/2020	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**49.3**	--	--	--	**302**	--	**1481**	**983**	**4.37**
		6/15/2021	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**44.2**	--	--	--	**316**	--	**1476**	**976**	**7.50**
		4/5/2022	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**43.0**	--	--	--	**248**	--	**1336**	**917**	**8.40**
		4/12/2023	ND	ND	--	ND	ND	ND	ND	**29.7**	ND	--	--	--	--	--	--	--	--	--	--	**43.2**	--	--	--	**183**	--	**1207**	**781**	**7.65**
	CL1-MW02	3/20/2013	ND	ND	--	ND	ND	ND	ND	--	ND	**77**	ND	**67.4**	**2.1**	**60.4**	**4.26**	ND	**354**	**354**	ND	**32.7**	**2.6**	ND	**2.6**	**171**	ND	**1090**	--	**7.90**
		3/30/2015	ND	ND	--	ND	ND	ND	ND	--	ND	**77**	ND	**67.4**	**2.1**	**60.4**	**4.26**	ND	**354**	**354**	ND	**32.7**	**2.6**	ND	**2.6**	**171**	ND	**1090**	--	**7.90**
		6/22/2016	ND	ND	--	ND	ND	ND*	ND*	--	ND*	**102**	ND	**85.5**	**1.98**	**93.3**	**3.22**	ND	**372**	**372**	ND	**46.7**	**13**	ND	**13**	**246**	--	**1402**	--	**7.30**
		5/23/2017	ND	ND	--	ND	ND	ND*	ND*	--	ND*	**97**	ND	**77.2**	**1.91**	**89.5**	**2.24**	ND	**416**	**416**	ND	**44.7**	**9.75**	ND	**9.75**	**209**	--	**1261**	--	**7.19**
		6/27/2018	ND	ND	--	ND	ND	ND*	ND*	--	ND*	**80**	ND*	**62.9**	**1.76**	**76.9**	**1.81**	ND	**352**	**352**	ND	**36.4**	**9.1**	ND	**9.1**	**144**	--	--	--	--
		6/17/2019	ND	ND	--	ND	ND	ND*	ND*	--	ND*	**89**	**0.014**	**73**	**1.81**	**70.1**	**2.46**	ND	**450**	**450**	**1.51**	**18.2**	**10.6**	ND	**10.6**	**216**	--	**1132**	--	**7.66**
		6/2/2020	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**47.4**	--	--	--	**266**	--	**1388**	**935**	--
		6/15/2021	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**46.8**	--	--	--	**345**	--	**1534**	**1020**	**7.60**
		4/5/2022	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**44.9**	--	--	--	**249**	--	**1341**	**911**	**8.38**
		4/12/2023	ND	ND	--	ND	ND	ND	ND	**29.0**	ND	--	--	--	--	--	--	--	--	--	--	**45.9**	--	--	--	**200**	--	**2151**	**828**	**7.74**
	CL1-MW03	3/21/2013	ND	ND	--	ND	ND	ND	ND	--	ND	**86**	ND	**75.1**	**2.83**	**63.6**	**3.45**	ND	**389**	**389**	ND	**35.3**	**14.8**	ND	**14.9**	**189**	ND	**1130**	--	**7.70**
		3/30/2015	ND	ND	--	ND	ND	ND	ND	--	ND	**86**	ND	**75.1**	**2.83**	**63.6**	**3.45**	ND	**389**	**389**	ND	**35.3**	**14.8**	ND	**14.9**	**189**	ND	**1130**	--	**7.70**
		6/21/2016	ND	ND	--	ND	ND	ND*	ND*	--	ND*	**105**	ND	**82.9**	**1.91**	**94.7**	**2.41**	ND	**380**	**380**	ND	**45.7**	**13.3**	ND	**13.3**	**254**	--	**1394**	--	**7.40**
		5/23/2017	ND	ND	--	ND	ND	ND*	ND*	--	ND*	**90**	ND	**70.2**	**1.89**	**86.4**	**2.01**	ND	**381**	**381**	ND	**44.4**	**13.1**	ND	**13.1**	**163**	--	**1175**	--	**7.43**
		6/27/2018	ND	ND	--	ND	ND	ND*	ND*	--	ND*	**80**	ND*	**67.6**	**1.73**	**73.6**	**1.94**	ND	**353**	**353**	ND	**35.2**	**7.57**	ND	**7.57**	**149**	--	--	--	--
		6/17/2019	ND	ND	--	ND	ND	ND*	ND*	--	ND*	**84**	**0.129**	**73.4**	**1.85**	**74.9**	**2.32**	ND	**440**	**440**	**1.51**	**14.4**	**10.5**	ND	**10.5**	**210**	--	**1125**	--	**7.65**
		6/2/2020	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**46.4**	--	--	--	**280**	--	**1672**	**948**	--
		6/28/2021	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**45.9**	--	--	--	**337**	--	**1672**	**986**	**7.60**
		4/5/2022	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**43.7**	--	--	--	**284**	--	**1432**	**785**	**8.46**
		4/12/2023	ND	ND	--	ND	ND	ND	ND	**23.6**	ND	--	--	--	--	--	--	--	--	--	--	**44.8**	--	--	--	**218**	--	**1278**	**816**	**7.61**

Table 2 - Groundwater Analytical Results
City of Longmont - Groundwater Quality Monitoring
Project Number 22227034

			Volatile Organic Compounds					Other Organic Compounds				Inorganic Parameters															General Parameters		
Parameter			Benzene	Ethylbenzene	Naphthalene	Toluene	Xylenes (Total)	Methane	Ethane	Carbon Dioxide	Ethene	Calcium, Dissolved	Iron, Dissolved	Magnesium, Dissolved	Potassium, Dissolved	Sodium, Dissolved	Strontium	Alkalinity, Carbonate (CaCO3)	Alkalinity, Bicarbonate (CaCO3)	Alkalinity, Total as CaCO3	Bromide	Chloride	Nitrogen as Nitrate	Nitrogen as Nitrite	Nitrogen as Nitrate and Nitrite	Sulfate	Sulfide, Total	Specific Conductance	Total Dissolved Solids (TDS)	pH
CAS #			71-43-2	100-41-4	91-20-3	108-88-3	1330-20-7	74-82-8	74-84-0		74-85-1	7440-70-2	7439-89-6	7439-95-4	7440-09-7	7440-23-5	7440-24-6				24959-67-9	16887-00-6				14808-79-8	18496-25-8			
COGCC Table 910-1[3]			0.005	0.7	---	0.56	1.4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	49.38	---	---	---	430.63	--	---	---	--
			---	---	---	1[M]	10[M]	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
CDPHE Basic Standards for Groundwater			0.005	0.7	0.14	0.56	1.4	---	---	---	---	--	0.3	---	---	---	---	---	---	---	---	250	10	1	10	250	---	---	400-No Limit	6.5 - 8.5
Detection Level			0.001	0.001	0.005	0.001	0.003	0.0066	0.0062	20	0.0062		0.05					20	20	20	1		0.1	0.5	0.1		0.05		200	
Units			mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	umhos/cm	mg/L	Std. Units
Serafini Gas Unit	SGU-MW01	3/21/2013	ND	ND	--	ND	ND	ND	ND	--	ND	**81**	ND	**53.7**	**3.59**	**67.2**	**2.96**	ND	**328**	**328**	ND	**29.8**	**5.9**	ND	**5.9**	**191**	ND	**1060**	--	**7.80**
		10/22/2013	ND	ND	--	ND	ND	ND	ND	--	ND	**77**	**0.208**	**54.7**	**2.88**	**62.5**	**2.32**	ND	**345**	**345**	ND	**30.3**	**7.4**	ND	**7.4**	**292**	ND	**1190**	--	**7.30**
		3/30/2015	ND	ND	--	ND	ND	ND	ND	--	ND	**98**	ND	**63.8**	**2.46**	**76.8**	**2.77**	ND	**392**	**392**	ND	**32.8**	**8.4**	ND	**8.4**	**263**	--	**1322**	--	**7.51**
		6/21/2016	ND	ND	--	ND	ND	ND*	ND*	--	ND*	**109**	ND	**61.9**	**2.67**	**69.9**	**2.02**	ND	**364**	**364**	ND	**37.8**	**7.37**	ND	**7.37**	**205**	--	**1170**	--	**7.50**
		5/23/2017	ND	ND	--	ND	ND	ND*	ND*	--	ND*	**118**	ND	**65.2**	**3.03**	**72**	**1.86**	ND	**400**	**400**	ND	**39.3**	**7.39**	ND	**7.39**	**192**	--	**1201**	--	**7.33**
		6/28/2018	ND	ND	--	ND	ND	ND*	ND*	--	ND*	**108**	ND	**57.9**	**2.59**	**73.8**	**1.65**	ND	**348**	**348**	ND	**35.3**	**10**	ND	**10**	**186**	--	--	--	--
		6/10/2020	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**39.1**	--	--	--	**176**	--	**1093**	**496**	**7.50**
		6/21/2021	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**39.3**	--	--	--	**182**	--	**1213**	**768**	**7.50**
		4/6/2022	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**42.5**	--	--	--	**208**	--	**1192**	**749**	**7.95**
		4/11/2023	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**40.7**	--	--	--	**233**	--	**1292**	**813**	**7.45**
	SGU-MW02	3/21/2013	ND	ND	--	ND	ND	**0.0087**	ND	--	ND	**93**	ND	**57.8**	**3.39**	**78.6**	**1.72**	ND	**359**	**359**	ND	**34.2**	**7.2**	ND	**7.3**	**228**	ND	**1100**	--	**7.90**
		10/22/2013	ND	ND	--	ND	ND	ND	ND	--	ND	**89**	**0.381**	**54.5**	**2.63**	**53.3**	**3.12**	ND	**364**	**364**	ND	**33.2**	**8.4**	ND	**8.4**	**243**	ND	**1150**	--	**7.30**
		3/30/2015	ND	ND	--	ND	ND	ND	ND	--	ND	**98**	ND	**63.7**	**2.23**	**59.3**	**2.31**	ND	**420**	**420**	ND	**31.9**	**8**	ND	**8**	**258**	--	**1135**	--	**7.59**
		6/21/2016	**0.0589**	ND	--	ND	ND	**0.238**	**0.0159**	--	ND*	**110**	ND	**63.5**	**2.98**	**158**	**2.82**	ND	**401**	**401**	ND	**119**	**6.42**	ND	**6.42**	**201**	--	**1654**	--	**7.30**
		5/23/2017	**0.0353**	ND	--	ND	ND	**0.0884**	ND*	--	ND*	**142**	ND	**79.7**	**10.8**	**271**	**4.16**	ND	**482**	**482**	**3.29**	**438**	**1.37**	ND	**1.37**	**223**	--	NS	--	NS
		6/28/2018	ND	ND	--	ND	ND	ND*	ND*	--	ND*	**132**	ND	**70.1**	**3.39**	**105**	**2.1**	ND	**369**	**369**	ND	**58**	**12.4**	ND	**12.4**	**295**	--	--	--	--
		6/10/2020	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**37.5**	--	--	--	**156**	--	**1070**	**649**	**7.30**
		6/21/2021	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**60.2**	--	--	--	**211**	--	**1299**	**835**	**7.60**
		4/6/2022	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**45.1**	--	--	--	**188**	--	**1160**	**784**	**8.16**
		4/11/2023	ND	ND	--	ND	ND	ND	ND	**20.2**	ND	--	--	--	--	--	--	--	--	--	--	**41.9**	--	--	--	**214**	--	**1221**	**795**	**7.31**
	SGU-MW03	3/21/2013	ND	ND	--		ND	ND	ND	--	ND	**88**	ND	**49**	**3.94**	**47.7**	**4.07**	ND	**632**	**632**	ND	**28.3**	**4.4**	ND	**4.4**	**152**	ND	**917**	--	**7.60**
		10/22/2013	ND	ND	--	ND	ND	ND	ND	--	ND	**96**	**0.076**	**50.5**	**1.91**	**50.3**	**2.47**	ND	**365**	**365**	ND	**34.5**	**10.1**	ND*	**10.1**	**252**	ND	**1160**	--	**7.30**
		3/30/2015	ND	ND	--	ND	ND	ND	ND	--	ND	**112**	ND	**59.1**	**1.74**	**64**	**2.83**	ND	**416**	**416**	ND	**33.9**	**8.6**	ND*	**8.6**	**259**	ND	**1139**	--	**7.57**
		6/21/2016	ND	ND	--	ND*	ND	ND*	ND*	--	ND*	**142**	ND	**67.4**	**2.22**	**69.2**	**2.33**	ND	**375**	**375**	ND	**43.7**	**9.91**	ND	**9.91**	**261**	--	**1346**	--	**7.40**
		5/23/2017	ND	ND	--	ND*	ND	ND*	ND*	--	ND*	**137**	ND	**67**	**2.54**	**64.5**	**2.1**	ND	**434**	**434**	ND	**41.8**	**9.15**	ND	**9.15**	**220**	--	**1238**	--	**7.13**
		6/28/2018	ND	ND	--	ND	ND	**0.0261**	ND*	--	ND*	**133**	ND	**82.6**	**4.22**	**115**	**2.32**	ND	**422**	**422**	ND	**60.2**	**12.80**	ND	**12.80**	**298**	--	--	--	--
		6/10/2020	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**46.1**	--	--	--	**222**	--	**1214**	**785**	**7.40**
		6/21/2021	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**56.9**	--	--	--	**272**	--	**1390**	**917**	**7.60**
		4/6/2022	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**44.7**	--	--	--	**222**	--	**1231**	**767**	**7.92**
		4/11/2023	ND	ND	--	ND	ND	ND	ND	**36.5**	ND	--	--	--	--	--	--	--	--	--	--	**43.7**	--	--	--	**219**	--	**1230**	**792**	**7.26**
	SGU-MW04	6/28/2018	ND	ND	--	ND	ND	ND*	ND*	--	ND*	**127**	ND	**58**	**1.95**	**67.9**	**1.84**	ND	**351**	**351**	ND	**36.1**	**11.10**	ND	**11.10**	**234**	--	--	--	--

Table 2 - Groundwater Analytical Results
City of Longmont - Groundwater Quality Monitoring
Project Number 22227034

			Volatile Organic Compounds					Other Organic Compounds				Inorganic Parameters															General Parameters		
Parameter			Benzene	Ethylbenzene	Naphthalene	Toluene	Xylenes (Total)	Methane	Ethane	Carbon Dioxide	Ethene	Calcium, Dissolved	Iron, Dissolved	Magnesium, Dissolved	Potassium, Dissolved	Sodium, Dissolved	Strontium	Alkalinity, Carbonate (CaCO3)	Alkalinity, Bicarbonate (CaCO3)	Alkalinity, Total as CaCO3	Bromide	Chloride	Nitrogen as Nitrate	Nitrogen as Nitrite	Nitrogen as Nitrate and Nitrite	Sulfate	Sulfide, Total	Specific Conductance	Total Dissolved Solids (TDS)	pH
CAS #			71-43-2	100-41-4	91-20-3	108-88-3	1330-20-7	74-82-8	74-84-0		74-85-1	7440-70-2	7439-89-6	7439-95-4	7440-09-7	7440-23-5	7440-24-6				24959-67-9	16887-00-6				14808-79-8	18496-25-8			
COGCC Table 910-1[3]			0.005	0.7	---	0.56	1.4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	49.38	---	---	---	430.63	--	---	---	--
			---	---	---	1[M]	10[M]	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
CDPHE Basic Standards for Groundwater			0.005	0.7	0.14	0.56	1.4	---	---	---	---	--	0.3	---	---	---	---	---	---	---	---	250	10	1	10	250	---	---	400-No Limit	6.5 - 8.5
Detection Level			0.001	0.001	0.005	0.001	0.003	0.0066	0.0062	20	0.0062		0.05					20	20	20	1		0.1	0.5	0.1		0.05		200	
Units			mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	umhos/cm	mg/L	Std. Units
Serafini Gas Unit	SGU-MW05	6/28/2018	ND	ND	--	ND	ND	ND*	ND*	--	ND*	**148**	ND	**60.7**	**3.87**	**72.4**	**2.11**	ND	**392**	**392**	ND	**39.9**	**7.63**	ND	**7.63**	**273**	--	--	--	--
	SGU-MW06	6/10/2020	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**41.5**	--	--	--	**208**	--	**1232**	**725**	**7.30**
		6/21/2021	ND	ND	--	ND	ND	ND	ND	**29.7**	ND	--	--	--	--	--	--	--	--	--	--	**50.1**	--	--	--	**265**	--	**1466**	**928**	**7.40**
		4/6/2022	ND	ND	--	ND	ND	ND	ND	**29.7**	ND	--	--	--	--	--	--	--	--	--	--	**48.6**	--	--	--	**229**	--	**1223**	**776**	**8.02**
		4/11/2023	ND	ND	--	ND	ND	ND	ND	**31.0**	ND	--	--	--	--	--	--	--	--	--	--	**43.5**	--	--	--	**226**	--	**1233**	**832**	**7.49**
	SGU-MW07	6/10/2020	ND	ND	--	ND	ND	**0.0224**	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**41.9**	--	--	--	**61**	--	**870**	**327**	**7.30**
		6/21/2021	ND	ND	--	ND	ND	**0.0247**	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**37.9**	--	--	--	**80**	--	**1027**	**474**	**7.40**
Powell #1 Wellhead	PL1-MW01	3/20/2013	ND	ND	--	ND	ND	ND	ND	--	ND	**95**	ND	**73.2**	**2.28**	**65.3**	**1.82**	ND	**295**	**295**	ND	**31.8**	**5.9**	ND	**5.9**	**369**	ND	**1280**	--	**7.90**
		3/31/2015	ND	ND	--	ND	ND	ND	ND	--	ND	**92**	ND	**71.8**	**1.25**	**63.5**	**1.78**	ND	**259**	**259**	ND	**38.9**	**10**	ND	**10**	**427**	--	**1315**	--	**7.10**
		6/22/2016	ND	ND	--	ND*	ND	ND*	ND*	--	ND*	**284**	ND	**195**	**2.25**	**114**	**4.88**	ND	**198**	**198**	ND	**86.0**	**11.2**	ND	**11.2**	**1,270**	--	**2583**	--	**6.98**
		5/23/2017	ND	ND	--	ND*	ND	ND*	ND*	--	ND*	**104**	ND	**75.1**	**1.64**	**89.9**	**1.64**	ND	**235**	**235**	ND	**33.8**	**9.36**	ND	**9.36**	**370**	--	**1261**	--	**7.28**
		6/27/2018	ND	ND	--	ND	ND	ND*	ND*	--	ND*	**101**	ND*	**74.9**	**1.66**	**97.2**	**1.74**	ND	**215**	**215**	ND	**35.4**	**5.94**	ND	**5.94**	**457**	--	--	--	--
		6/10/2019	ND	ND	--	ND	ND	ND*	ND*	--	ND*	**107**	ND	**75.6**	**1.53**	**68.6**	**1.79**	ND	**273**	**273**	ND	**34.4**	**5.88**	ND	**5.88**	**337**	--	**1123**	--	**7.61**
		5/28/2020	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**36.6**	--	--	--	**375**	--	**1272**	**866**	**6.95**
		6/15/2021	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**38.6**	--	--	--	**491**	--	**1550**	**1090**	**6.90**
		4/21/2022	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**40.6**	--	--	--	**655**	--	**1755**	**1180**	**8.13**
		6/20/2023	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**42.0**	--	--	--	**2,670**	--	**4081**	**4100**	**6.92**
	PL1-MW02	3/20/2013	ND	ND	--	ND	ND	ND	ND	--	ND	**106**	ND	**75.9**	**2.33**	**115**	**1.83**	ND	**311**	**311**	ND	**32.8**	ND	ND	ND	**484**	ND	**1480**	--	**7.40**
		3/31/2015	ND	ND	--	ND	ND	ND	ND	--	ND	**129**	**0.393**	**95.9**	**2.25**	**119**	**2.12**	ND	**318**	**318**	**1.1**	**39.6**	ND	ND	ND	**633**	--	**1707**	--	**7.19**
		6/22/2016	ND	ND	--	ND*	ND	**0.012**	ND*	--	ND*	**131**	ND	**91.1**	**2.53**	**134**	**2.12**	ND	**304**	**304**	ND	**36.7**	ND	ND	ND	**616**	--	**1638**	--	**7.20**
		5/23/2017	ND	ND	--	ND*	ND	**0.0231**	ND*	--	ND*	**143**	ND	**97.9**	**2.63**	**165**	**1.92**	ND	**321**	**321**	ND	**39.7**	ND	ND	ND	**688**	--	**2021**	--	**7.19**
		6/27/2018	ND	ND	--	ND	ND	**0.036**	ND*	--	ND*	**128**	ND*	**88.9**	**2.54**	**170**	**1.89**	ND	**321**	**321**	ND	**36.7**	ND	ND	ND	**670**	--	--	--	--
		6/10/2019	ND	ND	--	ND	ND	**0.036**	ND*	--	ND*	**119**	ND*	**82.1**	**2.23**	**149**	**1.8**	ND	**302**	**302**	ND	**36.1**	ND	ND	ND	**555**	--	**1511**	--	**7.46**
		5/28/2020	ND	ND	--	ND	ND	**0.0204**	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**38.2**	--	--	--	**563**	--	**1659**	**1110**	**6.74**
		6/15/2021	ND	ND	--	ND	ND	**0.0441**	ND	**21.8**	ND	--	--	--	--	--	--	--	--	--	--	**36.8**	--	--	--	**584**	--	**1579**	**1110**	**6.80**
		4/21/2022	ND	ND	--	ND	ND	ND	ND	**24.2**	ND	--	--	--	--	--	--	--	--	--	--	**38.9**	--	--	--	**541**	--	**1798**	**1090**	**7.42**
		6/20/2023	ND	ND	--	ND	ND	**0.0203**	ND	**31.6**	ND	--	--	--	--	--	--	--	--	--	--	**45.0**	--	--	--	**719**	--	**2112**	**1420**	**6.93**

Table 2 - Groundwater Analytical Results
City of Longmont - Groundwater Quality Monitoring
Project Number 22227034

			Volatile Organic Compounds					Other Organic Compounds				Inorganic Parameters															General Parameters		
Parameter			Benzene	Ethylbenzene	Naphthalene	Toluene	Xylenes (Total)	Methane	Ethane	Carbon Dioxide	Ethene	Calcium, Dissolved	Iron, Dissolved	Magnesium, Dissolved	Potassium, Dissolved	Sodium, Dissolved	Strontium	Alkalinity, Carbonate (CaCO3)	Alkalinity, Bicarbonate (CaCO3)	Alkalinity, Total as CaCO3	Bromide	Chloride	Nitrogen as Nitrate	Nitrogen as Nitrite	Nitrogen as Nitrate and Nitrite	Sulfate	Sulfide, Total	Specific Conductance	Total Dissolved Solids (TDS)	pH
CAS #			71-43-2	100-41-4	91-20-3	108-88-3	1330-20-7	74-82-8	74-84-0		74-85-1	7440-70-2	7439-89-6	7439-95-4	7440-09-7	7440-23-5	7440-24-6				24959-67-9	16887-00-6				14808-79-8	18496-25-8			
COGCC Table 910-1[3]			0.005	0.7	---	0.56	1.4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	49.38	---	---	---	430.63	--	---	---	--
			---	---	---	1[M]	10[M]	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
CDPHE Basic Standards for Groundwater			0.005	0.7	0.14	0.56	1.4	---	---	---	---	--	0.3	---	---	---	---	---	---	---	---	250	10	1	10	250	---	---	400-No Limit	6.5 - 8.5
Detection Level			0.001	0.001	0.005	0.001	0.003	0.0066	0.0062	20	0.0062		0.05					20	20	20	1		0.1	0.5	0.1		0.05		200	
Units			mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	umhos/cm	mg/L	Std. Units
Powell #1 Wellhead	PL1-MW03	3/19/2013	ND	ND	--	ND	ND	ND	ND	--	ND	**86**	ND	**63**	**3.02**	**58.6**	**1.9**	ND	**296**	**296**	ND	**32.3**	**0.58**	ND	**0.57**	**265**	ND	**1090**	--	**7.40**
		6/27/2018	ND	ND	--	ND	ND	**0.1**	ND*	--	ND*	**66**	ND	**47.9**	**3.4**	**77**	**1.07**	ND	**256**	**256**	ND	**35.0**	**0.503**	ND	**0.503**	**212**	--	--	--	--
		6/10/2019	ND	ND	--	ND	ND	**0.404**	ND	--	ND	**93**	ND	**60.4**	**2.63**	**71.9**	**1.56**	ND	**250**	**250**	ND	**39.6**	ND	ND	ND	**295**	--	**1022**	--	**7.56**
		5/28/2020	ND	ND	--	ND	ND	**0.0169**	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**34.3**	--	--	--	**292**	--	**1158**	**670**	**6.99**
		6/15/2021	ND	ND	--	ND	ND	**0.0489**	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**66.8**	--	--	--	**383**	--	**1322**	**889**	**7.00**
		4/21/2022	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**36.3**	--	--	--	**181**	--	**984**	**582**	**8.67**
		6/20/2023	ND	ND	--	ND	ND	ND	ND	**41.0**	ND	--	--	--	--	--	--	--	--	--	--	**47.0**	--	--	--	**743**	--	**1335**	**1270**	**6.61**
Evans #6 Wellhead	E6W-MW01	3/22/2013	ND	ND	--	ND	ND	ND	ND	--	ND	**183**	ND	**126**	**6.52**	**157**	**4.04**	ND	**307**	**307**	ND	**32.7**	**0.44**	ND	**0.44**	**987**	ND	**2070**	--	**7.60**
		10/23/2013	ND	ND	--	ND	ND	ND	ND	--	ND	**281**	ND	**182**	**7.58**	**236**	**5.52**	ND	**381**	**381**	ND	**72.2**	**5.0**	ND	**5.0**	**1,710**	ND	**4960**	--	**6.00**
		7/28/2014	ND	ND	--	ND	ND	ND	ND	--	ND	**206**	ND	**133**	**6.41**	**181**	**4.19**	ND	**326**	**326**	ND	**50.0**	**0.84**	ND	**0.84**	**1,130**	--	**2074**	--	**7.20**
		03/31/2015	ND	ND	--	ND	ND	ND	ND	--	ND	**207**	ND	**136**	**4.36**	**172**	**4.29**	ND	**351**	**351**	ND	**42.9**	**0.83**	ND	**0.83**	**1,090**	--	**2397**	--	**7.27**
		6/22/2016	ND	ND	--	ND*	ND	ND*	ND*	--	ND*	**187**	ND	**115**	**4.59**	**164**	**4.06**	ND	**268**	**268**	ND	**42.6**	**0.351**	ND	**0.351**	**915**	--	**2090**	--	**7.20**
		5/25/2017	ND	ND	--	ND*	ND	ND*	ND*	--	ND*	**332**	ND	**187**	**5.64**	**222**	**5.25**	ND	**305**	**305**	ND	**39.9**	**3.55**	ND	**3.55**	**1,580**	--	**2944**	--	**6.74**
		6/28/2018	ND	ND	--	ND	ND	ND*	ND*	--	ND*	**188**	ND	**108**	**4.25**	**171**	**3.39**	ND	**269**	**269**	ND	**35.9**	ND	ND	ND	**875**	--	--	--	--
		6/6/2019	ND	ND	--	ND	ND	ND	ND	ND	ND	**207**	ND	**119**	**4.25**	**172**	**3.5**	ND	**312**	**312**	ND	**31.8**	**1.65**	ND	**1.65**	**955**	--	**2026**	**2570**	**7.53**
		6/3/2020	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**38.6**	--	--	--	**735**	--	**3404**	**1290**	**7.50**
		4/21/2022	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**34.3**	--	--	--	**785**	--	**2020**	**1380**	**7.54**
		6/19/2023	ND	ND	--	ND	ND	ND	ND	**40.6**	ND	--	--	--	--	--	--	--	--	--	--	**86.3**	--	--	--	**1,170**	--	**2910**	**2740**	**7.05**
	E6W-MW02	3/22/2013	ND	ND	--	ND	ND	**0.0278**	ND	--	ND	**207**	ND	**175**	**10.6**	**212**	**5.94**	ND	**312**	**321**	**1.5**	**34.4**	ND	ND	ND	**1,380**	ND	**2200**	--	**7.80**
		10/23/2013	ND	ND	--	ND	ND	ND	ND	--	ND	**329**	ND	**279**	**42.4**	**419**	**7.28**	ND	**426**	**426**	**1**	**110**	**14.5**	ND*	**14.5**	**2,630**	ND	**7000**	--	**6.00**
		7/28/2014	ND	ND	--	ND	ND	ND	ND	--	ND	**187**	ND	**139**	**22.7**	**189**	**4.48**	ND	**309**	**309**	ND	**38.4**	**2.6**	ND	**2.6**	**1,350**	--	**2358**	--	**7.27**
		3/31/2015	ND	ND	--	ND	ND	ND	ND	--	ND	**181**	ND	**150**	**15.3**	**188**	**4.02**	ND	**307**	**307**	ND	**35.4**	**0.58**	ND	**0.58**	**1,160**	--	**2472**	--	**7.47**
		6/22/2016	ND	ND	--	ND*	ND	ND*	ND*	--	ND*	**226**	ND	**182**	**19.8**	**235**	**7.6**	ND	**304**	**304**	ND	**50.3**	**2.94**	ND	**2.94**	**1,430**	--	**2821**	--	**7.30**
		5/25/2017	ND	ND	--	ND*	ND	ND*	ND*	--	ND*	**167**	ND	**130**	**7.94**	**179**	**4.03**	ND	**280**	**280**	ND	**38.7**	**0.685**	ND	**0.685**	**863**	--	**2076**	--	**7.27**
		6/28/2018	ND	ND	--	ND	ND	ND*	ND*	--	ND*	**188**	ND	**142**	**9.41**	**192**	**3.61**	ND	**294**	**294**	ND	**35.0**	**0.312**	ND	**0.312**	**996**	--	--	--	--
		6/6/2019	ND	ND	--	ND	ND	ND*	ND*	--	ND*	**194**	ND	**150**	**10.4**	**188**	**3.44**	ND	**277**	**277**	ND	**30.8**	**1.12**	ND	**1.12**	**1,120**	--	**2133**	--	**7.57**
		6/3/2020	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**93.0**	--	--	--	**2,820**	--	**4660**	**4500**	--
		6/17/2021	ND	ND	--	ND	ND	ND	ND	**20.9**	ND	--	--	--	--	--	--	--	--	--	--	**51.9**	--	--	--	**3,610**	--	**2729**	**2070**	**7.50**
		4/21/2022	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**34.4**	--	--	--	**888**	--	**2142**	**1590**	**7.72**
		6/19/2023	ND	ND	--	ND	ND	ND	ND	**33.0**	ND	--	--	--	--	--	--	--	--	--	--	**61.7**	--	--	--	**1,490**	--	**3106**	**3030**	**7.08**

Table 2 - Groundwater Analytical Results
City of Longmont - Groundwater Quality Monitoring
Project Number 22227034

			Volatile Organic Compounds					Other Organic Compounds				Inorganic Parameters															General Parameters		
Parameter			Benzene	Ethylbenzene	Naphthalene	Toluene	Xylenes (Total)	Methane	Ethane	Carbon Dioxide	Ethene	Calcium, Dissolved	Iron, Dissolved	Magnesium, Dissolved	Potassium, Dissolved	Sodium, Dissolved	Strontium	Alkalinity, Carbonate (CaCO3)	Alkalinity, Bicarbonate (CaCO3)	Alkalinity, Total as CaCO3	Bromide	Chloride	Nitrogen as Nitrate	Nitrogen as Nitrite	Nitrogen as Nitrate and Nitrite	Sulfate	Sulfide, Total	Specific Conductance	Total Dissolved Solids (TDS)	pH
CAS #			71-43-2	100-41-4	91-20-3	108-88-3	1330-20-7	74-82-8	74-84-0		74-85-1	7440-70-2	7439-89-6	7439-95-4	7440-09-7	7440-23-5	7440-24-6				24959-67-9	16887-00-6				14808-79-8	18496-25-8			
COGCC Table 910-1[3]			0.005	0.7	---	0.56	1.4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	49.38	---	---	---	430.63	--	---	---	--
			---	---	---	1[M]	10[M]	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
CDPHE Basic Standards for Groundwater			0.005	0.7	0.14	0.56	1.4	---	---	---	---	--	0.3	---	---	---	---	---	---	---	---	250	10	1	10	250	---	---	400-No Limit	6.5 - 8.5
Detection Level			0.001	0.001	0.005	0.001	0.003	0.0066	0.0062	20	0.0062		0.05					20	20	20	1		0.1	0.5	0.1		0.05		200	
Units			mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	umhos/cm	mg/L	Std. Units
Evans #6 Wellhead	E6W-MW03	3/22/2013	ND	ND	--	ND	ND	**0.0141**	ND	--	ND	**192**	ND	**150**	**9.22**	**184**	**5.73**	ND	**312**	**312**	ND	**31.1**	**0.11**	ND	**0.12**	**1,130**	ND	**2280**	--	**7.60**
		10/23/2013	ND	ND	--	ND	ND	ND	ND	--	ND	**363**	ND	**255**	**31.1**	**333**	**7.09**	ND	**367**	**367**	ND	**96.2**	**6.2**	ND	**6.2**	**2,420**	ND	**6320**	--	**6.00**
		07/28/2014	ND	ND	--	ND	ND	ND	ND	--	ND	**264**	ND	**167**	**13.1**	**217**	**5.34**	ND	**315**	**315**	ND	**52.4**	**1.9**	ND	**1.9**	**1,550**	--	**2635**	--	**7.15**
		3/31/2015	ND	ND	--	ND	ND	ND	ND	--	ND	**200**	ND	**133**	**8.49**	**178**	**4.02**	ND	**327**	**327**	ND	**40.8**	**1.4**	ND	**1.4**	**1,180**	--	**2481**	--	**7.34**
		6/22/2016	ND	ND	--	ND*	ND	ND*	ND*	--	ND*	**262**	ND	**156**	**9.13**	**196**	**6.61**	ND	**325**	**325**	ND	**49.0**	**3.38**	ND	**3.38**	**1,280**	--	**2678**	--	**7.20**
		5/25/2017	ND	ND	--	ND*	ND	ND*	ND*	--	ND*	**273**	ND	**166**	**9.72**	**210**	**4.37**	ND	**299**	**299**	ND	**36.9**	**1.98**	ND	**1.98**	**1,430**	--	**2696**	--	**7.09**
		6/28/2018	ND	ND	--	ND	ND	ND*	ND*	--	ND*	**302**	ND	**165**	**6.94**	**217**	**4.98**	ND	**319**	**319**	ND	**37.8**	**0.725**	ND	**0.725**	**1,390**	--	--	--	--
		6/6/2019	ND	ND	--	ND	ND	ND*	ND*	--	ND*	**250**	ND	**146**	**7.26**	**192**	**3.89**	ND	**298**	**298**	ND	**30.1**	**1.16**	ND	**1.16**	**1,200**	--	**2331**	--	**7.61**
		6/3/2020	ND	ND	--	ND	ND	ND	ND	**117**	ND	--	--	--	--	--	--	--	--	--	--	**188.0**	--	--	--	**7,080**	--	**9455**	**10400**	--
		6/17/2021	ND	ND	--	ND	ND	ND	ND	**21.3**	ND	--	--	--	--	--	--	--	--	--	--	**36.8**	--	--	--	**1,020**	--	**2427**	**1900**	**7.40**
		4/21/2022	ND	ND	--	ND	ND	ND	ND	**20.8**	ND	--	--	--	--	--	--	--	--	--	--	**35.7**	--	--	--	**990**	--	**2246**	**1620**	**7.64**
		6/19/2023	ND	ND	--	ND	ND	ND	ND	**39.1**	ND	--	--	--	--	--	--	--	--	--	--	**47.1**	--	--	--	**1,310**	--	**2762**	**2490**	**7.08**
Evans #6 Tank Battery	E6T-MW01	3/22/2013	ND	ND	--	ND	ND	ND	ND	--	ND	**326**	ND	**285**	**12.1**	**593**	**6.14**	ND	**334**	**334**	**1.2**	**112**	**0.93**	ND	**0.93**	**3,060**	ND	**5030**	--	**7.80**
		10/23/2013	ND	ND	--	ND	ND	ND	ND	--	ND	**306**	ND	**256**	**6.61**	**666**	**4.03**	ND	**401**	**401**	ND	**111**	ND	ND	ND	**3,190**	ND	**8280**	--	**7.00**
		7/28/2014	ND	ND	--	ND	ND	ND	ND	--	ND	**280**	ND	**215**	**5.8**	**446**	**4.54**	ND	**340**	**340**	ND	**104**	ND	ND	ND	**2,810**	--	**4100**	--	**7.47**
		3/31/2015	ND	ND	--	ND	ND	ND	ND	--	ND	**258**	ND	**205**	**4.81**	**608**	**4.05**	ND	**324**	**324**	ND	**96.5**	ND	ND	ND	**2,590**	--	**4706**	--	**7.42**
		6/22/2016	ND	ND	--	ND*	ND	**0.0122**	ND*	--	ND*	**251**	ND	**168**	**5.15**	**587**	**4.85**	ND	**291**	**291**	ND	**86.1**	ND	ND	ND	**2,190**	--	**4225**	--	**7.46**
		5/25/2017	ND	ND	--	ND*	ND	ND*	ND*	--	ND*	**217**	ND	**140**	**4.4**	**616**	**2.93**	ND	**277**	**277**	ND	**90.6**	ND	ND	ND	**1,930**	--	**3850**	--	**7.38**
		6/28/2018	ND	ND	--	ND	ND	ND*	ND*	--	ND*	**193**	ND*	**121**	**3.91**	**595**	**2.65**	ND	**257**	**257**	ND	**84.9**	ND	ND	ND	**1,970**	--	--	--	--
		6/6/2019	ND	ND	--	ND	ND	ND*	ND*	--	ND*	**174**	ND	**110**	**3.64**	**560**	**2.38**	ND	**309**	**309**	ND	**76.3**	ND	ND	ND	**1,550**	--	**3140**	--	**7.21**
		6/4/2020	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**38.1**	--	--	--	**826**	--	**1956**	**1580**	--
		6/17/2021	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**82.6**	--	--	--	**1,480**	--	**3462**	**2460**	**7.70**
		4/21/2022	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**84.0**	--	--	--	**1,430**	--	**3466**	**2010**	--
		6/19/2023	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**66.5**	--	--	--	**1,220**	--	**2983**	**2280**	**7.36**

Table 2 - Groundwater Analytical Results
City of Longmont - Groundwater Quality Monitoring
Project Number 22227034

			Volatile Organic Compounds					Other Organic Compounds				Inorganic Parameters															General Parameters		
Parameter			Benzene	Ethylbenzene	Naphthalene	Toluene	Xylenes (Total)	Methane	Ethane	Carbon Dioxide	Ethene	Calcium, Dissolved	Iron, Dissolved	Magnesium, Dissolved	Potassium, Dissolved	Sodium, Dissolved	Strontium	Alkalinity, Carbonate (CaCO3)	Alkalinity, Bicarbonate (CaCO3)	Alkalinity, Total as CaCO3	Bromide	Chloride	Nitrogen as Nitrate	Nitrogen as Nitrite	Nitrogen as Nitrate and Nitrite	Sulfate	Sulfide, Total	Specific Conductance	Total Dissolved Solids (TDS)	pH
CAS #			71-43-2	100-41-4	91-20-3	108-88-3	1330-20-7	74-82-8	74-84-0		74-85-1	7440-70-2	7439-89-6	7439-95-4	7440-09-7	7440-23-5	7440-24-6				24959-67-9	16887-00-6				14808-79-8	18496-25-8			
COGCC Table 910-1[3]			0.005	0.7	---	0.56	1.4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	49.38	---	---	---	430.63	--	---	---	--
			---	---	---	1[M]	10[M]	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
CDPHE Basic Standards for Groundwater			0.005	0.7	0.14	0.56	1.4	---	---	---	---	--	0.3	---	---	---	---	---	---	---	---	250	10	1	10	250	---	---	400-No Limit	6.5 - 8.5
Detection Level			0.001	0.001	0.005	0.001	0.003	0.0066	0.0062	20	0.0062		0.05					20	20	20	1		0.1	0.5	0.1		0.05		200	
Units			mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	umhos/cm	mg/L	Std. Units
Evans #6 Tank Battery	E6T-MW02	3/22/2013	ND	ND	--	ND	ND	**0.0076**	ND	--	ND	**238**	ND	**181**	**7.41**	**247**	**4.52**	ND	**346**	**346**	**1.2**	**63.9**	ND	ND	ND	**1,560**	ND	**2960**	--	**7.60**
		10/23/2013	ND	ND	--	ND	ND	ND	ND	--	ND	**271**	ND	**210**	**6.58**	**334**	**4.45**	ND	**391**	**391**	ND	**68.6**	**16.6**	ND*	**17**	**1,770**	ND	**5640**	--	**6.00**
		7/28/2014	ND	ND	--	ND	ND	ND	ND	--	ND	**393**	ND	**297**	**7.56**	**356**	**7.04**	ND	**346**	**346**	ND	**113**	ND	ND	ND	**3,080**	--	**3968**	--	**7.44**
		3/31/2015	ND	ND	--	ND	ND	ND	ND	--	ND	**430**	ND	**392.00**	**7.24**	**563.00**	**8.27**	ND	**277.00**	**277.00**	ND	**129.0**	ND	ND	ND	**3,610**	--	**5745**	--	**7.28**
		6/22/2016	ND	ND	--	ND*	ND	ND*	ND*	--	ND*	**551**	ND	**810**	**8.74**	**1,060**	**29.3**	ND	**141**	**141**	ND	**218**	ND	ND	ND	**7,560**	--	**9390**	--	**7.04**
		5/25/2017	ND	ND	--	ND*	ND	ND*	ND*	--	ND*	**399**	ND	**331**	**7.58**	**462**	**7.78**	ND	**250**	**250**	ND	**83.9**	**0.575**	ND	**0.575**	**2,960**	--	--	--	--
		6/28/2018	ND	ND	--	ND	ND	ND*	ND*	--	ND*	**400**	ND*	**318**	**7.4**	**436**	**5.86**	ND	**166**	**166**	ND	**88.2**	ND	ND	ND	**2,600**	--	--	--	--
		6/6/2019	ND	ND	--	ND	ND	ND*	ND*	--	ND*	**462**	ND	**371**	**7.82**	**490**	**6.01**	ND	**184**	**184**	ND	**92.7**	**1.39**	ND	**1.39**	**3,170**	--	**4610**	--	**6.93**
		6/4/2020	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**40.5**	--	--	--	**1,210**	--	**2520**	**2070**	--
		6/17/2021	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**83.3**	--	--	--	**2,540**	--	**4502**	**3830**	**7.20**
		4/21/2022	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**95.0**	--	--	--	**3,080**	--	**4907**	**3530**	--
		6/19/2023	ND	ND	--	ND	ND	ND	ND	**21.4**	ND	--	--	--	--	--	--	--	--	--	--	**43.8**	--	--	--	**1,340**	--	**3023**	**2980**	**6.89**
	E6T-MW03	3/22/2013	ND	ND	--	ND	ND	**0.0068**	ND	--	ND	**354**	ND	**350**	**11**	**500**	**7.86**	ND	**524**	**524**	**1.3**	**103**	ND	ND	ND	**2,650**	ND	**4830**	--	**7.40**
		10/23/2013	ND	ND	--	ND	ND	ND	ND	--	ND	**516**	**0.212**	**644**	**8.43**	**992**	**10.1**	ND	**732**	**732**	**1.2**	**249**	ND	ND	ND	**5,200**	ND	**13200**	--	**6.00**
		7/28/2014	ND	ND	--	ND	ND	ND	ND	--	ND	**530**	ND	**680**	**7.48**	**1,010**	**2.51**	ND	**468**	**468**	**1.1**	**254**	ND	ND	ND	**6,240**	--	**7162**	--	**7.35**
		3/31/2015	ND	ND	--	ND	ND	ND	ND	--	ND	**432**	**9.73**	**543**	**6.25**	**840**	**9.29**	ND	**301**	**301**	ND	**165.0**	ND	ND	ND	**4,970**	--	**7557**	--	**7.16**
		6/22/2016	ND	ND	--	ND*	ND	ND*	ND*	--	ND*	**392**	ND	**295**	**6.65**	**490**	**7.44**	ND	**245**	**245**	ND	**88.1**	**4.41**	ND	**4.41**	**2,930**	--	**4748**	--	**7.38**
		5/25/2017	ND	ND	--	ND*	ND	ND*	ND*	--	ND*	**432**	**0.282**	**616**	**6.34**	**824**	**7.73**	ND	ND	ND	ND	**166.0**	ND	ND	ND	**5,610**	--	**7601**	--	**5.08**
		6/28/2018	ND	ND	--	ND	ND	**0.013**	ND*	--	ND*	**436**	ND*	**646**	**7.02**	**894**	**7.82**	ND	ND	ND	ND	**179.0**	ND	ND	ND	**5,850**	--	--	--	--
		6/6/2019	ND	ND	--	ND	ND	ND	ND	--	ND	**392**	ND	**764**	**7.61**	**1180**	**9.71**	ND	ND	ND	ND	**162.0**	**3**	ND	**3**	**6,290**	--	**8180**	--	**5.77**
		6/4/2020	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**32.3**	--	--	--	**968**	--	**2270**	**1790**	--
		6/17/2021	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**126.0**	--	--	--	**4,890**	--	**7239**	**7100**	**5.90**
		4/21/2022	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**140.0**	--	--	--	**4,720**	--	**6338**	**4270**	--
		6/19/2023	ND	ND	--	ND	ND	ND	ND	**126**	ND	--	--	--	--	--	--	--	--	--	--	**114**	--	--	--	**5,350**	--	**245**	**8490**	**4.81**
Longmont 8-10K Wellhead	LM8-MW01	3/22/2013	ND	ND	--	ND	ND	ND	ND	--	ND	**75**	**ND**	**79.1**	**5.87**	**106**	**3.03**	**ND**	**204**	**204**	**ND**	**40.1**	**0.23**	**ND**	**0.24**	**496**	**ND**	**1350**	--	**7.50**
		12/20/2017	--	--	--	--	--	ND	--	--	--	**339**	**--**	**120**	**22.7**	**203**	**2.68**	**--**	**--**	**244**	**--**	**90.2**	**0.875**	**--**	**0.875**	**1410**	**--**	**2742**	--	**7.66**
		6/5/2019	ND	ND	ND	ND	ND	ND	ND	--	ND	**492**	**ND**	**326**	**12.1**	**223**	**6.26**	**ND**	**129**	**129**	**ND**	**35.9**	**ND**	**ND**	**ND**	**2820**	**--**	**3478**	--	**6.74**
		6/4/2020	ND	ND	--	ND	ND	ND	ND	ND	ND	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**38.6**	**--**	**--**	**--**	**2600**	**--**	**4011**	**4040**	--
		6/23/2021	ND	ND	--	ND	ND	ND	ND	ND	ND	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**42.5**	**--**	**--**	**--**	**2960**	**--**	**4402**	**4140**	--
		4/21/2022	ND	ND	--	ND	ND	ND	ND	ND	ND	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**46.1**	**--**	**--**	**--**	**2940**	**--**	**4279**	**3200**	--
		6/19/2023	ND	ND	--	ND	ND	ND	ND	ND	ND	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**39.6**	**--**	**--**	**--**	**2440**	**--**	**3740**	**3860**	**7.09**

Table 2 - Groundwater Analytical Results
City of Longmont - Groundwater Quality Monitoring
Project Number 22227034

			Volatile Organic Compounds					Other Organic Compounds				Inorganic Parameters															General Parameters		
Parameter			Benzene	Ethylbenzene	Naphthalene	Toluene	Xylenes (Total)	Methane	Ethane	Carbon Dioxide	Ethene	Calcium, Dissolved	Iron, Dissolved	Magnesium, Dissolved	Potassium, Dissolved	Sodium, Dissolved	Strontium	Alkalinity, Carbonate (CaCO3)	Alkalinity, Bicarbonate (CaCO3)	Alkalinity, Total as CaCO3	Bromide	Chloride	Nitrogen as Nitrate	Nitrogen as Nitrite	Nitrogen as Nitrate and Nitrite	Sulfate	Sulfide, Total	Specific Conductance	Total Dissolved Solids (TDS)	pH
CAS #			71-43-2	100-41-4	91-20-3	108-88-3	1330-20-7	74-82-8	74-84-0		74-85-1	7440-70-2	7439-89-6	7439-95-4	7440-09-7	7440-23-5	7440-24-6				24959-67-9	16887-00-6				14808-79-8	18496-25-8			
COGCC Table 910-1[3]			0.005	0.7	---	0.56	1.4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	49.38	---	---	---	430.63	--	---	---	--
			---	---	---	1[M]	10[M]	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
CDPHE Basic Standards for Groundwater			0.005	0.7	0.14	0.56	1.4	---	---	---	---	--	0.3	---	---	---	---	---	---	---	---	250	10	1	10	250	---	---	400-No Limit	6.5 - 8.5
Detection Level			0.001	0.001	0.005	0.001	0.003	0.0066	0.0062	20	0.0062		0.05					20	20	20	1		0.1	0.5	0.1		0.05		200	
Units			mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	umhos/cm	mg/L	Std. Units
Longmont 8-10K Wellhead	LM8-MW02	3/22/2013	ND	ND	--	ND	ND	ND	ND	--	ND	**85**	**ND**	**88.6**	**5.39**	**131**	**1.97**	**ND**	**234**	**234**	**ND**	**42.9**	**0.28**	**ND**	**0.29**	**548**	**ND**	**1540**	--	**7.60**
		12/20/2017	--	--	--	--	--	ND	--	--	--	**182**	**--**	**152**	**9.38**	**244**	**2.32**	**--**	**--**	**246**	**--**	**79.9**	**0.423**	**--**	**0.423**	**1190**	**--**	**2546**	--	**7.37**
		6/5/2019	ND	ND	ND	ND	ND	ND	ND	--	ND	**522**	**ND**	**432**	**16.5**	**200**	**7.32**	**ND**	**ND**	**ND**	**ND**	**45.5**	**ND**	**ND**	**ND**	**4600**	**--**	**4366**	--	**5.91**
		6/4/2020	ND	ND	--	ND	ND	ND	ND	**79.6**	ND	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**41**	**--**	**--**	**--**	**2950**	**--**	**4012**	**4090**	--
		6/23/2021	ND	ND	--	ND	ND	ND	ND	**141**	ND	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**36.2**	**--**	**--**	**--**	**2730**	**--**	**3703**	**3580**	--
		4/21/2022	ND	ND	--	ND	ND	ND	ND	**39.8**	ND	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**37.6**	**--**	**--**	**--**	**2370**	**--**	**3400**	**3030**	--
		6/19/2023	ND	ND	--	ND	ND	ND	ND	**47.8**	ND	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**15.6**	**--**	**--**	**--**	**660**	**--**	**1345**	**1140**	**6.13**
	LM8-MW03	3/22/2013	ND	ND	--	ND	ND	ND	ND	--	ND	**87**	**ND**	**94.1**	**5.65**	**122**	**2.87**	**ND**	**244**	**244**	**ND**	**42.1**	**ND**	**ND**	**ND**	**530**	**ND**	**1530**	--	**7.40**
		12/20/2017	--	--	--	--	--	**0.0263**	--	--	--	**209**	**--**	**173**	**11.5**	**255**	**2.76**	**--**	**--**	**211**	**--**	**95.9**	**5.12**	**--**	**5.12**	**1370**	**--**	**2685**	--	**7.43**
		6/5/2019	ND	ND	ND	ND	ND	ND	ND	--	ND	**437**	**ND**	**326**	**13.4**	**177**	**5.88**	**ND**	**ND**	**ND**	**ND**	**35.1**	**ND**	**ND**	**ND**	**3570**	**--**	**3486**	--	**5.34**
		6/4/2020	ND	ND	--	ND	ND	ND	ND	**65.6**	ND	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**43.8**	**--**	**--**	**--**	**2840**	**--**	**4064**	**4040**	--
		6/23/2021	ND	ND	--	ND	ND	ND	ND	**56.9**	ND	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**38.6**	**--**	**--**	**--**	**2740**	**--**	**3966**	**3510**	--
		4/21/2022	ND	ND	--	ND	ND	ND	ND	**53.4**	ND	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**42.8**	**--**	**--**	**--**	**2680**	**--**	**3603**	**3410**	--
		6/19/2023	ND	ND	--	ND	ND	ND	ND	**38.2**	ND	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**37.3**	**--**	**--**	**--**	**2060**	**--**	**3219**	**1430**	**5.97**
Domenico #1 Wellsite	DM1-MW01	3/19/2013	ND	ND	--	ND	ND	**0.0253**	ND	--	ND	**86**	ND	**93.1**	**3.4**	**254**	**1.83**	ND	**484**	**484**	**4.8**	**136**	ND	ND	ND	**494**	ND	**1970**	--	**7.50**
		7/29/2014	ND	ND	--	ND	ND	ND	ND	--	ND	**53**	ND	**56.9**	**1.64**	**175**	**0.853**	ND	**305**	**305**	**3**	**92.0**	ND	ND	ND	**373**	--	**1023**	--	**7.36**
		3/31/2015	ND	ND	--	ND	ND	**0.0625**	ND	--	ND	**34**	ND	**53**	**1.72**	**145**	**0.71**	ND	**351**	**351**	**2.1**	**72.2**	ND	ND	ND	**183**	--	**1189**	--	**7.52**
		6/24/2016	ND	ND	--	ND*	ND	ND*	ND*	--	ND*	**33**	ND	**41.1**	**1.9**	**78.7**	**0.713**	ND	**209**	**209**	ND	**48.1**	ND	ND	ND	**122**	--	**801**	--	**7.27**
		5/23/2017	ND	ND	--	ND*	ND	**0.213**	ND*	--	ND*	**55**	ND	**69.3**	**2.54**	**143**	**1.07**	ND	**410**	**410**	**1.66**	**76.9**	ND	ND	ND	**180**	--	**1271**	--	**7.53**
		6/29/2018	ND	ND	--	ND	ND	**0.0505**	ND*	--	ND*	**40**	ND	**52.6**	**2.47**	**115**	**0.719**	ND	**241**	**241**	ND	**74.3**	ND	ND	ND	**193**	--	--	--	--
		6/3/2019	ND	ND	--	ND	ND	**0.0529**	ND	--	ND	**52**	ND	**74.2**	**3.04**	**144**	**1.12**	ND	**407**	**407**	ND	**78.4**	ND	ND	ND	**181**	--	**1163**	--	**7.46**
		6/8/2020	ND	ND	--	ND	ND	**0.0438**	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**96.3**	--	--	--	**219**	--	**1445**	**793**	**7.30**
		6/17/2021	ND	ND	--	ND	ND	**0.0149**	ND	**21.6**	ND	--	--	--	--	--	--	--	--	--	--	**100.0**	--	--	--	**221**	--	**1723**	**958**	**7.50**
		4/21/2022	ND	ND	--	ND	ND	ND	ND	**23.1**	ND	--	--	--	--	--	--	--	--	--	--	**120.0**	--	--	--	**230**	--	**1641**	**939**	**9.70**
		6/20/2023	ND	ND	--	ND	ND	ND	ND	**26.0**	ND	--	--	--	--	--	--	--	--	--	--	**118**	--	--	--	**354**	--	**1624**	**1200**	**7.30**

Table 2 - Groundwater Analytical Results
City of Longmont - Groundwater Quality Monitoring
Project Number 22227034

			Volatile Organic Compounds					Other Organic Compounds				Inorganic Parameters															General Parameters		
Parameter			Benzene	Ethylbenzene	Naphthalene	Toluene	Xylenes (Total)	Methane	Ethane	Carbon Dioxide	Ethene	Calcium, Dissolved	Iron, Dissolved	Magnesium, Dissolved	Potassium, Dissolved	Sodium, Dissolved	Strontium	Alkalinity, Carbonate (CaCO3)	Alkalinity, Bicarbonate (CaCO3)	Alkalinity, Total as CaCO3	Bromide	Chloride	Nitrogen as Nitrate	Nitrogen as Nitrite	Nitrogen as Nitrate and Nitrite	Sulfate	Sulfide, Total	Specific Conductance	Total Dissolved Solids (TDS)	pH
CAS #			71-43-2	100-41-4	91-20-3	108-88-3	1330-20-7	74-82-8	74-84-0		74-85-1	7440-70-2	7439-89-6	7439-95-4	7440-09-7	7440-23-5	7440-24-6				24959-67-9	16887-00-6				14808-79-8	18496-25-8			
COGCC Table 910-1[3]			0.005	0.7	---	0.56	1.4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	49.38	---	---	---	430.63	--	---	---	--
			---	---	---	1[M]	10[M]	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
CDPHE Basic Standards for Groundwater			0.005	0.7	0.14	0.56	1.4	---	---	---	---	--	0.3	---	---	---	---	---	---	---	---	250	10	1	10	250	---	---	400-No Limit	6.5 - 8.5
Detection Level			0.001	0.001	0.005	0.001	0.003	0.0066	0.0062	20	0.0062		0.05					20	20	20	1		0.1	0.5	0.1		0.05		200	
Units			mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	umhos/cm	mg/L	Std. Units
Domenico #1 Wellsite	DM1-MW02	3/19/2013	ND	ND	--	ND	ND	**0.0071**	ND	--	ND	**58**	ND	**84.8**	**6.21**	**214**	**0.965**	ND	**307**	**307**	**3.4**	**123**	ND	ND	ND	**492**	ND	**1720**	--	**7.50**
		7/29/2014	ND	ND	--	ND	ND	**0.0291**	ND	--	ND	**114**	ND	**93.2**	**6.46**	**276**	**1.59**	ND	**525**	**525**	**4.6**	**157**	**1.4**	**0.13**	**1.6**	**685**	--	**2215**	--	**7.13**
		3/31/2015	ND	ND	--	ND	ND	ND	ND	--	ND	**83**	ND	**68.6**	**4.67**	**215**	**0.986**	ND	**529**	**529**	**4.1**	**112**	ND	ND	--	**339**	--	**1750**	--	**7.32**
		6/24/2016	ND	ND	--	ND*	ND	**0.0433**	ND*	--	ND*	**68**	ND	**58**	**5.67**	**119**	**1.12**	ND	**330**	**330**	**1.25**	**61.1**	ND	ND	ND	**185**	--	**1176**	--	**7.01**
		5/23/2017	ND	ND	--	ND*	ND	**0.0152**	ND*	--	ND*	**66**	ND	**55.8**	**5.55**	**127**	**0.729**	ND	**330**	**330**	**1.15**	**80.4**	**0.44**	ND	**0.44**	**185**	--	**1217**	--	**7.32**
		6/29/2018	ND	ND	--	ND	ND	**0.0675**	ND*	--	ND*	**71**	ND	**52.9**	**4.93**	**159**	**0.837**	ND	**386**	**386**	**1.33**	**76.9**	ND	ND	ND	**196**	--	--	--	--
		6/3/2019	ND	ND	--	ND	ND	**0.173**	ND	--	ND	**85**	ND	**65.6**	**3.2**	**164**	**0.945**	ND	**367**	**367**	ND	**89.5**	ND	ND	ND	**286**	--	**1278**	--	**7.50**
		6/8/2020	ND	ND	--	ND	ND	ND	ND	**29.9**	ND	--	--	--	--	--	--	--	--	--	--	**106.0**	--	--	--	**271**	--	**1565**	**858**	**7.20**
		6/17/2021	ND	ND	--	ND	ND	ND	ND	**28.2**	ND	--	--	--	--	--	--	--	--	--	--	**137.0**	--	--	--	**333**	--	**1800**	**1080**	**7.30**
		4/21/2022	ND	ND	--	ND	ND	**0.0629**	ND	**28.2**	ND	--	--	--	--	--	--	--	--	--	--	**121.0**	--	--	--	**416**	--	**1763**	**1050**	**9.46**
		6/20/2023	ND	ND	--	ND	ND	ND	ND	**53.6**	ND	--	--	--	--	--	--	--	--	--	--	**143**	--	--	--	**450**	--	**2006**	**1430**	**6.99**
	DM1-MW03	3/19/2013	ND	ND	--	ND	ND	ND	ND	--	ND	**99**	ND	**55.1**	**3.18**	**161**	**2.14**	ND	**284**	**284**	**2.2**	**91.5**	**0.27**	ND	**0.3**	**448**	ND	**1640**	--	**7.40**
		7/29/2014	ND	ND	--	ND	ND	**0.0119**	ND	--	ND	**89**	ND	**51.5**	**1.76**	**145**	**1.11**	ND	**275**	**275**	**2.7**	**91.1**	**2.8**	ND	**2.8**	**423**	--	**1293**	--	**7.09**
		4/1/2015	ND	ND	--	ND	ND	ND	ND	--	ND	**116**	ND	**70.3**	**1.96**	**167**	**1.12**	ND	**287**	**287**	**2.8**	**108.0**	**3.5**	ND	**3.5**	**577**	--	**1722**	--	**7.11**
		6/24/2016	ND	ND	--	ND*	ND	ND*	ND*	--	ND*	**160**	ND	**86**	**2.4**	**203**	**1.8**	ND	**288**	**288**	**2.06**	**110**	**4.38**	ND	**4.38**	**604**	--	**2031**	--	**7.21**
		5/23/2017	ND	ND	--	ND*	ND	ND*	ND*	--	ND*	**145**	ND	**77.5**	**2.25**	**193**	**1.28**	ND	**258**	**258**	**1.31**	**121**	**5.83**	ND	**5.83**	**589**	--	**1862**	--	**7.02**
		6/29/2018	ND	ND	--	ND	ND	ND*	ND*	--	ND*	**70**	ND	**37.5**	**1.61**	**129**	**0.628**	ND	**195**	**195**	ND	**72**	**1.1**	ND	**1.1**	**255**	--	--	--	--
		6/3/2019	ND	ND	--	ND	ND	ND*	ND*	--	ND*	**84**	ND	**46.4**	**2.08**	**122**	**0.79**	ND	**216**	**216**	ND	**90**	**0.432**	ND	**0.432**	**282**	--	**1092**	--	**7.52**
		6/8/2020	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**98.7**	--	--	--	248	--	**1212**	**637**	**7.30**
		6/17/2021	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**121.0**	--	--	--	**367**	--	**1577**	**996**	**7.20**
		4/21/2022	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**109.0**	--	--	--	**297**	--	**1577**	**789**	**7.20**
		6/20/2023	ND	ND	--	ND	ND	ND	ND	**42.8**	ND	--	--	--	--	--	--	--	--	--	--	**127**	--	--	--	**379**	--	**1534**	**1060**	**7.00**
Stamp 31-2C Wellsite	S31-MW01	3/7/2022	ND	ND	--	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**15147**	--	**7.87**
		8/3/2023	ND	ND		ND	ND	ND	ND	**47.6**	ND	--	--	--	--	--	--	--	--	--	--	**223**	--	--	--	**12,200**	--	**15969**	**18600**	**7.45**
	S31-MW02	3/7/2022	ND	ND	--	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**9367**	--	**7.90**
		6/23/2023	ND	ND		ND	ND	ND	ND	**29.9**	ND	--	--	--	--	--	--	--	--	--	--	**172**	--	--	--	**7400**	--	**11168**	**7420**	**7.46**
	S31-MW03	3/7/2022	ND	ND	--	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**16198**	--	**8.29**
		8/3/2023	ND	ND	--	ND	ND	ND	ND	**28.9**	ND	--	--	--	--	--	--	--	--	--	--	**392**	--	--	--	**11800**	--	**16168**	**19200**	**7.43**
	S31-MW04	3/7/2022	ND	ND	--	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**11832**	--	**8.08**
		8/3/2023	ND	ND	--	ND	ND	ND	ND	**31.9**	ND	--	--	--	--	--	--	--	--	--	--	**230**	--	--	--	**9660**	--	**12973**	**14800**	**7.48**
	S31-MW05	3/7/2022	ND	ND	--	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**11994**	--	**8.00**
		6/23/2023	ND	ND	--	ND	ND	ND	ND	**130**	ND	--	--	--	--	--	--	--	--	--	--	**293**	--	--	--	**5770**	--	**9774**	**5220**	**7.16**

Table 2 - Groundwater Analytical Results
City of Longmont - Groundwater Quality Monitoring
Project Number 22227034

			Volatile Organic Compounds					Other Organic Compounds				Inorganic Parameters															General Parameters		
Parameter			Benzene	Ethylbenzene	Naphthalene	Toluene	Xylenes (Total)	Methane	Ethane	Carbon Dioxide	Ethene	Calcium, Dissolved	Iron, Dissolved	Magnesium, Dissolved	Potassium, Dissolved	Sodium, Dissolved	Strontium	Alkalinity, Carbonate (CaCO3)	Alkalinity, Bicarbonate (CaCO3)	Alkalinity, Total as CaCO3	Bromide	Chloride	Nitrogen as Nitrate	Nitrogen as Nitrite	Nitrogen as Nitrate and Nitrite	Sulfate	Sulfide, Total	Specific Conductance	Total Dissolved Solids (TDS)	pH
CAS #			71-43-2	100-41-4	91-20-3	108-88-3	1330-20-7	74-82-8	74-84-0		74-85-1	7440-70-2	7439-89-6	7439-95-4	7440-09-7	7440-23-5	7440-24-6				24959-67-9	16887-00-6				14808-79-8	18496-25-8			
COGCC Table 910-1[3]			0.005	0.7	---	0.56	1.4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	49.38	---	---	---	430.63	--	---	---	--
			---	---	---	1[M]	10[M]	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
CDPHE Basic Standards for Groundwater			0.005	0.7	0.14	0.56	1.4	---	---	---	---	--	0.3	---	---	---	---	---	---	---	---	250	10	1	10	250	---	---	400-No Limit	6.5 - 8.5
Detection Level			0.001	0.001	0.005	0.001	0.003	0.0066	0.0062	20	0.0062		0.05					20	20	20	1		0.1	0.5	0.1		0.05		200	
Units			mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	umhos/cm	mg/L	Std. Units
	S31-MW06	3/7/2022	ND	ND	--	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	13551	--	7.97
		8/3/2023	ND	ND	--	ND	ND	ND	ND	**32.3**	ND	--	--	--	--	--	--	--	--	--	--	**110**	--	--	--	**9710**	--	12447	12600	7.07
Stamp #1	ST1-MW02	7/7/2021	ND	ND	--	ND	ND	ND	ND	**26.2**	ND	--	--	--	--	--	--	--	--	--	--	**662.0**	--	--	--	**12,500**	--	18667	20300	7.70
		4/25/2022	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**749.0**	--	--	--	**15,400**	--	19076	14900	7.86
		8/3/2023	ND	ND	--	ND	ND	ND	ND	**20.1**	ND	--	--	--	--	--	--	--	--	--	--	**974.0**	--	--	--	**16,000**	--	21062	27400	7.47
	ST1-MW03	7/7/2021	ND	ND	--	ND	ND	ND	ND	**26.4**	ND	--	--	--	--	--	--	--	--	--	--	**131.0**	--	--	--	**6,490**	--	10236	9760	7.60
		4/25/2022	ND	ND	--	ND	ND	ND	ND	**22**	ND	--	--	--	--	--	--	--	--	--	--	**122.0**	--	--	--	**6,270**	--	10091	7400	7.91
		6/23/2023	ND	ND	--	ND	ND	ND	ND	**36.1**	ND	--	--	--	--	--	--	--	--	--	--	**170**	--	--	--	**7,840**	--	11360	8720	7.41
	ST1-MW05	7/7/2021	ND	ND	--	ND	ND	ND	ND	**29.8**	ND	--	--	--	--	--	--	--	--	--	--	**917.0**	--	--	--	**15,600**	--	21596	24400	7.70
		4/25/2022	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**1150.0**	--	--	--	**18,200**	--	21596	18700	7.70
		8/3/2023	ND	ND	--	ND	ND	ND	ND	**38.9**	ND	--	--	--	--	--	--	--	--	--	--	**2550.0**	--	--	--	**19,500**	--	27306	33500	7.42
George Mayeda #1	GM1-MW01	6/4/2019	ND	ND	--	ND	ND	ND*	ND*	--	ND	**96**	ND	**80.9**	**3.84**	**146**	**2.08**	ND	**376**	**376**	ND	**24.8**	**7.26**	ND	**7.26**	**410**	--	1560	--	7.65
		5/26/2020	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**32.1**	--	--	--	**411**	--	816	941	7.04
		6/21/2021	ND	ND	--	ND	ND	ND	ND	**23.5**	ND	--	--	--	--	--	--	--	--	--	--	**19**	--	--	--	**307**	--	1212	796	7.70
		4/26/2022	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**19**	--	--	--	**307**	--	1492	1130	7.77
		6/28/2023	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**20.9**	--	--	--	**271**	--	1001	733	7.52
	GM1-MW02	6/4/2019	ND	ND	--	ND	ND	ND*	ND*	--	ND	**88.9**	ND	**82.8**	**3.54**	**141**	**3.08**	ND	**401**	**401**	ND	**32.3**	**8.15**	ND	**8.15**	**550**	--	1325	--	7.88
		5/26/2020	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**27.8**	--	--	--	**429**	--	1722	875	7.22
		6/21/2021	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**29.5**	--	--	--	**427**	--	1347	924	7.90
		4/26/2022	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**27.5**	--	--	--	**416**	--	1399	918	8.01
		6/28/2023	ND	ND	--	ND	ND	ND	ND	**24.8**	ND	--	--	--	--	--	--	--	--	--	--	**30.4**	--	--	--	**310**	--	1159	803	7.39
	GM1-MW03	6/3/2019	ND	ND	ND	ND	ND	ND	ND	--	ND	**191**	ND	**178**	**4.47**	**306**	**6.08**	ND	**311**	**311**	ND	**34.5**	**9.23**	ND	**9.23**	**989**	--	1330	--	7.92
		5/26/2020	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**29.6**	--	--	--	**493**	--	1479	1040	7.39
		6/21/2021	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**22.9**	--	--	--	**499**	--	1250	1010	7.80
		4/26/2022	ND	ND	--	ND	ND	ND	ND	**47.2**	ND	--	--	--	--	--	--	--	--	--	--	**33.9**	--	--	--	**816**	--	1866	1180	8.21
		6/28/2023	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**42.6**	--	--	--	**387**	--	1375	1050	7.54
Maruyama #1	MY1-MW01	5/16/2019	ND	ND	ND	ND	ND	ND	ND	--	ND	**119**	ND	**80.1**	**3.33**	**98.4**	**4.8**	ND	**371**	**371**	ND	**31.1**	**4.28**	ND	**4.28**	**344**	**344**	1260	--	7.50
		5/27/2020	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**31.4**	--	--	--	**321**	--	1298	904	7.19
		6/15/2021	ND	ND	--	ND	ND	ND	ND	**22.7**	ND	--	--	--	--	--	--	--	--	--	--	**41.3**	--	--	--	**398**	--	1478	1000	7.20
		4/26/2022	ND	ND	--	ND	ND	ND	ND	**23.4**	ND	--	--	--	--	--	--	--	--	--	--	**42.2**	--	--	--	**346**	--	1811	899	7.56
		6/28/2023	ND	ND	--	ND	ND	ND	ND	**25.5**	ND	--	--	--	--	--	--	--	--	--	--	**36.8**	--	--	--	**345**	--	1367	1010	7.39

Table 2 - Groundwater Analytical Results
City of Longmont - Groundwater Quality Monitoring
Project Number 22227034

			Volatile Organic Compounds					Other Organic Compounds				Inorganic Parameters														General Parameters		
Parameter			Benzene	Ethylbenzene	Naphthalene	Toluene	Xylenes (Total)	Methane	Ethane	Carbon Dioxide	Ethene	Calcium, Dissolved	Iron, Dissolved	Magnesium, Dissolved	Potassium, Dissolved	Sodium, Dissolved	Strontium	Alkalinity, Carbonate (CaCO3)	Alkalinity, Bicarbonate (CaCO3)	Alkalinity, Total as CaCO3	Bromide	Chloride	Nitrogen as Nitrate	Nitrogen as Nitrite	Nitrogen as Nitrate and Nitrite	Sulfate	Sulfide, Total	Specific Conductance	Total Dissolved Solids (TDS)	pH
CAS #			71-43-2	100-41-4	91-20-3	108-88-3	1330-20-7	74-82-8	74-84-0		74-85-1	7440-70-2	7439-89-6	7439-95-4	7440-09-7	7440-23-5	7440-24-6				24959-67-9	16887-00-6				14808-79-8	18496-25-8			
COGCC Table 910-1[3]			0.005	0.7	---	0.56	1.4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	49.38	---	---	---	430.63	--	---	---	--
			---	---	---	1[M]	10[M]	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
CDPHE Basic Standards for Groundwater			0.005	0.7	0.14	0.56	1.4	---	---	---	---	--	0.3	---	---	---	---	---	---	---	---	250	10	1	10	250	---	---	400-No Limit	6.5 - 8.5
Detection Level			0.001	0.001	0.005	0.001	0.003	0.0066	0.0062	20	0.0062		0.05					20	20	20	1		0.1	0.5	0.1		0.05		200	
Units			mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	umhos/cm	mg/L	Std. Units
Maruyama #1	MY1-MW02	5/16/2019	ND	ND	ND	ND	ND	ND	ND		ND	**115**	ND	**77.7**	**3.28**	**95.1**	**4.74**	ND	**371**	**371**	ND	**31.2**	**4.3**	ND	**4.3**	**350**	**350**	**1310**	--	**7.49**
		5/27/2020	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**31.4**	--	--	--	**324**	--	**1398**	**893**	**7.12**
		6/15/2021	ND	ND	--	ND	ND	ND	ND	**21.3**	ND	--	--	--	--	--	--	--	--	--	--	**41.7**	--	--	--	**389**	--	**1514**	**1040**	**7.10**
		4/26/2022	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**42.3**	--	--	--	**343**	--	**1466**	**896**	**7.55**
		6/28/2023	ND	ND	--	ND	ND	ND	ND	**52.3**	ND	--	--	--	--	--	--	--	--	--	--	**36.2**	--	--	--	**353**	--	**1373**	**912**	**7.30**
	MY1-MW03	5/16/2019	ND	ND	ND	ND	ND	ND	ND	--	ND	**115**	ND	**76.9**	**3.21**	**97.2**	**5.57**	ND	**389**	**389**	ND	**31**	**4.53**	ND	**4.53**	**355**	**355**	**1270**	--	**7.43**
		5/27/2020	ND	ND	--	ND	ND	ND	ND	**20.1**	ND	--	--	--	--	--	--	--	--	--	--	**33.3**	--	--	--	**336**	--	**1346**	**934**	**7.12**
		6/15/2021	ND	ND	--	ND	ND	ND	ND	**23.5**	ND	--	--	--	--	--	--	--	--	--	--	**42.1**	--	--	--	**389**	--	**1492**	**978**	**7.10**
		4/26/2022	ND	ND	--	ND	ND	ND	ND	**46.4**	ND	--	--	--	--	--	--	--	--	--	--	**43.9**	--	--	--	**370**	--	**1507**	**936**	**7.65**
		6/28/2023	ND	ND	--	ND	ND	ND	ND	**82.2**	ND	--	--	--	--	--	--	--	--	--	--	**36.3**	--	--	--	**358**	--	**1420**	**876**	**7.34**
Tabor #1	TB1-MW01	5/16/2019	ND	ND	ND	ND	ND	ND	ND	--	ND	**477**	ND	**482**	**15.3**	**734**	**6.54**	ND	**441**	**441**	ND	**124**	ND	ND	ND	**4030**	**4030**	**5586**	--	**7.25**
		4/19/2022	ND	ND	ND	ND	ND	ND	ND	**66**	ND	--	--	--	--	--	--	--	--	--	--	**118**	--	--	--	**4150**	--	**6311**	**4950**	**7.79**
		6/27/2023	ND	ND	--	ND	ND	ND	ND	**67.1**	ND	--	--	--	--	--	--	--	--	--	--	**124**	--	--	--	**3530**	--	**5804**	**3520**	**7.09**
	TB1-MW02	5/16/2019	ND	ND	ND	ND	ND	ND	ND	--	ND	**349**	ND	**318**	**2.79**	**657**	**6.51**	ND	**385**	**385**	ND	**298**	**7.43**	ND	**7.43**	**2560**	**2560**	**4692**	--	**7.17**
		6/16/2021	ND	ND	--	ND	ND	ND	ND	**39.7**	ND	--	--	--	--	--	--	--	--	--	--	**400**	--	--	--	**2620**	--	**5476**	**4900**	**7.10**
		4/19/2022	ND	ND	--	ND	ND	ND	ND	**39**	ND	--	--	--	--	--	--	--	--	--	--	**375**	--	--	--	**2240**	--	**4903**	**3150**	**8.63**
		6/27/2023	ND	ND	--	ND	ND	ND	ND	**48.1**	ND	--	--	--	--	--	--	--	--	--	--	**228**	--	--	--	**1270**	--	**3647**	**2280**	**7.38**
	TB1-MW03R	6/16/2021	ND	ND	--	ND	ND	ND	ND	**33.3**	ND	--	--	--	--	--	--	--	--	--	--	**181**	--	--	--	**5480**	--	**8417**	**8830**	**7.40**
		4/19/2022	ND	ND	--	ND	ND	ND	ND	**26.4**	ND	--	--	--	--	--	--	--	--	--	--	**199**	--	--	--	**5400**	--	**8410**	**5010**	**8.30**
		6/27/2023	ND	ND	--	ND	ND	ND	ND	**77.7**	ND	--	--	--	--	--	--	--	--	--	--	**192**	--	--	--	**4770**	--	**7823**	**6590**	**7.09**
Tabor #7	TB7-MW01	5/17/2019	ND	ND	ND	ND	ND	ND	ND	--	ND	**127**	ND	**91.5**	**2.98**	**96.3**	**2.78**	ND	**313**	**313**	ND	**41.5**	**6.47**	ND	**6.47**	**448**	**448**	**1334**	--	**7.48**
		6/3/2020	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**38.3**	--	--	--	**445**	--	**1566**	**1140**	--
		6/16/2021	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**44**	--	--	--	**431**	--	**1562**	**1050**	**7.60**
		4/18/2022	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**43**	--	--	--	**461**	--	**1562**	**1050**	**7.60**
		6/21/2023	ND	ND	--	ND	ND	ND	ND	**21.5**	ND	--	--	--	--	--	--	--	--	--	--	**50.5**	--	--	--	**438**	--	**1560**	**1120**	**8.19**
	TB7-MW02	5/17/2019	ND	ND	ND	ND	ND	ND	ND		ND	**132**	ND	**97.6**	**2.5**	**96.1**	**3.39**	ND	**348**	**348**	ND	**44.9**	**5.61**	ND	**5.61**	**460**	**460**	**1442**	--	**7.50**
		6/3/2020	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**40.5**	--	--	--	**422**	--	**1550**	**1080**	--
		6/16/2021	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**47.2**	--	--	--	**442**	--	**1529**	**1060**	**7.50**
		4/18/2022	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**46.8**	--	--	--	**441**	--	**1535**	**1020**	**7.75**
		6/21/2023	ND	ND	--	ND	ND	ND	ND	**24.6**	ND	--	--	--	--	--	--	--	--	--	--	**49.2**	--	--	--	**427**	--	**1609**	**1090**	**7.97**

Table 2 - Groundwater Analytical Results
City of Longmont - Groundwater Quality Monitoring
Project Number 22227034

			Volatile Organic Compounds					Other Organic Compounds				Inorganic Parameters															General Parameters		
Parameter			Benzene	Ethylbenzene	Naphthalene	Toluene	Xylenes (Total)	Methane	Ethane	Carbon Dioxide	Ethene	Calcium, Dissolved	Iron, Dissolved	Magnesium, Dissolved	Potassium, Dissolved	Sodium, Dissolved	Strontium	Alkalinity, Carbonate (CaCO3)	Alkalinity, Bicarbonate (CaCO3)	Alkalinity, Total as CaCO3	Bromide	Chloride	Nitrogen as Nitrate	Nitrogen as Nitrite	Nitrogen as Nitrate and Nitrite	Sulfate	Sulfide, Total	Specific Conductance	Total Dissolved Solids (TDS)	pH
CAS #			71-43-2	100-41-4	91-20-3	108-88-3	1330-20-7	74-82-8	74-84-0		74-85-1	7440-70-2	7439-89-6	7439-95-4	7440-09-7	7440-23-5	7440-24-6				24959-67-9	16887-00-6				14808-79-8	18496-25-8			
COGCC Table 910-1[3]			0.005	0.7	---	0.56	1.4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	49.38	---	---	---	430.63	--	---	---	--
			---	---	---	1[M]	10[M]	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
CDPHE Basic Standards for Groundwater			0.005	0.7	0.14	0.56	1.4	---	---	---	---	--	0.3	---	---	---	---	---	---	---	---	250	10	1	10	250	---	---	400-No Limit	6.5 - 8.5
Detection Level			0.001	0.001	0.005	0.001	0.003	0.0066	0.0062	20	0.0062		0.05					20	20	20	1		0.1	0.5	0.1		0.05		200	
Units			mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	umhos/cm	mg/L	Std. Units
Tabor #7	TB7-MW03	5/17/2019	ND	ND	ND	ND	ND	ND	ND	--	ND	**134**	ND	**99.3**	**2.3**	**96.3**	**2.5**	ND	**348**	**348**	ND	**46.1**	**5.5**	ND	**5.5**	**466**	**466**	**1387**	--	**7.53**
		6/3/2020	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**42.3**	--	--	--	**425**	--	**1770**	**1140**	--
		6/16/2021	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**49.5**	--	--	--	**437**	--	**1551**	**1050**	**7.50**
		4/18/2022	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**49.5**	--	--	--	**437**	--	**1551**	**1050**	**7.50**
		6/21/2023	ND	ND	--	ND	ND	ND	ND	**25.3**	ND	--	--	--	--	--	--	--	--	--	--	**48.1**	--	--	--	**420**	--	**1627**	**1100**	**7.13**
Wertman #1	WT1-MW01	5/16/2019	ND	ND	ND	ND	ND	ND	ND	--	ND	**58.3**	ND	**36.6**	**4.21**	**63**	**1.8**	ND	**256**	**256**	ND	**19.5**	**0.678**	ND	**0.678**	**139**	**139**	**633**	--	**7.63**
		5/28/2020	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**59.2**	--	--	--	**291**	--	**1509**	**824**	**6.97**
		6/28/2021	ND	ND	--	ND	ND	ND	ND	**28.2**	ND	--	--	--	--	--	--	--	--	--	--	**41.8**	--	--	--	**272**	--	**1326**	**676**	**7.30**
		4/18/2022	ND	ND	--	ND	ND	ND	ND	**24.9**	ND	--	--	--	--	--	--	--	--	--	--	**24.5**	--	--	--	**175**	--	**854**	**479**	**7.85**
		6/21/2023	ND	ND	--	ND	ND	ND	ND	**76.2**	ND	--	--	--	--	--	--	--	--	--	--	**28.8**	--	--	--	**170**	--	**1636**	**651**	**7.72**
	WT1-MW02	5/16/2019	ND	ND	ND	ND	ND	ND	ND	--	ND	**60.8**	ND	**44.9**	**3.04**	**65.2**	**1.44**	ND	**281**	**281**	ND	**28.1**	**0.385**	ND	**0.385**	**185**	**185**	**633**	--	**7.39**
		5/28/2020	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**37.8**	--	--	--	**335**	--	**1263**	**798**	**6.81**
		6/28/2021	ND	ND	--	ND	ND	ND	ND	**40**	ND	--	--	--	--	--	--	--	--	--	--	**40.3**	--	--	--	**377**	--	**1523**	**888**	**7.30**
		4/18/2022	ND	ND	--	ND	ND	ND	ND	**24.3**	ND	--	--	--	--	--	--	--	--	--	--	**31.9**	--	--	--	**222**	--	**1093**	**586**	**7.75**
		6/21/2023	ND	ND	--	ND	ND	ND	ND	**38.1**	ND	--	--	--	--	--	--	--	--	--	--	**51.7**	--	--	--	**497**	--	**1703**	**1070**	**4.50**
	WT1-MW03	5/16/2019	ND	ND	ND	ND	ND	ND	ND	--	ND	**53**	ND	**42.5**	**1.14**	**68.2**	**1.34**	ND	**231**	**231**	ND	**23.8**	**0.885**	ND	**0.885**	**158**	**158**	**1082**	--	**7.44**
		5/28/2020	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**27.2**	--	--	--	**171**	--	**818**	**496**	**7.20**
		6/28/2021	ND	ND	--	ND	ND	ND	ND	**21.5**	ND	--	--	--	--	--	--	--	--	--	--	**31.1**	--	--	--	**256**	--	**1150**	**628**	**7.40**
		4/18/2022	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**25.3**	--	--	--	**174**	--	**822**	**495**	**7.86**
		6/21/2023	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**16.9**	--	--	--	**129**	--	**743**	**429**	**6.62**
Mary #2	MR2-MW01	5/15/2019	ND	ND	ND	ND	ND	ND	ND	--	ND	**362**	ND	**273**	**8.35**	**500**	**8.06**	ND	**481**	**481**	ND	**130**	**65**	ND	**65**	**1950**	**1950**	**1983**	--	**7.02**
		5/27/2020	ND	ND	--	ND	ND	ND	ND	**20.3**	ND	--	--	--	--	--	--	--	--	--	--	**129**	--	--	--	**1990**	--	**4492**	**3900**	**6.86**
		6/15/2021	ND	ND	--	ND	ND	ND	ND	**37.7**	ND	--	--	--	--	--	--	--	--	--	--	**138**	--	--	--	**1970**	--	**4350**	**3710**	**7.30**
		4/18/2022	ND	ND	--	ND	ND	ND	ND	**63.5**	ND	--	--	--	--	--	--	--	--	--	--	**128**	--	--	--	**2170**	--	--	**3180**	--
		6/27/2023	ND	ND	--	ND	ND	ND	ND	**62.2**	ND	--	--	--	--	--	--	--	--	--	--	**122**	--	--	--	**1880**	--	**4456**	**3810**	**7.14**
	MR2-MW02	5/15/2019	ND	ND	ND	ND	ND	**0.0559**	ND	--	ND	**35.1**	ND	**26.1**	**4.73**	**162**	**2.67**	ND	**419**	**419**	ND	**5.78**	**1.11**	ND	**1.11**	**90.7**	**90.7**	**3290**	--	**6.91**
		5/27/2020	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**5.63**	--	--	--	**100**	--	**1002**	**600**	**7.30**
		6/15/2021	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**5.35**	--	--	--	**94.6**	--	**987**	**569**	**7.80**
		4/18/2022	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**5.49**	--	--	--	**92.6**	--	**958**	**550**	**8.17**
		6/27/2023	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**16.2**	--	--	--	**90.9**	--	**1000**	**570**	**7.54**

Table 2 - Groundwater Analytical Results
City of Longmont - Groundwater Quality Monitoring
Project Number 22227034

			Volatile Organic Compounds					Other Organic Compounds				Inorganic Parameters															General Parameters		
Parameter			Benzene	Ethylbenzene	Naphthalene	Toluene	Xylenes (Total)	Methane	Ethane	Carbon Dioxide	Ethene	Calcium, Dissolved	Iron, Dissolved	Magnesium, Dissolved	Potassium, Dissolved	Sodium, Dissolved	Strontium	Alkalinity, Carbonate (CaCO3)	Alkalinity, Bicarbonate (CaCO3)	Alkalinity, Total as CaCO3	Bromide	Chloride	Nitrogen as Nitrate	Nitrogen as Nitrite	Nitrogen as Nitrate and Nitrite	Sulfate	Sulfide, Total	Specific Conductance	Total Dissolved Solids (TDS)	pH
CAS #			71-43-2	100-41-4	91-20-3	108-88-3	1330-20-7	74-82-8	74-84-0		74-85-1	7440-70-2	7439-89-6	7439-95-4	7440-09-7	7440-23-5	7440-24-6				24959-67-9	16887-00-6				14808-79-8	18496-25-8			
COGCC Table 910-1[3]			0.005	0.7	---	0.56	1.4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	49.38	---	---	---	430.63	--	---	---	--
			---	---	---	1[M]	10[M]	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
CDPHE Basic Standards for Groundwater			0.005	0.7	0.14	0.56	1.4	---	---	---	---	--	0.3	---	---	---	---	---	---	---	---	250	10	1	10	250	---	---	400-No Limit	6.5 - 8.5
Detection Level			0.001	0.001	0.005	0.001	0.003	0.0066	0.0062	20	0.0062		0.05					20	20	20	1		0.1	0.5	0.1		0.05		200	
Units			mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	umhos/cm	mg/L	Std. Units
Mary #2	MR2-MW03	5/15/2019	ND	ND	ND	ND	ND	**0.0292**	ND	--	ND	**107**	ND	**82.3**	**10.1**	**243**	**4.48**	ND	**468**	**468**	ND	**33.1**	**4**	ND	**4**	**522**	**522**	**1184**	--	**7.49**
		5/27/2020	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**36.3**	--	--	--	**602**	--	**1766**	**1340**	**7.24**
		6/15/2021	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**32.8**	--	--	--	**527**	--	**1764**	**1130**	**7.70**
		4/18/2022	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**32.6**	--	--	--	**509**	--	**1736**	**1140**	**8.61**
		6/27/2023	ND	ND	--	ND	ND	ND	ND	**22.7**	ND	--	--	--	--	--	--	--	--	--	--	**33.6**	--	--	--	**509**	--	**1744**	**1180**	**7.51**
Rider #1	RD1-MW01	4/25/2022	ND	ND	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	**45.7**	--	--	--	**339**	--	**1402**	**932**	**7.73**
		6/28/2023	ND	ND	--	ND	ND	ND	ND	**49.1**	ND	--	--	--	--	--	--	--	--	--	--	**54.0**	--	--	--	**302**	--	**1336**	**914**	**7.30**
	RD1-MW02	4/25/2022	ND	ND	--	ND	ND	ND	ND	**47.2**	ND	--	--	--	--	--	--	--	--	--	--	**52.0**	--	--	--	**325**	--	**1404**	**890**	**7.82**
		6/28/2023	ND	ND	--	ND	ND	ND	ND	**37.8**	ND	--	--	--	--	--	--	--	--	--	--	**56.5**	--	--	--	**326**	--	**1388**	**888**	**7.32**
	RD1-MW03	4/25/2022	ND	ND	--	ND	ND	ND	ND	**47.8**	ND	--	--	--	--	--	--	--	--	--	--	**47.7**	--	--	--	**342**	--	**1435**	**938**	**7.93**
		6/28/2023	ND	ND	--	ND	ND	ND	ND	**28.9**	ND	--	--	--	--	--	--	--	--	--	--	**56.0**	--	--	--	**368**	--	**1440**	**930**	**7.33**

**Elevated detection level due to sample dilution above regulatory limits

[1] Wells were observed to be destroyed. Unable to measure depths to water.
[2] The aluminum collar around the well casing was bent and the concrete surface completion was found separated, the well was not sampled.
The bentonite seal may be compromised; however, the analytical data does not indicate that the well is compromised.
[3] The COGCC cleanup standard for chloride and sulfate is 1.25 x background. Background concentrations from unimpacted wells were used to average and calculate an appropriate background concentration for this area.
RD1 samples collected on 6/23/2016 had to be recollected for nitrite and nitrate analysis due to a shipping delay resulting in the original samples being past the hold time of 48 hours.
COGCC - Colorado Oil and Gas Conservation Commission
CDPHE - Colorado Department of Public Health and Environment
mg/L - milligrams per liter
ND - Parameter not detected above the laboratory detection limit (Detection Limit)
Bold indicates detected constituents
Yellow shading indicates constituents above COGCC Table 910-1 standards.
Red shading indicates constituents detected above CDPHE standards
Grey shading indicates analytical results from the past calendar year
umhos/cm - microsiemens per centimeter
M - Drinking water maximum contaminant level
-- Not Sampled
Bkg - Background
--- indicates no regulatory standard

APPENDIX B – ANALYTICAL REPORTS & CHAIN OF CUSTODY DOCUMENTS

ANALYTICAL REPORT

July 05, 2023

Terracon - Longmont, CO

Sample Delivery Group:	L1629548
Samples Received:	06/24/2023
Project Number:	22227034
Description:	COL Annual GW Sampling

Report To:

Travis Whalen
1831 Lefthand Circle
Suite B
Longmont, CO 80501

Entire Report Reviewed By:

Chris Ward
Project Manager

TABLE OF CONTENTS

SAMPLE SUMMARY

STI-MW-02 L1629548-01 GW

Collected by: Travis Whalen
Collected date/time: 06/23/23 12:30
Received date/time: 06/24/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2086756	1	06/29/23 15:15	06/29/23 17:00	AS	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2088434	100	07/03/23 05:27	07/03/23 05:27	JD	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG2088539	1	07/03/23 10:23	07/03/23 10:23	ARD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2087015	1	06/30/23 16:43	06/30/23 16:43	BAW	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2088473	1	07/03/23 00:29	07/03/23 00:29	DWR	Mt. Juliet, TN

STI-MW-03 L1629548-02 GW

Collected by: Travis Whalen
Collected date/time: 06/23/23 12:50
Received date/time: 06/24/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2085968	1	06/28/23 15:10	06/28/23 17:04	MMF	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2088434	100	07/03/23 06:18	07/03/23 06:18	JD	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG2088539	1	07/03/23 10:50	07/03/23 10:50	ARD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2087015	1	06/30/23 16:48	06/30/23 16:48	BAW	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2088473	1	07/03/23 00:51	07/03/23 00:51	DWR	Mt. Juliet, TN

STI-MW-05 L1629548-03 GW

Collected by: Travis Whalen
Collected date/time: 06/23/23 12:00
Received date/time: 06/24/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2085968	1	06/28/23 15:10	06/28/23 17:04	MMF	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2088434	100	07/03/23 06:35	07/03/23 06:35	JD	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG2088539	1	07/03/23 10:54	07/03/23 10:54	ARD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2087015	1	06/30/23 16:51	06/30/23 16:51	BAW	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2088473	1	07/03/23 01:11	07/03/23 01:11	DWR	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Chris Ward
Project Manager

Sample Delivery Group (SDG) Narrative

pH outside of method requirement.

Lab Sample ID	Project Sample ID	Method
L1629548-03	STI-MW-05	8260B

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	7420		200	1	06/29/2023 17:00	WG2086756

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	172		100	100	07/03/2023 05:27	WG2088434
Sulfate	7400		500	100	07/03/2023 05:27	WG2088434

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Free Carbon Dioxide	29.9	B T8	20.0	1	07/03/2023 10:23	WG2088539

Sample Narrative:

L1629548-01 WG2088539: Endpoint pH 4.5

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	06/30/2023 16:43	WG2087015
Ethane	ND		0.0130	1	06/30/2023 16:43	WG2087015
Ethene	ND		0.0130	1	06/30/2023 16:43	WG2087015
Acetylene	ND		0.0208	1	06/30/2023 16:43	WG2087015

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	07/03/2023 00:29	WG2088473
Toluene	ND		0.00100	1	07/03/2023 00:29	WG2088473
Ethylbenzene	ND		0.00100	1	07/03/2023 00:29	WG2088473
Total Xylenes	ND		0.00300	1	07/03/2023 00:29	WG2088473
(S) Toluene-d8	*110*		*80.0-120*		*07/03/2023 00:29*	WG2088473
(S) 4-Bromofluorobenzene	*99.9*		*77.0-126*		*07/03/2023 00:29*	WG2088473
(S) 1,2-Dichloroethane-d4	*86.8*		*70.0-130*		*07/03/2023 00:29*	WG2088473

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	8720		200	1	06/28/2023 17:04	WG2085968

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	170		100	100	07/03/2023 06:18	WG2088434
Sulfate	7840		500	100	07/03/2023 06:18	WG2088434

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Free Carbon Dioxide	36.1	B T8	20.0	1	07/03/2023 10:50	WG2088539

Sample Narrative:

L1629548-02 WG2088539: Endpoint pH 4.5

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	06/30/2023 16:48	WG2087015
Ethane	ND		0.0130	1	06/30/2023 16:48	WG2087015
Ethene	ND		0.0130	1	06/30/2023 16:48	WG2087015
Acetylene	ND		0.0208	1	06/30/2023 16:48	WG2087015

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	07/03/2023 00:51	WG2088473
Toluene	ND		0.00100	1	07/03/2023 00:51	WG2088473
Ethylbenzene	ND		0.00100	1	07/03/2023 00:51	WG2088473
Total Xylenes	ND		0.00300	1	07/03/2023 00:51	WG2088473
(S) Toluene-d8	*111*		*80.0-120*		*07/03/2023 00:51*	WG2088473
(S) 4-Bromofluorobenzene	*96.7*		*77.0-126*		*07/03/2023 00:51*	WG2088473
(S) 1,2-Dichloroethane-d4	*87.9*		*70.0-130*		*07/03/2023 00:51*	WG2088473

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	5220		200	1	06/28/2023 17:04	WG2085968

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	293		100	100	07/03/2023 06:35	WG2088434
Sulfate	5770		500	100	07/03/2023 06:35	WG2088434

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Free Carbon Dioxide	130	T8	20.0	1	07/03/2023 10:54	WG2088539

Sample Narrative:

L1629548-03 WG2088539: Endpoint pH 4.5

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	06/30/2023 16:51	WG2087015
Ethane	ND		0.0130	1	06/30/2023 16:51	WG2087015
Ethene	ND		0.0130	1	06/30/2023 16:51	WG2087015
Acetylene	ND		0.0208	1	06/30/2023 16:51	WG2087015

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	07/03/2023 01:11	WG2088473
Toluene	ND		0.00100	1	07/03/2023 01:11	WG2088473
Ethylbenzene	ND		0.00100	1	07/03/2023 01:11	WG2088473
Total Xylenes	ND		0.00300	1	07/03/2023 01:11	WG2088473
(S) Toluene-d8	*110*		*80.0-120*		*07/03/2023 01:11*	WG2088473
(S) 4-Bromofluorobenzene	*102*		*77.0-126*		*07/03/2023 01:11*	WG2088473
(S) 1,2-Dichloroethane-d4	*86.8*		*70.0-130*		*07/03/2023 01:11*	WG2088473

Method Blank (MB)

(MB) R3943066-1 06/28/23 17:04

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Dissolved Solids	U		10.0	10.0

L1629349-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1629349-03 06/28/23 17:04 • (DUP) R3943066-3 06/28/23 17:04

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	1130	1220	1	7.85	J3	5

L1629525-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1629525-07 06/28/23 17:04 • (DUP) R3943066-4 06/28/23 17:04

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	413	422	1	2.16		5

Laboratory Control Sample (LCS)

(LCS) R3943066-2 06/28/23 17:04

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8510	96.7	77.3-123	

Method Blank (MB)

(MB) R3943703-1 06/29/23 17:00

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Dissolved Solids	U	J	10.0	10.0

L1629349-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1629349-01 06/29/23 17:00 • (DUP) R3943703-3 06/29/23 17:00

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	433	484	1	11.1	J3	5

L1630084-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1630084-02 06/29/23 17:00 • (DUP) R3943703-4 06/29/23 17:00

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	1200	1240	1	3.27		5

Laboratory Control Sample (LCS)

(LCS) R3943703-2 06/29/23 17:00

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8300	94.3	77.3-123	

Method Blank (MB)

(MB) R3944288-1 07/02/23 23:23

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	U		0.379	1.00
Sulfate	U		0.594	5.00

L1629445-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1629445-06 07/03/23 01:47 • (DUP) R3944288-3 07/03/23 02:04

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	74.1	69.7	1	6.17		20
Sulfate	23.0	21.1	1	8.54		20

L1630367-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1630367-01 07/03/23 06:51 • (DUP) R3944288-6 07/03/23 07:08

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	2.37	2.34	1	1.11		20
Sulfate	40.9	40.8	1	0.431		20

Laboratory Control Sample (LCS)

(LCS) R3944288-2 07/02/23 23:40

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40.0	39.9	99.9	90.0-110	
Sulfate	40.0	39.9	99.8	90.0-110	

L1629445-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1629445-06 07/03/23 01:47 • (MS) R3944288-4 07/03/23 02:55 • (MSD) R3944288-5 07/03/23 03:12

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50.0	74.1	118	118	87.4	88.3	1	80.0-120			0.388	20
Sulfate	50.0	23.0	70.0	70.3	94.1	94.7	1	80.0-120			0.415	20

L1630367-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1630367-01 07/03/23 06:51 • (MS) R3944288-7 07/03/23 07:25

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50.0	2.37	53.4	102	1	80.0-120	
Sulfate	50.0	40.9	91.8	102	1	80.0-120	

Method Blank (MB)

(MB) R3944137-2 07/03/23 08:44

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Free Carbon Dioxide	12.1	J	6.67	20.0

Sample Narrative:

BLANK: Endpoint pH 4.5

L1629340-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1629340-01 07/03/23 09:08 • (DUP) R3944137-5 07/03/23 09:16

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Free Carbon Dioxide	ND	ND	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

L1629352-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1629352-01 07/03/23 10:12 • (DUP) R3944137-7 07/03/23 10:16

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Free Carbon Dioxide	312	307	1	1.72		20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

Method Blank (MB)

(MB) R3943615-2 06/30/23 14:46

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Methane	U		0.00291	0.0100
Ethane	U		0.00407	0.0130
Ethene	U		0.00426	0.0130
Acetylene	U		0.00558	0.0208

L1629186-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1629186-09 06/30/23 16:16 • (DUP) R3943615-3 06/30/23 16:19

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Methane	0.383	0.383	1	0.000		20
Ethane	ND	ND	1	0.000		20
Ethene	ND	ND	1	0.000		20
Acetylene	ND	ND	1	0.000		20

L1629548-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1629548-02 06/30/23 16:48 • (DUP) R3943615-4 06/30/23 16:54

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Methane	ND	ND	1	0.000		20
Ethane	ND	ND	1	0.000		20
Ethene	ND	ND	1	0.000		20
Acetylene	ND	ND	1	0.000		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3943615-1 06/30/23 14:43 • (LCSD) R3943615-5 06/30/23 16:57

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Methane	0.0678	0.0679	0.0696	100	103	85.0-115			2.47	20
Ethane	0.129	0.114	0.115	88.4	89.1	85.0-115			0.873	20
Ethene	0.127	0.116	0.117	91.3	92.1	85.0-115			0.858	20
Acetylene	0.208	0.184	0.186	88.5	89.4	85.0-115			1.08	20

Method Blank (MB)

(MB) R3944292-2 07/02/23 21:48

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.0000941	0.00100
Toluene	U		0.000278	0.00100
Ethylbenzene	U		0.000137	0.00100
Total Xylenes	U		0.000174	0.00300
(S) Toluene-d8	*108*			*80.0-120*
(S) 4-Bromofluorobenzene	*98.6*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*87.1*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3944292-1 07/02/23 21:05

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.00500	0.00486	97.2	70.0-123	
Toluene	0.00500	0.00577	115	79.0-120	
Ethylbenzene	0.00500	0.00554	111	79.0-123	
Total Xylenes	0.0150	0.0167	111	79.0-123	
(S) Toluene-d8			*113*	*80.0-120*	
(S) 4-Bromofluorobenzene			*93.8*	*77.0-126*	
(S) 1,2-Dichloroethane-d4			*85.8*	*70.0-130*	

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
T8	Sample(s) received past/too close to holding time expiration.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:	Billing Information:	Pres Chk
Terracon - Longmont, CO 1831 Lefthand Circle Suite CB Longmont, CO 80501	Charles Covington 1831 Lefthand Circle Suite CB Longmont, CO 80501	

Report to:	Email To:
~~Charles Covington~~ Travis Whalen	~~charles.covington@terracon.com~~ travis.whalen@terracon.com

Project Description:	City/State Collected:	Please Circle:
COL Annual GW Sampling	Longmont, CO	PT (MT) CT ET

Phone: 303-454-5249	Client Project # 22227034	Lab Project # TERRALCO-22227034
Collected by (print): Travis Whalen	Site/Facility ID #	P.O. #
Collected by (signature): [signature] Immediately Packed on Ice N ___ Y X	Rush? (Lab MUST Be Notified) ___ Same Day ___ Five Day ___ Next Day ___ 5 Day (Rad Only) ___ Two Day ___ 10 Day (Rad Only) ___ Three Day	Quote # Date Results Needed: Standard

Chain of Custody Page 1 of 1

Pace PEOPLE ADVANCING SCIENCE

MT JULIET, TN

12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L1629548
B220

Acctnum: TERRALCO
Template: T226963
Prelogin: P988375
PM: 824 - Chris Ward
PB: DP 3-22-23
Shipped Via: FedEX Ground

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	CHLORIDE,SULFATE 125mlHDPE-NoPres	CO2 40mlAmb-NoPres	RSK175 40mlAmb HCl	TDS 1L-HDPE NoPres	V8260BTEX 40mlAmb-HCl	Remarks	Sample # (lab only)
STI-MW-02	Grab	GW	—	6/23/22	1230	9	X	X	X	X	X		-01
STI-MW-03	↓	GW	—	↓	1250	9	X	X	X	X	X		-02
STI-MW-05	↓	GW	—	↓	1200	9	X	X	X	X	X		-03
		~~GW~~				~~9~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~		
		~~GW~~				~~9~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~		
		~~GW~~				~~9~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~		
		~~GW~~				~~9~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~		
		~~GW~~				~~9~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~		
		~~GW~~				~~9~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~		
		~~GW~~				~~9~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~		

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other ________

Remarks:

pH ______ Temp ______
Flow ______ Other ______

Samples returned via: __ UPS X FedEx __ Courier ________

Tracking # 6481 5466 6048

Sample Receipt Checklist ✓
COC Seal Present/Intact: __NP ✓Y __N
COC Signed/Accurate: ✓Y __N
Bottles arrive intact: ✓Y __N
Correct bottles used: ✓Y __N
Sufficient volume sent: ✓Y __N
If Applicable
VOA Zero Headspace: ✓Y __N
Preservation Correct/Checked: ✓Y __N
RAD Screen <0.5 mR/hr: ✓Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)		
[signature] Travis Whalen	6/23/22	1500	FedEx	Trip Blank Received: Yes / (No) HCL / MeoH TBR	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 5.3+0=5.3 °C Bottles Received: 27	If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) [signature] 17	Date: 6-24-23 Time: 900	Hold: Condition: NCF / (OK)

ANALYTICAL REPORT

July 07, 2023

Terracon - Longmont, CO

Sample Delivery Group:	L1630414
Samples Received:	06/28/2023
Project Number:	22227034
Description:	COL Annual GW Sampling

Report To:

Travis Whalen
1831 Lefthand Circle
Suite B
Longmont, CO 80501

Entire Report Reviewed By:

Chris Ward
Project Manager

Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

TB1-MW01 L1630414-01 GW

Collected by: Travis Whalen | Collected date/time: 06/27/23 11:30 | Received date/time: 06/28/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2088338	1	07/02/23 17:15	07/02/23 17:57	CAT	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2088634	100	07/04/23 00:54	07/04/23 00:54	KMC	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG2089074	1	07/05/23 13:13	07/05/23 13:13	ARD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2089310	1	07/05/23 13:22	07/05/23 13:22	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2089124	1	07/04/23 13:21	07/04/23 13:21	DYW	Mt. Juliet, TN

TB1-MW02 L1630414-02 GW

Collected by: Travis Whalen | Collected date/time: 06/27/23 09:50 | Received date/time: 06/28/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2088338	1	07/02/23 17:15	07/02/23 17:57	CAT	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2088634	100	07/04/23 01:06	07/04/23 01:06	KMC	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG2089074	1	07/05/23 13:19	07/05/23 13:19	ARD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2089310	1	07/05/23 13:28	07/05/23 13:28	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2089126	1	07/04/23 21:20	07/04/23 21:20	TJJ	Mt. Juliet, TN

TB1-MW03R L1630414-03 GW

Collected by: Travis Whalen | Collected date/time: 06/27/23 10:10 | Received date/time: 06/28/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2088338	1	07/02/23 17:15	07/02/23 17:57	CAT	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2088634	100	07/04/23 01:19	07/04/23 01:19	KMC	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG2089074	1	07/05/23 13:32	07/05/23 13:32	ARD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2089310	1	07/05/23 13:31	07/05/23 13:31	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2089126	1	07/04/23 21:42	07/04/23 21:42	TJJ	Mt. Juliet, TN

MR2-MW-01 L1630414-04 GW

Collected by: Travis Whalen | Collected date/time: 06/27/23 12:05 | Received date/time: 06/28/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2088340	1	07/03/23 08:59	07/03/23 10:41	JAC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2088634	100	07/04/23 01:31	07/04/23 01:31	KMC	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG2089074	1	07/05/23 13:35	07/05/23 13:35	ARD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2089310	1	07/05/23 13:35	07/05/23 13:35	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2089126	1	07/04/23 23:30	07/04/23 23:30	TJJ	Mt. Juliet, TN

MR2-MW-02 L1630414-05 GW

Collected by: Travis Whalen | Collected date/time: 06/27/23 13:45 | Received date/time: 06/28/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2088338	1	07/02/23 17:15	07/02/23 17:57	CAT	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2088634	1	07/04/23 01:44	07/04/23 01:44	KMC	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG2089074	1	07/05/23 13:39	07/05/23 13:39	ARD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2089310	1	07/05/23 13:43	07/05/23 13:43	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2089126	1	07/04/23 23:51	07/04/23 23:51	TJJ	Mt. Juliet, TN

SAMPLE SUMMARY

MR2-MW-03 L1630414-06 GW

Collected by: Travis Whalen
Collected date/time: 06/27/23 13:45
Received date/time: 06/28/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2088340	1	07/03/23 08:59	07/03/23 10:41	JAC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2088634	1	07/04/23 02:22	07/04/23 02:22	KMC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2088634	5	07/04/23 02:34	07/04/23 02:34	KMC	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG2089074	1	07/05/23 13:44	07/05/23 13:44	ARD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2089310	1	07/05/23 13:46	07/05/23 13:46	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2089126	1	07/05/23 00:13	07/05/23 00:13	TJJ	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Chris Ward
Project Manager

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	3520		100	1	07/02/2023 17:57	WG2088338

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	124		100	100	07/04/2023 00:54	WG2088634
Sulfate	3530		500	100	07/04/2023 00:54	WG2088634

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Free Carbon Dioxide	67.1	T8	20.0	1	07/05/2023 13:13	WG2089074

Sample Narrative:

L1630414-01 WG2089074: Endpoint pH 4.5

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	07/05/2023 13:22	WG2089310
Ethane	ND		0.0130	1	07/05/2023 13:22	WG2089310
Ethene	ND		0.0130	1	07/05/2023 13:22	WG2089310
Acetylene	ND		0.0208	1	07/05/2023 13:22	WG2089310

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	07/04/2023 13:21	WG2089124
Toluene	ND		0.00100	1	07/04/2023 13:21	WG2089124
Ethylbenzene	ND		0.00100	1	07/04/2023 13:21	WG2089124
Total Xylenes	ND		0.00300	1	07/04/2023 13:21	WG2089124
(S) Toluene-d8	*101*		*80.0-120*		*07/04/2023 13:21*	WG2089124
(S) 4-Bromofluorobenzene	*97.9*		*77.0-126*		*07/04/2023 13:21*	WG2089124
(S) 1,2-Dichloroethane-d4	*114*		*70.0-130*		*07/04/2023 13:21*	WG2089124

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	2280		50.0	1	07/02/2023 17:57	WG2088338

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	228		100	100	07/04/2023 01:06	WG2088634
Sulfate	1270		500	100	07/04/2023 01:06	WG2088634

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Free Carbon Dioxide	48.1	T8	20.0	1	07/05/2023 13:19	WG2089074

Sample Narrative:

L1630414-02 WG2089074: Endpoint pH 4.5

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	07/05/2023 13:28	WG2089310
Ethane	ND		0.0130	1	07/05/2023 13:28	WG2089310
Ethene	ND		0.0130	1	07/05/2023 13:28	WG2089310
Acetylene	ND		0.0208	1	07/05/2023 13:28	WG2089310

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	07/04/2023 21:20	WG2089126
Toluene	ND		0.00100	1	07/04/2023 21:20	WG2089126
Ethylbenzene	ND		0.00100	1	07/04/2023 21:20	WG2089126
Total Xylenes	ND		0.00300	1	07/04/2023 21:20	WG2089126
(S) Toluene-d8	*102*		*80.0-120*		*07/04/2023 21:20*	WG2089126
(S) 4-Bromofluorobenzene	*101*		*77.0-126*		*07/04/2023 21:20*	WG2089126
(S) 1,2-Dichloroethane-d4	*120*		*70.0-130*		*07/04/2023 21:20*	WG2089126

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	6590		100	1	07/02/2023 17:57	WG2088338

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	192		100	100	07/04/2023 01:19	WG2088634
Sulfate	4770		500	100	07/04/2023 01:19	WG2088634

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Free Carbon Dioxide	77.7	T8	20.0	1	07/05/2023 13:32	WG2089074

Sample Narrative:

L1630414-03 WG2089074: Endpoint pH 4.5

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	07/05/2023 13:31	WG2089310
Ethane	ND		0.0130	1	07/05/2023 13:31	WG2089310
Ethene	ND		0.0130	1	07/05/2023 13:31	WG2089310
Acetylene	ND		0.0208	1	07/05/2023 13:31	WG2089310

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	07/04/2023 21:42	WG2089126
Toluene	ND		0.00100	1	07/04/2023 21:42	WG2089126
Ethylbenzene	ND		0.00100	1	07/04/2023 21:42	WG2089126
Total Xylenes	ND		0.00300	1	07/04/2023 21:42	WG2089126
(S) Toluene-d8	*98.0*		*80.0-120*		*07/04/2023 21:42*	WG2089126
(S) 4-Bromofluorobenzene	*99.8*		*77.0-126*		*07/04/2023 21:42*	WG2089126
(S) 1,2-Dichloroethane-d4	*122*		*70.0-130*		*07/04/2023 21:42*	WG2089126

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	3810		50.0	1	07/03/2023 10:41	WG2088340

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	122		100	100	07/04/2023 01:31	WG2088634
Sulfate	1880		500	100	07/04/2023 01:31	WG2088634

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Free Carbon Dioxide	62.2	T8	20.0	1	07/05/2023 13:35	WG2089074

Sample Narrative:

L1630414-04 WG2089074: Endpoint pH 4.5

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	07/05/2023 13:35	WG2089310
Ethane	ND		0.0130	1	07/05/2023 13:35	WG2089310
Ethene	ND		0.0130	1	07/05/2023 13:35	WG2089310
Acetylene	ND		0.0208	1	07/05/2023 13:35	WG2089310

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	07/04/2023 23:30	WG2089126
Toluene	ND		0.00100	1	07/04/2023 23:30	WG2089126
Ethylbenzene	ND		0.00100	1	07/04/2023 23:30	WG2089126
Total Xylenes	ND		0.00300	1	07/04/2023 23:30	WG2089126
(S) Toluene-d8	*98.4*		*80.0-120*		*07/04/2023 23:30*	WG2089126
(S) 4-Bromofluorobenzene	*93.7*		*77.0-126*		*07/04/2023 23:30*	WG2089126
(S) 1,2-Dichloroethane-d4	*125*		*70.0-130*		*07/04/2023 23:30*	WG2089126

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	570		10.0	1	07/02/2023 17:57	WG2088338

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	16.2		1.00	1	07/04/2023 01:44	WG2088634
Sulfate	90.9		5.00	1	07/04/2023 01:44	WG2088634

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Free Carbon Dioxide	ND	T8	20.0	1	07/05/2023 13:39	WG2089074

Sample Narrative:

L1630414-05 WG2089074: Endpoint pH 4.5

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	07/05/2023 13:43	WG2089310
Ethane	ND		0.0130	1	07/05/2023 13:43	WG2089310
Ethene	ND		0.0130	1	07/05/2023 13:43	WG2089310
Acetylene	ND		0.0208	1	07/05/2023 13:43	WG2089310

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	07/04/2023 23:51	WG2089126
Toluene	ND		0.00100	1	07/04/2023 23:51	WG2089126
Ethylbenzene	ND		0.00100	1	07/04/2023 23:51	WG2089126
Total Xylenes	ND		0.00300	1	07/04/2023 23:51	WG2089126
(S) Toluene-d8	*99.9*		*80.0-120*		*07/04/2023 23:51*	WG2089126
(S) 4-Bromofluorobenzene	*98.9*		*77.0-126*		*07/04/2023 23:51*	WG2089126
(S) 1,2-Dichloroethane-d4	*129*		*70.0-130*		*07/04/2023 23:51*	WG2089126

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	1180		20.0	1	07/03/2023 10:41	WG2088340

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	33.6		1.00	1	07/04/2023 02:22	WG2088634
Sulfate	509		25.0	5	07/04/2023 02:34	WG2088634

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Free Carbon Dioxide	22.7	T8	20.0	1	07/05/2023 13:44	WG2089074

Sample Narrative:

L1630414-06 WG2089074: Endpoint pH 4.5

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	07/05/2023 13:46	WG2089310
Ethane	ND		0.0130	1	07/05/2023 13:46	WG2089310
Ethene	ND		0.0130	1	07/05/2023 13:46	WG2089310
Acetylene	ND		0.0208	1	07/05/2023 13:46	WG2089310

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	07/05/2023 00:13	WG2089126
Toluene	ND		0.00100	1	07/05/2023 00:13	WG2089126
Ethylbenzene	ND		0.00100	1	07/05/2023 00:13	WG2089126
Total Xylenes	ND		0.00300	1	07/05/2023 00:13	WG2089126
(S) Toluene-d8	*99.2*		*80.0-120*		*07/05/2023 00:13*	WG2089126
(S) 4-Bromofluorobenzene	*107*		*77.0-126*		*07/05/2023 00:13*	WG2089126
(S) 1,2-Dichloroethane-d4	*126*		*70.0-130*		*07/05/2023 00:13*	WG2089126

Method Blank (MB)

(MB) R3944487-1 07/02/23 17:57

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Dissolved Solids	U	J	10.0	10.0

L1630525-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1630525-01 07/02/23 17:57 • (DUP) R3944487-3 07/02/23 17:57

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	604	628	1	3.90		5

L1630525-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1630525-02 07/02/23 17:57 • (DUP) R3944487-4 07/02/23 17:57

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	612	624	1	1.94		5

Laboratory Control Sample (LCS)

(LCS) R3944487-2 07/02/23 17:57

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8580	97.5	77.3-123	

Method Blank (MB)

(MB) R3945110-1 07/03/23 10:41

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Dissolved Solids	U		10.0	10.0

L1630337-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1630337-01 07/03/23 10:41 • (DUP) R3945110-3 07/03/23 10:41

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	645	680	1	5.23	J3	5

L1630414-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1630414-06 07/03/23 10:41 • (DUP) R3945110-4 07/03/23 10:41

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	1180	1230	1	3.65		5

Laboratory Control Sample (LCS)

(LCS) R3945110-2 07/03/23 10:41

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8430	95.8	77.3-123	

Method Blank (MB)

(MB) R3944677-1 07/03/23 10:14

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	U		0.379	1.00
Sulfate	U		0.594	5.00

L1626860-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1626860-04 07/03/23 21:45 • (DUP) R3944677-3 07/03/23 21:57

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	24.6	24.5	1	0.238		20
Sulfate	38.4	38.4	1	0.157		20

L1630476-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1630476-01 07/04/23 03:25 • (DUP) R3944677-5 07/04/23 03:40

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	21.6	21.8	1	0.566		20
Sulfate	32.8	33.1	1	0.899		20

Laboratory Control Sample (LCS)

(LCS) R3944677-2 07/03/23 10:27

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40.0	39.4	98.4	90.0-110	
Sulfate	40.0	39.4	98.6	90.0-110	

L1626860-04 Original Sample (OS) • Matrix Spike (MS)

(OS) L1626860-04 07/03/23 21:45 • (MS) R3944677-4 07/03/23 22:10

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50.0	24.6	75.0	101	1	80.0-120	
Sulfate	50.0	38.4	88.9	101	1	80.0-120	

L1630476-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1630476-01 07/04/23 03:25 • (MS) R3944677-6 07/04/23 03:52 • (MSD) R3944677-7 07/04/23 04:05

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50.0	21.6	70.2	71.5	97.1	99.6	1	80.0-120			1.76	20
Sulfate	50.0	32.8	81.3	82.7	97.0	99.8	1	80.0-120			1.70	20

Method Blank (MB)

(MB) R3944817-3 07/05/23 11:53

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Free Carbon Dioxide	U		6.67	20.0

Sample Narrative:

BLANK: Endpoint pH 4.5

L1629928-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1629928-01 07/05/23 12:15 • (DUP) R3944817-5 07/05/23 12:19

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Free Carbon Dioxide	ND	ND	1	1.13		20

Sample Narrative:

OS: Endpoint pH 4.5

DUP: Endpoint pH 4.5

L1630525-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1630525-03 07/05/23 12:55 • (DUP) R3944817-7 07/05/23 12:59

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Free Carbon Dioxide	ND	ND	1	1.07		20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

Method Blank (MB)

(MB) R3944773-2 07/05/23 11:25

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Methane	U		0.00291	0.0100
Ethane	U		0.00407	0.0130
Ethene	U		0.00426	0.0130
Acetylene	U		0.00558	0.0208

L1630142-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1630142-01 07/05/23 11:39 • (DUP) R3944773-3 07/05/23 12:59

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Methane	ND	ND	1	0.000		20
Ethane	ND	ND	1	0.000		20
Ethene	ND	ND	1	0.000		20
Acetylene	ND	ND	1	0.000		20

L1630414-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1630414-01 07/05/23 13:22 • (DUP) R3944773-4 07/05/23 13:51

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Methane	ND	ND	1	0.000		20
Ethane	ND	ND	1	0.000		20
Ethene	ND	ND	1	0.000		20
Acetylene	ND	ND	1	0.000		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3944773-1 07/05/23 11:21 • (LCSD) R3944773-5 07/05/23 13:55

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Methane	0.0678	0.0734	0.0633	108	93.4	85.0-115			14.8	20
Ethane	0.129	0.117	0.112	90.7	86.8	85.0-115			4.37	20
Ethene	0.127	0.117	0.113	92.1	89.0	85.0-115			3.48	20
Acetylene	0.208	0.188	0.183	90.4	88.0	85.0-115			2.70	20

Method Blank (MB)

(MB) R3945434-5 07/04/23 11:49

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.0000941	0.00100
Toluene	U		0.000278	0.00100
Ethylbenzene	U		0.000137	0.00100
Total Xylenes	U		0.000174	0.00300
(S) Toluene-d8	*104*			*80.0-120*
(S) 4-Bromofluorobenzene	*99.5*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*113*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3945434-1 07/04/23 09:59 • (LCSD) R3945434-2 07/04/23 10:21

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.00500	0.00459	0.00507	91.8	101	70.0-123			9.94	20
Toluene	0.00500	0.00427	0.00486	85.4	97.2	79.0-120			12.9	20
Ethylbenzene	0.00500	0.00424	0.00489	84.8	97.8	79.0-123			14.2	20
Total Xylenes	0.0150	0.0129	0.0149	86.0	99.3	79.0-123			14.4	20
(S) Toluene-d8				*97.6*	*99.5*	*80.0-120*				
(S) 4-Bromofluorobenzene				*96.8*	*103*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*125*	*123*	*70.0-130*				

Method Blank (MB)

(MB) R3945435-3 07/04/23 20:58

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.0000941	0.00100
Toluene	U		0.000278	0.00100
Ethylbenzene	U		0.000137	0.00100
Total Xylenes	U		0.000174	0.00300
(S) Toluene-d8	*99.1*			*80.0-120*
(S) 4-Bromofluorobenzene	*98.4*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*118*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3945435-1 07/04/23 19:53 • (LCSD) R3945435-2 07/04/23 20:15

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.00500	0.00495	0.00519	99.0	104	70.0-123			4.73	20
Toluene	0.00500	0.00493	0.00527	98.6	105	79.0-120			6.67	20
Ethylbenzene	0.00500	0.00489	0.00531	97.8	106	79.0-123			8.24	20
Total Xylenes	0.0150	0.0150	0.0157	100	105	79.0-123			4.56	20
(S) Toluene-d8				*99.4*	*102*	*80.0-120*				
(S) 4-Bromofluorobenzene				*98.9*	*101*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*121*	*122*	*70.0-130*				

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
T8	Sample(s) received past/too close to holding time expiration.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:
Terracon - Longmont, CO

1831 Lefthand Circle
Suite ~~C~~ B
Longmont, CO 80501

Billing Information:
Charles Covington
1831 Lefthand Circle
Suite ~~C~~ B
Longmont, CO 80501

Pres Chk

Report to:
~~Charles Covington~~ Travis Whalen

Email To: ~~charles.covington@terracon.com~~
travis.whalen@terracon.com

Project Description:
COL Annual GW Sampling

City/State Collected: Longmont, CO

Please Circle: PT (MT) CT ET

Phone: 303-454-5249

Client Project #
22227034

Lab Project #
TERRALCO-22227034

Collected by (print):
Travis Whalen

Site/Facility ID #

P.O. #

Collected by (signature):
Travis Whalen

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed
Standard

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	CHLORIDE,SULFATE 125mlHDPE-NoPres	CO2 40mlAmb-NoPres	RSK175 40mlAmb HCl	TDS 1L-HDPE NoPres	V8260BTEX 40mlAmb-HCl						Remarks	Sample # (lab only)
TBI-MW01	Grab	GW	–	6/27/23	1130	9	X	X	X	X	X							-01
TBI-MW02	↓	GW	–	↓	0950	9	X	X	X	X	X							-02
TBI-MW03R	↓	GW	–	↓	~~0950~~ TW 1010	9	X	X	X	X	X							-03
		~~GW~~				~~9~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~							
MR2-MW-01	Grab	GW	–	6/27/23	1205	9	X	X	X	X	X							-04
MR2-MW-02	↓	GW	–	↓	1345	9	X	X	X	X	X							-05
MR2-MW-03	↓	GW	–	↓	1345	9	X	X	X	X	X							-06
		~~GW~~				~~9~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~							
		~~GW~~				~~9~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~							
		~~GW~~				~~9~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~							

Chain of Custody Page 1 of 1

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN

12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # 630414
J217

Acctnum: TERRALCO
Template: T226963
Prelogin: P988375
PM: 824 - Chris Ward
PB: DP 3-22-23
Shipped Via: FedEX Ground

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS X FedEx __ Courier _____

Tracking # 6357 9918 4354

Sample Receipt Checklist
COC Seal Present/Intact: __NP (Y) __N
COC Signed/Accurate: Y __N
Bottles arrive intact: Y __N
Correct bottles used: Y __N
Sufficient volume sent: Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: Y __N
RAD Screen <0.5 mR/hr: (Y) __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
Travis Whalen	6/27/23	1530	Fed Ex		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 1.4 °C Bottles Received: GBAG 1.4+0=1.4	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 6/28/23 Time: 0:01	Hold: Condition: NCF / OK

ANALYTICAL REPORT

July 10, 2023

Terracon - Longmont, CO

Sample Delivery Group:	L1630938
Samples Received:	06/29/2023
Project Number:	22227034
Description:	COL Annual GW Sampling

Report To:

Travis Whalen
1831 Lefthand Circle
Suite B
Longmont, CO 80501

Entire Report Reviewed By:

Chris Ward
Project Manager

Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

GM1-MW01 L1630938-01 GW

Collected by: Travis Whalen | Collected date/time: 06/28/23 09:50 | Received date/time: 06/29/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2088593	1	07/03/23 10:20	07/03/23 11:00	JAC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2091554	1	07/09/23 15:05	07/09/23 15:05	GEB	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2091554	5	07/09/23 15:18	07/09/23 15:18	GEB	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG2089081	1	07/05/23 15:59	07/05/23 15:59	ARD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2090128	1	07/06/23 15:54	07/06/23 15:54	JAP	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2089891	1	07/06/23 01:00	07/06/23 01:00	ACG	Mt. Juliet, TN

GM1-MW02 L1630938-02 GW

Collected by: Travis Whalen | Collected date/time: 06/28/23 10:50 | Received date/time: 06/29/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2088593	1	07/03/23 10:20	07/03/23 11:00	JAC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2091554	1	07/09/23 15:31	07/09/23 15:31	GEB	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2091554	5	07/09/23 15:44	07/09/23 15:44	GEB	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG2089081	1	07/05/23 16:03	07/05/23 16:03	ARD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2090128	1	07/06/23 15:56	07/06/23 15:56	JAP	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2089891	1	07/06/23 01:19	07/06/23 01:19	ACG	Mt. Juliet, TN

GM1-MW03 L1630938-03 GW

Collected by: Travis Whalen | Collected date/time: 06/28/23 10:30 | Received date/time: 06/29/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2088586	1	07/03/23 10:09	07/03/23 13:28	JAC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2091554	1	07/09/23 15:56	07/09/23 15:56	GEB	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2091554	5	07/09/23 16:09	07/09/23 16:09	GEB	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG2089081	1	07/05/23 16:10	07/05/23 16:10	ARD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2090128	1	07/06/23 15:59	07/06/23 15:59	JAP	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2089891	1	07/06/23 01:38	07/06/23 01:38	ACG	Mt. Juliet, TN

RD1-MW01 L1630938-04 GW

Collected by: Travis Whalen | Collected date/time: 06/28/23 12:22 | Received date/time: 06/29/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2088593	1	07/03/23 10:20	07/03/23 11:00	JAC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2091554	1	07/09/23 16:22	07/09/23 16:22	GEB	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2091554	5	07/09/23 17:00	07/09/23 17:00	GEB	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG2089081	1	07/05/23 16:16	07/05/23 16:16	ARD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2090128	1	07/06/23 16:01	07/06/23 16:01	JAP	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2089891	1	07/06/23 01:59	07/06/23 01:59	ACG	Mt. Juliet, TN

RD1-MW02 L1630938-05 GW

Collected by: Travis Whalen | Collected date/time: 06/28/23 12:40 | Received date/time: 06/29/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2088593	1	07/03/23 10:20	07/03/23 11:00	JAC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2091554	1	07/09/23 17:13	07/09/23 17:13	GEB	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2091554	5	07/09/23 17:26	07/09/23 17:26	GEB	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG2089081	1	07/05/23 16:24	07/05/23 16:24	ARD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2090657	1	07/07/23 15:31	07/07/23 15:31	BAW	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2089891	1	07/06/23 06:41	07/06/23 06:41	ACG	Mt. Juliet, TN

RD1-MW03 L1630938-06 GW

Collected by: Travis Whalen | Collected date/time: 06/28/23 12:00 | Received date/time: 06/29/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2088593	1	07/03/23 10:20	07/03/23 11:00	JAC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2091554	1	07/09/23 17:39	07/09/23 17:39	GEB	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2091554	5	07/09/23 17:52	07/09/23 17:52	GEB	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG2089081	1	07/05/23 16:29	07/05/23 16:29	ARD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2090657	1	07/07/23 15:34	07/07/23 15:34	BAW	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2089891	1	07/06/23 07:01	07/06/23 07:01	ACG	Mt. Juliet, TN

MY1-MW01 L1630938-07 GW

Collected by: Travis Whalen | Collected date/time: 06/28/23 14:10 | Received date/time: 06/29/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2088593	1	07/03/23 10:20	07/03/23 11:00	JAC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2091554	1	07/09/23 18:04	07/09/23 18:04	GEB	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2091554	5	07/09/23 18:17	07/09/23 18:17	GEB	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG2089081	1	07/05/23 16:35	07/05/23 16:35	ARD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2090657	1	07/07/23 15:37	07/07/23 15:37	BAW	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2089891	1	07/06/23 07:20	07/06/23 07:20	ACG	Mt. Juliet, TN

MY1-MW02 L1630938-08 GW

Collected by: Travis Whalen | Collected date/time: 06/28/23 14:30 | Received date/time: 06/29/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2088586	1	07/03/23 10:09	07/03/23 13:28	JAC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2091554	1	07/09/23 18:30	07/09/23 18:30	GEB	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2091554	5	07/09/23 18:43	07/09/23 18:43	GEB	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG2089081	1	07/05/23 16:48	07/05/23 16:48	ARD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2090657	1	07/07/23 15:39	07/07/23 15:39	BAW	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2089891	1	07/06/23 10:11	07/06/23 10:11	ACG	Mt. Juliet, TN

MY1-MW03 L1630938-09 GW

Collected by: Travis Whalen | Collected date/time: 06/28/23 13:55 | Received date/time: 06/29/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2088586	1	07/03/23 10:09	07/03/23 13:28	JAC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2091554	10	07/09/23 18:56	07/09/23 18:56	GEB	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG2089081	1	07/05/23 16:58	07/05/23 16:58	ARD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2090657	1	07/07/23 15:42	07/07/23 15:42	BAW	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2089891	1	07/06/23 10:30	07/06/23 10:30	ACG	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Chris Ward
Project Manager

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	733		13.3	1	07/03/2023 11:00	WG2088593

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	20.9		1.00	1	07/09/2023 15:05	WG2091554
Sulfate	271		25.0	5	07/09/2023 15:18	WG2091554

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Free Carbon Dioxide	ND	T8	20.0	1	07/05/2023 15:59	WG2089081

Sample Narrative:

L1630938-01 WG2089081: Endpoint pH 4.5

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	07/06/2023 15:54	WG2090128
Ethane	ND		0.0130	1	07/06/2023 15:54	WG2090128
Ethene	ND		0.0130	1	07/06/2023 15:54	WG2090128
Acetylene	ND		0.0208	1	07/06/2023 15:54	WG2090128

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	07/06/2023 01:00	WG2089891
Toluene	ND		0.00100	1	07/06/2023 01:00	WG2089891
Ethylbenzene	ND		0.00100	1	07/06/2023 01:00	WG2089891
Total Xylenes	ND		0.00300	1	07/06/2023 01:00	WG2089891
(S) Toluene-d8	*102*		*80.0-120*		*07/06/2023 01:00*	WG2089891
(S) 4-Bromofluorobenzene	*108*		*77.0-126*		*07/06/2023 01:00*	WG2089891
(S) 1,2-Dichloroethane-d4	*101*		*70.0-130*		*07/06/2023 01:00*	WG2089891

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	803		13.3	1	07/03/2023 11:00	WG2088593

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	30.4		1.00	1	07/09/2023 15:31	WG2091554
Sulfate	310		25.0	5	07/09/2023 15:44	WG2091554

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Free Carbon Dioxide	24.8	T8	20.0	1	07/05/2023 16:03	WG2089081

Sample Narrative:

L1630938-02 WG2089081: Endpoint pH 4.5

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	07/06/2023 15:56	WG2090128
Ethane	ND		0.0130	1	07/06/2023 15:56	WG2090128
Ethene	ND		0.0130	1	07/06/2023 15:56	WG2090128
Acetylene	ND		0.0208	1	07/06/2023 15:56	WG2090128

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	07/06/2023 01:19	WG2089891
Toluene	ND		0.00100	1	07/06/2023 01:19	WG2089891
Ethylbenzene	ND		0.00100	1	07/06/2023 01:19	WG2089891
Total Xylenes	ND		0.00300	1	07/06/2023 01:19	WG2089891
(S) Toluene-d8	*104*		*80.0-120*		*07/06/2023 01:19*	WG2089891
(S) 4-Bromofluorobenzene	*106*		*77.0-126*		*07/06/2023 01:19*	WG2089891
(S) 1,2-Dichloroethane-d4	*96.5*		*70.0-130*		*07/06/2023 01:19*	WG2089891

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	1050		20.0	1	07/03/2023 13:28	WG2088586

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	42.6		1.00	1	07/09/2023 15:56	WG2091554
Sulfate	387		25.0	5	07/09/2023 16:09	WG2091554

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Free Carbon Dioxide	ND	T8	20.0	1	07/05/2023 16:10	WG2089081

Sample Narrative:

L1630938-03 WG2089081: Endpoint pH 4.5

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	07/06/2023 15:59	WG2090128
Ethane	ND		0.0130	1	07/06/2023 15:59	WG2090128
Ethene	ND		0.0130	1	07/06/2023 15:59	WG2090128
Acetylene	ND		0.0208	1	07/06/2023 15:59	WG2090128

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	07/06/2023 01:38	WG2089891
Toluene	ND		0.00100	1	07/06/2023 01:38	WG2089891
Ethylbenzene	ND		0.00100	1	07/06/2023 01:38	WG2089891
Total Xylenes	ND		0.00300	1	07/06/2023 01:38	WG2089891
(S) Toluene-d8	*104*		*80.0-120*		*07/06/2023 01:38*	WG2089891
(S) 4-Bromofluorobenzene	*103*		*77.0-126*		*07/06/2023 01:38*	WG2089891
(S) 1,2-Dichloroethane-d4	*102*		*70.0-130*		*07/06/2023 01:38*	WG2089891

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	914		20.0	1	07/03/2023 11:00	WG2088593

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	54.0		1.00	1	07/09/2023 16:22	WG2091554
Sulfate	302		25.0	5	07/09/2023 17:00	WG2091554

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Free Carbon Dioxide	49.1	T8	20.0	1	07/05/2023 16:16	WG2089081

Sample Narrative:

L1630938-04 WG2089081: Endpoint pH 4.5

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	07/06/2023 16:01	WG2090128
Ethane	ND		0.0130	1	07/06/2023 16:01	WG2090128
Ethene	ND		0.0130	1	07/06/2023 16:01	WG2090128
Acetylene	ND		0.0208	1	07/06/2023 16:01	WG2090128

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	07/06/2023 01:59	WG2089891
Toluene	ND		0.00100	1	07/06/2023 01:59	WG2089891
Ethylbenzene	ND		0.00100	1	07/06/2023 01:59	WG2089891
Total Xylenes	ND		0.00300	1	07/06/2023 01:59	WG2089891
(S) Toluene-d8	*102*		*80.0-120*		*07/06/2023 01:59*	WG2089891
(S) 4-Bromofluorobenzene	*105*		*77.0-126*		*07/06/2023 01:59*	WG2089891
(S) 1,2-Dichloroethane-d4	*101*		*70.0-130*		*07/06/2023 01:59*	WG2089891

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	888		20.0	1	07/03/2023 11:00	WG2088593

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	56.5		1.00	1	07/09/2023 17:13	WG2091554
Sulfate	326		25.0	5	07/09/2023 17:26	WG2091554

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Free Carbon Dioxide	37.8	T8	20.0	1	07/05/2023 16:24	WG2089081

Sample Narrative:

L1630938-05 WG2089081: Endpoint pH 4.5

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	07/07/2023 15:31	WG2090657
Ethane	ND		0.0130	1	07/07/2023 15:31	WG2090657
Ethene	ND		0.0130	1	07/07/2023 15:31	WG2090657
Acetylene	ND		0.0208	1	07/07/2023 15:31	WG2090657

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	07/06/2023 06:41	WG2089891
Toluene	ND		0.00100	1	07/06/2023 06:41	WG2089891
Ethylbenzene	ND		0.00100	1	07/06/2023 06:41	WG2089891
Total Xylenes	ND		0.00300	1	07/06/2023 06:41	WG2089891
(S) Toluene-d8	*102*		*80.0-120*		*07/06/2023 06:41*	WG2089891
(S) 4-Bromofluorobenzene	*105*		*77.0-126*		*07/06/2023 06:41*	WG2089891
(S) 1,2-Dichloroethane-d4	*98.7*		*70.0-130*		*07/06/2023 06:41*	WG2089891

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	930		20.0	1	07/03/2023 11:00	WG2088593

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	56.0		1.00	1	07/09/2023 17:39	WG2091554
Sulfate	368		25.0	5	07/09/2023 17:52	WG2091554

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Free Carbon Dioxide	28.9	T8	20.0	1	07/05/2023 16:29	WG2089081

Sample Narrative:

L1630938-06 WG2089081: Endpoint pH 4.5

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	07/07/2023 15:34	WG2090657
Ethane	ND		0.0130	1	07/07/2023 15:34	WG2090657
Ethene	ND		0.0130	1	07/07/2023 15:34	WG2090657
Acetylene	ND		0.0208	1	07/07/2023 15:34	WG2090657

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	07/06/2023 07:01	WG2089891
Toluene	ND		0.00100	1	07/06/2023 07:01	WG2089891
Ethylbenzene	ND		0.00100	1	07/06/2023 07:01	WG2089891
Total Xylenes	ND		0.00300	1	07/06/2023 07:01	WG2089891
(S) Toluene-d8	*102*		*80.0-120*		*07/06/2023 07:01*	WG2089891
(S) 4-Bromofluorobenzene	*107*		*77.0-126*		*07/06/2023 07:01*	WG2089891
(S) 1,2-Dichloroethane-d4	*103*		*70.0-130*		*07/06/2023 07:01*	WG2089891

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	1010		20.0	1	07/03/2023 11:00	WG2088593

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	36.8		1.00	1	07/09/2023 18:04	WG2091554
Sulfate	345		25.0	5	07/09/2023 18:17	WG2091554

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Free Carbon Dioxide	25.5	T8	20.0	1	07/05/2023 16:35	WG2089081

Sample Narrative:

L1630938-07 WG2089081: Endpoint pH 4.5

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	07/07/2023 15:37	WG2090657
Ethane	ND		0.0130	1	07/07/2023 15:37	WG2090657
Ethene	ND		0.0130	1	07/07/2023 15:37	WG2090657
Acetylene	ND		0.0208	1	07/07/2023 15:37	WG2090657

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	07/06/2023 07:20	WG2089891
Toluene	ND		0.00100	1	07/06/2023 07:20	WG2089891
Ethylbenzene	ND		0.00100	1	07/06/2023 07:20	WG2089891
Total Xylenes	ND		0.00300	1	07/06/2023 07:20	WG2089891
(S) Toluene-d8	*103*		*80.0-120*		*07/06/2023 07:20*	WG2089891
(S) 4-Bromofluorobenzene	*107*		*77.0-126*		*07/06/2023 07:20*	WG2089891
(S) 1,2-Dichloroethane-d4	*98.4*		*70.0-130*		*07/06/2023 07:20*	WG2089891

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	912		20.0	1	07/03/2023 13:28	WG2088586

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	36.2		1.00	1	07/09/2023 18:30	WG2091554
Sulfate	353		25.0	5	07/09/2023 18:43	WG2091554

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Free Carbon Dioxide	52.3	T8	20.0	1	07/05/2023 16:48	WG2089081

Sample Narrative:

L1630938-08 WG2089081: Endpoint pH 4.5

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	07/07/2023 15:39	WG2090657
Ethane	ND		0.0130	1	07/07/2023 15:39	WG2090657
Ethene	ND		0.0130	1	07/07/2023 15:39	WG2090657
Acetylene	ND		0.0208	1	07/07/2023 15:39	WG2090657

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	07/06/2023 10:11	WG2089891
Toluene	ND		0.00100	1	07/06/2023 10:11	WG2089891
Ethylbenzene	ND		0.00100	1	07/06/2023 10:11	WG2089891
Total Xylenes	ND		0.00300	1	07/06/2023 10:11	WG2089891
(S) Toluene-d8	*101*		*80.0-120*		*07/06/2023 10:11*	WG2089891
(S) 4-Bromofluorobenzene	*107*		*77.0-126*		*07/06/2023 10:11*	WG2089891
(S) 1,2-Dichloroethane-d4	*101*		*70.0-130*		*07/06/2023 10:11*	WG2089891

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	876		20.0	1	07/03/2023 13:28	WG2088586

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	36.3		10.0	10	07/09/2023 18:56	WG2091554
Sulfate	358		50.0	10	07/09/2023 18:56	WG2091554

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Free Carbon Dioxide	82.2	T8	20.0	1	07/05/2023 16:58	WG2089081

Sample Narrative:

L1630938-09 WG2089081: Endpoint pH 4.5

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	07/07/2023 15:42	WG2090657
Ethane	ND		0.0130	1	07/07/2023 15:42	WG2090657
Ethene	ND		0.0130	1	07/07/2023 15:42	WG2090657
Acetylene	ND		0.0208	1	07/07/2023 15:42	WG2090657

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	07/06/2023 10:30	WG2089891
Toluene	ND		0.00100	1	07/06/2023 10:30	WG2089891
Ethylbenzene	ND		0.00100	1	07/06/2023 10:30	WG2089891
Total Xylenes	ND		0.00300	1	07/06/2023 10:30	WG2089891
(S) Toluene-d8	*102*		*80.0-120*		*07/06/2023 10:30*	WG2089891
(S) 4-Bromofluorobenzene	*106*		*77.0-126*		*07/06/2023 10:30*	WG2089891
(S) 1,2-Dichloroethane-d4	*100*		*70.0-130*		*07/06/2023 10:30*	WG2089891

Method Blank (MB)

(MB) R3944772-1 07/03/23 13:28

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Dissolved Solids	84.0		10.0	10.0

L1630671-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1630671-01 07/03/23 13:28 • (DUP) R3944772-3 07/03/23 13:28

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	1220	1260	1	3.71		5

L1630690-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1630690-04 07/03/23 13:28 • (DUP) R3944772-4 07/03/23 13:28

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	1980	2160	1	8.46	J3	5

Laboratory Control Sample (LCS)

(LCS) R3944772-2 07/03/23 13:28

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8400	95.5	77.3-123	

Method Blank (MB)

(MB) R3944836-1 07/03/23 11:00

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Dissolved Solids	U	J	10.0	10.0

L1630690-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1630690-01 07/03/23 11:00 • (DUP) R3944836-3 07/03/23 11:00

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	1820	1940	1	6.38	J3	5

L1630956-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1630956-01 07/03/23 11:00 • (DUP) R3944836-4 07/03/23 11:00

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	213	211	1	0.943		5

Laboratory Control Sample (LCS)

(LCS) R3944836-2 07/03/23 11:00

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8340	94.8	77.3-123	

Method Blank (MB)

(MB) R3946599-1 07/09/23 10:04

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	U		0.379	1.00
Sulfate	U		0.594	5.00

L1628569-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1628569-09 07/09/23 12:57 • (DUP) R3946599-3 07/09/23 13:10

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	101	99.6	1	1.65		20
Sulfate	531	529	1	0.319	E	20

L1631121-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1631121-02 07/10/23 10:06 • (DUP) R3946599-6 07/10/23 10:19

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	164	163	1	0.243		20
Sulfate	40.4	40.2	1	0.580		20

Laboratory Control Sample (LCS)

(LCS) R3946599-2 07/09/23 10:17

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40.0	38.5	96.2	90.0-110	
Sulfate	40.0	39.6	99.1	90.0-110	

L1628569-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1628569-09 07/09/23 12:57 • (MS) R3946599-4 07/09/23 13:23 • (MSD) R3946599-5 07/09/23 13:36

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50.0	101	144	146	84.5	89.6	1	80.0-120			1.75	20
Sulfate	50.0	531	558	563	54.9	65.5	1	80.0-120	E V	E V	0.940	20

L1631121-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1631121-02 07/10/23 10:06 • (MS) R3946599-7 07/10/23 10:32

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50.0	164	204	80.9	1	80.0-120	E
Sulfate	50.0	40.4	89.1	97.3	1	80.0-120	

Method Blank (MB)

(MB) R3945095-3 07/05/23 14:58

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Free Carbon Dioxide	U		6.67	20.0

Sample Narrative:

BLANK: Endpoint pH 4.5

L1630956-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1630956-01 07/05/23 17:06 • (DUP) R3945095-5 07/05/23 17:10

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Free Carbon Dioxide	ND	ND	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

L1630811-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1630811-01 07/05/23 15:11 • (DUP) R3945095-7 07/05/23 15:15

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Free Carbon Dioxide	110	111	1	0.677		20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

Method Blank (MB)

(MB) R3945516-2 07/06/23 14:59

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Methane	U		0.00291	0.0100
Ethane	U		0.00407	0.0130
Ethene	U		0.00426	0.0130
Acetylene	U		0.00558	0.0208

L1630855-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1630855-01 07/06/23 15:10 • (DUP) R3945516-3 07/06/23 15:45

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Methane	ND	ND	1	0.000		20
Ethane	ND	ND	1	0.000		20
Ethene	ND	ND	1	0.000		20
Acetylene	ND	ND	1	0.000		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3945516-1 07/06/23 14:56 • (LCSD) R3945516-6 07/06/23 16:09

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Methane	0.0678	0.0620	0.0649	91.4	95.7	85.0-115			4.57	20
Ethane	0.129	0.110	0.112	85.3	86.8	85.0-115			1.80	20
Ethene	0.127	0.110	0.113	86.6	89.0	85.0-115			2.69	20
Acetylene	0.208	0.209	0.220	100	106	85.0-115			5.13	20

L1630855-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1630855-01 07/06/23 15:10 • (MS) R3945516-4 07/06/23 16:04 • (MSD) R3945516-5 07/06/23 16:06

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Methane	0.0678	ND	0.0551	0.0454	81.3	67.0	1	50.0-150			19.3	20
Ethane	0.129	ND	0.103	0.0839	79.8	65.0	1	50.0-150		J3	20.4	20
Ethene	0.127	ND	0.103	0.0832	81.1	65.5	1	50.0-150		J3	21.3	20
Acetylene	0.208	ND	0.197	0.159	94.7	76.4	1	50.0-150		J3	21.3	20

Method Blank (MB)

(MB) R3946054-2 07/07/23 14:32

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Methane	U		0.00291	0.0100
Ethane	U		0.00407	0.0130
Ethene	U		0.00426	0.0130
Acetylene	U		0.00558	0.0208

L1630855-11 Original Sample (OS) • Duplicate (DUP)

(OS) L1630855-11 07/07/23 15:05 • (DUP) R3946054-3 07/07/23 15:07

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Methane	9.50	10.1	10	6.12		20
Ethane	ND	ND	10	0.000		20
Ethene	ND	ND	10	0.000		20
Acetylene	ND	ND	10	0.000		20

L1630959-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1630959-01 07/07/23 15:53 • (DUP) R3946054-4 07/07/23 16:01

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Methane	ND	ND	1	0.000		20
Ethane	ND	ND	1	0.000		20
Ethene	ND	ND	1	0.000		20
Acetylene	ND	ND	1	0.000		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3946054-1 07/07/23 14:28 • (LCSD) R3946054-7 07/07/23 16:09

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Methane	0.0678	0.0721	0.0713	106	105	85.0-115			1.12	20
Ethane	0.129	0.117	0.116	90.7	89.9	85.0-115			0.858	20
Ethene	0.127	0.120	0.118	94.5	92.9	85.0-115			1.68	20
Acetylene	0.208	0.197	0.194	94.7	93.3	85.0-115			1.53	20

L1631003-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1631003-02 07/07/23 15:56 • (MS) R3946054-5 07/07/23 16:04 • (MSD) R3946054-6 07/07/23 16:07

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Methane	0.0678	ND	0.0772	0.0858	114	127	1	50.0-150			10.6	20
Ethane	0.129	ND	0.128	0.143	99.2	111	1	50.0-150			11.1	20
Ethene	0.127	ND	0.127	0.142	100	112	1	50.0-150			11.2	20
Acetylene	0.208	ND	0.210	0.236	101	113	1	50.0-150			11.7	20

Method Blank (MB)

(MB) R3945968-3 07/05/23 23:31

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.0000941	0.00100
Toluene	U		0.000278	0.00100
Ethylbenzene	U		0.000137	0.00100
Total Xylenes	U		0.000174	0.00300
(S) Toluene-d8	*111*			*80.0-120*
(S) 4-Bromofluorobenzene	*97.4*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*93.4*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3945968-1 07/05/23 20:15 • (LCSD) R3945968-2 07/05/23 20:47

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.00500	0.00469	0.00473	93.8	94.6	70.0-123			0.849	20
Toluene	0.00500	0.00447	0.00477	89.4	95.4	79.0-120			6.49	20
Ethylbenzene	0.00500	0.00517	0.00533	103	107	79.0-123			3.05	20
Total Xylenes	0.0150	0.0156	0.0161	104	107	79.0-123			3.15	20
(S) Toluene-d8				*103*	*104*	*80.0-120*				
(S) 4-Bromofluorobenzene				*107*	*106*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*103*	*99.2*	*70.0-130*				

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
T8	Sample(s) received past/too close to holding time expiration.
V	The sample concentration is too high to evaluate accurate spike recoveries.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:
Terracon - Longmont, CO
1831 Lefthand Circle
Suite C
Longmont, CO 80501

Billing Information:
Charles Covington
1831 Lefthand Circle
Suite C
Longmont, CO 80501

Pres Chk

Chain of Custody Page 1 of 1

Pace® PEOPLE ADVANCING SCIENCE

MT JULIET, TN

12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

L1630938
G213

Report to: ~~Charles Covington~~ Travis Whalen

Email To: ~~charles.covington@terracon.com~~ travis.whalen@terracon.com

Project Description: COL Annual GW Sampling

City/State Collected: Longmont, CO

Please Circle: PT (MT) CT ET

Phone: 303-454-5249

Client Project # 22227034

Lab Project # TERRALCO-22227034

Collected by (print): Travis Whalen

Site/Facility ID #

P.O. #

Collected by (signature): [signature]

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed: Standard

Acctnum: TERRALCO
Template: T226963
Prelogin: P988375
PM: 824 - Chris Ward
PB: CP 3-22-23
Shipped Via: FedEX Ground

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	CHLORIDE,SULFATE 125mlHDPE-NoPres	CO2 40mlAmb-NoPres	RSK175 40mlAmb HCl	TDS 1L-HDPE NoPres	V8260BTEX 40mlAmb-HCl	Remarks	Sample # (lab only)
GMI-MW01	Grab	GW	–	6/28/23	09:50	9	X	X	X	X	X		-01
GMI-MW02	↓	GW	–	↓	10:50	9	X	X	X	X	X		-02
GMI-MW03		GW	–		10:30	9	X	X	X	X	X		-03
RDI-MW01		GW	–		12:22	9	X	X	X	X	X		-04
RDI-MW02		GW	–		12:40	9	X	X	X	X	X		-05
RDI-MW03		GW	–		12:00	9	X	X	X	X	X		-06
MYI-MW01		GW	–		14:10	9	X	X	X	X	X		-07
MYI-MW02		GW	–		14:30	9	X	X	X	X	X		-08
MYI-MW03	↓	GW	–	↓	13:55	9	X	X	X	X	X		-09
		~~GW~~				~~9~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~		

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other________

Remarks:

pH ______ Temp ______
Flow ______ Other ______

Samples returned via: TW
__ UPS X FedEx X Courier ________

Tracking # 6481 5466 2811

Sample Receipt Checklist
COC Seal Present/Intact: __NP ✓Y __N
COC Signed/Accurate: ✓Y __N
Bottles arrive intact: ✓Y __N
Correct bottles used: ✓Y __N
Sufficient volume sent: ✓Y __N
If Applicable
VOA Zero Headspace: ✓Y __N
Preservation Correct/Checked: ✓Y __N
RAD Screen <0.5 mR/hr: ✓Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)		
[signature]	6/28/23	1600	FedEx	Trip Blank Received: (Yes) / No — HCL / MeoH — TBR — 3	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 5.1+0=5.1 °C — Bottles Received: 81	If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) [signature] 17	Date: 6-29-23 — Time: 900	Hold: — Condition: NCF / (OK)

ANALYTICAL REPORT

August 11, 2023

Terracon - Longmont, CO

Sample Delivery Group:	L1642779
Samples Received:	08/04/2023
Project Number:	22227034
Description:	COL Annual GW Sampling

Report To:

Travis Whalen
1831 Lefthand Circle
Suite B
Longmont, CO 80501

Entire Report Reviewed By:

Chris Ward
Project Manager

Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

S31-MW01 L1642779-01 GW

Collected by: Travis Whalen | Collected date/time: 08/03/23 10:25 | Received date/time: 08/04/23 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2109907	1	08/08/23 13:24	08/08/23 17:33	MMF	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2108334	10	08/05/23 14:41	08/05/23 14:41	GEB	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2108334	100	08/05/23 14:54	08/05/23 14:54	GEB	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG2109986	1	08/11/23 12:03	08/11/23 12:03	ARD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2108393	1	08/05/23 13:36	08/05/23 13:36	BAW	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2110207	1	08/09/23 00:55	08/09/23 00:55	DYW	Mt. Juliet, TN

S31-MW03 L1642779-02 GW

Collected by: Travis Whalen | Collected date/time: 08/03/23 10:58 | Received date/time: 08/04/23 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2109907	1	08/08/23 13:24	08/08/23 17:33	MMF	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2108334	10	08/05/23 15:32	08/05/23 15:32	GEB	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2108334	100	08/05/23 15:45	08/05/23 15:45	GEB	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG2109986	1	08/11/23 12:11	08/11/23 12:11	ARD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2108393	1	08/05/23 13:39	08/05/23 13:39	BAW	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2110207	1	08/09/23 01:16	08/09/23 01:16	DYW	Mt. Juliet, TN

S31-MW04 L1642779-03 GW

Collected by: Travis Whalen | Collected date/time: 08/03/23 09:55 | Received date/time: 08/04/23 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2109907	1	08/08/23 13:24	08/08/23 17:33	MMF	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2108334	10	08/05/23 15:58	08/05/23 15:58	GEB	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2108334	100	08/05/23 16:10	08/05/23 16:10	GEB	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG2109986	1	08/11/23 12:15	08/11/23 12:15	ARD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2108393	1	08/05/23 13:41	08/05/23 13:41	BAW	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2110207	1	08/09/23 01:36	08/09/23 01:36	DYW	Mt. Juliet, TN

S31-MW06 L1642779-04 GW

Collected by: Travis Whalen | Collected date/time: 08/03/23 11:30 | Received date/time: 08/04/23 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2109907	1	08/08/23 13:24	08/08/23 17:33	MMF	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2108334	10	08/05/23 16:23	08/05/23 16:23	GEB	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2108334	100	08/05/23 16:36	08/05/23 16:36	GEB	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG2109986	1	08/11/23 12:19	08/11/23 12:19	ARD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2108393	1	08/05/23 13:48	08/05/23 13:48	BAW	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2110207	1	08/09/23 01:57	08/09/23 01:57	DYW	Mt. Juliet, TN

ST1-MW02 L1642779-05 GW

Collected by: Travis Whalen | Collected date/time: 08/03/23 11:15 | Received date/time: 08/04/23 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2109907	1	08/08/23 13:24	08/08/23 17:33	MMF	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2108334	10	08/05/23 16:49	08/05/23 16:49	GEB	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2108334	100	08/05/23 17:02	08/05/23 17:02	GEB	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG2109986	1	08/11/23 12:23	08/11/23 12:23	ARD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2108393	1	08/05/23 13:55	08/05/23 13:55	BAW	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2110207	1	08/09/23 02:18	08/09/23 02:18	DYW	Mt. Juliet, TN

ST1-MW05 L1642779-06 GW

Collected by: Travis Whalen
Collected date/time: 08/03/23 11:45
Received date/time: 08/04/23 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2109907	1	08/08/23 13:24	08/08/23 17:33	MMF	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2108334	100	08/05/23 17:15	08/05/23 17:15	GEB	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG2109986	1	08/11/23 12:27	08/11/23 12:27	ARD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2108393	1	08/05/23 13:58	08/05/23 13:58	BAW	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2110207	1	08/09/23 02:38	08/09/23 02:38	DYW	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Chris Ward
Project Manager

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	18600		200	1	08/08/2023 17:33	WG2109907

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	223		10.0	10	08/05/2023 14:41	WG2108334
Sulfate	12200		500	100	08/05/2023 14:54	WG2108334

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Free Carbon Dioxide	47.6	B T8	20.0	1	08/11/2023 12:03	WG2109986

Sample Narrative:

L1642779-01 WG2109986: Endpoint pH 4.5 Headspace

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	08/05/2023 13:36	WG2108393
Ethane	ND		0.0130	1	08/05/2023 13:36	WG2108393
Ethene	ND		0.0130	1	08/05/2023 13:36	WG2108393
Acetylene	ND		0.0208	1	08/05/2023 13:36	WG2108393

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	08/09/2023 00:55	WG2110207
Toluene	ND		0.00100	1	08/09/2023 00:55	WG2110207
Ethylbenzene	ND		0.00100	1	08/09/2023 00:55	WG2110207
Total Xylenes	ND		0.00300	1	08/09/2023 00:55	WG2110207
(S) Toluene-d8	*109*		*80.0-120*		*08/09/2023 00:55*	WG2110207
(S) 4-Bromofluorobenzene	*88.9*		*77.0-126*		*08/09/2023 00:55*	WG2110207
(S) 1,2-Dichloroethane-d4	*106*		*70.0-130*		*08/09/2023 00:55*	WG2110207

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	19200		200	1	08/08/2023 17:33	WG2109907

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	392		10.0	10	08/05/2023 15:32	WG2108334
Sulfate	11800		500	100	08/05/2023 15:45	WG2108334

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Free Carbon Dioxide	28.9	B T8	20.0	1	08/11/2023 12:11	WG2109986

Sample Narrative:

L1642779-02 WG2109986: Endpoint pH 4.5 Headspace

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	08/05/2023 13:39	WG2108393
Ethane	ND		0.0130	1	08/05/2023 13:39	WG2108393
Ethene	ND		0.0130	1	08/05/2023 13:39	WG2108393
Acetylene	ND		0.0208	1	08/05/2023 13:39	WG2108393

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	08/09/2023 01:16	WG2110207
Toluene	ND		0.00100	1	08/09/2023 01:16	WG2110207
Ethylbenzene	ND		0.00100	1	08/09/2023 01:16	WG2110207
Total Xylenes	ND		0.00300	1	08/09/2023 01:16	WG2110207
(S) Toluene-d8	*110*		*80.0-120*		*08/09/2023 01:16*	WG2110207
(S) 4-Bromofluorobenzene	*85.4*		*77.0-126*		*08/09/2023 01:16*	WG2110207
(S) 1,2-Dichloroethane-d4	*109*		*70.0-130*		*08/09/2023 01:16*	WG2110207

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	14800		200	1	08/08/2023 17:33	WG2109907

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	230		10.0	10	08/05/2023 15:58	WG2108334
Sulfate	9660		500	100	08/05/2023 16:10	WG2108334

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Free Carbon Dioxide	31.9	B T8	20.0	1	08/11/2023 12:15	WG2109986

Sample Narrative:

L1642779-03 WG2109986: Endpoint pH 4.5 Headspace

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	08/05/2023 13:41	WG2108393
Ethane	ND		0.0130	1	08/05/2023 13:41	WG2108393
Ethene	ND		0.0130	1	08/05/2023 13:41	WG2108393
Acetylene	ND		0.0208	1	08/05/2023 13:41	WG2108393

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	08/09/2023 01:36	WG2110207
Toluene	ND		0.00100	1	08/09/2023 01:36	WG2110207
Ethylbenzene	ND		0.00100	1	08/09/2023 01:36	WG2110207
Total Xylenes	ND		0.00300	1	08/09/2023 01:36	WG2110207
(S) Toluene-d8	*112*		*80.0-120*		*08/09/2023 01:36*	WG2110207
(S) 4-Bromofluorobenzene	*89.9*		*77.0-126*		*08/09/2023 01:36*	WG2110207
(S) 1,2-Dichloroethane-d4	*110*		*70.0-130*		*08/09/2023 01:36*	WG2110207

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	12600		200	1	08/08/2023 17:33	WG2109907

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	110		10.0	10	08/05/2023 16:23	WG2108334
Sulfate	9710		500	100	08/05/2023 16:36	WG2108334

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Free Carbon Dioxide	32.3	B T8	20.0	1	08/11/2023 12:19	WG2109986

Sample Narrative:

L1642779-04 WG2109986: Endpoint pH 4.5 Headspace

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	08/05/2023 13:48	WG2108393
Ethane	ND		0.0130	1	08/05/2023 13:48	WG2108393
Ethene	ND		0.0130	1	08/05/2023 13:48	WG2108393
Acetylene	ND		0.0208	1	08/05/2023 13:48	WG2108393

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	08/09/2023 01:57	WG2110207
Toluene	ND		0.00100	1	08/09/2023 01:57	WG2110207
Ethylbenzene	ND		0.00100	1	08/09/2023 01:57	WG2110207
Total Xylenes	ND		0.00300	1	08/09/2023 01:57	WG2110207
(S) Toluene-d8	*113*		*80.0-120*		*08/09/2023 01:57*	WG2110207
(S) 4-Bromofluorobenzene	*88.0*		*77.0-126*		*08/09/2023 01:57*	WG2110207
(S) 1,2-Dichloroethane-d4	*112*		*70.0-130*		*08/09/2023 01:57*	WG2110207

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	27400		400	1	08/08/2023 17:33	WG2109907

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	974		10.0	10	08/05/2023 16:49	WG2108334
Sulfate	16000		500	100	08/05/2023 17:02	WG2108334

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Free Carbon Dioxide	20.1	B T8	20.0	1	08/11/2023 12:23	WG2109986

Sample Narrative:

L1642779-05 WG2109986: Endpoint pH 4.5 Headspace

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	08/05/2023 13:55	WG2108393
Ethane	ND		0.0130	1	08/05/2023 13:55	WG2108393
Ethene	ND		0.0130	1	08/05/2023 13:55	WG2108393
Acetylene	ND		0.0208	1	08/05/2023 13:55	WG2108393

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	08/09/2023 02:18	WG2110207
Toluene	ND		0.00100	1	08/09/2023 02:18	WG2110207
Ethylbenzene	ND		0.00100	1	08/09/2023 02:18	WG2110207
Total Xylenes	ND		0.00300	1	08/09/2023 02:18	WG2110207
(S) Toluene-d8	*115*		*80.0-120*		*08/09/2023 02:18*	WG2110207
(S) 4-Bromofluorobenzene	*79.4*		*77.0-126*		*08/09/2023 02:18*	WG2110207
(S) 1,2-Dichloroethane-d4	*114*		*70.0-130*		*08/09/2023 02:18*	WG2110207

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	33500		400	1	08/08/2023 17:33	WG2109907

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	2550		100	100	08/05/2023 17:15	WG2108334
Sulfate	19500		500	100	08/05/2023 17:15	WG2108334

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Free Carbon Dioxide	38.9	B T8	20.0	1	08/11/2023 12:27	WG2109986

Sample Narrative:

L1642779-06 WG2109986: Endpoint pH 4.5 Headspace

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	08/05/2023 13:58	WG2108393
Ethane	ND		0.0130	1	08/05/2023 13:58	WG2108393
Ethene	ND		0.0130	1	08/05/2023 13:58	WG2108393
Acetylene	ND		0.0208	1	08/05/2023 13:58	WG2108393

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	08/09/2023 02:38	WG2110207
Toluene	ND		0.00100	1	08/09/2023 02:38	WG2110207
Ethylbenzene	ND		0.00100	1	08/09/2023 02:38	WG2110207
Total Xylenes	ND		0.00300	1	08/09/2023 02:38	WG2110207
(S) Toluene-d8	*110*		*80.0-120*		*08/09/2023 02:38*	WG2110207
(S) 4-Bromofluorobenzene	*86.5*		*77.0-126*		*08/09/2023 02:38*	WG2110207
(S) 1,2-Dichloroethane-d4	*114*		*70.0-130*		*08/09/2023 02:38*	WG2110207

Method Blank (MB)

(MB) R3959226-1 08/08/23 17:33

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Dissolved Solids	U		10.0	10.0

L1642871-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1642871-01 08/08/23 17:33 • (DUP) R3959226-3 08/08/23 17:33

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	644	609	1	5.53	J3	5

L1642911-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1642911-02 08/08/23 17:33 • (DUP) R3959226-4 08/08/23 17:33

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	179	178	1	0.560		5

Laboratory Control Sample (LCS)

(LCS) R3959226-2 08/08/23 17:33

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8590	97.6	77.3-123	

Method Blank (MB)

(MB) R3957561-1 08/05/23 10:14

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	U		0.379	1.00
Sulfate	U		0.594	5.00

L1642708-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1642708-01 08/05/23 11:15 • (DUP) R3957561-3 08/05/23 11:28

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	7.39	7.48	1	1.23		20
Sulfate	19.7	19.8	1	0.454		20

L1642775-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1642775-01 08/05/23 18:06 • (DUP) R3957561-6 08/05/23 18:19

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	41.7	41.9	1	0.273		20
Sulfate	48.4	48.5	1	0.0791		20

Laboratory Control Sample (LCS)

(LCS) R3957561-2 08/05/23 10:27

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40.0	40.3	101	90.0-110	
Sulfate	40.0	39.4	98.4	90.0-110	

L1642708-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1642708-01 08/05/23 11:15 • (MS) R3957561-4 08/05/23 11:40 • (MSD) R3957561-5 08/05/23 11:53

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50.0	7.39	58.7	58.7	103	103	1	80.0-120			0.0737	20
Sulfate	50.0	19.7	69.4	69.3	99.4	99.3	1	80.0-120			0.0348	20

L1642775-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1642775-01 08/05/23 18:06 • (MS) R3957561-7 08/05/23 18:34

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50.0	41.7	93.4	103	1	80.0-120	
Sulfate	50.0	48.4	97.0	97.2	1	80.0-120	

Method Blank (MB)

(MB) R3959569-3 08/11/23 10:54

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Free Carbon Dioxide	11.6	J	6.67	20.0

Sample Narrative:

BLANK: Endpoint pH 4.5

L1642779-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1642779-01 08/11/23 12:03 • (DUP) R3959569-5 08/11/23 12:07

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Free Carbon Dioxide	47.6	46.9	1	1.37		20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

L1643682-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1643682-01 08/11/23 14:11 • (DUP) R3959569-7 08/11/23 14:15

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Free Carbon Dioxide	29.1	27.8	1	4.37		20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

Method Blank (MB)

(MB) R3957272-2 08/05/23 13:14

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Methane	U		0.00291	0.0100
Ethane	U		0.00407	0.0130
Ethene	U		0.00426	0.0130
Acetylene	U		0.00558	0.0208

L1642779-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1642779-04 08/05/23 13:48 • (DUP) R3957272-3 08/05/23 13:53

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Methane	ND	ND	1	0.000		20
Ethane	ND	ND	1	0.000		20
Ethene	ND	ND	1	0.000		20
Acetylene	ND	ND	1	0.000		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3957272-1 08/05/23 13:11 • (LCSD) R3957272-4 08/05/23 14:00

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Methane	0.0678	0.0663	0.0644	97.8	95.0	85.0-115			2.91	20
Ethane	0.129	0.117	0.113	90.7	87.6	85.0-115			3.48	20
Ethene	0.127	0.117	0.114	92.1	89.8	85.0-115			2.60	20
Acetylene	0.208	0.183	0.179	88.0	86.1	85.0-115			2.21	20

Method Blank (MB)

(MB) R3958884-2 08/08/23 21:41

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.0000941	0.00100
Toluene	U		0.000278	0.00100
Ethylbenzene	U		0.000137	0.00100
Total Xylenes	U		0.000174	0.00300
(S) Toluene-d8	*106*			*80.0-120*
(S) 4-Bromofluorobenzene	*82.7*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*124*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3958884-1 08/08/23 20:59

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.00500	0.00440	88.0	70.0-123	
Toluene	0.00500	0.00472	94.4	79.0-120	
Ethylbenzene	0.00500	0.00421	84.2	79.0-123	
Total Xylenes	0.0150	0.0130	86.7	79.0-123	
(S) Toluene-d8			*101*	*80.0-120*	
(S) 4-Bromofluorobenzene			*88.8*	*77.0-126*	
(S) 1,2-Dichloroethane-d4			*114*	*70.0-130*	

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
T8	Sample(s) received past/too close to holding time expiration.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:
Terracon - Longmont, CO

1831 Lefthand Circle
Suite C
Longmont, CO 80501

Billing Information:
Charles Covington
1831 Lefthand Circle
Suite C
Longmont, CO 80501

Pres Chk

Report to: ~~Charles Covington~~ Travis Whalen

Email To: charles.covington@terracon.com
travis.whalen@terracon.com

Project Description: COL Annual GW Sampling

City/State Collected: Longmont, CO

Please Circle: PT (MT) CT ET

Phone: 303-454-5249

Client Project # 22227034

Lab Project # TERRALCO-22227034

Collected by (print): Travis Whalen

Site/Facility ID #

P.O. #

Collected by (signature): Travis Whalen

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed: Standard

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	CHLORIDE,SULFATE 125mlHDPE-NoPres	CO2 40mlAmb-NoPres	RSK175 40mlAmb HCl	TDS 1L-HDPE NoPres	V8260BTEX 40mlAmb-HCl						Remarks	Sample # (lab only)
S31 - MW01	Grab	GW	—	8/3/23	1025	9	X	X	X	X	X							-01
S31 - MW03		GW	—		1058	9	X	X	X	X	X							-02
S31 - MW04		GW	—		955	9	X	X	X	X	X							-03
S31 - MW06		GW	—		1130	9	X	X	X	X	X							-04
		~~GW~~	—			~~9~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~							
ST1 - MW02		GW	—		1115	9	X	X	X	X	X							-05
ST1 - MW05		GW	—		1145	9	X	X	X	X	X							-06
		~~GW~~				~~9~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~							
		~~GW~~				~~9~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~							
		~~GW~~				~~9~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~							

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN
12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # 164279
H142

Acctnum: TERRALCO
Template: T226963
Prelogin: P988375
PM: 824 - Chris Ward
PB: LR 3-22-23
Shipped Via: FedEX Ground

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS X FedEx __ Courier _____

Tracking # 6295 1086 1390

Sample Receipt Checklist
COC Seal Present/Intact: √ NP Y N
COC Signed/Accurate: √ Y N
Bottles arrive intact: √ Y N
Correct bottles used: √ Y N
Sufficient volume sent: √ Y N
If Applicable
VOA Zero Headspace: √ Y N
Preservation Correct/Checked: √ Y N
RAD Screen <0.5 mR/hr: √ Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
Travis Whalen	8/3/23	1445	FedEx	3 6	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: ~~#18~~ 3.2+0=3.2 °C Bottles Received: 54	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) Ec Hewitt 17	Date: 8-4-23 Time: 930	Hold: Condition: NCF / OK

ANALYTICAL REPORT

April 20, 2023

Terracon - Longmont, CO

Sample Delivery Group:	L1605105
Samples Received:	04/13/2023
Project Number:	22227034
Description:	COL Annual GW Sampling

Report To:

Charles Covington
1831 Lefthand Circle
Suite B
Longmont, CO 80501

Entire Report Reviewed By:

Chris Ward
Project Manager

TABLE OF CONTENTS

SH2-MW01 L1605105-01 GW

Collected by: Travis Whalen | Collected date/time: 04/11/23 09:02 | Received date/time: 04/13/23 11:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2043652	1	04/18/23 11:20	04/18/23 12:49	AS	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2044171	1	04/18/23 22:07	04/18/23 22:07	GEB	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2044171	10	04/18/23 22:20	04/18/23 22:20	GEB	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG2045369	1	04/20/23 13:39	04/20/23 13:39	ARD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2043815	1	04/19/23 13:23	04/19/23 13:23	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2042432	1	04/15/23 05:50	04/15/23 05:50	DWR	Mt. Juliet, TN

SH2-MW02 L1605105-02 GW

Collected by: Travis Whalen | Collected date/time: 04/11/23 09:45 | Received date/time: 04/13/23 11:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2043652	1	04/18/23 11:20	04/18/23 12:49	AS	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2044171	1	04/18/23 22:34	04/18/23 22:34	GEB	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2044171	10	04/18/23 23:14	04/18/23 23:14	GEB	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG2045369	1	04/20/23 13:43	04/20/23 13:43	ARD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2043815	1	04/19/23 13:26	04/19/23 13:26	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2042432	1	04/15/23 06:12	04/15/23 06:12	DWR	Mt. Juliet, TN

SGU-MW01 L1605105-03 GW

Collected by: Travis Whalen | Collected date/time: 04/11/23 14:25 | Received date/time: 04/13/23 11:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2043652	1	04/18/23 11:20	04/18/23 12:49	AS	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2044171	1	04/18/23 23:28	04/18/23 23:28	GEB	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2044171	10	04/18/23 23:41	04/18/23 23:41	GEB	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG2045369	1	04/20/23 13:47	04/20/23 13:47	ARD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2043815	1	04/19/23 13:29	04/19/23 13:29	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2042432	1	04/15/23 06:33	04/15/23 06:33	DWR	Mt. Juliet, TN

SGU-MW02 L1605105-04 GW

Collected by: Travis Whalen | Collected date/time: 04/11/23 15:00 | Received date/time: 04/13/23 11:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2043652	1	04/18/23 11:20	04/18/23 12:49	AS	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2044171	1	04/18/23 23:55	04/18/23 23:55	GEB	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2044171	10	04/19/23 00:08	04/19/23 00:08	GEB	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG2045369	1	04/20/23 13:52	04/20/23 13:52	ARD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2043815	1	04/19/23 13:31	04/19/23 13:31	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2042556	1	04/15/23 10:41	04/15/23 10:41	JCP	Mt. Juliet, TN

SGU-MW03 L1605105-05 GW

Collected by: Travis Whalen | Collected date/time: 04/11/23 15:25 | Received date/time: 04/13/23 11:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2043652	1	04/18/23 11:20	04/18/23 12:49	AS	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2044171	1	04/19/23 00:22	04/19/23 00:22	GEB	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2044171	10	04/19/23 00:35	04/19/23 00:35	GEB	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG2045369	1	04/20/23 13:56	04/20/23 13:56	ARD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2043822	1	04/19/23 15:44	04/19/23 15:44	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2042556	1	04/15/23 11:01	04/15/23 11:01	JCP	Mt. Juliet, TN

SGU-MW06 L1605105-06 GW

Collected by: Travis Whalen
Collected date/time: 04/11/23 16:12
Received date/time: 04/13/23 11:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2043652	1	04/18/23 11:20	04/18/23 12:49	AS	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2044171	1	04/19/23 00:49	04/19/23 00:49	GEB	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2044171	10	04/19/23 01:02	04/19/23 01:02	GEB	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG2045369	1	04/20/23 14:05	04/20/23 14:05	ARD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2043822	1	04/19/23 15:50	04/19/23 15:50	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2042556	1	04/15/23 11:22	04/15/23 11:22	JCP	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Chris Ward
Project Manager

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	1630		25.0	1	04/18/2023 12:49	WG2043652

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	54.6		1.00	1	04/18/2023 22:07	WG2044171
Sulfate	890		50.0	10	04/18/2023 22:20	WG2044171

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Free Carbon Dioxide	24.6	B T8	20.0	1	04/20/2023 13:39	WG2045369

Sample Narrative:

L1605105-01 WG2045369: Endpoint pH 4.5

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	04/19/2023 13:23	WG2043815
Ethane	ND		0.0130	1	04/19/2023 13:23	WG2043815
Ethene	ND		0.0130	1	04/19/2023 13:23	WG2043815
Acetylene	ND		0.0208	1	04/19/2023 13:23	WG2043815

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	04/15/2023 05:50	WG2042432
Toluene	ND		0.00100	1	04/15/2023 05:50	WG2042432
Ethylbenzene	ND		0.00100	1	04/15/2023 05:50	WG2042432
Total Xylenes	ND		0.00300	1	04/15/2023 05:50	WG2042432
(S) Toluene-d8	*87.3*		*80.0-120*		*04/15/2023 05:50*	WG2042432
(S) 4-Bromofluorobenzene	*122*		*77.0-126*		*04/15/2023 05:50*	WG2042432
(S) 1,2-Dichloroethane-d4	*102*		*70.0-130*		*04/15/2023 05:50*	WG2042432

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	1810		25.0	1	04/18/2023 12:49	WG2043652

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	53.1		1.00	1	04/18/2023 22:34	WG2044171
Sulfate	901		50.0	10	04/18/2023 23:14	WG2044171

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Free Carbon Dioxide	26.9	B T8	20.0	1	04/20/2023 13:43	WG2045369

Sample Narrative:

L1605105-02 WG2045369: Endpoint pH 4.5

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	04/19/2023 13:26	WG2043815
Ethane	ND		0.0130	1	04/19/2023 13:26	WG2043815
Ethene	ND		0.0130	1	04/19/2023 13:26	WG2043815
Acetylene	ND		0.0208	1	04/19/2023 13:26	WG2043815

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	04/15/2023 06:12	WG2042432
Toluene	ND		0.00100	1	04/15/2023 06:12	WG2042432
Ethylbenzene	ND		0.00100	1	04/15/2023 06:12	WG2042432
Total Xylenes	ND		0.00300	1	04/15/2023 06:12	WG2042432
(S) Toluene-d8	*89.1*		*80.0-120*		*04/15/2023 06:12*	WG2042432
(S) 4-Bromofluorobenzene	*122*		*77.0-126*		*04/15/2023 06:12*	WG2042432
(S) 1,2-Dichloroethane-d4	*103*		*70.0-130*		*04/15/2023 06:12*	WG2042432

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	813		13.3	1	04/18/2023 12:49	WG2043652

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	40.7		1.00	1	04/18/2023 23:28	WG2044171
Sulfate	233		50.0	10	04/18/2023 23:41	WG2044171

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Free Carbon Dioxide	ND	T8	20.0	1	04/20/2023 13:47	WG2045369

Sample Narrative:

L1605105-03 WG2045369: Endpoint pH 4.5

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	04/19/2023 13:29	WG2043815
Ethane	ND		0.0130	1	04/19/2023 13:29	WG2043815
Ethene	ND		0.0130	1	04/19/2023 13:29	WG2043815
Acetylene	ND		0.0208	1	04/19/2023 13:29	WG2043815

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	04/15/2023 06:33	WG2042432
Toluene	ND		0.00100	1	04/15/2023 06:33	WG2042432
Ethylbenzene	ND		0.00100	1	04/15/2023 06:33	WG2042432
Total Xylenes	ND		0.00300	1	04/15/2023 06:33	WG2042432
(S) Toluene-d8	*88.7*		*80.0-120*		*04/15/2023 06:33*	WG2042432
(S) 4-Bromofluorobenzene	*119*		*77.0-126*		*04/15/2023 06:33*	WG2042432
(S) 1,2-Dichloroethane-d4	*104*		*70.0-130*		*04/15/2023 06:33*	WG2042432

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	795		13.3	1	04/18/2023 12:49	WG2043652

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	41.9		1.00	1	04/18/2023 23:55	WG2044171
Sulfate	214		50.0	10	04/19/2023 00:08	WG2044171

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Free Carbon Dioxide	20.2	B T8	20.0	1	04/20/2023 13:52	WG2045369

Sample Narrative:

L1605105-04 WG2045369: Endpoint pH 4.5

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	04/19/2023 13:31	WG2043815
Ethane	ND		0.0130	1	04/19/2023 13:31	WG2043815
Ethene	ND		0.0130	1	04/19/2023 13:31	WG2043815
Acetylene	ND		0.0208	1	04/19/2023 13:31	WG2043815

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	04/15/2023 10:41	WG2042556
Toluene	ND		0.00100	1	04/15/2023 10:41	WG2042556
Ethylbenzene	ND		0.00100	1	04/15/2023 10:41	WG2042556
Total Xylenes	ND		0.00300	1	04/15/2023 10:41	WG2042556
(S) Toluene-d8	*111*		*80.0-120*		*04/15/2023 10:41*	WG2042556
(S) 4-Bromofluorobenzene	*110*		*77.0-126*		*04/15/2023 10:41*	WG2042556
(S) 1,2-Dichloroethane-d4	*111*		*70.0-130*		*04/15/2023 10:41*	WG2042556

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	792		13.3	1	04/18/2023 12:49	WG2043652

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	43.7		1.00	1	04/19/2023 00:22	WG2044171
Sulfate	219		50.0	10	04/19/2023 00:35	WG2044171

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Free Carbon Dioxide	36.5	B T8	20.0	1	04/20/2023 13:56	WG2045369

Sample Narrative:

L1605105-05 WG2045369: Endpoint pH 4.5

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	04/19/2023 15:44	WG2043822
Ethane	ND		0.0130	1	04/19/2023 15:44	WG2043822
Ethene	ND		0.0130	1	04/19/2023 15:44	WG2043822
Acetylene	ND		0.0208	1	04/19/2023 15:44	WG2043822

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	04/15/2023 11:01	WG2042556
Toluene	ND		0.00100	1	04/15/2023 11:01	WG2042556
Ethylbenzene	ND		0.00100	1	04/15/2023 11:01	WG2042556
Total Xylenes	ND		0.00300	1	04/15/2023 11:01	WG2042556
(S) Toluene-d8	*110*		*80.0-120*		*04/15/2023 11:01*	WG2042556
(S) 4-Bromofluorobenzene	*105*		*77.0-126*		*04/15/2023 11:01*	WG2042556
(S) 1,2-Dichloroethane-d4	*110*		*70.0-130*		*04/15/2023 11:01*	WG2042556

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	832		13.3	1	04/18/2023 12:49	WG2043652

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	43.5		1.00	1	04/19/2023 00:49	WG2044171
Sulfate	226		50.0	10	04/19/2023 01:02	WG2044171

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Free Carbon Dioxide	31.0	B T8	20.0	1	04/20/2023 14:05	WG2045369

Sample Narrative:

L1605105-06 WG2045369: Endpoint pH 4.5

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	04/19/2023 15:50	WG2043822
Ethane	ND		0.0130	1	04/19/2023 15:50	WG2043822
Ethene	ND		0.0130	1	04/19/2023 15:50	WG2043822
Acetylene	ND		0.0208	1	04/19/2023 15:50	WG2043822

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	04/15/2023 11:22	WG2042556
Toluene	ND		0.00100	1	04/15/2023 11:22	WG2042556
Ethylbenzene	ND		0.00100	1	04/15/2023 11:22	WG2042556
Total Xylenes	ND		0.00300	1	04/15/2023 11:22	WG2042556
(S) Toluene-d8	*108*		*80.0-120*		*04/15/2023 11:22*	WG2042556
(S) 4-Bromofluorobenzene	*103*		*77.0-126*		*04/15/2023 11:22*	WG2042556
(S) 1,2-Dichloroethane-d4	*111*		*70.0-130*		*04/15/2023 11:22*	WG2042556

Method Blank (MB)

(MB) R3915168-1 04/18/23 12:49

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Dissolved Solids	U	J	10.0	10.0

L1604840-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1604840-01 04/18/23 12:49 • (DUP) R3915168-3 04/18/23 12:49

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	2120	2080	1	1.91		5

L1604840-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1604840-02 04/18/23 12:49 • (DUP) R3915168-4 04/18/23 12:49

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	980	972	1	0.820		5

Laboratory Control Sample (LCS)

(LCS) R3915168-2 04/18/23 12:49

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8000	90.9	77.3-123	

Method Blank (MB)

(MB) R3914952-1 04/18/23 11:29

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	0.405	J	0.379	1.00
Sulfate	U		0.594	5.00

L1605171-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1605171-01 04/19/23 05:10 • (DUP) R3914952-3 04/19/23 05:23

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	268	256	10	4.52		20
Sulfate	664	675	10	1.67		20

L1605171-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1605171-03 04/19/23 06:15 • (DUP) R3914952-6 04/19/23 06:28

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	460	451	10	1.97		20
Sulfate	1090	1100	10	0.652		20

Laboratory Control Sample (LCS)

(LCS) R3914952-2 04/18/23 11:42

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40.0	38.6	96.4	90.0-110	
Sulfate	40.0	39.0	97.5	90.0-110	

L1605171-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1605171-01 04/19/23 05:10 • (MS) R3914952-4 04/19/23 05:36 • (MSD) R3914952-5 04/19/23 05:49

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50.0	268	290	293	43.9	50.2	10	80.0-120	V	V	1.08	20
Sulfate	50.0	664	679	686	31.6	44.9	10	80.0-120	V	V	0.975	20

L1605171-03 Original Sample (OS) • Matrix Spike (MS)

(OS) L1605171-03 04/19/23 06:15 • (MS) R3914952-7 04/19/23 07:06

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50.0	460	499	77.9	10	80.0-120	V
Sulfate	50.0	1090	1100	19.5	10	80.0-120	V

Method Blank (MB)

(MB) R3915520-3 04/20/23 12:35

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Free Carbon Dioxide	11.6	J	6.67	20.0

Sample Narrative:

BLANK: Endpoint pH 4.5

L1605046-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1605046-06 04/20/23 12:39 • (DUP) R3915520-5 04/20/23 12:45

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Free Carbon Dioxide	ND	ND	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

L1605191-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1605191-01 04/20/23 15:03 • (DUP) R3915520-7 04/20/23 15:08

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Free Carbon Dioxide	ND	ND	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

Method Blank (MB)

(MB) R3914956-2 04/19/23 11:02

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Methane	U		0.00291	0.0100
Ethane	U		0.00407	0.0130
Ethene	U		0.00426	0.0130
Acetylene	U		0.00558	0.0208

L1604647-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1604647-02 04/19/23 11:18 • (DUP) R3914956-3 04/19/23 12:50

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Methane	ND	ND	1	0.000		20
Ethane	ND	ND	1	0.000		20
Ethene	ND	ND	1	0.000		20
Acetylene	ND	ND	1	0.000		20

L1604647-12 Original Sample (OS) • Duplicate (DUP)

(OS) L1604647-12 04/19/23 13:04 • (DUP) R3914956-4 04/19/23 13:52

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Methane	ND	ND	1	0.000		20
Ethane	ND	ND	1	0.000		20
Ethene	ND	ND	1	0.000		20
Acetylene	ND	ND	1	0.000		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3914956-1 04/19/23 10:59 • (LCSD) R3914956-5 04/19/23 13:58

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Methane	0.0678	0.0619	0.0628	91.3	92.6	85.0-115			1.44	20
Ethane	0.129	0.113	0.115	87.6	89.1	85.0-115			1.75	20
Ethene	0.127	0.114	0.114	89.8	89.8	85.0-115			0.000	20
Acetylene	0.208	0.181	0.182	87.0	87.5	85.0-115			0.551	20

Method Blank (MB)

(MB) R3915097-2 04/19/23 15:08

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Methane	U		0.00291	0.0100
Ethane	U		0.00407	0.0130
Ethene	U		0.00426	0.0130
Acetylene	U		0.00558	0.0208

L1605005-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1605005-02 04/19/23 15:16 • (DUP) R3915097-3 04/19/23 15:47

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Methane	ND	ND	1	0.000		20
Ethane	ND	ND	1	0.000		20
Ethene	ND	ND	1	0.000		20
Acetylene	ND	ND	1	0.000		20

L1605111-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1605111-01 04/19/23 15:53 • (DUP) R3915097-4 04/19/23 16:46

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Methane	ND	ND	1	0.000		20
Ethane	ND	ND	1	0.000		20
Ethene	ND	ND	1	0.000		20
Acetylene	ND	ND	1	0.000		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3915097-1 04/19/23 15:05 • (LCSD) R3915097-7 04/19/23 16:58

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Methane	0.0678	0.0623	0.0622	91.9	91.7	85.0-115			0.161	20
Ethane	0.129	0.114	0.113	88.4	87.6	85.0-115			0.881	20
Ethene	0.127	0.114	0.113	89.8	89.0	85.0-115			0.881	20
Acetylene	0.208	0.182	0.181	87.5	87.0	85.0-115			0.551	20

L1605005-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1605005-01 04/19/23 15:12 • (MS) R3915097-5 04/19/23 16:49 • (MSD) R3915097-6 04/19/23 16:53

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Methane	0.0678	ND	0.0712	0.0712	105	105	1	50.0-150			0.000	20
Ethane	0.129	ND	0.128	0.127	99.2	98.4	1	50.0-150			0.784	20
Ethene	0.127	ND	0.128	0.127	101	100	1	50.0-150			0.784	20
Acetylene	0.208	ND	0.205	0.203	98.6	97.6	1	50.0-150			0.980	20

Method Blank (MB)

(MB) R3914545-2 04/14/23 23:00

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.0000941	0.00100
Toluene	U		0.000278	0.00100
Ethylbenzene	U		0.000137	0.00100
Xylenes, Total	U		0.000174	0.00300
(S) Toluene-d8	*87.5*			*80.0-120*
(S) 4-Bromofluorobenzene	*125*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*101*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3914545-1 04/14/23 20:13

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.00500	0.00427	85.4	70.0-123	
Toluene	0.00500	0.00419	83.8	79.0-120	
Ethylbenzene	0.00500	0.00475	95.0	79.0-123	
Xylenes, Total	0.0150	0.0140	93.3	79.0-123	
(S) Toluene-d8			*87.6*	*80.0-120*	
(S) 4-Bromofluorobenzene			*119*	*77.0-126*	
(S) 1,2-Dichloroethane-d4			*103*	*70.0-130*	

L1605097-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1605097-02 04/15/23 04:47 • (MS) R3914545-3 04/15/23 06:55 • (MSD) R3914545-4 04/15/23 07:16

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.00500	ND	0.00588	0.00576	118	115	1	17.0-158			2.06	27
Toluene	0.00500	ND	0.00567	0.00550	113	110	1	26.0-154			3.04	28
Ethylbenzene	0.00500	ND	0.00640	0.00616	128	123	1	30.0-155			3.82	27
Xylenes, Total	0.0150	ND	0.0187	0.0178	125	119	1	29.0-154			4.93	28
(S) Toluene-d8					*84.8*	*83.6*		*80.0-120*				
(S) 4-Bromofluorobenzene					*114*	*114*		*77.0-126*				
(S) 1,2-Dichloroethane-d4					*105*	*104*		*70.0-130*				

Method Blank (MB)

(MB) R3914116-3 04/15/23 08:28

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.0000941	0.00100
Toluene	U		0.000278	0.00100
Ethylbenzene	U		0.000137	0.00100
Xylenes, Total	U		0.000174	0.00300
(S) Toluene-d8	*109*			*80.0-120*
(S) 4-Bromofluorobenzene	*108*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*111*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3914116-1 04/15/23 07:05

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.00500	0.00592	118	70.0-123	
Toluene	0.00500	0.00569	114	79.0-120	
Ethylbenzene	0.00500	0.00555	111	79.0-123	
Xylenes, Total	0.0150	0.0165	110	79.0-123	
(S) Toluene-d8			*105*	*80.0-120*	
(S) 4-Bromofluorobenzene			*106*	*77.0-126*	
(S) 1,2-Dichloroethane-d4			*110*	*70.0-130*	

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
T8	Sample(s) received past/too close to holding time expiration.
V	The sample concentration is too high to evaluate accurate spike recoveries.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:
Terracon - Longmont, CO

1831 Lefthand Circle
Suite ¢B
Longmont. CO 80501

Billing Information:
Charles Covington
1831 Lefthand Circle
Suite ¢B
Longmont, CO 80501

Pres Chk

Report to:
Charles Covington

Email To: **charles.covington@terracon.com**

Project Description:
COL Annual GW Sampling

City/State Collected: Longmont, CO

Please Circle: PT (MT) CT ET

Phone: **303-454-5249**

Client Project #
22227034

Lab Project #
TERRALCO-22227034

Collected by (print):
Travis Whalen

Site/Facility ID #

P.O. #

Collected by (signature):
Travis Whalen

Immediately Packed on Ice N ____ Y X

Rush? (Lab MUST be Notified)
____ Same Day ____ Five Day
____ Next Day ____ 5 Day (Rad Only)
____ Two Day ____ 10 Day (Rad Only)
____ Three Day

Quote #

Date Results Needed
Standard

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN

12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

L1605105

E126

Acctnum: **TERRALCO**
Template: **T226963**
Prelogin: **P988375**
PM: **824 - Chris Ward**
PB: DR 3-22-23
Shipped Via: **FedEX Ground**

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	CHLORIDE,SULFATE 125mlHDPE-NoPres	CO2 40mlAmb-NoPres	RSK175 40mlAmb HCl	TDS 1L-HDPE NoPres	V8260BTEX 40mlAmb-HCl	Remarks	Sample # (lab only)
SH2-MW01	Grab	GW	—	4/11/23	0902	9	X	X	X	X	X		-01
SH2-MW02	Grab	GW	—	4/11/23	0945	9	X	X	X	X	X		-02
		~~GW~~				~~9~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~		
SGU-MW01	Grab	GW	—	4/11/23	1425	9	X	X	X	X	X		-03
SGU-MW02	Grab	GW	—	4/11/23	1500	9	X	X	X	X	X		-04
SGU-MW03	Grab	GW	—	4/11/23	1525	9	X	X	X	X	X		-05
SGU-MW06	Grab	GW	—	4/11/23	1612	9	X	X	X	X	X		-06
		~~GW~~				~~9~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~		
		~~GW~~				~~9~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~		
		~~GW~~				~~9~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~		

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS X FedEx __ Courier _____

Tracking # 6357 9918 4332

Sample Receipt Checklist

COC Seal Present/Intact:	NP	✓Y N
COC Signed/Accurate:		✓Y N
Bottles arrive intact:		✓Y N
Correct bottles used:		✓Y N
Sufficient volume sent:		✓Y N
If Applicable		
VOA Zero Headspace:		✓Y N
Preservation Correct/Checked:		✓Y N
RAD Screen <0.5 mR/hr:		✓Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes (No) HCL / MeoH TBR	If preservation required by Login: Date/Time
Travis Whalen	4/12/23	1715	FedEx		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp NSL °C 2.0 Bottles Received: 9	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 4-13-23 Time: 1130	Hold: Condition: NCF / (OK)

ANALYTICAL REPORT

April 20, 2023

Terracon - Longmont, CO

Sample Delivery Group:	L1605111
Samples Received:	04/13/2023
Project Number:	22227034
Description:	COL Annual GW Sampling

Report To:

Charles Covington
1831 Lefthand Circle
Suite B
Longmont, CO 80501

Entire Report Reviewed By:

Chris Ward
Project Manager

Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

SH1-MW01 L1605111-01 GW

Collected by: Travis Whalen | Collected date/time: 04/11/23 11:10 | Received date/time: 04/13/23 11:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2043652	1	04/18/23 11:20	04/18/23 12:49	AS	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2044171	1	04/19/23 01:16	04/19/23 01:16	GEB	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2044171	10	04/19/23 01:56	04/19/23 01:56	GEB	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG2045369	1	04/20/23 14:10	04/20/23 14:10	ARD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2043822	1	04/19/23 15:53	04/19/23 15:53	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2042556	1	04/15/23 11:43	04/15/23 11:43	JCP	Mt. Juliet, TN

SH1-MW02 L1605111-02 GW

Collected by: Travis Whalen | Collected date/time: 04/11/23 11:40 | Received date/time: 04/13/23 11:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2043652	1	04/18/23 11:20	04/18/23 12:49	AS	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2044171	1	04/19/23 02:10	04/19/23 02:10	GEB	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2044171	10	04/19/23 02:22	04/19/23 02:22	GEB	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG2045369	1	04/20/23 14:17	04/20/23 14:17	ARD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2043822	1	04/19/23 15:55	04/19/23 15:55	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2042556	1	04/15/23 12:03	04/15/23 12:03	JCP	Mt. Juliet, TN

SH1-MW03 L1605111-03 GW

Collected by: Travis Whalen | Collected date/time: 04/11/23 12:05 | Received date/time: 04/13/23 11:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2043652	1	04/18/23 11:20	04/18/23 12:49	AS	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2044171	1	04/19/23 02:35	04/19/23 02:35	GEB	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2044171	10	04/19/23 02:48	04/19/23 02:48	GEB	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG2045369	1	04/20/23 14:25	04/20/23 14:25	ARD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2043822	1	04/19/23 15:58	04/19/23 15:58	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2042556	1	04/15/23 12:24	04/15/23 12:24	JCP	Mt. Juliet, TN

CL1-MW01 L1605111-04 GW

Collected by: Travis Whalen | Collected date/time: 04/12/23 15:00 | Received date/time: 04/13/23 11:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2043652	1	04/18/23 11:20	04/18/23 12:49	AS	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2044171	1	04/19/23 03:01	04/19/23 03:01	GEB	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2044171	10	04/19/23 03:14	04/19/23 03:14	GEB	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG2045369	1	04/20/23 14:41	04/20/23 14:41	ARD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2043822	1	04/19/23 16:00	04/19/23 16:00	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2042556	1	04/15/23 12:45	04/15/23 12:45	JCP	Mt. Juliet, TN

CL1-MW02 L1605111-05 GW

Collected by: Travis Whalen | Collected date/time: 04/12/23 14:30 | Received date/time: 04/13/23 11:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2043652	1	04/18/23 11:20	04/18/23 12:49	AS	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2044171	1	04/19/23 03:27	04/19/23 03:27	GEB	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2044171	10	04/19/23 03:40	04/19/23 03:40	GEB	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG2045369	1	04/20/23 14:49	04/20/23 14:49	ARD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2043822	1	04/19/23 16:03	04/19/23 16:03	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2042556	1	04/15/23 13:06	04/15/23 13:06	JCP	Mt. Juliet, TN

SAMPLE SUMMARY

CL1-MW03 L1605111-06 GW

Collected by: Travis Whalen
Collected date/time: 04/12/23 13:55
Received date/time: 04/13/23 11:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2043652	1	04/18/23 11:20	04/18/23 12:49	AS	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2044171	1	04/19/23 03:53	04/19/23 03:53	GEB	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2044171	10	04/19/23 04:31	04/19/23 04:31	GEB	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG2045369	1	04/20/23 14:57	04/20/23 14:57	ARD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2043822	1	04/19/23 16:06	04/19/23 16:06	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2042556	1	04/15/23 13:26	04/15/23 13:26	JCP	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Chris Ward
Project Manager

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	1800		25.0	1	04/18/2023 12:49	WG2043652

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	72.6		1.00	1	04/19/2023 01:16	WG2044171
Sulfate	853		50.0	10	04/19/2023 01:56	WG2044171

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Free Carbon Dioxide	36.6	B T8	20.0	1	04/20/2023 14:10	WG2045369

Sample Narrative:

L1605111-01 WG2045369: Endpoint pH 4.5

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	04/19/2023 15:53	WG2043822
Ethane	ND		0.0130	1	04/19/2023 15:53	WG2043822
Ethene	ND		0.0130	1	04/19/2023 15:53	WG2043822
Acetylene	ND		0.0208	1	04/19/2023 15:53	WG2043822

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	04/15/2023 11:43	WG2042556
Toluene	ND		0.00100	1	04/15/2023 11:43	WG2042556
Ethylbenzene	ND		0.00100	1	04/15/2023 11:43	WG2042556
Total Xylenes	ND		0.00300	1	04/15/2023 11:43	WG2042556
(S) Toluene-d8	*107*		*80.0-120*		*04/15/2023 11:43*	WG2042556
(S) 4-Bromofluorobenzene	*106*		*77.0-126*		*04/15/2023 11:43*	WG2042556
(S) 1,2-Dichloroethane-d4	*111*		*70.0-130*		*04/15/2023 11:43*	WG2042556

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	1780		25.0	1	04/18/2023 12:49	WG2043652

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	68.0		1.00	1	04/19/2023 02:10	WG2044171
Sulfate	834		50.0	10	04/19/2023 02:22	WG2044171

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Free Carbon Dioxide	48.5	B T8	20.0	1	04/20/2023 14:17	WG2045369

Sample Narrative:

L1605111-02 WG2045369: Endpoint pH 4.5

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	04/19/2023 15:55	WG2043822
Ethane	ND		0.0130	1	04/19/2023 15:55	WG2043822
Ethene	ND		0.0130	1	04/19/2023 15:55	WG2043822
Acetylene	ND		0.0208	1	04/19/2023 15:55	WG2043822

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	04/15/2023 12:03	WG2042556
Toluene	ND		0.00100	1	04/15/2023 12:03	WG2042556
Ethylbenzene	ND		0.00100	1	04/15/2023 12:03	WG2042556
Total Xylenes	ND		0.00300	1	04/15/2023 12:03	WG2042556
(S) Toluene-d8	*110*		*80.0-120*		*04/15/2023 12:03*	WG2042556
(S) 4-Bromofluorobenzene	*107*		*77.0-126*		*04/15/2023 12:03*	WG2042556
(S) 1,2-Dichloroethane-d4	*114*		*70.0-130*		*04/15/2023 12:03*	WG2042556

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	1770		25.0	1	04/18/2023 12:49	WG2043652

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	65.3		1.00	1	04/19/2023 02:35	WG2044171
Sulfate	861		50.0	10	04/19/2023 02:48	WG2044171

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Free Carbon Dioxide	29.4	B T8	20.0	1	04/20/2023 14:25	WG2045369

Sample Narrative:

L1605111-03 WG2045369: Endpoint pH 4.5

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	04/19/2023 15:58	WG2043822
Ethane	ND		0.0130	1	04/19/2023 15:58	WG2043822
Ethene	ND		0.0130	1	04/19/2023 15:58	WG2043822
Acetylene	ND		0.0208	1	04/19/2023 15:58	WG2043822

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	04/15/2023 12:24	WG2042556
Toluene	ND		0.00100	1	04/15/2023 12:24	WG2042556
Ethylbenzene	ND		0.00100	1	04/15/2023 12:24	WG2042556
Total Xylenes	ND		0.00300	1	04/15/2023 12:24	WG2042556
(S) Toluene-d8	*111*		*80.0-120*		*04/15/2023 12:24*	WG2042556
(S) 4-Bromofluorobenzene	*109*		*77.0-126*		*04/15/2023 12:24*	WG2042556
(S) 1,2-Dichloroethane-d4	*109*		*70.0-130*		*04/15/2023 12:24*	WG2042556

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	781		13.3	1	04/18/2023 12:49	WG2043652

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	43.2		1.00	1	04/19/2023 03:01	WG2044171
Sulfate	183		50.0	10	04/19/2023 03:14	WG2044171

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Free Carbon Dioxide	29.7	B T8	20.0	1	04/20/2023 14:41	WG2045369

Sample Narrative:

L1605111-04 WG2045369: Endpoint pH 4.5

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	04/19/2023 16:00	WG2043822
Ethane	ND		0.0130	1	04/19/2023 16:00	WG2043822
Ethene	ND		0.0130	1	04/19/2023 16:00	WG2043822
Acetylene	ND		0.0208	1	04/19/2023 16:00	WG2043822

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	04/15/2023 12:45	WG2042556
Toluene	ND		0.00100	1	04/15/2023 12:45	WG2042556
Ethylbenzene	ND		0.00100	1	04/15/2023 12:45	WG2042556
Total Xylenes	ND		0.00300	1	04/15/2023 12:45	WG2042556
(S) Toluene-d8	*109*		*80.0-120*		*04/15/2023 12:45*	WG2042556
(S) 4-Bromofluorobenzene	*108*		*77.0-126*		*04/15/2023 12:45*	WG2042556
(S) 1,2-Dichloroethane-d4	*111*		*70.0-130*		*04/15/2023 12:45*	WG2042556

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	828		13.3	1	04/18/2023 12:49	WG2043652

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	45.9		1.00	1	04/19/2023 03:27	WG2044171
Sulfate	200		50.0	10	04/19/2023 03:40	WG2044171

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Free Carbon Dioxide	29.0	B T8	20.0	1	04/20/2023 14:49	WG2045369

Sample Narrative:

L1605111-05 WG2045369: Endpoint pH 4.5

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	04/19/2023 16:03	WG2043822
Ethane	ND		0.0130	1	04/19/2023 16:03	WG2043822
Ethene	ND		0.0130	1	04/19/2023 16:03	WG2043822
Acetylene	ND		0.0208	1	04/19/2023 16:03	WG2043822

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	04/15/2023 13:06	WG2042556
Toluene	ND		0.00100	1	04/15/2023 13:06	WG2042556
Ethylbenzene	ND		0.00100	1	04/15/2023 13:06	WG2042556
Total Xylenes	ND		0.00300	1	04/15/2023 13:06	WG2042556
(S) Toluene-d8	*112*		*80.0-120*		*04/15/2023 13:06*	WG2042556
(S) 4-Bromofluorobenzene	*105*		*77.0-126*		*04/15/2023 13:06*	WG2042556
(S) 1,2-Dichloroethane-d4	*108*		*70.0-130*		*04/15/2023 13:06*	WG2042556

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	816		13.3	1	04/18/2023 12:49	WG2043652

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	44.8		1.00	1	04/19/2023 03:53	WG2044171
Sulfate	218		50.0	10	04/19/2023 04:31	WG2044171

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Free Carbon Dioxide	23.6	B T8	20.0	1	04/20/2023 14:57	WG2045369

Sample Narrative:

L1605111-06 WG2045369: Endpoint pH 4.5

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	04/19/2023 16:06	WG2043822
Ethane	ND		0.0130	1	04/19/2023 16:06	WG2043822
Ethene	ND		0.0130	1	04/19/2023 16:06	WG2043822
Acetylene	ND		0.0208	1	04/19/2023 16:06	WG2043822

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	04/15/2023 13:26	WG2042556
Toluene	ND		0.00100	1	04/15/2023 13:26	WG2042556
Ethylbenzene	ND		0.00100	1	04/15/2023 13:26	WG2042556
Total Xylenes	ND		0.00300	1	04/15/2023 13:26	WG2042556
(S) Toluene-d8	*109*		*80.0-120*		*04/15/2023 13:26*	WG2042556
(S) 4-Bromofluorobenzene	*106*		*77.0-126*		*04/15/2023 13:26*	WG2042556
(S) 1,2-Dichloroethane-d4	*113*		*70.0-130*		*04/15/2023 13:26*	WG2042556

Method Blank (MB)

(MB) R3915168-1 04/18/23 12:49

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Dissolved Solids	U	J	10.0	10.0

L1604840-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1604840-01 04/18/23 12:49 • (DUP) R3915168-3 04/18/23 12:49

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	2120	2080	1	1.91		5

L1604840-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1604840-02 04/18/23 12:49 • (DUP) R3915168-4 04/18/23 12:49

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	980	972	1	0.820		5

Laboratory Control Sample (LCS)

(LCS) R3915168-2 04/18/23 12:49

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8000	90.9	77.3-123	

Method Blank (MB)

(MB) R3914952-1 04/18/23 11:29

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	0.405	J	0.379	1.00
Sulfate	U		0.594	5.00

L1605171-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1605171-01 04/19/23 05:10 • (DUP) R3914952-3 04/19/23 05:23

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	268	256	10	4.52		20
Sulfate	664	675	10	1.67		20

L1605171-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1605171-03 04/19/23 06:15 • (DUP) R3914952-6 04/19/23 06:28

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	460	451	10	1.97		20
Sulfate	1090	1100	10	0.652		20

Laboratory Control Sample (LCS)

(LCS) R3914952-2 04/18/23 11:42

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40.0	38.6	96.4	90.0-110	
Sulfate	40.0	39.0	97.5	90.0-110	

L1605171-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1605171-01 04/19/23 05:10 • (MS) R3914952-4 04/19/23 05:36 • (MSD) R3914952-5 04/19/23 05:49

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50.0	268	290	293	43.9	50.2	10	80.0-120	V	V	1.08	20
Sulfate	50.0	664	679	686	31.6	44.9	10	80.0-120	V	V	0.975	20

L1605171-03 Original Sample (OS) • Matrix Spike (MS)

(OS) L1605171-03 04/19/23 06:15 • (MS) R3914952-7 04/19/23 07:06

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50.0	460	499	77.9	10	80.0-120	V
Sulfate	50.0	1090	1100	19.5	10	80.0-120	V

Method Blank (MB)

(MB) R3915520-3 04/20/23 12:35

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Free Carbon Dioxide	11.6	J	6.67	20.0

Sample Narrative:

BLANK: Endpoint pH 4.5

L1605046-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1605046-06 04/20/23 12:39 • (DUP) R3915520-5 04/20/23 12:45

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Free Carbon Dioxide	ND	ND	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

L1605191-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1605191-01 04/20/23 15:03 • (DUP) R3915520-7 04/20/23 15:08

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Free Carbon Dioxide	ND	ND	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

Method Blank (MB)

(MB) R3915097-2 04/19/23 15:08

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Methane	U		0.00291	0.0100
Ethane	U		0.00407	0.0130
Ethene	U		0.00426	0.0130
Acetylene	U		0.00558	0.0208

L1605005-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1605005-02 04/19/23 15:16 • (DUP) R3915097-3 04/19/23 15:47

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Methane	ND	ND	1	0.000		20
Ethane	ND	ND	1	0.000		20
Ethene	ND	ND	1	0.000		20
Acetylene	ND	ND	1	0.000		20

L1605111-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1605111-01 04/19/23 15:53 • (DUP) R3915097-4 04/19/23 16:46

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Methane	ND	ND	1	0.000		20
Ethane	ND	ND	1	0.000		20
Ethene	ND	ND	1	0.000		20
Acetylene	ND	ND	1	0.000		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3915097-1 04/19/23 15:05 • (LCSD) R3915097-7 04/19/23 16:58

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Methane	0.0678	0.0623	0.0622	91.9	91.7	85.0-115			0.161	20
Ethane	0.129	0.114	0.113	88.4	87.6	85.0-115			0.881	20
Ethene	0.127	0.114	0.113	89.8	89.0	85.0-115			0.881	20
Acetylene	0.208	0.182	0.181	87.5	87.0	85.0-115			0.551	20

L1605005-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1605005-01 04/19/23 15:12 • (MS) R3915097-5 04/19/23 16:49 • (MSD) R3915097-6 04/19/23 16:53

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Methane	0.0678	ND	0.0712	0.0712	105	105	1	50.0-150			0.000	20
Ethane	0.129	ND	0.128	0.127	99.2	98.4	1	50.0-150			0.784	20
Ethene	0.127	ND	0.128	0.127	101	100	1	50.0-150			0.784	20
Acetylene	0.208	ND	0.205	0.203	98.6	97.6	1	50.0-150			0.980	20

Method Blank (MB)

(MB) R3914116-3 04/15/23 08:28

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.0000941	0.00100
Toluene	U		0.000278	0.00100
Ethylbenzene	U		0.000137	0.00100
Xylenes, Total	U		0.000174	0.00300
(S) Toluene-d8	*109*			*80.0-120*
(S) 4-Bromofluorobenzene	*108*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*111*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3914116-1 04/15/23 07:05

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.00500	0.00592	118	70.0-123	
Toluene	0.00500	0.00569	114	79.0-120	
Ethylbenzene	0.00500	0.00555	111	79.0-123	
Xylenes, Total	0.0150	0.0165	110	79.0-123	
(S) Toluene-d8			*105*	*80.0-120*	
(S) 4-Bromofluorobenzene			*106*	*77.0-126*	
(S) 1,2-Dichloroethane-d4			*110*	*70.0-130*	

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
T8	Sample(s) received past/too close to holding time expiration.
V	The sample concentration is too high to evaluate accurate spike recoveries.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:
Terracon - Longmont, CO

1831 Lefthand Circle
Suite C B
Longmont, CO 80501

Billing Information:
Charles Covington
1831 Lefthand Circle
Suite C B
Longmont, CO 80501

Pres Chk

Report to:
Charles Covington

Email To: **charles.covington@terracon.com**

Project Description:
COL Annual GW Sampling

City/State Collected: Longmont, CO

Please Circle: PT (MT) CT ET

Phone: **303-454-5249**

Client Project #
22227034

Lab Project #
TERRALCO-22227034

Collected by (print):
Travis Whalen

Site/Facility ID #

P.O. #

Collected by (signature):
Travis Whalen

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed
Standard

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	CHLORIDE,SULFATE 125mlHDPE-NoPres	CO2 40mlAmb-NoPres	RSK175 40mlAmb HCl	TDS 1L-HDPE NoPres	V8260BTEX 40mlAmb-HCl						
SH1-MW01	Grab	GW	–	4/11/23	1110	9	X	X	X	X	X						-01
SH1-MW02	Grab	GW	–	4/11/23	1140	9	X	X	X	X	X						-02
SH1-MW03	Grab	GW	–	4/11/23	1205	9	X	X	X	X	X						-03
		~~GW~~				~~9~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~						
CL1-MW01	Grab	GW	–	4/12/23	1500	9	X	X	X	X	X						-04
CL1-MW02	Grab	GW	–	4/12/23	1430	9	X	X	X	X	X						-05
CL1-MW03	Grab	GW	–	4/12/23	1355	9	X	X	X	X	X						-06
		~~GW~~				~~9~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~						
		~~GW~~				~~9~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~						
		~~GW~~				~~9~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~						

Chain of Custody Page 1 of 1

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN

12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L1605111

1206

Acctnum: TERRALCO
Template: T226963
Prelogin: P988375
PM: 824 - Chris Ward
PB CR 3-22-23
Shipped Via: FedEX Ground

Remarks	Sample # (lab only)

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS X FedEx __ Courier _____

Tracking # 6357 9918 4321

Sample Receipt Checklist

COC Seal Present/Intact:	NP	Y	N
COC Signed/Accurate:		Y	N
Bottles arrive intact:		Y	N
Correct bottles used:		Y	N
Sufficient volume sent:		Y	N
If Applicable			
VOA Zero Headspace:		Y	N
Preservation Correct/Checked:		Y	N
RAD Screen <0.5 mR/hr:		Y	N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCl / MeoH TBR	If preservation required by Login: Date/Time
Travis Whalen	4/12/23	1715	FedEx	5	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 1.2 °C Bottles Received: 54	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 4/13/23 Time: 1130	Hold: / Condition: NCF / OK

ANALYTICAL REPORT

July 03, 2023

Terracon - Longmont, CO

Sample Delivery Group:	L1627840
Samples Received:	06/20/2023
Project Number:	22227034
Description:	COL Annual GW Sampling

Report To: Travis Whalen
1831 Lefthand Circle
Suite B
Longmont, CO 80501

Entire Report Reviewed By: Chris Ward

Chris Ward
Project Manager

Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

EGW-MW01 L1627840-01 GW

Collected by: Travis Whalen | Collected date/time: 06/19/23 12:30 | Received date/time: 06/20/23 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2083137	1	06/23/23 05:50	06/23/23 10:29	AS	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG2084926	1	06/27/23 09:32	06/27/23 09:32	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2088297	1	07/02/23 16:33	07/02/23 16:33	SMC	Allen, TX
Wet Chemistry by Method 9056A	WG2088297	1	07/02/23 22:00	07/02/23 22:00	SMC	Allen, TX
Volatile Organic Compounds (GC) by Method RSK175	WG2085125	1	06/28/23 10:15	06/28/23 10:15	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2083806	1	06/25/23 02:39	06/25/23 02:39	JAH	Mt. Juliet, TN

EGW-MW02 L1627840-02 GW

Collected by: Travis Whalen | Collected date/time: 06/19/23 11:05 | Received date/time: 06/20/23 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2083137	1	06/23/23 05:50	06/23/23 10:29	AS	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG2084926	1	06/27/23 09:36	06/27/23 09:36	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2088297	1	07/02/23 16:51	07/02/23 16:51	SMC	Allen, TX
Wet Chemistry by Method 9056A	WG2088297	1	07/02/23 22:18	07/02/23 22:18	SMC	Allen, TX
Volatile Organic Compounds (GC) by Method RSK175	WG2085125	1	06/28/23 10:20	06/28/23 10:20	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2083806	1	06/25/23 02:58	06/25/23 02:58	JAH	Mt. Juliet, TN

EGW-MW03 L1627840-03 GW

Collected by: Travis Whalen | Collected date/time: 06/19/23 11:40 | Received date/time: 06/20/23 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2083137	1	06/23/23 05:50	06/23/23 10:29	AS	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG2084926	1	06/27/23 09:39	06/27/23 09:39	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2088297	1	07/02/23 17:09	07/02/23 17:09	SMC	Allen, TX
Wet Chemistry by Method 9056A	WG2088297	1	07/02/23 22:36	07/02/23 22:36	SMC	Allen, TX
Volatile Organic Compounds (GC) by Method RSK175	WG2085125	1	06/28/23 10:23	06/28/23 10:23	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2083806	1	06/25/23 03:17	06/25/23 03:17	JAH	Mt. Juliet, TN

EGT-MW01 L1627840-04 GW

Collected by: Travis Whalen | Collected date/time: 06/19/23 14:25 | Received date/time: 06/20/23 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2083137	1	06/23/23 05:50	06/23/23 10:29	AS	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG2084926	1	06/27/23 09:44	06/27/23 09:44	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2088297	1	07/02/23 17:26	07/02/23 17:26	SMC	Allen, TX
Wet Chemistry by Method 9056A	WG2088297	1	07/02/23 22:54	07/02/23 22:54	SMC	Allen, TX
Volatile Organic Compounds (GC) by Method RSK175	WG2085125	1	06/28/23 10:41	06/28/23 10:41	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2084148	1	06/26/23 00:09	06/26/23 00:09	DWR	Mt. Juliet, TN

EGT-MW02 L1627840-05 GW

Collected by: Travis Whalen | Collected date/time: 06/19/23 13:50 | Received date/time: 06/20/23 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2083137	1	06/23/23 05:50	06/23/23 10:29	AS	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG2084926	1	06/27/23 09:48	06/27/23 09:48	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2088297	1	07/02/23 18:20	07/02/23 18:20	SMC	Allen, TX
Wet Chemistry by Method 9056A	WG2088297	1	07/02/23 23:11	07/02/23 23:11	SMC	Allen, TX
Volatile Organic Compounds (GC) by Method RSK175	WG2085125	1	06/28/23 10:47	06/28/23 10:47	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2084148	1	06/26/23 00:35	06/26/23 00:35	DWR	Mt. Juliet, TN

EGT-MW03 L1627840-06 GW

Collected by: Travis Whalen | Collected date/time: 06/19/23 13:25 | Received date/time: 06/20/23 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2083137	1	06/23/23 05:50	06/23/23 10:29	AS	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG2084926	1	06/27/23 09:55	06/27/23 09:55	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2088297	1	07/02/23 18:38	07/02/23 18:38	SMC	Allen, TX
Wet Chemistry by Method 9056A	WG2088297	1	07/02/23 23:29	07/02/23 23:29	SMC	Allen, TX
Volatile Organic Compounds (GC) by Method RSK175	WG2085125	1	06/28/23 10:51	06/28/23 10:51	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2084148	1	06/26/23 01:02	06/26/23 01:02	DWR	Mt. Juliet, TN

MW-01 (LONGMONT 8-10K) L1627840-07 GW

Collected by: Travis Whalen | Collected date/time: 06/19/23 15:25 | Received date/time: 06/20/23 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2083137	1	06/23/23 05:50	06/23/23 10:29	AS	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG2084926	1	06/27/23 10:05	06/27/23 10:05	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2088297	1	07/02/23 23:47	07/02/23 23:47	SMC	Allen, TX
Wet Chemistry by Method 9056A	WG2088297	1	07/03/23 00:05	07/03/23 00:05	SMC	Allen, TX
Volatile Organic Compounds (GC) by Method RSK175	WG2085125	1	06/28/23 10:54	06/28/23 10:54	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2083902	1	06/25/23 01:51	06/25/23 01:51	DWR	Mt. Juliet, TN

MW-02 (LONGMONT 8-10K) L1627840-08 GW

Collected by: Travis Whalen | Collected date/time: 06/19/23 16:10 | Received date/time: 06/20/23 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2083137	1	06/23/23 05:50	06/23/23 10:29	AS	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG2084926	1	06/27/23 10:09	06/27/23 10:09	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2088297	1	07/03/23 01:17	07/03/23 01:17	SMC	Allen, TX
Wet Chemistry by Method 9056A	WG2088297	1	07/03/23 01:34	07/03/23 01:34	SMC	Allen, TX
Volatile Organic Compounds (GC) by Method RSK175	WG2085125	1	06/28/23 10:57	06/28/23 10:57	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2083902	1	06/25/23 02:12	06/25/23 02:12	DWR	Mt. Juliet, TN

MW-03 (LONGMONT 8-10K) L1627840-09 GW

Collected by: Travis Whalen | Collected date/time: 06/19/23 15:45 | Received date/time: 06/20/23 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2083137	1	06/23/23 05:50	06/23/23 10:29	AS	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG2084926	1	06/27/23 10:12	06/27/23 10:12	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2088297	1	07/02/23 19:31	07/02/23 19:31	SMC	Allen, TX
Wet Chemistry by Method 9056A	WG2088297	1	07/03/23 00:23	07/03/23 00:23	SMC	Allen, TX
Volatile Organic Compounds (GC) by Method RSK175	WG2085125	1	06/28/23 11:01	06/28/23 11:01	CCM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2083902	1	06/25/23 02:34	06/25/23 02:34	DWR	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Chris Ward
Project Manager

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	2740		50.0	1	06/23/2023 10:29	WG2083137

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Free Carbon Dioxide	40.6	B T8	20.0	1	06/27/2023 09:32	WG2084926

Sample Narrative:

L1627840-01 WG2084926: Endpoint pH 4.5

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	86.3		0.800	1	07/02/2023 16:33	WG2088297
Sulfate	1170		0.700	1	07/02/2023 22:00	WG2088297

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	06/28/2023 10:15	WG2085125
Ethane	ND		0.0130	1	06/28/2023 10:15	WG2085125
Ethene	ND		0.0130	1	06/28/2023 10:15	WG2085125
Acetylene	ND		0.0208	1	06/28/2023 10:15	WG2085125

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	06/25/2023 02:39	WG2083806
Toluene	ND		0.00100	1	06/25/2023 02:39	WG2083806
Ethylbenzene	ND		0.00100	1	06/25/2023 02:39	WG2083806
Total Xylenes	ND		0.00300	1	06/25/2023 02:39	WG2083806
(S) Toluene-d8	*103*		*80.0-120*		*06/25/2023 02:39*	WG2083806
(S) 4-Bromofluorobenzene	*104*		*77.0-126*		*06/25/2023 02:39*	WG2083806
(S) 1,2-Dichloroethane-d4	*104*		*70.0-130*		*06/25/2023 02:39*	WG2083806

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	3030		50.0	1	06/23/2023 10:29	WG2083137

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Free Carbon Dioxide	33.0	B T8	20.0	1	06/27/2023 09:36	WG2084926

Sample Narrative:

L1627840-02 WG2084926: Endpoint pH 4.5

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	61.7		0.800	1	07/02/2023 16:51	WG2088297
Sulfate	1490		0.700	1	07/02/2023 22:18	WG2088297

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	06/28/2023 10:20	WG2085125
Ethane	ND		0.0130	1	06/28/2023 10:20	WG2085125
Ethene	ND		0.0130	1	06/28/2023 10:20	WG2085125
Acetylene	ND		0.0208	1	06/28/2023 10:20	WG2085125

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	06/25/2023 02:58	WG2083806
Toluene	ND		0.00100	1	06/25/2023 02:58	WG2083806
Ethylbenzene	ND		0.00100	1	06/25/2023 02:58	WG2083806
Total Xylenes	ND		0.00300	1	06/25/2023 02:58	WG2083806
(S) Toluene-d8	*101*		*80.0-120*		*06/25/2023 02:58*	WG2083806
(S) 4-Bromofluorobenzene	*103*		*77.0-126*		*06/25/2023 02:58*	WG2083806
(S) 1,2-Dichloroethane-d4	*103*		*70.0-130*		*06/25/2023 02:58*	WG2083806

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	2490		50.0	1	06/23/2023 10:29	WG2083137

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Free Carbon Dioxide	39.1	B T8	20.0	1	06/27/2023 09:39	WG2084926

Sample Narrative:

L1627840-03 WG2084926: Endpoint pH 4.5

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	47.1		0.800	1	07/02/2023 17:09	WG2088297
Sulfate	1310		0.700	1	07/02/2023 22:36	WG2088297

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	06/28/2023 10:23	WG2085125
Ethane	ND		0.0130	1	06/28/2023 10:23	WG2085125
Ethene	ND		0.0130	1	06/28/2023 10:23	WG2085125
Acetylene	ND		0.0208	1	06/28/2023 10:23	WG2085125

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	06/25/2023 03:17	WG2083806
Toluene	ND		0.00100	1	06/25/2023 03:17	WG2083806
Ethylbenzene	ND		0.00100	1	06/25/2023 03:17	WG2083806
Total Xylenes	ND		0.00300	1	06/25/2023 03:17	WG2083806
(S) Toluene-d8	*102*		*80.0-120*		*06/25/2023 03:17*	WG2083806
(S) 4-Bromofluorobenzene	*105*		*77.0-126*		*06/25/2023 03:17*	WG2083806
(S) 1,2-Dichloroethane-d4	*106*		*70.0-130*		*06/25/2023 03:17*	WG2083806

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	2280		50.0	1	06/23/2023 10:29	WG2083137

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Free Carbon Dioxide	ND	T8	20.0	1	06/27/2023 09:44	WG2084926

Sample Narrative:

L1627840-04 WG2084926: Endpoint pH 4.5

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	66.5		0.800	1	07/02/2023 17:26	WG2088297
Sulfate	1220		0.700	1	07/02/2023 22:54	WG2088297

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	06/28/2023 10:41	WG2085125
Ethane	ND		0.0130	1	06/28/2023 10:41	WG2085125
Ethene	ND		0.0130	1	06/28/2023 10:41	WG2085125
Acetylene	ND		0.0208	1	06/28/2023 10:41	WG2085125

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	06/26/2023 00:09	WG2084148
Toluene	ND		0.00100	1	06/26/2023 00:09	WG2084148
Ethylbenzene	ND		0.00100	1	06/26/2023 00:09	WG2084148
Total Xylenes	ND		0.00300	1	06/26/2023 00:09	WG2084148
(S) Toluene-d8	*121*	J1	*80.0-120*		*06/26/2023 00:09*	WG2084148
(S) 4-Bromofluorobenzene	*99.3*		*77.0-126*		*06/26/2023 00:09*	WG2084148
(S) 1,2-Dichloroethane-d4	*85.7*		*70.0-130*		*06/26/2023 00:09*	WG2084148

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	2980		50.0	1	06/23/2023 10:29	WG2083137

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Free Carbon Dioxide	21.4	B T8	20.0	1	06/27/2023 09:48	WG2084926

Sample Narrative:

L1627840-05 WG2084926: Endpoint pH 4.5

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	43.8		0.800	1	07/02/2023 18:20	WG2088297
Sulfate	1340		0.700	1	07/02/2023 23:11	WG2088297

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	06/28/2023 10:47	WG2085125
Ethane	ND		0.0130	1	06/28/2023 10:47	WG2085125
Ethene	ND		0.0130	1	06/28/2023 10:47	WG2085125
Acetylene	ND		0.0208	1	06/28/2023 10:47	WG2085125

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	06/26/2023 00:35	WG2084148
Toluene	ND		0.00100	1	06/26/2023 00:35	WG2084148
Ethylbenzene	ND		0.00100	1	06/26/2023 00:35	WG2084148
Total Xylenes	ND		0.00300	1	06/26/2023 00:35	WG2084148
(S) Toluene-d8	*125*	J1	*80.0-120*		*06/26/2023 00:35*	WG2084148
(S) 4-Bromofluorobenzene	*100*		*77.0-126*		*06/26/2023 00:35*	WG2084148
(S) 1,2-Dichloroethane-d4	*83.7*		*70.0-130*		*06/26/2023 00:35*	WG2084148

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	8490		100	1	06/23/2023 10:29	WG2083137

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Free Carbon Dioxide	126	B T8	20.0	1	06/27/2023 09:55	WG2084926

Sample Narrative:

L1627840-06 WG2084926: Endpoint pH 4.5

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	114		0.800	1	07/02/2023 18:38	WG2088297
Sulfate	5350		0.700	1	07/02/2023 23:29	WG2088297

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	06/28/2023 10:51	WG2085125
Ethane	ND		0.0130	1	06/28/2023 10:51	WG2085125
Ethene	ND		0.0130	1	06/28/2023 10:51	WG2085125
Acetylene	ND		0.0208	1	06/28/2023 10:51	WG2085125

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	06/26/2023 01:02	WG2084148
Toluene	ND		0.00100	1	06/26/2023 01:02	WG2084148
Ethylbenzene	ND		0.00100	1	06/26/2023 01:02	WG2084148
Total Xylenes	ND		0.00300	1	06/26/2023 01:02	WG2084148
(S) Toluene-d8	*125*	J1	*80.0-120*		*06/26/2023 01:02*	WG2084148
(S) 4-Bromofluorobenzene	*98.0*		*77.0-126*		*06/26/2023 01:02*	WG2084148
(S) 1,2-Dichloroethane-d4	*86.4*		*70.0-130*		*06/26/2023 01:02*	WG2084148

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	3860		50.0	1	06/23/2023 10:29	WG2083137

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Free Carbon Dioxide	ND	T8	20.0	1	06/27/2023 10:05	WG2084926

Sample Narrative:

L1627840-07 WG2084926: Endpoint pH 4.5

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	39.6		0.800	1	07/02/2023 23:47	WG2088297
Sulfate	2440		0.700	1	07/03/2023 00:05	WG2088297

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	06/28/2023 10:54	WG2085125
Ethane	ND		0.0130	1	06/28/2023 10:54	WG2085125
Ethene	ND		0.0130	1	06/28/2023 10:54	WG2085125
Acetylene	ND		0.0208	1	06/28/2023 10:54	WG2085125

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	06/25/2023 01:51	WG2083902
Toluene	ND		0.00100	1	06/25/2023 01:51	WG2083902
Ethylbenzene	ND		0.00100	1	06/25/2023 01:51	WG2083902
Total Xylenes	ND		0.00300	1	06/25/2023 01:51	WG2083902
(S) Toluene-d8	*112*		*80.0-120*		*06/25/2023 01:51*	WG2083902
(S) 4-Bromofluorobenzene	*94.9*		*77.0-126*		*06/25/2023 01:51*	WG2083902
(S) 1,2-Dichloroethane-d4	*108*		*70.0-130*		*06/25/2023 01:51*	WG2083902

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	1140		20.0	1	06/23/2023 10:29	WG2083137

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Free Carbon Dioxide	47.8	B T8	20.0	1	06/27/2023 10:09	WG2084926

Sample Narrative:

L1627840-08 WG2084926: Endpoint pH 4.5

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	15.6		0.800	1	07/03/2023 01:17	WG2088297
Sulfate	660		0.700	1	07/03/2023 01:34	WG2088297

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	06/28/2023 10:57	WG2085125
Ethane	ND		0.0130	1	06/28/2023 10:57	WG2085125
Ethene	ND		0.0130	1	06/28/2023 10:57	WG2085125
Acetylene	ND		0.0208	1	06/28/2023 10:57	WG2085125

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	06/25/2023 02:12	WG2083902
Toluene	ND		0.00100	1	06/25/2023 02:12	WG2083902
Ethylbenzene	ND		0.00100	1	06/25/2023 02:12	WG2083902
Total Xylenes	ND		0.00300	1	06/25/2023 02:12	WG2083902
(S) Toluene-d8	*113*		*80.0-120*		*06/25/2023 02:12*	WG2083902
(S) 4-Bromofluorobenzene	*96.3*		*77.0-126*		*06/25/2023 02:12*	WG2083902
(S) 1,2-Dichloroethane-d4	*107*		*70.0-130*		*06/25/2023 02:12*	WG2083902

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	1430		50.0	1	06/23/2023 10:29	WG2083137

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Free Carbon Dioxide	38.2	B T8	20.0	1	06/27/2023 10:12	WG2084926

Sample Narrative:

L1627840-09 WG2084926: Endpoint pH 4.5

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	37.3		0.800	1	07/02/2023 19:31	WG2088297
Sulfate	2060		0.700	1	07/03/2023 00:23	WG2088297

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	06/28/2023 11:01	WG2085125
Ethane	ND		0.0130	1	06/28/2023 11:01	WG2085125
Ethene	ND		0.0130	1	06/28/2023 11:01	WG2085125
Acetylene	ND		0.0208	1	06/28/2023 11:01	WG2085125

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	06/25/2023 02:34	WG2083902
Toluene	ND		0.00100	1	06/25/2023 02:34	WG2083902
Ethylbenzene	ND		0.00100	1	06/25/2023 02:34	WG2083902
Total Xylenes	ND		0.00300	1	06/25/2023 02:34	WG2083902
(S) Toluene-d8	*111*		*80.0-120*		*06/25/2023 02:34*	WG2083902
(S) 4-Bromofluorobenzene	*92.9*		*77.0-126*		*06/25/2023 02:34*	WG2083902
(S) 1,2-Dichloroethane-d4	*107*		*70.0-130*		*06/25/2023 02:34*	WG2083902

Method Blank (MB)

(MB) R3941518-1 06/23/23 10:29

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Dissolved Solids	U		10.0	10.0

L1627802-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1627802-03 06/23/23 10:29 • (DUP) R3941518-3 06/23/23 10:29

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	1000	1020	1	2.17		5

L1627805-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1627805-01 06/23/23 10:29 • (DUP) R3941518-4 06/23/23 10:29

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	276	270	1	2.20		5

Laboratory Control Sample (LCS)

(LCS) R3941518-2 06/23/23 10:29

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8390	95.3	77.3-123	

Method Blank (MB)

(MB) R3941808-3 06/27/23 09:13

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Free Carbon Dioxide	15.2	J	6.67	20.0

Sample Narrative:

BLANK: Endpoint pH 4.5

L1627948-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1627948-01 06/27/23 09:22 • (DUP) R3941808-5 06/27/23 09:27

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Free Carbon Dioxide	ND	ND	1	2.81		20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

L1628458-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1628458-01 06/27/23 11:01 • (DUP) R3941808-7 06/27/23 11:05

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Free Carbon Dioxide	ND	ND	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

Method Blank (MB)

(MB) R3944009-1 07/02/23 14:46

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	U		0.0541	0.800
Sulfate	U		0.199	0.700

Laboratory Control Sample (LCS)

(LCS) R3944009-2 07/02/23 15:04

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	5.00	4.41	88.2	80.0-120	
Sulfate	5.00	4.68	93.6	80.0-120	

L1627840-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1627840-08 07/03/23 01:17 • (MS) R3944009-5 07/03/23 01:52 • (MSD) R3944009-6 07/03/23 02:10

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	25.0	15.6	40.0	39.3	97.7	94.9	1	80.0-120			1.74	20

L1627840-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1627840-08 07/03/23 01:34 • (MS) R3944009-7 07/03/23 02:28 • (MSD) R3944009-8 07/03/23 02:46

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Sulfate	500	660	1140	1110	96.5	89.6	1	80.0-120			3.07	20

L1627840-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1627840-09 07/03/23 00:23 • (MS) R3944009-9 07/03/23 03:04 • (MSD) R3944009-10 07/03/23 03:22

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Sulfate	1000	2060	2910	2890	85.1	83.0	1	80.0-120			0.721	20

Method Blank (MB)

(MB) R3942212-2 06/28/23 09:48

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Methane	U		0.00291	0.0100
Ethane	U		0.00407	0.0130
Ethene	U		0.00426	0.0130
Acetylene	U		0.00558	0.0208

L1627656-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1627656-09 06/28/23 09:56 • (DUP) R3942212-3 06/28/23 10:44

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Methane	ND	ND	1	0.000		20
Ethane	ND	ND	1	0.000		20
Ethene	ND	ND	1	0.000		20
Acetylene	ND	ND	1	0.000		20

L1627840-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1627840-05 06/28/23 10:47 • (DUP) R3942212-4 06/28/23 11:26

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Methane	ND	ND	1	0.000		20
Ethane	ND	ND	1	0.000		20
Ethene	ND	ND	1	0.000		20
Acetylene	ND	ND	1	0.000		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3942212-1 06/28/23 09:45 • (LCSD) R3942212-9 06/28/23 12:02

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Methane	0.0678	0.0727	0.0779	107	115	85.0-115			6.91	20
Ethane	0.129	0.118	0.120	91.5	93.0	85.0-115			1.68	20
Ethene	0.127	0.119	0.120	93.7	94.5	85.0-115			0.837	20
Acetylene	0.208	0.188	0.193	90.4	92.8	85.0-115			2.62	20

L1627656-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1627656-08 06/28/23 09:52 • (MS) R3942212-5 06/28/23 11:30 • (MSD) R3942212-6 06/28/23 11:34

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Methane	0.0678	ND	0.0803	0.0767	118	113	1	50.0-150			4.59	20
Ethane	0.129	ND	0.130	0.127	101	98.4	1	50.0-150			2.33	20
Ethene	0.127	ND	0.129	0.126	102	99.2	1	50.0-150			2.35	20
Acetylene	0.208	ND	0.210	0.206	101	99.0	1	50.0-150			1.92	20

L1628329-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1628329-01 06/28/23 11:07 • (MS) R3942212-7 06/28/23 11:54 • (MSD) R3942212-8 06/28/23 11:58

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Methane	0.0678	ND	0.0814	0.0786	120	116	1	50.0-150			3.50	20
Ethane	0.129	ND	0.137	0.133	106	103	1	50.0-150			2.96	20
Ethene	0.127	ND	0.136	0.132	107	104	1	50.0-150			2.99	20
Acetylene	0.208	ND	0.222	0.215	107	103	1	50.0-150			3.20	20

Method Blank (MB)

(MB) R3941626-3 06/24/23 18:34

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.0000941	0.00100
Toluene	U		0.000278	0.00100
Ethylbenzene	U		0.000137	0.00100
Total Xylenes	U		0.000174	0.00300
(S) Toluene-d8	*102*			*80.0-120*
(S) 4-Bromofluorobenzene	*106*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*106*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3941626-1 06/24/23 17:18 • (LCSD) R3941626-2 06/24/23 17:37

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.00500	0.00547	0.00548	109	110	70.0-123			0.183	20
Toluene	0.00500	0.00527	0.00531	105	106	79.0-120			0.756	20
Ethylbenzene	0.00500	0.00554	0.00561	111	112	79.0-123			1.26	20
Total Xylenes	0.0150	0.0170	0.0164	113	109	79.0-123			3.59	20
(S) Toluene-d8				*101*	*101*	*80.0-120*				
(S) 4-Bromofluorobenzene				*102*	*103*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*110*	*107*	*70.0-130*				

Method Blank (MB)

(MB) R3941844-3 06/24/23 19:09

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.0000941	0.00100
Toluene	U		0.000278	0.00100
Ethylbenzene	U		0.000137	0.00100
Total Xylenes	U		0.000174	0.00300
(S) Toluene-d8	*113*			*80.0-120*
(S) 4-Bromofluorobenzene	*92.6*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*99.2*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3941844-1 06/24/23 17:43 • (LCSD) R3941844-2 06/24/23 18:04

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.00500	0.00412	0.00436	82.4	87.2	70.0-123			5.66	20
Toluene	0.00500	0.00485	0.00500	97.0	100	79.0-120			3.05	20
Ethylbenzene	0.00500	0.00511	0.00539	102	108	79.0-123			5.33	20
Total Xylenes	0.0150	0.0147	0.0149	98.0	99.3	79.0-123			1.35	20
(S) Toluene-d8				*115*	*113*	*80.0-120*				
(S) 4-Bromofluorobenzene				*97.0*	*93.9*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*98.0*	*97.8*	*70.0-130*				

Method Blank (MB)

(MB) R3941193-3 06/25/23 20:11

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.0000941	0.00100
Toluene	U		0.000278	0.00100
Ethylbenzene	U		0.000137	0.00100
Total Xylenes	U		0.000174	0.00300
(S) Toluene-d8	*120*			*80.0-120*
(S) 4-Bromofluorobenzene	*98.4*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*91.2*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3941193-1 06/25/23 18:34 • (LCSD) R3941193-2 06/25/23 18:57

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.00500	0.00450	0.00468	90.0	93.6	70.0-123			3.92	20
Toluene	0.00500	0.00553	0.00602	111	120	79.0-120			8.48	20
Ethylbenzene	0.00500	0.00565	0.00589	113	118	79.0-123			4.16	20
Total Xylenes	0.0150	0.0167	0.0176	111	117	79.0-123			5.25	20
(S) Toluene-d8				*120*	*118*	*80.0-120*				
(S) 4-Bromofluorobenzene				*100*	*101*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*90.2*	*89.8*	*70.0-130*				

L1628361-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1628361-02 06/26/23 02:39 • (MS) R3941193-4 06/26/23 06:18 • (MSD) R3941193-5 06/26/23 06:40

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.00500	ND	0.00580	0.00598	116	120	1	17.0-158			3.06	27
Toluene	0.00500	ND	0.00837	0.00749	167	150	1	26.0-154	J5		11.1	28
Ethylbenzene	0.00500	ND	0.00746	0.00736	149	147	1	30.0-155			1.35	27
Total Xylenes	0.0150	ND	0.0238	0.0227	159	151	1	29.0-154	J5		4.73	28
(S) Toluene-d8					*119*	*118*		*80.0-120*				
(S) 4-Bromofluorobenzene					*105*	*103*		*77.0-126*				
(S) 1,2-Dichloroethane-d4					*83.9*	*83.7*		*70.0-130*				

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
T8	Sample(s) received past/too close to holding time expiration.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

Pace Analytical Services, LLC -Dallas 400 W. Bethany Drive Suite 190 Allen, TX 75013

Arkansas	88-0647	Kansas	E10388
Florida	E871118	Texas	T104704232-22-37
Iowa	408	Oklahoma	8727
Louisiana	30686		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:	Billing Information:	Pres Chk	Analysis / Container / Preservative	Chain of Custody Page 1 of 1
Terracon - Longmont, CO 1831 Lefthand Circle Suite C Longmont, CO 80501	Charles Covington 1831 Lefthand Circle Suite C Longmont, CO 80501			Pace PEOPLE ADVANCING SCIENCE MT JULIET, TN 12065 Lebanon Rd Mount Juliet, TN 37122 Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf
Report to: ~~Charles Covington~~ Travis Whalen	Email To: ~~charles.covington@terracon.com~~ travis.whalen@terracon.com			
Project Description: COL Annual GW Sampling	City/State Collected: Longmont, CO	Please Circle: PT (MT) CT ET		
Phone: 303-454-5249	Client Project # 22227034	Lab Project # TERRALCO-22227034		SDG # L1627840 E192
Collected by (print): Travis Whalen	Site/Facility ID #	P.O. #		Acctnum: TERRALCO
Collected by (signature): Travis Whalen	Rush? (Lab MUST Be Notified) __ Same Day __ Five Day __ Next Day __ 5 Day (Rad Only) __ Two Day __ 10 Day (Rad Only) __ Three Day	Quote # Date Results Needed: Standard		Template: T226963 Prelogin: P988375 PM: 824 - Chris Ward PB: AP 3-22-23
Immediately Packed on Ice N __ Y X				Shipped Via: FedEX Ground

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	CHLORIDE,SULFATE 125mlHDPE-NoPres	CO2 40mlAmb-NoPres	RSK175 40mlAmb HCl	TDS 1L-HDPE NoPres	V8260BTEX 40mlAmb-HCl						Remarks	Sample # (lab only)
EGW-MW01	Grab	GW	—	6/19/23	1230	9	X	X	X	X	X							-01
EGW-MW02	↓	GW	—	↓	1105	9	X	X	X	X	X							-02
EGW-MW03		GW	—		1140	9	X	X	X	X	X							-03
EGT-MW01		GW	—		1425	9	X	X	X	X	X							04
EGT-MW02		GW	—		1350	9	X	X	X	X	X							-05
EGT-MW03		GW	—		1325	9	X	X	X	X	X							-06
MW-01 (Longmont 8-10K)		GW	—		1525	9	X	X	X	X	X							-07
MW-02 (Longmont 8-10K)		GW	—		1610	9	X	X	X	X	X							-08
MW-03 (Longmont 8-10K)	↓	GW	—	↓	1545	9	X	X	X	X	X							-09
		GW				9	X	X	X	X	X							

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other ______

Remarks:

pH ______ Temp ______

Flow ______ Other ______

Samples returned via: __ UPS X FedEx __ Courier ______

Tracking # 6126 6535 6818

Sample Receipt Checklist

COC Seal Present/Intact:	NP ✓Y __N
COC Signed/Accurate:	✓Y __N
Bottles arrive intact:	✓Y __N
Correct bottles used:	✓Y __N
Sufficient volume sent:	✓Y __N
If Applicable	
VOA Zero Headspace:	✓Y __N
Preservation Correct/Checked:	✓Y __N
RAD Screen <0.5 mR/hr:	✓Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	
Travis Whalen	6/19/23	1750	FedEx		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: NS A7C 5.7+0=5.7 Bottles Received: 81	If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) [signature]	Date: 6-20-23 Time: 915	Hold: Condition: NCF / (OK)

ANALYTICAL REPORT

June 30, 2023

Terracon - Longmont, CO

Sample Delivery Group:	L1629109
Samples Received:	06/23/2023
Project Number:	22227034
Description:	COL Annual GW Sampling

Report To: Travis Whalen
1831 Lefthand Circle
Suite B
Longmont, CO 80501

Entire Report Reviewed By:

Jason Romer
Project Manager

Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

WT1-MW01 L1629109-01 GW

Collected by: Travis Whalen | Collected date/time: 06/21/23 09:55 | Received date/time: 06/23/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2085944	1	06/28/23 15:00	06/28/23 16:07	AS	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2085019	1	06/27/23 14:40	06/27/23 14:40	KMC	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG2086638	1	06/29/23 13:40	06/29/23 13:40	ARD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2085998	1	06/29/23 14:33	06/29/23 14:33	BAW	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2085770	1	06/29/23 01:55	06/29/23 01:55	ACG	Mt. Juliet, TN

WT1-MW02 L1629109-02 GW

Collected by: Travis Whalen | Collected date/time: 06/21/23 10:28 | Received date/time: 06/23/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2085944	1	06/28/23 15:00	06/28/23 16:07	AS	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2085019	1	06/27/23 15:07	06/27/23 15:07	JD	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2085019	5	06/27/23 15:20	06/27/23 15:20	JD	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG2086638	1	06/29/23 13:56	06/29/23 13:56	ARD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2085998	1	06/29/23 14:36	06/29/23 14:36	BAW	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2085770	1	06/29/23 02:13	06/29/23 02:13	ACG	Mt. Juliet, TN

WT1-MW03 L1629109-03 GW

Collected by: Travis Whalen | Collected date/time: 06/21/23 10:25 | Received date/time: 06/23/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2084899	1	06/27/23 08:39	06/27/23 11:31	MMF	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2085019	1	06/27/23 15:34	06/27/23 15:34	KMC	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG2086638	1	06/29/23 13:59	06/29/23 13:59	ARD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2085998	1	06/29/23 14:40	06/29/23 14:40	BAW	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2085770	1	06/29/23 02:32	06/29/23 02:32	ACG	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Jason Romer
Project Manager

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	651		10.0	1	06/28/2023 16:07	WG2085944

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	28.8		1.00	1	06/27/2023 14:40	WG2085019
Sulfate	170		5.00	1	06/27/2023 14:40	WG2085019

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Free Carbon Dioxide	76.2	T8	20.0	1	06/29/2023 13:40	WG2086638

Sample Narrative:

L1629109-01 WG2086638: Endpoint pH 4.5 Headspace

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	06/29/2023 14:33	WG2085998
Ethane	ND		0.0130	1	06/29/2023 14:33	WG2085998
Ethene	ND		0.0130	1	06/29/2023 14:33	WG2085998
Acetylene	ND		0.0208	1	06/29/2023 14:33	WG2085998

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	06/29/2023 01:55	WG2085770
Toluene	ND		0.00100	1	06/29/2023 01:55	WG2085770
Ethylbenzene	ND		0.00100	1	06/29/2023 01:55	WG2085770
Total Xylenes	ND		0.00300	1	06/29/2023 01:55	WG2085770
(S) Toluene-d8	*115*		*80.0-120*		*06/29/2023 01:55*	WG2085770
(S) 4-Bromofluorobenzene	*95.9*		*77.0-126*		*06/29/2023 01:55*	WG2085770
(S) 1,2-Dichloroethane-d4	*94.8*		*70.0-130*		*06/29/2023 01:55*	WG2085770

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	1070		20.0	1	06/28/2023 16:07	WG2085944

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	51.7		1.00	1	06/27/2023 15:07	WG2085019
Sulfate	497		25.0	5	06/27/2023 15:20	WG2085019

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Free Carbon Dioxide	38.1	T8	20.0	1	06/29/2023 13:56	WG2086638

Sample Narrative:

L1629109-02 WG2086638: Endpoint pH 4.5 Headspace

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	06/29/2023 14:36	WG2085998
Ethane	ND		0.0130	1	06/29/2023 14:36	WG2085998
Ethene	ND		0.0130	1	06/29/2023 14:36	WG2085998
Acetylene	ND		0.0208	1	06/29/2023 14:36	WG2085998

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	06/29/2023 02:13	WG2085770
Toluene	ND		0.00100	1	06/29/2023 02:13	WG2085770
Ethylbenzene	ND		0.00100	1	06/29/2023 02:13	WG2085770
Total Xylenes	ND		0.00300	1	06/29/2023 02:13	WG2085770
(S) Toluene-d8	*115*		*80.0-120*		*06/29/2023 02:13*	WG2085770
(S) 4-Bromofluorobenzene	*97.3*		*77.0-126*		*06/29/2023 02:13*	WG2085770
(S) 1,2-Dichloroethane-d4	*93.4*		*70.0-130*		*06/29/2023 02:13*	WG2085770

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	429		10.0	1	06/27/2023 11:31	WG2084899

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	16.9		1.00	1	06/27/2023 15:34	WG2085019
Sulfate	129		5.00	1	06/27/2023 15:34	WG2085019

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Free Carbon Dioxide	ND	T8	20.0	1	06/29/2023 13:59	WG2086638

Sample Narrative:

L1629109-03 WG2086638: Endpoint pH 4.5 Headspace

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	06/29/2023 14:40	WG2085998
Ethane	ND		0.0130	1	06/29/2023 14:40	WG2085998
Ethene	ND		0.0130	1	06/29/2023 14:40	WG2085998
Acetylene	ND		0.0208	1	06/29/2023 14:40	WG2085998

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	06/29/2023 02:32	WG2085770
Toluene	ND		0.00100	1	06/29/2023 02:32	WG2085770
Ethylbenzene	ND		0.00100	1	06/29/2023 02:32	WG2085770
Total Xylenes	ND		0.00300	1	06/29/2023 02:32	WG2085770
(S) Toluene-d8	*115*		*80.0-120*		*06/29/2023 02:32*	WG2085770
(S) 4-Bromofluorobenzene	*99.6*		*77.0-126*		*06/29/2023 02:32*	WG2085770
(S) 1,2-Dichloroethane-d4	*90.9*		*70.0-130*		*06/29/2023 02:32*	WG2085770

Method Blank (MB)

(MB) R3943084-1 06/27/23 11:31

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Dissolved Solids	U		10.0	10.0

L1629109-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1629109-03 06/27/23 11:31 • (DUP) R3943084-3 06/27/23 11:31

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	429	438	1	2.08		5

L1629251-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1629251-02 06/27/23 11:31 • (DUP) R3943084-4 06/27/23 11:31

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	1420	1460	1	2.92		5

Laboratory Control Sample (LCS)

(LCS) R3943084-2 06/27/23 11:31

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8420	95.7	77.3-123	

Method Blank (MB)

(MB) R3943308-1 06/28/23 16:07

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Dissolved Solids	U		10.0	10.0

L1629422-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1629422-08 06/28/23 16:07 • (DUP) R3943308-3 06/28/23 16:07

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	2800	3210	1	13.8	J3	5

L1629422-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1629422-09 06/28/23 16:07 • (DUP) R3943308-4 06/28/23 16:07

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	3210	3190	1	0.625		5

Laboratory Control Sample (LCS)

(LCS) R3943308-2 06/28/23 16:07

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8480	96.4	77.3-123	

Method Blank (MB)

(MB) R3943141-1 06/27/23 10:12

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	0.460	J	0.379	1.00
Sulfate	0.634	J	0.594	5.00

L1628595-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1628595-02 06/27/23 12:26 • (DUP) R3943141-3 06/27/23 12:39

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	22.9	22.7	1	0.856		20
Sulfate	63.3	62.3	1	1.57		20

L1629251-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1629251-07 06/27/23 21:49 • (DUP) R3943141-6 06/27/23 22:43

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	50.5	50.7	1	0.479		20

L1629251-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1629251-07 06/27/23 22:30 • (DUP) R3943141-7 06/27/23 22:57

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfate	438	443	5	1.20		20

Laboratory Control Sample (LCS)

(LCS) R3943141-2 06/27/23 10:26

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40.0	38.5	96.2	90.0-110	
Sulfate	40.0	36.6	91.5	90.0-110	

L1628595-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1628595-02 06/27/23 12:26 • (MS) R3943141-4 06/27/23 12:53 • (MSD) R3943141-5 06/27/23 13:06

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50.0	22.9	71.4	72.6	97.1	99.4	1	80.0-120			1.60	20
Sulfate	50.0	63.3	106	107	85.0	88.2	1	80.0-120			1.53	20

Method Blank (MB)

(MB) R3943309-3 06/29/23 13:15

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Free Carbon Dioxide	U		6.67	20.0

Sample Narrative:

BLANK: Endpoint pH 4.5

L1628955-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1628955-02 06/29/23 13:26 • (DUP) R3943309-5 06/29/23 13:31

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Free Carbon Dioxide	ND	ND	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

L1630351-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1630351-01 06/29/23 14:46 • (DUP) R3943309-7 06/29/23 15:39

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Free Carbon Dioxide	ND	ND	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

Method Blank (MB)

(MB) R3943101-2 06/29/23 14:23

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Methane	U		0.00291	0.0100
Ethane	U		0.00407	0.0130
Ethene	U		0.00426	0.0130
Acetylene	U		0.00558	0.0208

L1629237-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1629237-04 06/29/23 15:38 • (DUP) R3943101-3 06/29/23 15:41

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Methane	ND	ND	1	0.000		20
Ethane	ND	ND	1	0.000		20
Ethene	ND	ND	1	0.000		20
Acetylene	ND	ND	1	0.000		20

L1629251-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1629251-08 06/29/23 16:35 • (DUP) R3943101-4 06/29/23 16:40

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Methane	ND	ND	1	0.000		20
Ethane	ND	ND	1	0.000		20
Ethene	ND	ND	1	0.000		20
Acetylene	ND	ND	1	0.000		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3943101-1 06/29/23 14:19 • (LCSD) R3943101-5 06/29/23 16:43

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Methane	0.0678	0.0626	0.0647	92.3	95.4	85.0-115			3.30	20
Ethane	0.129	0.112	0.111	86.8	86.0	85.0-115			0.897	20
Ethene	0.127	0.113	0.113	89.0	89.0	85.0-115			0.000	20
Acetylene	0.208	0.214	0.211	103	101	85.0-115			1.41	20

Method Blank (MB)

(MB) R3942713-2 06/28/23 20:27

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.0000941	0.00100
Toluene	U		0.000278	0.00100
Ethylbenzene	U		0.000137	0.00100
Total Xylenes	U		0.000174	0.00300
(S) Toluene-d8	*113*			*80.0-120*
(S) 4-Bromofluorobenzene	*94.4*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*88.9*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3942713-1 06/28/23 19:30

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.00500	0.00405	81.0	70.0-123	
Toluene	0.00500	0.00423	84.6	79.0-120	
Ethylbenzene	0.00500	0.00433	86.6	79.0-123	
Total Xylenes	0.0150	0.0129	86.0	79.0-123	
(S) Toluene-d8			*108*	*80.0-120*	
(S) 4-Bromofluorobenzene			*94.3*	*77.0-126*	
(S) 1,2-Dichloroethane-d4			*91.8*	*70.0-130*	

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
T8	Sample(s) received past/too close to holding time expiration.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Chain of Custody Page 1 of 1

Pace® PEOPLE ADVANCING SCIENCE

MT JULIET, TN

12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

L1629109
A044

Acctnum: TERRALCO
Template: T226963
Prelogin: P988375
PM: 824 - Chris Ward
PB: LR 3-22-23
Shipped Via: FedEX Ground

Company Name/Address:
Terracon - Longmont, CO
1831 Lefthand Circle
Suite C
Longmont, CO 80501

Billing Information:
Charles Covington
1831 Lefthand Circle
Suite C
Longmont, CO 80501

Pres Chk

Report to: ~~Charles Covington~~ Travis Whalen

Email To: ~~charles.covington@terracon.com~~ Travis.whalen@terracon.com

Project Description: COL Annual GW Sampling

City/State Collected: Longmont, CO

Please Circle: PT (MT) CT ET

Phone: 303-454-5249

Client Project #: 22227034

Lab Project #: TERRALCO-22227034

Site/Facility ID #:

P.O. #:

Collected by (print): Travis Whalen

Collected by (signature): [signature]

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #:

Date Results Needed: Standard

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	CHLORIDE,SULFATE 125mlHDPE-NoPres	CO2 40mlAmb-NoPres	RSK175 40mlAmb HCl	TDS 1L-HDPE NoPres	V8260BTEX 40mlAmb-HCl	Remarks	Sample # (lab only)
WT1 - MW01	Grab	GW	—	6/21/23	0955	9	X	X	X	X	X		-01
WT1 - MW02	Grab	GW	—	6/21/23	1028	9	X	X	X	X	X		-02
WT1 - MW03	Grab	GW	—	6/21/23	1025	9	X	X	X	X	X		-03
		~~GW~~				~~9~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~		
		~~GW~~				~~9~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~		
		~~GW~~				~~9~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~		
		~~GW~~				~~9~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~		
		~~GW~~				~~9~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~		
		~~GW~~				~~9~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~		
		~~GW~~				~~9~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~		
		~~GW~~											

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other________

Remarks:

pH ______ Temp ______
Flow ______ Other ______

Samples returned via: __ UPS X FedEx __ Courier ________

Tracking # 6357 9918 4376

Sample Receipt Checklist
COC Seal Present/Intact: __NP ✓Y __N
COC Signed/Accurate: ✓Y __N
Bottles arrive intact: ✓Y __N
Correct bottles used: ✓Y __N
Sufficient volume sent: ✓Y __N
If Applicable
VOA Zero Headspace: ✓Y __N
Preservation Correct/Checked: ✓Y __N
RAD Screen <0.5 mR/hr: ✓Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	
[signature]	6/21/23	1600	FedEx	Trip Blank Received: Yes / (No) HCL / MeoH TBR
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: NSA °C 4.1+0=4.1 Bottles Received: 27
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) [signature]	Date: 6-23-23 Time: 900

If preservation required by Login: Date/Time

Hold:

Condition: NCF / (OK)

ANALYTICAL REPORT

July 05, 2023

Terracon - Longmont, CO

Sample Delivery Group:	L1629251
Samples Received:	06/23/2023
Project Number:	22227034
Description:	COL Annual GW Sampling

Report To:

Travis Whalen
1831 Lefthand Circle
Suite B
Longmont, CO 80501

Entire Report Reviewed By:

Chris Ward
Project Manager

Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

PLI-MW01 L1629251-01 GW

Collected by: Travis Whalen | Collected date/time: 06/20/23 09:35 | Received date/time: 06/23/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2087892	1	07/01/23 07:05	07/01/23 10:46	CAT	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2085019	10	06/27/23 18:42	06/27/23 18:42	JD	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2085019	100	06/27/23 18:55	06/27/23 18:55	KMC	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG2086638	1	06/29/23 14:03	06/29/23 14:03	ARD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2085998	1	06/29/23 15:46	06/29/23 15:46	BAW	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2087395	1	07/01/23 07:07	07/01/23 07:07	JHH	Mt. Juliet, TN

PLI-MW02 L1629251-02 GW

Collected by: Travis Whalen | Collected date/time: 06/20/23 10:20 | Received date/time: 06/23/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2084899	1	06/27/23 08:39	06/27/23 11:31	MMF	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2085019	1	06/27/23 19:08	06/27/23 19:08	KMC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2085019	5	06/27/23 19:49	06/27/23 19:49	KMC	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG2086638	1	06/29/23 14:07	06/29/23 14:07	ARD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2085998	1	06/29/23 15:48	06/29/23 15:48	BAW	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2087395	1	07/01/23 07:28	07/01/23 07:28	JHH	Mt. Juliet, TN

PLI-MW03 L1629251-03 GW

Collected by: Travis Whalen | Collected date/time: 06/20/23 10:30 | Received date/time: 06/23/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2084899	1	06/27/23 08:39	06/27/23 11:31	MMF	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2085019	1	06/27/23 20:02	06/27/23 20:02	KMC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2085019	10	06/27/23 20:16	06/27/23 20:16	KMC	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG2086638	1	06/29/23 14:19	06/29/23 14:19	ARD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2085998	1	06/29/23 15:50	06/29/23 15:50	BAW	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2087395	1	07/01/23 07:50	07/01/23 07:50	JHH	Mt. Juliet, TN

DMI-MW-01 L1629251-04 GW

Collected by: Travis Whalen | Collected date/time: 06/20/23 12:55 | Received date/time: 06/23/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2084899	1	06/27/23 08:39	06/27/23 11:31	MMF	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2085019	1	06/27/23 20:29	06/27/23 20:29	KMC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2085019	5	06/27/23 20:42	06/27/23 20:42	KMC	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG2086638	1	06/29/23 14:22	06/29/23 14:22	ARD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2085998	1	06/29/23 15:53	06/29/23 15:53	BAW	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2087395	1	07/01/23 08:11	07/01/23 08:11	JHH	Mt. Juliet, TN

DMI-MW-02 L1629251-05 GW

Collected by: Travis Whalen | Collected date/time: 06/20/23 12:35 | Received date/time: 06/23/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2084899	1	06/27/23 08:39	06/27/23 11:31	MMF	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2085019	1	06/27/23 20:56	06/27/23 20:56	KMC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2085019	5	06/27/23 21:09	06/27/23 21:09	KMC	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG2086638	1	06/29/23 14:26	06/29/23 14:26	ARD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2085998	1	06/29/23 16:12	06/29/23 16:12	BAW	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2087395	1	07/01/23 08:32	07/01/23 08:32	JHH	Mt. Juliet, TN

DMI-MW-03 L1629251-06 GW

Collected by: Travis Whalen | Collected date/time: 06/20/23 12:00 | Received date/time: 06/23/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2084899	1	06/27/23 08:39	06/27/23 11:31	MMF	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2085019	1	06/27/23 21:23	06/27/23 21:23	KMC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2085019	5	06/27/23 21:36	06/27/23 21:36	KMC	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG2086638	1	06/29/23 14:30	06/29/23 14:30	ARD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2085998	1	06/29/23 16:14	06/29/23 16:14	BAW	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2088068	1	07/01/23 20:35	07/01/23 20:35	JHH	Mt. Juliet, TN

TB7-MW01 L1629251-07 GW

Collected by: Travis Whalen | Collected date/time: 06/21/23 11:45 | Received date/time: 06/23/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2084899	1	06/27/23 08:39	06/27/23 11:31	MMF	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2085019	1	06/27/23 21:49	06/27/23 21:49	JD	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2085019	5	06/27/23 22:30	06/27/23 22:30	KMC	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG2086638	1	06/29/23 14:33	06/29/23 14:33	ARD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2085998	1	06/29/23 16:16	06/29/23 16:16	BAW	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2087395	1	07/01/23 09:15	07/01/23 09:15	JHH	Mt. Juliet, TN

TB7-MW02 L1629251-08 GW

Collected by: Travis Whalen | Collected date/time: 06/21/23 12:20 | Received date/time: 06/23/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2084899	1	06/27/23 08:39	06/27/23 11:31	MMF	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2085728	1	06/28/23 18:34	06/28/23 18:34	JD	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2085728	5	06/28/23 18:47	06/28/23 18:47	JD	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG2086638	1	06/29/23 14:37	06/29/23 14:37	ARD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2085998	1	06/29/23 16:35	06/29/23 16:35	BAW	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2087395	1	07/01/23 09:36	07/01/23 09:36	JHH	Mt. Juliet, TN

TB7-MW03 L1629251-09 GW

Collected by: Travis Whalen | Collected date/time: 06/21/23 12:25 | Received date/time: 06/23/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2084899	1	06/27/23 08:39	06/27/23 11:31	MMF	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2085728	10	06/28/23 19:01	06/28/23 19:01	JD	Mt. Juliet, TN
Wet Chemistry by Method 4500CO2 D-2011	WG2086638	1	06/29/23 14:41	06/29/23 14:41	ARD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG2085998	1	06/29/23 16:38	06/29/23 16:38	BAW	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2087395	1	07/01/23 09:58	07/01/23 09:58	JHH	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Chris Ward
Project Manager

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	4100		50.0	1	07/01/2023 10:46	WG2087892

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	42.0	B	10.0	10	06/27/2023 18:42	WG2085019
Sulfate	2670		500	100	06/27/2023 18:55	WG2085019

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Free Carbon Dioxide	ND	T8	20.0	1	06/29/2023 14:03	WG2086638

Sample Narrative:

L1629251-01 WG2086638: Endpoint pH 4.5 Headspace

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	06/29/2023 15:46	WG2085998
Ethane	ND		0.0130	1	06/29/2023 15:46	WG2085998
Ethene	ND		0.0130	1	06/29/2023 15:46	WG2085998
Acetylene	ND		0.0208	1	06/29/2023 15:46	WG2085998

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	07/01/2023 07:07	WG2087395
Toluene	ND		0.00100	1	07/01/2023 07:07	WG2087395
Ethylbenzene	ND		0.00100	1	07/01/2023 07:07	WG2087395
Total Xylenes	ND		0.00300	1	07/01/2023 07:07	WG2087395
(S) Toluene-d8	*100*		*80.0-120*		*07/01/2023 07:07*	WG2087395
(S) 4-Bromofluorobenzene	*92.6*		*77.0-126*		*07/01/2023 07:07*	WG2087395
(S) 1,2-Dichloroethane-d4	*94.6*		*70.0-130*		*07/01/2023 07:07*	WG2087395

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	1420		20.0	1	06/27/2023 11:31	WG2084899

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	45.0		1.00	1	06/27/2023 19:08	WG2085019
Sulfate	719		25.0	5	06/27/2023 19:49	WG2085019

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Free Carbon Dioxide	31.6	T8	20.0	1	06/29/2023 14:07	WG2086638

Sample Narrative:

L1629251-02 WG2086638: Endpoint pH 4.5 Headspace

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	0.0203		0.0100	1	06/29/2023 15:48	WG2085998
Ethane	ND		0.0130	1	06/29/2023 15:48	WG2085998
Ethene	ND		0.0130	1	06/29/2023 15:48	WG2085998
Acetylene	ND		0.0208	1	06/29/2023 15:48	WG2085998

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	07/01/2023 07:28	WG2087395
Toluene	ND		0.00100	1	07/01/2023 07:28	WG2087395
Ethylbenzene	ND		0.00100	1	07/01/2023 07:28	WG2087395
Total Xylenes	ND		0.00300	1	07/01/2023 07:28	WG2087395
(S) Toluene-d8	*106*		*80.0-120*		*07/01/2023 07:28*	WG2087395
(S) 4-Bromofluorobenzene	*95.8*		*77.0-126*		*07/01/2023 07:28*	WG2087395
(S) 1,2-Dichloroethane-d4	*93.9*		*70.0-130*		*07/01/2023 07:28*	WG2087395

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	1270		20.0	1	06/27/2023 11:31	WG2084899

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	47.0		1.00	1	06/27/2023 20:02	WG2085019
Sulfate	743		50.0	10	06/27/2023 20:16	WG2085019

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Free Carbon Dioxide	41.0	T8	20.0	1	06/29/2023 14:19	WG2086638

Sample Narrative:

L1629251-03 WG2086638: Endpoint pH 4.5 Headspace

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	06/29/2023 15:50	WG2085998
Ethane	ND		0.0130	1	06/29/2023 15:50	WG2085998
Ethene	ND		0.0130	1	06/29/2023 15:50	WG2085998
Acetylene	ND		0.0208	1	06/29/2023 15:50	WG2085998

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	07/01/2023 07:50	WG2087395
Toluene	ND		0.00100	1	07/01/2023 07:50	WG2087395
Ethylbenzene	ND		0.00100	1	07/01/2023 07:50	WG2087395
Total Xylenes	ND		0.00300	1	07/01/2023 07:50	WG2087395
(S) Toluene-d8	*101*		*80.0-120*		*07/01/2023 07:50*	WG2087395
(S) 4-Bromofluorobenzene	*92.4*		*77.0-126*		*07/01/2023 07:50*	WG2087395
(S) 1,2-Dichloroethane-d4	*95.9*		*70.0-130*		*07/01/2023 07:50*	WG2087395

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	1200		20.0	1	06/27/2023 11:31	WG2084899

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	118		1.00	1	06/27/2023 20:29	WG2085019
Sulfate	354		25.0	5	06/27/2023 20:42	WG2085019

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Free Carbon Dioxide	26.0	T8	20.0	1	06/29/2023 14:22	WG2086638

Sample Narrative:

L1629251-04 WG2086638: Endpoint pH 4.5 Headspace

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	06/29/2023 15:53	WG2085998
Ethane	ND		0.0130	1	06/29/2023 15:53	WG2085998
Ethene	ND		0.0130	1	06/29/2023 15:53	WG2085998
Acetylene	ND		0.0208	1	06/29/2023 15:53	WG2085998

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	07/01/2023 08:11	WG2087395
Toluene	ND		0.00100	1	07/01/2023 08:11	WG2087395
Ethylbenzene	ND		0.00100	1	07/01/2023 08:11	WG2087395
Total Xylenes	ND		0.00300	1	07/01/2023 08:11	WG2087395
(S) Toluene-d8	*102*		*80.0-120*		*07/01/2023 08:11*	WG2087395
(S) 4-Bromofluorobenzene	*91.4*		*77.0-126*		*07/01/2023 08:11*	WG2087395
(S) 1,2-Dichloroethane-d4	*96.3*		*70.0-130*		*07/01/2023 08:11*	WG2087395

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	1430		25.0	1	06/27/2023 11:31	WG2084899

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	143		1.00	1	06/27/2023 20:56	WG2085019
Sulfate	450		25.0	5	06/27/2023 21:09	WG2085019

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Free Carbon Dioxide	53.6	T8	20.0	1	06/29/2023 14:26	WG2086638

Sample Narrative:

L1629251-05 WG2086638: Endpoint pH 4.5 Headspace

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	06/29/2023 16:12	WG2085998
Ethane	ND		0.0130	1	06/29/2023 16:12	WG2085998
Ethene	ND		0.0130	1	06/29/2023 16:12	WG2085998
Acetylene	ND		0.0208	1	06/29/2023 16:12	WG2085998

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	07/01/2023 08:32	WG2087395
Toluene	ND		0.00100	1	07/01/2023 08:32	WG2087395
Ethylbenzene	ND		0.00100	1	07/01/2023 08:32	WG2087395
Total Xylenes	ND		0.00300	1	07/01/2023 08:32	WG2087395
(S) Toluene-d8	*99.9*		*80.0-120*		*07/01/2023 08:32*	WG2087395
(S) 4-Bromofluorobenzene	*92.4*		*77.0-126*		*07/01/2023 08:32*	WG2087395
(S) 1,2-Dichloroethane-d4	*98.1*		*70.0-130*		*07/01/2023 08:32*	WG2087395

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	1060		20.0	1	06/27/2023 11:31	WG2084899

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	127		1.00	1	06/27/2023 21:23	WG2085019
Sulfate	379		25.0	5	06/27/2023 21:36	WG2085019

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Free Carbon Dioxide	42.8	T8	20.0	1	06/29/2023 14:30	WG2086638

Sample Narrative:

L1629251-06 WG2086638: Endpoint pH 4.5 Headspace

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	06/29/2023 16:14	WG2085998
Ethane	ND		0.0130	1	06/29/2023 16:14	WG2085998
Ethene	ND		0.0130	1	06/29/2023 16:14	WG2085998
Acetylene	ND		0.0208	1	06/29/2023 16:14	WG2085998

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	07/01/2023 20:35	WG2088068
Toluene	ND		0.00100	1	07/01/2023 20:35	WG2088068
Ethylbenzene	ND		0.00100	1	07/01/2023 20:35	WG2088068
Total Xylenes	ND		0.00300	1	07/01/2023 20:35	WG2088068
(S) Toluene-d8	*115*		*80.0-120*		*07/01/2023 20:35*	WG2088068
(S) 4-Bromofluorobenzene	*91.8*		*77.0-126*		*07/01/2023 20:35*	WG2088068
(S) 1,2-Dichloroethane-d4	*124*		*70.0-130*		*07/01/2023 20:35*	WG2088068

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	1120		20.0	1	06/27/2023 11:31	WG2084899

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	50.5		1.00	1	06/27/2023 21:49	WG2085019
Sulfate	438	V	25.0	5	06/27/2023 22:30	WG2085019

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Free Carbon Dioxide	21.5	T8	20.0	1	06/29/2023 14:33	WG2086638

Sample Narrative:

L1629251-07 WG2086638: Endpoint pH 4.5 Headspace

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	06/29/2023 16:16	WG2085998
Ethane	ND		0.0130	1	06/29/2023 16:16	WG2085998
Ethene	ND		0.0130	1	06/29/2023 16:16	WG2085998
Acetylene	ND		0.0208	1	06/29/2023 16:16	WG2085998

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	07/01/2023 09:15	WG2087395
Toluene	ND		0.00100	1	07/01/2023 09:15	WG2087395
Ethylbenzene	ND		0.00100	1	07/01/2023 09:15	WG2087395
Total Xylenes	ND		0.00300	1	07/01/2023 09:15	WG2087395
(S) Toluene-d8	*109*		*80.0-120*		*07/01/2023 09:15*	WG2087395
(S) 4-Bromofluorobenzene	*97.2*		*77.0-126*		*07/01/2023 09:15*	WG2087395
(S) 1,2-Dichloroethane-d4	*94.3*		*70.0-130*		*07/01/2023 09:15*	WG2087395

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	1090		20.0	1	06/27/2023 11:31	WG2084899

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	49.2		1.00	1	06/28/2023 18:34	WG2085728
Sulfate	427		25.0	5	06/28/2023 18:47	WG2085728

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Free Carbon Dioxide	24.6	T8	20.0	1	06/29/2023 14:37	WG2086638

Sample Narrative:

L1629251-08 WG2086638: Endpoint pH 4.5 Headspace

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	06/29/2023 16:35	WG2085998
Ethane	ND		0.0130	1	06/29/2023 16:35	WG2085998
Ethene	ND		0.0130	1	06/29/2023 16:35	WG2085998
Acetylene	ND		0.0208	1	06/29/2023 16:35	WG2085998

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	07/01/2023 09:36	WG2087395
Toluene	ND		0.00100	1	07/01/2023 09:36	WG2087395
Ethylbenzene	ND		0.00100	1	07/01/2023 09:36	WG2087395
Total Xylenes	ND		0.00300	1	07/01/2023 09:36	WG2087395
(S) Toluene-d8	*101*		*80.0-120*		*07/01/2023 09:36*	WG2087395
(S) 4-Bromofluorobenzene	*89.6*		*77.0-126*		*07/01/2023 09:36*	WG2087395
(S) 1,2-Dichloroethane-d4	*95.1*		*70.0-130*		*07/01/2023 09:36*	WG2087395

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	1100		20.0	1	06/27/2023 11:31	WG2084899

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Chloride	48.1		10.0	10	06/28/2023 19:01	WG2085728
Sulfate	420		50.0	10	06/28/2023 19:01	WG2085728

Wet Chemistry by Method 4500CO2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Free Carbon Dioxide	25.3	T8	20.0	1	06/29/2023 14:41	WG2086638

Sample Narrative:

L1629251-09 WG2086638: Endpoint pH 4.5 Headspace

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Methane	ND		0.0100	1	06/29/2023 16:38	WG2085998
Ethane	ND		0.0130	1	06/29/2023 16:38	WG2085998
Ethene	ND		0.0130	1	06/29/2023 16:38	WG2085998
Acetylene	ND		0.0208	1	06/29/2023 16:38	WG2085998

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Benzene	ND		0.00100	1	07/01/2023 09:58	WG2087395
Toluene	ND		0.00100	1	07/01/2023 09:58	WG2087395
Ethylbenzene	ND		0.00100	1	07/01/2023 09:58	WG2087395
Total Xylenes	ND		0.00300	1	07/01/2023 09:58	WG2087395
(S) Toluene-d8	*102*		*80.0-120*		*07/01/2023 09:58*	WG2087395
(S) 4-Bromofluorobenzene	*95.3*		*77.0-126*		*07/01/2023 09:58*	WG2087395
(S) 1,2-Dichloroethane-d4	*93.3*		*70.0-130*		*07/01/2023 09:58*	WG2087395

Method Blank (MB)

(MB) R3943084-1 06/27/23 11:31

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Dissolved Solids	U		10.0	10.0

L1629109-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1629109-03 06/27/23 11:31 • (DUP) R3943084-3 06/27/23 11:31

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	429	438	1	2.08		5

L1629251-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1629251-02 06/27/23 11:31 • (DUP) R3943084-4 06/27/23 11:31

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	1420	1460	1	2.92		5

Laboratory Control Sample (LCS)

(LCS) R3943084-2 06/27/23 11:31

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8420	95.7	77.3-123	

Method Blank (MB)

(MB) R3944486-1 07/01/23 10:46

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Dissolved Solids	U	J	10.0	10.0

L1629251-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1629251-01 07/01/23 10:46 • (DUP) R3944486-3 07/01/23 10:46

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	4100	4110	1	0.366		5

L1629401-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1629401-01 07/01/23 10:46 • (DUP) R3944486-4 07/01/23 10:46

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	482	499	1	3.47		5

Laboratory Control Sample (LCS)

(LCS) R3944486-2 07/01/23 10:46

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8380	95.2	77.3-123	

Method Blank (MB)

(MB) R3943141-1 06/27/23 10:12

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	0.460	J	0.379	1.00
Sulfate	0.634	J	0.594	5.00

L1628595-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1628595-02 06/27/23 12:26 • (DUP) R3943141-3 06/27/23 12:39

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	22.9	22.7	1	0.856		20
Sulfate	63.3	62.3	1	1.57		20

L1629251-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1629251-07 06/27/23 21:49 • (DUP) R3943141-6 06/27/23 22:43

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	50.5	50.7	1	0.479		20

L1629251-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1629251-07 06/27/23 22:30 • (DUP) R3943141-7 06/27/23 22:57

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfate	438	443	5	1.20		20

Laboratory Control Sample (LCS)

(LCS) R3943141-2 06/27/23 10:26

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40.0	38.5	96.2	90.0-110	
Sulfate	40.0	36.6	91.5	90.0-110	

L1628595-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1628595-02 06/27/23 12:26 • (MS) R3943141-4 06/27/23 12:53 • (MSD) R3943141-5 06/27/23 13:06

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50.0	22.9	71.4	72.6	97.1	99.4	1	80.0-120			1.60	20
Sulfate	50.0	63.3	106	107	85.0	88.2	1	80.0-120			1.53	20

L1629251-07 Original Sample (OS) • Matrix Spike (MS)

(OS) L1629251-07 06/27/23 21:49 • (MS) R3943141-8 06/27/23 23:10

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50.0	50.5	96.5	92.1	1	80.0-120	
Sulfate	50.0	444	417	0.000	1	80.0-120	E V

Method Blank (MB)

(MB) R3942606-1 06/28/23 10:21

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	0.467	J	0.379	1.00
Sulfate	0.628	J	0.594	5.00

L1626409-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1626409-05 06/28/23 12:31 • (DUP) R3942606-3 06/28/23 12:45

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	ND	ND	1	2.15		20
Sulfate	ND	ND	1	4.19		20

L1626528-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1626528-02 06/28/23 16:06 • (DUP) R3942606-6 06/28/23 16:20

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	5.32	5.32	1	0.0451		20
Sulfate	ND	ND	1	0.518		20

Laboratory Control Sample (LCS)

(LCS) R3942606-2 06/28/23 10:34

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40.0	38.5	96.3	90.0-110	
Sulfate	40.0	37.0	92.6	90.0-110	

L1626409-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1626409-05 06/28/23 12:31 • (MS) R3942606-4 06/28/23 12:58 • (MSD) R3942606-5 06/28/23 13:12

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50.0	ND	49.7	49.8	97.6	97.7	1	80.0-120			0.167	20
Sulfate	50.0	ND	50.3	50.3	94.3	94.4	1	80.0-120			0.0893	20

L1626528-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1626528-02 06/28/23 16:06 • (MS) R3942606-7 06/28/23 17:00

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50.0	5.32	54.8	98.9	1	80.0-120	
Sulfate	50.0	ND	48.2	93.2	1	80.0-120	

Method Blank (MB)

(MB) R3943309-3 06/29/23 13:15

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Free Carbon Dioxide	U		6.67	20.0

Sample Narrative:

BLANK: Endpoint pH 4.5

L1628955-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1628955-02 06/29/23 13:26 • (DUP) R3943309-5 06/29/23 13:31

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Free Carbon Dioxide	ND	ND	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

L1630351-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1630351-01 06/29/23 14:46 • (DUP) R3943309-7 06/29/23 15:39

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Free Carbon Dioxide	ND	ND	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

Method Blank (MB)

(MB) R3943101-2 06/29/23 14:23

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Methane	U		0.00291	0.0100
Ethane	U		0.00407	0.0130
Ethene	U		0.00426	0.0130
Acetylene	U		0.00558	0.0208

L1629237-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1629237-04 06/29/23 15:38 • (DUP) R3943101-3 06/29/23 15:41

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Methane	ND	ND	1	0.000		20
Ethane	ND	ND	1	0.000		20
Ethene	ND	ND	1	0.000		20
Acetylene	ND	ND	1	0.000		20

L1629251-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1629251-08 06/29/23 16:35 • (DUP) R3943101-4 06/29/23 16:40

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Methane	ND	ND	1	0.000		20
Ethane	ND	ND	1	0.000		20
Ethene	ND	ND	1	0.000		20
Acetylene	ND	ND	1	0.000		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3943101-1 06/29/23 14:19 • (LCSD) R3943101-5 06/29/23 16:43

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Methane	0.0678	0.0626	0.0647	92.3	95.4	85.0-115			3.30	20
Ethane	0.129	0.112	0.111	86.8	86.0	85.0-115			0.897	20
Ethene	0.127	0.113	0.113	89.0	89.0	85.0-115			0.000	20
Acetylene	0.208	0.214	0.211	103	101	85.0-115			1.41	20

Method Blank (MB)

(MB) R3943752-3 07/01/23 03:55

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.0000941	0.00100
Toluene	U		0.000278	0.00100
Ethylbenzene	U		0.000137	0.00100
Total Xylenes	U		0.000174	0.00300
(S) Toluene-d8	*104*			*80.0-120*
(S) 4-Bromofluorobenzene	*96.4*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*93.0*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3943752-1 07/01/23 02:51 • (LCSD) R3943752-2 07/01/23 03:12

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.00500	0.00552	0.00551	110	110	70.0-123			0.181	20
Toluene	0.00500	0.00557	0.00491	111	98.2	79.0-120			12.6	20
Ethylbenzene	0.00500	0.00564	0.00510	113	102	79.0-123			10.1	20
Total Xylenes	0.0150	0.0165	0.0154	110	103	79.0-123			6.90	20
(S) Toluene-d8				*102*	*97.2*	*80.0-120*				
(S) 4-Bromofluorobenzene				*91.8*	*92.7*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*94.2*	*96.5*	*70.0-130*				

Method Blank (MB)

(MB) R3944151-3 07/01/23 18:52

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.0000941	0.00100
Toluene	U		0.000278	0.00100
Ethylbenzene	U		0.000137	0.00100
Total Xylenes	U		0.000174	0.00300
(S) Toluene-d8	*113*			*80.0-120*
(S) 4-Bromofluorobenzene	*89.0*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*123*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3944151-1 07/01/23 17:29 • (LCSD) R3944151-2 07/01/23 18:11

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.00500	0.00520	0.00575	104	115	70.0-123			10.0	20
Toluene	0.00500	0.00519	0.00537	104	107	79.0-120			3.41	20
Ethylbenzene	0.00500	0.00489	0.00504	97.8	101	79.0-123			3.02	20
Total Xylenes	0.0150	0.0144	0.0147	96.0	98.0	79.0-123			2.06	20
(S) Toluene-d8				*114*	*112*	*80.0-120*				
(S) 4-Bromofluorobenzene				*92.7*	*93.1*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*124*	*124*	*70.0-130*				

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
T8	Sample(s) received past/too close to holding time expiration.
V	The sample concentration is too high to evaluate accurate spike recoveries.

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:
Terracon - Longmont, CO

1831 Lefthand Circle
Suite C
Longmont. CO 80501

Billing Information:
Charles Covington
1831 Lefthand Circle
Suite C
Longmont, CO 80501

Pres Chk

Report to:
~~Charles Covington~~ Travis Whalen

Email To: ~~charles.covington@terracon.com~~
travis.whalen@terracon.com

Project Description:
COL Annual GW Sampling

City/State Collected: Longmont, CO

Please Circle: PT (MT) CT ET

Phone: 303-454-5249

Client Project #
22227034

Lab Project #
TERRALCO-22227034

Collected by (print):
Travis Whalen

Site/Facility ID #

P.O. #

Collected by (signature):
Travis Whalen

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed
Standard

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	CHLORIDE,SULFATE 125mlHDPE-NoPres	CO2 40mlAmb-NoPres	RSK175 40mlAmb HCl	TDS 1L-HDPE NoPres	V8260BTEX 40mlAmb-HCl							Remarks	Sample # (lab only)
PLI-MW01	Grab	GW	–	6/20/23	0935	9	X	X	X	X	X								-01
PLI-MW02		GW	–		1020	9	X	X	X	X	X								-02
PLI-MW03		GW	–		1030	9	X	X	X	X	X								-03
DMI-MW01		GW	–		1255	9	X	X	X	X	X								-04
DMI-MW-02		GW	–		1235	9	X	X	X	X	X								-05
DMI-MW-03		GW	–		1200	9	X	X	X	X	X								-06
TB7-MW01		GW	–	6/21/23	1145	9	X	X	X	X	X								-07
TB7-MW02		GW	–		1220	9	X	X	X	X	X								-08
TB7-MW03		GW	–		1225	9	X	X	X	X	X								-09
		~~GW~~				~~9~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~								

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN
12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L629251
G113

Acctnum: TERRALCO
Template: T226963
Prelogin: P988375
PM: 824 - Chris Ward
PB: LR 3-22-23
Shipped Via: FedEX Ground

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS X FedEx __ Courier _____

Tracking # 6357 9918 4365

Sample Receipt Checklist
COC Seal Present/Intact: __NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N
RAD Screen <0.5 mR/hr: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	
Travis Whalen	6/21/23	1600	FedEx	Y	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 6.8 °C Bottles Received: 1.2+0=1.2 81	If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 6/23/23 Time: 09:00	Hold: Condition: NCF / OK
			Caleb Tapp		