



Chris Brand

Environmental Remediation/ Facility Decom Advisor

February 10, 2026

New Mexico Oil Conservation Division
District I
1625 N. French Drive
Hobbs, New Mexico 88240

**Re: Lovington Unit Water Plant
2025 Annual Groundwater Monitoring Report
Lea County, New Mexico
Incident No. nAUTOFLWP00359
Case No. 1R-394
OGRID No. 4323**

To whom it may concern:

Please find enclosed the following report:

Lovington Unit Water Plant Site – 2025 Annual Groundwater Monitoring Report

The Report was prepared by Arcadis U.S., Inc. (Arcadis), on behalf of Chevron Environmental Management Company (CEMC) to document on-going groundwater monitoring activities throughout 2025 at the Site.

Should you have any questions or require additional information please contact Morgan Jordan with Arcadis at (281) 644-9437 or myself at (661) 401-0359 or you can reach me via email at chrisbrand@chevron.com.

Respectfully,

Chris Brand

Encl. Lovington Unit Water Plant – 2025 Annual Groundwater Monitoring Report

cc. Morgan Jordan – Arcadis, douglas.jordan@arcadis.com

Chris Brand
Environmental Remediation/ Facility Decom Advisor
6301 Deauville Blvd, Midland, Texas 79706
Mobile 661 401 0359
chrisbrand@chevron.com



Chevron Environmental Management Company

2025 Annual Groundwater Monitoring Report

Lovington Unit Water Plant

Lea County, New Mexico

Incident No. nAUTOflWLP00359

Case No. 1R394

OGRID No. 4323

February 10, 2026

2025 Annual Groundwater Monitoring Report

2025 Annual Groundwater Monitoring Report

Lovington Unit Water Plant
Lea County, New Mexico
Incident No. nAUTOflWP00359
Case No. 1R-394
OGRID No. 4323

February 10, 2026

Prepared By:

Arcadis U.S., Inc.
1330 Post Oak Blvd, Suite 2250
Houston, Texas 77056
Phone: 713 953 4800

Prepared For:

Chris Brand
Project Manager
Chevron Environmental Management Company
6301 Deauville Blvd.
Midland, Texas 79706



Morgan Jordan
Project Manager

This document is intended only for the use of the individual or entity for which it was prepared and may contain information that is privileged, confidential and exempt from disclosure under applicable law. Any dissemination, distribution or copying of this document is strictly prohibited.

www.arcadis.com

2025 Annual Groundwater Monitoring Report

Contents

- 1 Introduction 1
- 2 Groundwater Monitoring Results 1
 - 2.1 Groundwater Gauging Data 1
 - 2.2 Groundwater Analytical Results 1
 - 2.2.1 Chloride 2
 - 2.2.2 TDS 2
- 3 2026 Planned Activities 3

Tables

- Table 1 2025 Groundwater Potentiometric Elevation Data
- Table 2 2025 Groundwater Analytical Results

Figures

- Figure 1 Site Location Map
- Figure 2 Site Details Map
- Figure 3 Semi-Annual Groundwater Potentiometric Map 2025
- Figure 4 Chloride Isoconcentration Map 2025
- Figure 5 TDS Isoconcentration Map 2025

Appendices

- Appendix A. Site Background
- Appendix B. Field Methodology
- Appendix C. Cumulative Summary of Groundwater Potentiometric Elevation Data
- Appendix D. Cumulative Summary of Groundwater Analytical Results
- Appendix E. Analytical Reports

2025 Annual Groundwater Monitoring Report

1 Introduction

Arcadis U.S., Inc. (Arcadis) submits the Annual Groundwater Monitoring Report herein, on behalf of Chevron Environmental Management Company (CEMC), which summarizes the groundwater monitoring activities conducted in 2025 at the Lovington Unit Water Plant (Site).

The Site is located on land owned by the City of Lovington in Unit B, Section 1, Township 17 South, Range 36 East, Lea County, New Mexico at coordinates: 32.868054, -103.305479.

The Site is in the Monument-Draw Watershed in Lea County, New Mexico, which is an area with very low topographic relief that has an overall gentle southward slope. The Site is on the eastern edge of an upland that breaks in slope downward into the Monument Draw valley immediately to the east of the Site. Elevations slope from approximately 3,400 feet above mean sea level (ft AMSL) to approximately 3,360 ft AMSL in the Monument Draw. A Site Location Map is presented as **Figure 1**. A Site Detail Map is presented as **Figure 2**. Additional Site background information is in **Appendix A**.

2 Groundwater Monitoring Results

Groundwater at the Site is monitored semi-annually from a network of 16 monitoring wells. The monitoring wells are shown on **Figure 2**. Arcadis performed the first semi-annual groundwater sampling event on May 12-13, 2025, and the second semi-annual groundwater sampling event on November 10-11, 2025. Field monitoring methodologies are described in **Appendix B**.

2.1 Groundwater Gauging Data

Groundwater measurements collected during the 2025 monitoring events indicate:

- Groundwater elevations ranged from:
 - 3711.68 ft AMSL (MW-12) to 3718.07 ft AMSL (MW-1) during the May 2025 event, and
 - 3710.82 ft AMSL (MW-12) to 3718.08 ft AMSL (MW-1) during the November 2025 event.
- The groundwater elevations observed during the 2025 period are consistent with historical levels, with groundwater flow generally to the east.
- The calculated gradient was 0.0021 feet/foot (ft/ft) for the May 2025 gauging event and 0.0020 ft/ft for the November 2025 gauging event.

Potentiometric elevation data for the sampling event is presented in **Table 1**. The groundwater potentiometric surface maps for May and November 2025 are presented in **Figure 3**. A cumulative summary of groundwater potentiometric elevation data is presented in **Appendix C**.

2.2 Groundwater Analytical Results

During the May 2025 monitoring event 12 of the 16 monitoring wells (MW-5 through MW-16) were sampled. Monitoring wells MW-1 through MW-4 were not sampled due to being dry or insufficient volume of groundwater for sample collection.

2025 Annual Groundwater Monitoring Report

During the November 2025 monitoring event 12 of the 16 monitoring wells (MW-5 through MW-16) were sampled. Monitoring wells (MW-1 through MW-4) were not sampled due to being dry or insufficient volume of groundwater for sample collection.

Groundwater samples were analyzed for the following:

- Chloride by United States Environmental Protection Agency (USEPA) Method 300.0.
- Total Dissolved Solids (TDS) by USEPA Method 2540C-1997.

Groundwater analytical results for chloride and TDS were compared to the New Mexico Environment Department Water Quality Control Commission (NMWQCC) Groundwater Standards. A summary of the groundwater sample analytical results from the May and November 2025 semi-annual events are presented in **Table 2**. A cumulative summary table of groundwater analytical results from 2010 through 2025 is presented in **Appendix D**. Copies of the certified analytical reports and chain-of-custody documentation from Pace Analytical are provided in **Appendix E**.

The isoconcentration maps for chloride and TDS for the 2025 semi-annual sampling events are presented in **Figures 4 and 5**. The analytical results are further summarized below.

2.2.1 Chloride

- Chloride concentrations during the May 2025 sampling event exceeded the NMWQCC standard of 250 milligrams per liter (mg/L) in:
 - 7 of 12 wells sampled (MW-6, MW-8, MW-11, MW-12, MW-14, MW-15 and MW-16) at concentrations ranging from 252 mg/L (MW-15) to 3,500 mg/L (MW-11).
- Chloride concentrations during the November 2025 sampling event exceeded the NMWQCC standard of 250 mg/L in:
 - 7 of 12 wells sampled (MW-6, MW-7, MW-8, MW-11, MW-12, MW-14, and MW-16) at concentrations ranging from 261 mg/L (MW-16) to 4,080 mg/L (MW-11).
- Chloride concentrations in an upgradient well to the west (MW-16) exceeded the NMWQCC standard during both May and November 2025 sampling event, which is consistent with the sampling results reported for the previous 2024 events.
- Chloride exceedances in downgradient wells to the east (MW-8 and MW-12) were also reported during both the May and November 2025 sampling events, which is consistent with the sampling results reported for the previous 2024 events.

2.2.2 TDS

- TDS concentrations during the May 2025 sampling event exceeded the NMWQCC standard of 1,000 mg/L in:
 - 5 of 12 wells sampled (MW-6, MW-8, MW-11, MW-12, and MW-14) at concentrations ranging from 1,280 mg/L (MW-8) to 3,190 mg/L (MW-12).
- TDS concentrations during the November 2025 sampling event exceeded the NMWQCC standard of 1,000 mg/L in:
 - 7 of 12 wells (MW-6, MW-7, MW-8, MW-11, MW-12, MW-14, and MW-15) at concentrations ranging from 1,050 mg/L (MW-7 and MW-15) to 7,600 mg/L (MW-11).

2025 Annual Groundwater Monitoring Report

- TDS exceedances in downgradient wells to the east (MW-8 and MW-12) were reported during both the May and November 2025 sampling events, which is consistent with the sampling results reported for the previous 2024 events.

3 2026 Planned Activities

Based upon the findings presented in this report, the following activities are planned:

- Semi-annual groundwater sampling of all Site wells will be performed in 2026 to monitor chloride and TDS concentrations.
- The results will be summarized in the 2026 annual report.

Tables

Table 1
2025 Groundwater Potentiometric Elevation Data
Lovington Unit Water Plant
Lea County, New Mexico



Well ID	TOC elev ¹	Well Diameter (inches)	Screen Interval (ft bgs ³)	Date	Total Depth (ft below TOC)	Depth to Water (ft below TOC)	Corrected Groundwater Elevation (ft above MSL ²)
MW-1	3832.74	4	95'-115'	05/12/25	114.85	114.67	3718.07
				11/10/25	114.89	114.66	3718.08
MW-2	3830.96	4	95'-115'	05/12/25	114.51	DRY	--
				11/10/25	114.77	114.63	3716.33
MW-3	3834.31	4	95'-115'	05/12/25	115.26	DRY	--
				11/10/25	115.24	DRY	--
MW-4	3831.95	4	95'-115'	05/12/25	114.54	DRY	--
				11/10/25	114.67	DRY	--
MW-5	3830.07	4	95'-130'	05/12/25	132.48	116.18	3713.89
				11/10/25	132.48	117.07	3713.00
MW-6	3835.60	4	95'-130'	05/12/25	131.56	122.23	3713.37
				11/10/25	131.55	123.14	3712.46
MW-7	3834.46	4	95'-132'	05/12/25	135.50	121.87	3712.59
				11/10/25	135.50	122.62	3711.84
MW-8	3832.40	4	97'-132'	05/12/25	135.27	120.61	3711.79
				11/10/25	135.27	121.34	3711.06
MW-9	3832.62	4	92'-222'	05/12/25	200+	117.92	3714.70
				11/10/25	200+	119.02	3713.60
MW-10	3828.57	4	92'-223'	05/12/25	200+	114.94	3713.63
				11/10/25	200+	115.71	3712.86
MW-11	3833.06	4	92'-223'	05/12/25	200+	119.95	3713.11
				11/10/25	200+	120.77	3712.29
MW-12	3831.71	4	97'-227'	05/12/25	200+	120.03	3711.68
				11/10/25	200+	120.89	3710.82
MW-13	3831.06	4	104'-234'	05/12/25	200+	118.92	3712.14
				11/10/25	200+	119.69	3711.37
MW-14	3834.81	4	100'-130'	05/12/25	134.82	121.22	3713.59
				11/10/25	134.82	122.06	3712.75
MW-15	3835.75	4	100'-130'	05/12/25	134.65	122.41	3713.34
				11/10/25	134.65	123.15	3712.60
MW-16	3835.36	4	100'-130'	05/12/25	136.08	120.93	3714.43
				11/10/25	136.08	121.85	3713.51

Notes:

¹ TOC - Top of Casing

² MSL - Mean Sea Level

³ bgs - below ground surface

-- - Not Measured

Professional Survey conducted by West Company of Midland, Inc. in March 2013 and January 2015.

Table 2
2025 Groundwater Analytical Results
Lovington Unit Water Plant
Lea County, New Mexico



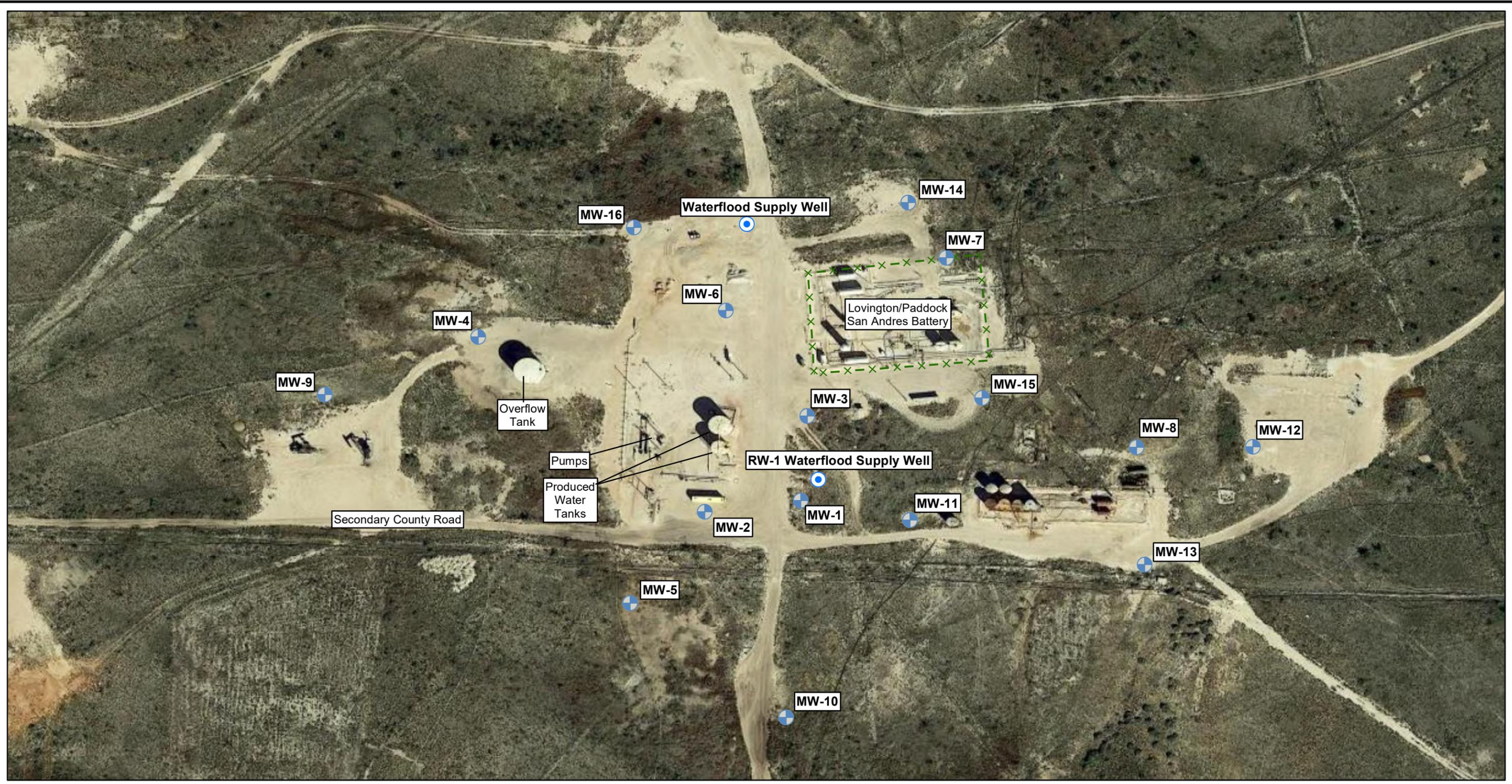
Sample I.D. No.	Date	NMWQCC Standards	
		Chloride	Total Dissolved Solids
		250 mg/L	1,000 mg/L
MW-1	05/12/25	Insufficient water	
	11/10/25	Insufficient water	
MW-2	05/12/25	Dry	
	11/10/25	Insufficient water	
MW-3	05/12/25	Dry	
	11/10/25	Dry	
MW-4	05/12/25	Dry	
	11/10/25	Dry	
MW-5	05/12/25	207	717
	11/10/25	223	839
MW-6	05/12/25	947	2,640
	11/10/25	798	2,440
MW-7	05/13/25	214	787
	11/10/25	273	1,050
MW-8	05/13/25	392	1,280
	11/11/25	395	1,370
MW-9	05/12/25	112	551
	11/10/25	101	531
MW-10	05/12/25	182	644
	11/11/25	169	743
MW-11	05/12/25	3,500	2,140
	11/10/25	4,080	7,600
MW-12 DUP	05/13/25	1,140	3,190 T8
	05/13/25	1,160	3,090
MW-12 DUP	11/11/25	1,110	3,260
	11/11/25	1,030	2,920
MW-13	05/12/25	163	457
	11/11/25	104	528
MW-14	05/13/25	476	1,490
	11/10/25	473	1,630
MW-15	05/13/25	252	779
	11/10/25	226	1,050
MW-16	05/12/25	339	952
	11/11/25	261	914

Notes:

- 1) Groundwater Quality by EPA Methods 300.0 and 2540 C-2011.
- 2) **Bold and Italics** values indicate concentrations above NMWQCC Standards for Domestic Water Supply.
- 3) ¹ NMWQCC Human Health Standards Per NMAC 20.6.2.3103A.
- 4) ² NMWQCC Other Standards for Domestic Water Supply Per NMAC 20.6.2.3103B.
- 6) DUP = Duplicate sample
- 7) mg/L = Milligrams per liter
- 8) T8 = Sample(s) received past/too close to holding time expiration.

Figures

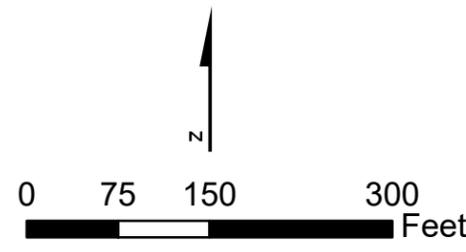
Document Path: \\arcadis-us.com\office\data\Houston-TX\ENV\Chevron\Texaco TX8\HES Transfer\04 Field Investigations\2019\6 - Annual GWMR\Lovington Water Plant\GIS\Figure 2 LWP Site Details Map 01.03.2019.mxd



Legend

- ⊕ Monitoring Well Location
- ⊙ Waterflood Supply Well Location
- x—x—x Fence Line

Notes:
1. Site Location: 32.868054, -103.305479

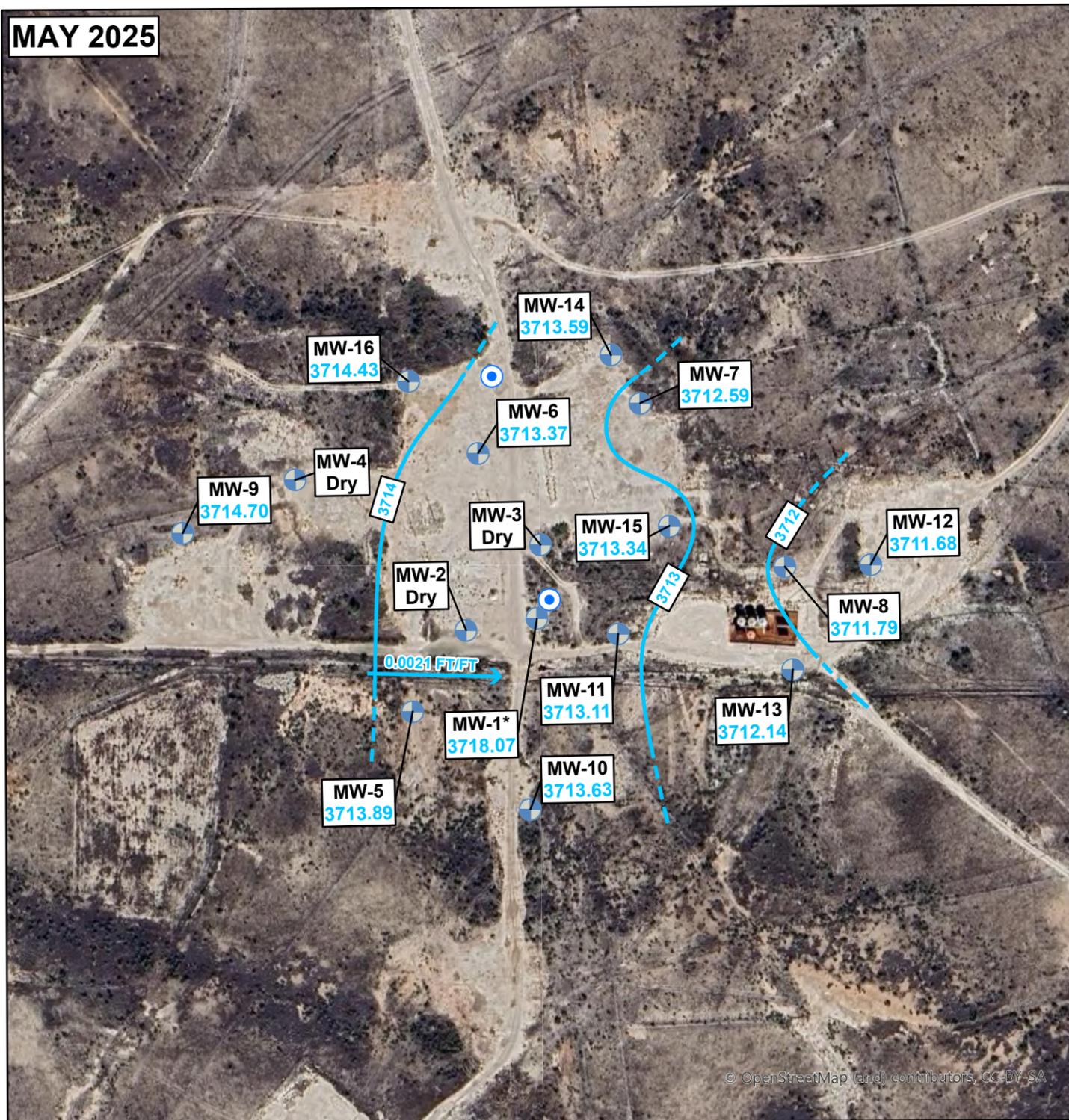


Chevron Environmental Management Company
Lovington Unit Water Plant
Lea County, New Mexico

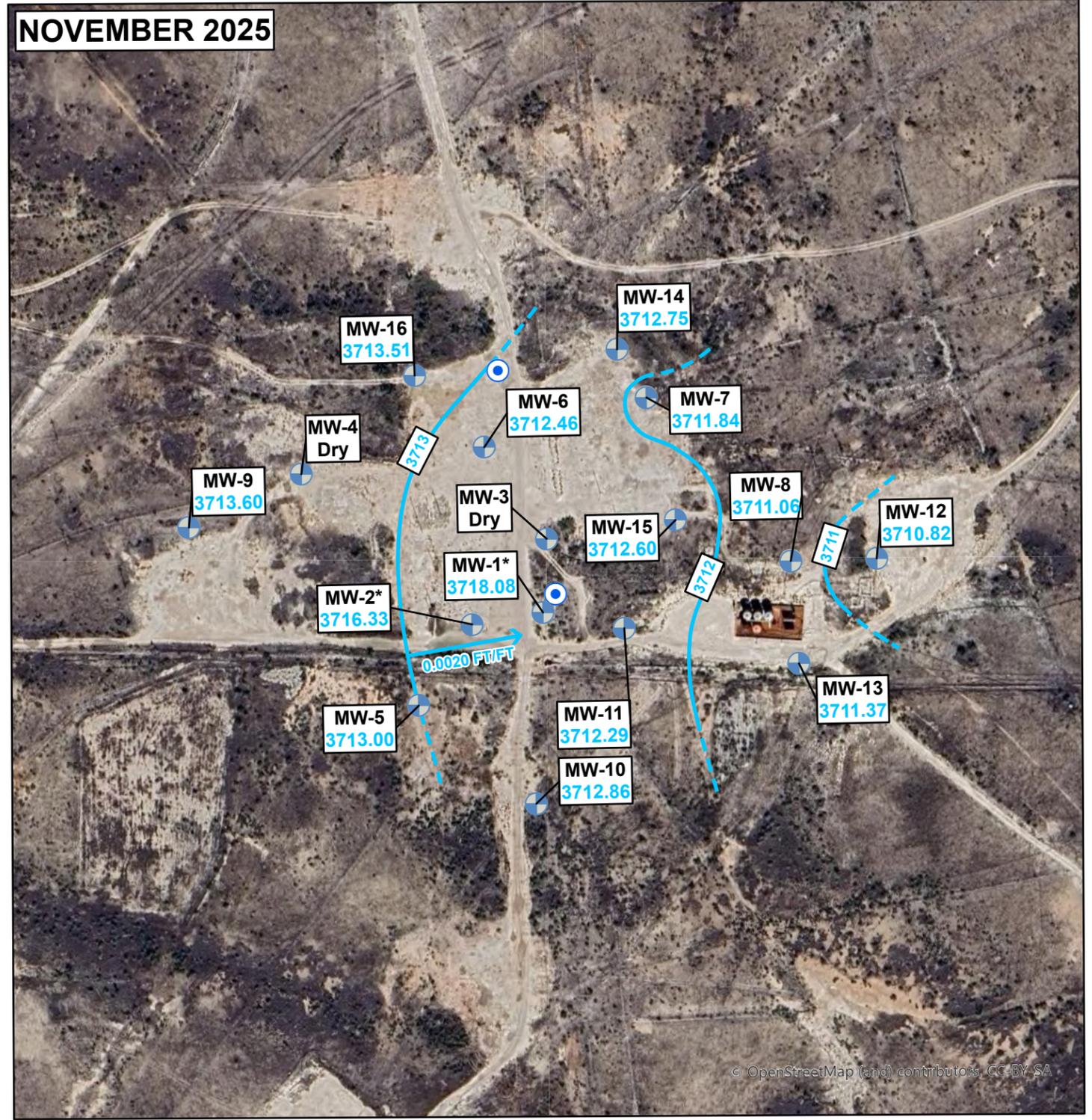
SITE DETAILS MAP

ARCADIS | FIGURE 2

MAY 2025



NOVEMBER 2025



Document Path: T:_ENV\UpstreamLovington_Unit_Water_Plant\ProLovington_Unit_WaterPlant_2025_V1.aprx

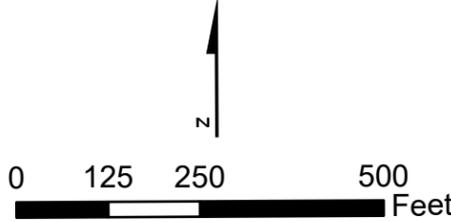
© OpenStreetMap (and) contributors, CC-BY-SA

© OpenStreetMap (and) contributors, CC-BY-SA

Legend

- Monitoring Well Location
- Waterford Supply Well Location *
- Potentiometric Contour and Elevation
- Inferred Potentiometric Contour
- Groundwater Elevation (feet above mean sea level)
- Approximate Groundwater Flow Direction
- Approximate Hydraulic Gradient (Feet/Foot)

- Notes:**
1. Waterford Supply and Reovery Wells were not sampled.
 2. Datum: D_WGS_1984
 3. Site Location: 32.868054, -103.305479
 4. * = Well not used for contouring
 5. Dry = Well Dry



Chevron Environmental Management Company
Lovington Unit Water Plant
Lea County, New Mexico

**SEMI-ANNUAL GROUNDWATER
POTENTIOMETRIC MAP 2025**

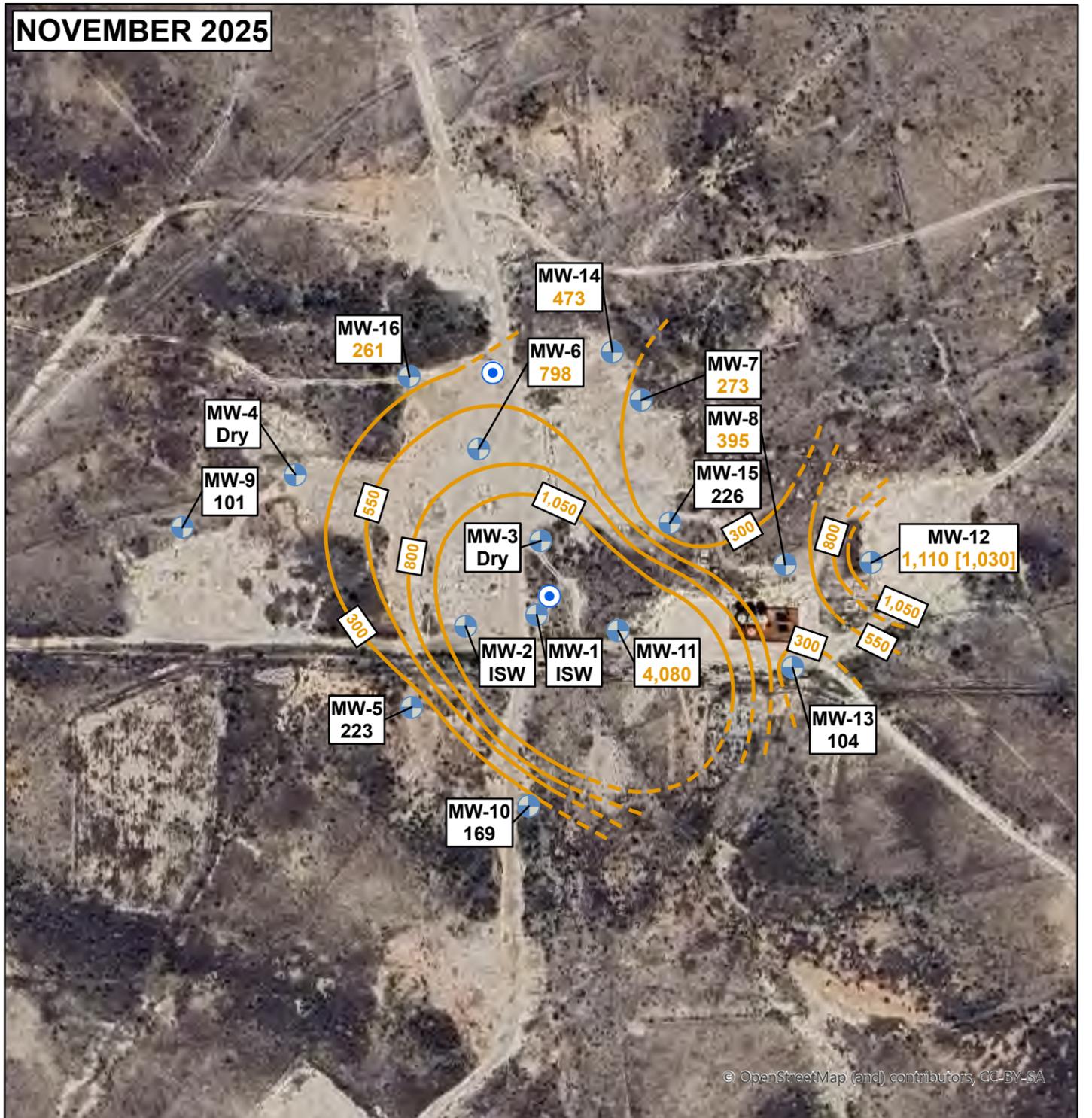
ARCADIS

FIGURE
3

MAY 2025



NOVEMBER 2025



Legend

- Monitoring Well Location
- Waterford Supply Well Location
- Chloride Isoconcentration Contour
- Dashed where inferred
- 101** Chloride Concentration in milligrams per liter (mg/L)
- 1,030** Chloride Concentration (mg/L) Exceeds NMWQCC Other Standards for Domestic Water Supply

Notes:

- Waterflood Supply and Recovery Wells were not sampled.
- Datum: D_WGS_1984
- Site Location: 32.868054, -103.305479
- [] = Duplicate sample
- Dry = Well is Dry
- ISW = Insufficient Water
- NMWQCC = New Mexico Water Quality Control Commission



Analyte	NMWQCC Standard for Groundwater (mg/L)
Chloride	250

Chevron Environmental Management Company
 Lovington Unit Water Plant
 Lea County, New Mexico

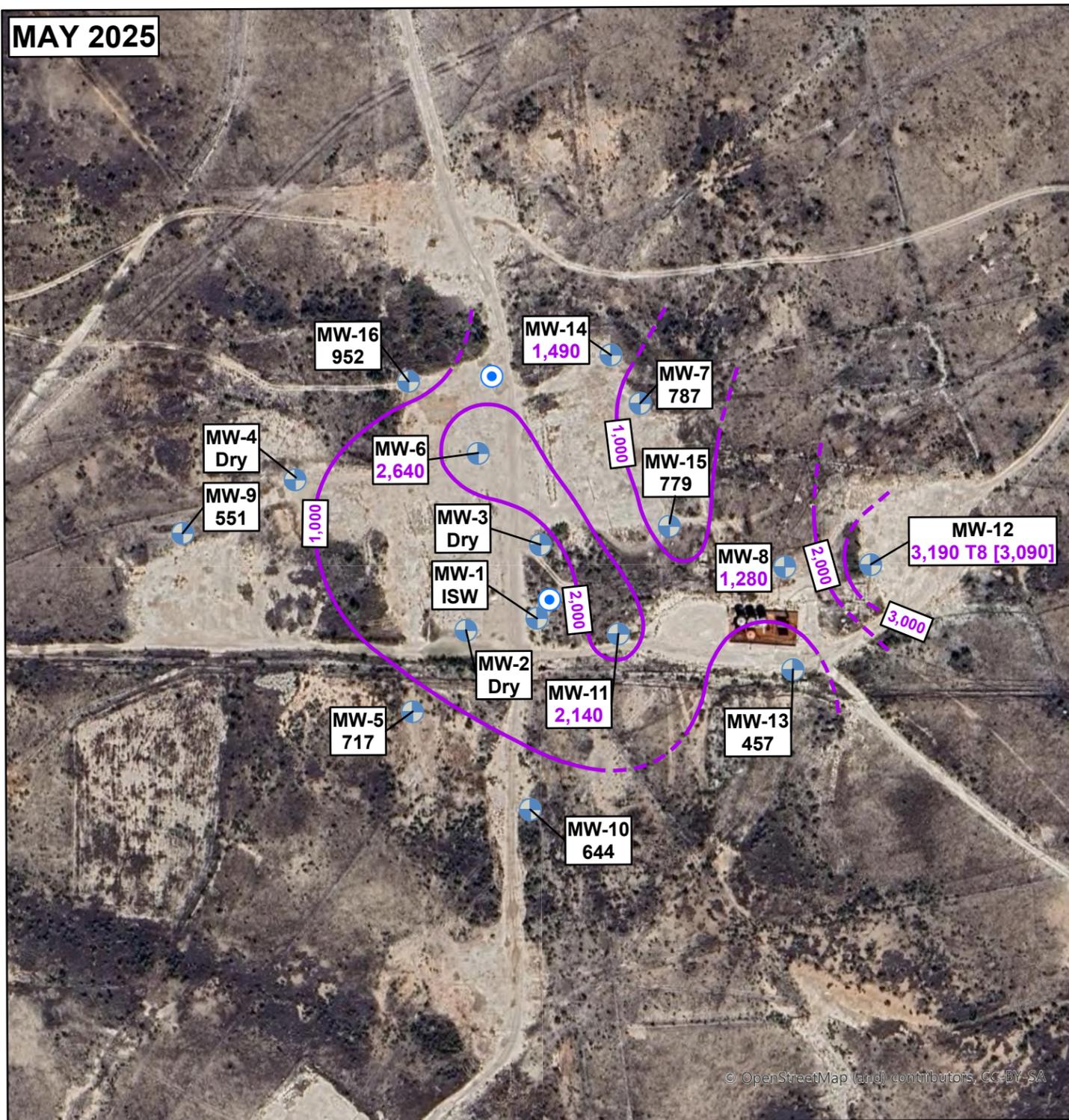
SEMI-ANNUAL CHLORIDE ISOCONCENTRATION MAP 2025

ARCADIS

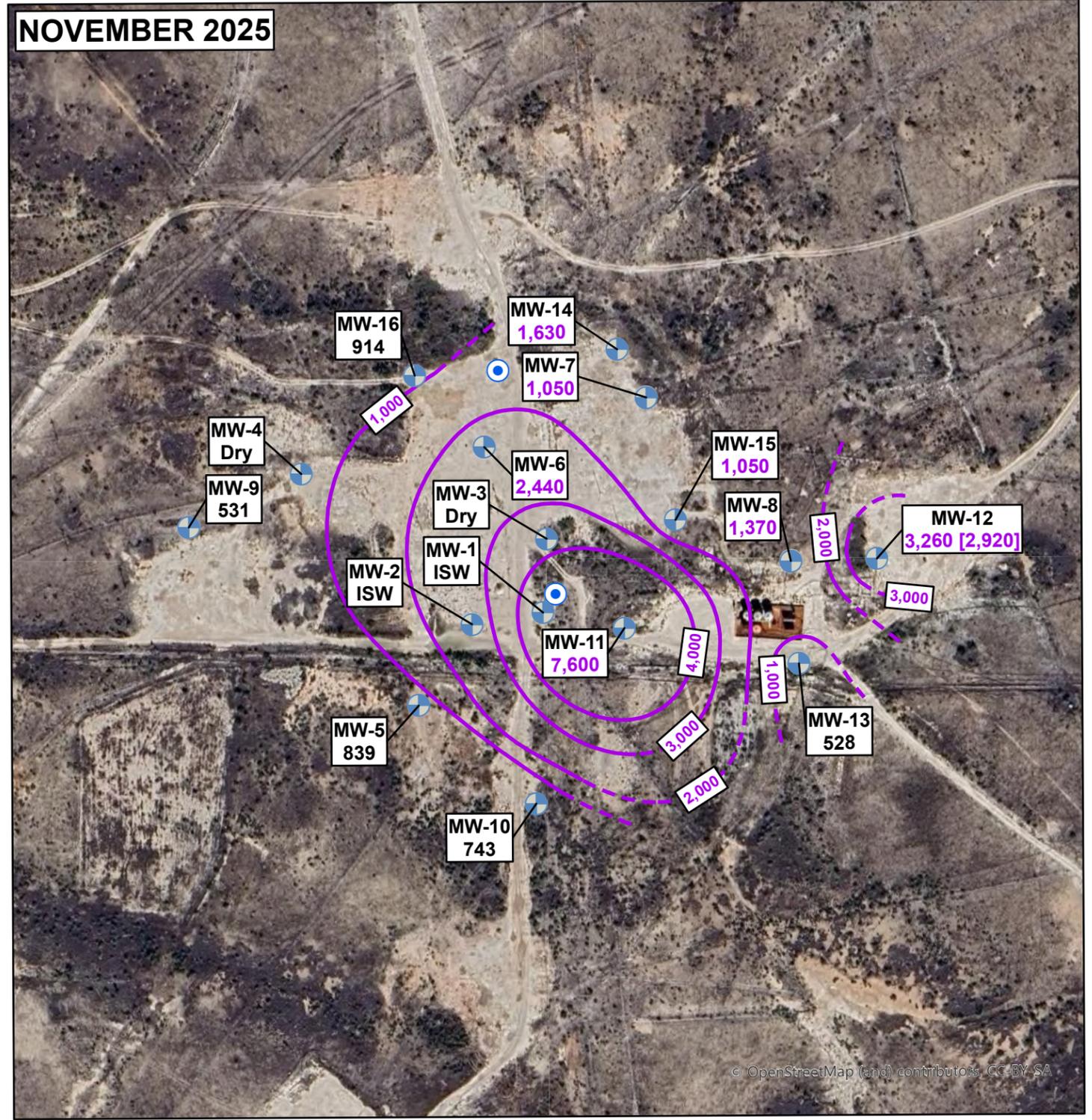
FIGURE **4**

Document Path: T:_ENV\Upstream\Lovington_Unit_Water_Plant\Pro\Lovington_Unit_Water_Plant_2025_V1.aprx

MAY 2025



NOVEMBER 2025



© OpenStreetMap (and) contributors, CC-BY-SA

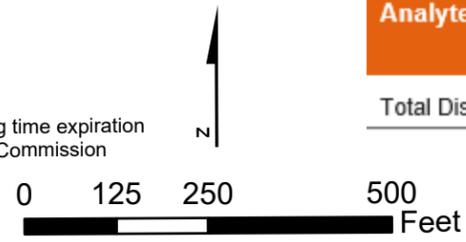
© OpenStreetMap (and) contributors, CC-BY-SA

Legend

- Monitoring Well Location
- Waterford Supply Well Location
- Total Dissolved Solids (TDS) Isoconcentration Contours
- Dashed where inferred
- 952** TDS Concentration in milligrams per liter (mg/L)
- 7,600** TDS Concentration (mg/L) Exceeds NMWQCC Other Standards for Domestic Water Supply

Notes:

1. Waterflood Supply and Recovery Wells were not sampled.
2. Datum: D_WGS_1984
3. Site Location: 32.868054, -103.305479
4. [] = Duplicate sample
5. Dry = Well Dry
6. ISW = Insufficient Water
7. T8 = Sample(s) received past/too close to holding time expiration
8. NMWQCC = New Mexico Water Quality Control Commission



Analyte	NMWQCC Standard for Groundwater (mg/L)
Total Dissolved Solids (TDS)	1,000

Chevron Environmental Management Company
Lovington Unit Water Plant
Lea County, New Mexico

SEMI-ANNUAL TDS ISOCONCENTRATION MAP 2025

ARCADIS

FIGURE
5

Document Path: T:\ENV\UpstreamLovington_Unit_Water_Plant\Pro\Lovington_Unit_Water_Plant\2025_V1.aprx

Appendix A

Site Background



GEOLOGY/HYDROGEOLOGY ASSESSMENT

Site Setting

The Site is located approximately 5 miles southeast of the City of Lovington, in Lea County, New Mexico. The Site is located on land owned by the City of Lovington in Unit B, Section 1, Township 17 South, Range 36 East at coordinates: 32.868054, -103.305479.

The Site is in the Monument-Draw Watershed in Lea County, New Mexico, which is an area with very low topographic relief that has an overall gentle southward slope. The Site is on the eastern edge of an upland that breaks in slope downward into the Monument Draw valley immediately to the east of the Site. Elevations slope from approximately 3,400 feet above mean sea level (ft AMSL) to approximately 3,360 feet in Monument Draw.

Regional Geologic Conditions

The region is characterized by a surface cover of up to 200 feet of unconsolidated to semi-lithified sediments of the Ogallala Formation consisting of sand, clay, and fluvial gravel. The upper portion of the Ogallala Formation has been heavily cemented by caliche. The Tertiary-aged sediments are underlain by the Triassic-aged Dockum Group shale ("red beds").

Site Geology

The Site boring logs used to interpret the Site geology included the logs from the September 2018 GHD field work and logs from previous groundwater assessments. The locations of the soil borings and monitoring wells are shown on Figure 2 (GHD, 2018, Report No 13). The subsurface stratigraphy typically included the following:

- A zone of caliche-cemented fine to medium sand, typically 15 to 20 ft below ground surface (bgs)
- An underlying unconsolidated fine sand layer ranging from 20 to 50 ft bgs
- An unconsolidated very fine to fine sand layer ranging from 50 to 130 ft bgs

Hydrogeologic Conditions

Regional groundwater flow in the Ogallala Aquifer is controlled by the slope of the land surface to the south with localized eastward flow into the valley of Monument Draw. The aquifer typically behaves as an unconfined aquifer. Monument Draw is an intermittent stream that contains water only after heavy rains (Texas Water Development Board [TWDB], 2008). The Dockum Group Shale is considered the underlying aquitard for the Ogallala Aquifer.

Site Hydrogeology

Groundwater beneath the Site is found within the lower Ogallala deposits. The depth to groundwater at the Site ranges from approximately 107 to 115 ft bgs, based on the groundwater monitoring event conducted in October 2018. The local groundwater flow direction trends to the east with an average horizontal hydraulic gradient of approximately 0.006 feet per foot (ft/ft). The east to southeast groundwater flow direction observed at the Site is consistent with the regional groundwater flow direction to the southeast.



REGULATORY BACKGROUND

Sometime between 2000 and 2010, a surface release of produced water (i.e., chlorides) occurred from a saltwater disposal pipeline operated by Rice Operating Company located approximately 700 feet southeast of the Site. The release was in the area of the City of Lovington's public water supply wells, and in a downgradient area regarding groundwater elevations in the Ogallala Aquifer. Specific details of the release are not available (GHD, 2018, Report No 13).

The City of Lovington requested Chevron assess chloride groundwater impacts resulting from operation of Chevron's water processing plant. Four monitoring wells, MW-1 through MW-4, were installed by Stantec Consulting Corporation (Stantec) in January 2010. The highest chloride concentration in soil was present at a depth of 40 feet below bgs at MW-4. Chloride impacted soil was observed at depths less than 20 feet bgs at MW-1 through MW-3. Groundwater from all four wells was sampled in January and February 2010. Chloride and total dissolved solids (TDS) concentrations in groundwater from MW-1 through MW-3 exceeded the New Mexico Water Quality Control Commission (NMWQCC) groundwater standards set forth in New Mexico Administrative Code (NMAC) Section 20.6.2.3103B. Both chloride and TDS concentrations in groundwater at MW-4 were below standards in both samples collected in 2010.

Quarterly monitoring was initiated in 2011. Additional monitoring wells, MW-5 through MW-8, were installed in February and March 2012 to further assess the dissolved-phase chloride plume. All eight monitoring wells were gauged and sampled on a quarterly basis through 2013. Based on the previous results, the monitoring program was changed to semi-annual in 2014.

In 2016, recovery well RW-1 was installed to remediate/control expansion of the chloride plume and to provide water to the waterflood supply program, as well as three additional monitoring wells (MW-9, MW-10, and MW-11) to further delineate the chloride groundwater plume. The monitoring wells were placed around the Site perimeter, and RW-1 was placed between MW-1 and MW-3 in the central plume area.

Recovery well RW-1 serves both as a remediation well for recovery of chloride-impacted groundwater from the aquifer, and as a water supply well for the oil field's waterflood system. The radial gradient induced by the water extraction at RW-1 is also intended to aid in stabilizing the chloride plume by pulling chloride-impacted groundwater inward toward the central plume area.

Due to downgradient expansion of the chloride plume to MW-12 during 2017 and elevated chloride concentrations in MW-4, MW-6, and MW-7, three monitoring wells (MW-14, MW-15, MW-16) and four soil borings (SB-1 through SB-4) were installed during 2018 (GHD, 2018, Report No 13).

REGULATORY FRAMEWORK

The NMOCD provides guidance for remediation of contaminants of oil field wastes or products in Guidelines for Remediation of Leaks, Spills, and Releases (August 13, 1993). The guidance requires remediation of groundwater to the human health standards of the New Mexico Water Quality Control Commission (NMWQCC) set forth in New Mexico Administrative Code (NMAC) 20.6.2.3103. NMAC 20.6.2 was amended and revised standards were effective December 21, 2018. Standards for chloride and TDS are listed below.



Analyte	NMWQCC Standard for Groundwater (mg/L)
Chloride	250
Total Dissolved Solids (TDS)	1,000

Note: mg/L = milligrams per liter

2018 HYDROGEOLOGY ASSESSMENT

On September 5th, 2018, GHD began installation of additional soil borings and monitoring wells at the Site to further delineate the vertical and horizontal extent of chloride impacts in the groundwater and evaluate Site hydrogeological conditions. NMOSE approvals for installation were received on December 13, 2017, and August 10, 2018.

Soil Boring and Monitoring Well Installation

Three monitoring wells, MW-14 through MW-16, and four soil borings, SB-1 through SB-4, were installed at the Site on September 5 and September 6, 2018, with the use of air rotary and mud rotary drilling equipment by Harrison & Cooper, Inc (HCI). The soil boring for each monitoring well installation was continuously drilled to 90 feet bgs prior to transitioning to mud rotary.

The three monitoring wells were constructed with four-inch diameter, schedule 40 PVC casing and with 30-feet of well screen (0.020-inch slotted screen). Well construction details included an 8/16 sand filter pack around the well screen, bentonite seal above the filter pack with riser casing to the ground surface. The wells were completed at the surface with stick-up well protectors set in a concrete pad. Well registration documentation was submitted to the NMOSE by HCI in November 2018. The monitoring wells were surveyed by West Company of Midland, Texas on November 13, 2018.

Appendix B

Field Methodology



FIELD METHODOLOGY

Groundwater Sampling

Field equipment was decontaminated with an Alconox™ wash and distilled water rinse before beginning field activities and between wells. Groundwater gauging was conducted prior to sampling activities.

Prior to sampling, static fluid water levels were measured with an electronic interface probe to the nearest hundredth of a foot and recorded. The monitoring wells were sampled using United States Environmental Protection Agency (USEPA) approved no purge methodology via Hydrasleeves™. Hydrasleeves™ were placed mid-screen within each well a minimum of 24-hours prior to sampling. All non-disposable groundwater sampling equipment was thoroughly decontaminated between measurements to prevent possible cross-contamination between wells. Laboratory-supplied sample containers were filled directly from the Hydrasleeve™.

Groundwater samples were placed on ice in insulated coolers and chilled to a temperature of approximately 4°C. The coolers were sealed for shipment with proper chain-of-custody documentation. Groundwater samples were submitted by Arcadis under chain-of-custody (COC) protocol to Pace Analytical for analysis of chloride by Environmental Protection Agency (EPA) Method 300.0 and total dissolved solids (TDS) by SM 2540C.

Appendix C

Cumulative Summary of Groundwater Potentiometric Elevation Data

Appendix C
 Cumulative Summary of Groundwater Potentiometric Elevation data
 Lovington Unit Water Plant
 Lea County, New Mexico



Well	TOC elev ¹	Well Diameter (inches)	Screen Interval (ft bgs ³)	Date	Total Depth (ft below TOC)	Depth to Water (ft below TOC)	Corrected Groundwater Elevation (ft above MSL ²)
MW-01	3832.74	4	95'-115'	01/19/10	115.00	100.31	3732.43
				02/25/10	115.00	100.41	3732.33
				03/01/11	115.00	102.20	3730.54
				04/13/11	115.00	102.40	3730.34
				07/15/11	115.00	102.58	3730.16
				12/22/11	115.00	102.63	3730.11
				03/22/12	115.00	103.87	3728.87
				06/13/12	115.00	103.89	3728.85
				09/27/12	115.00	104.25	3728.49
				12/19/12	115.00	104.97	3727.77
				01/17/13	115.00	106.98	3725.76
				04/18/13	115.00	105.47	3727.27
				07/18/13	115.00	105.60	3727.14
				10/17/13	115.00	105.59	3727.15
				03/06/14	115.00	105.63	3727.11
				09/09/14	115.00	106.02	3726.72
				03/11/15	115.00	106.26	3726.48
				09/16/15	115.00	106.53	3726.21
				03/30/16	114.75	107.20	3725.54
				09/05/16	---	107.80	3724.94
				03/06/17	115.73	108.98	3723.76
				09/05/17	---	112.20	3720.54
				04/12/18	115.40	113.64	3719.10
				10/01/18	---	Dry	---
				02/07/19	115.24	114.40	3718.34
				12/02/19	115.25	111.70	3721.04
				04/20/20	115.32	110.01	3722.73
				05/12/21	114.98	Dry	---
				11/16/21	114.76	113.20	3719.54
				05/16/22	114.89	114.07	3718.67
11/15/22	114.89	114.52	3718.22				
07/24/23	114.87	114.63	3718.11				
11/06/23	112.90	Dry	---				
07/08/24	114.75	114.57	3718.17				
10/28/24	114.90	114.65	3718.09				
05/12/25	114.85	114.67	3718.07				
11/10/25	114.89	114.66	3718.08				
MW-02	3830.96	4	95'-115'	01/19/10	115.00	98.10	3732.86
				02/25/10	115.00	98.17	3732.79
				03/01/11	115.00	99.89	3731.07
				04/13/11	115.00	100.03	3730.93
				07/15/11	115.00	100.41	3730.55
				12/22/11	115.00	100.53	3730.43
				03/22/12	115.00	101.60	3729.36
				06/13/12	115.00	101.60	3729.36
				09/27/12	115.00	102.02	3728.94
				12/19/12	115.00	102.68	3728.28
				01/17/13	115.00	103.40	3727.56
				04/19/13	115.00	102.93	3728.03
				07/18/13	115.00	103.30	3727.66
				10/17/13	115.00	103.54	3727.42
				03/06/14	115.00	114.95	3716.01
				09/09/14	115.00	103.70	3727.26
				03/15/15	115.00	104.09	3726.87
				09/16/15	115.00	104.30	3726.66
				03/30/16	114.82	104.93	3726.03
				09/05/16	---	105.55	3725.41
				03/06/17	114.98	106.61	3724.35
				09/05/17	---	108.45	3722.51
				04/12/18	114.97	109.87	3721.09
				10/01/18	114.71	110.65	3720.31
				02/04/19	115.37	110.76	3720.20
				12/02/19	116.75	108.08	3722.88
				04/20/20	114.81	107.51	3723.45
				05/12/21	114.92	109.88	3721.08
				11/17/21	114.50	111.02	3719.94
				05/16/22	114.85	111.80	3719.16
11/15/22	114.85	112.87	3718.09				
07/24/23	114.94	113.98	3716.98				
11/06/23	114.92	114.35	3716.61				
07/08/24	114.38	DRY	---				
10/28/24	114.46	DRY	---				
05/12/25	114.51	DRY	---				
11/10/25	114.77	114.63	3716.33				

Appendix C
 Cumulative Summary of Groundwater Potentiometric Elevation data
 Lovington Unit Water Plant
 Lea County, New Mexico



Well	TOC elev ¹	Well Diameter (inches)	Screen Interval (ft bgs ³)	Date	Total Depth (ft below TOC)	Depth to Water (ft below TOC)	Corrected Groundwater Elevation (ft above MSL ²)
MW-03	3834.31	4	95'-115'	01/19/10	115.00	101.96	3732.35
				02/25/10	115.00	102.10	3732.21
				03/01/11	115.00	103.94	3730.37
				04/13/11	115.00	104.30	3730.01
				07/15/11	115.00	104.76	3729.55
				12/22/11	115.00	104.98	3729.33
				03/22/12	115.00	105.60	3728.71
				06/13/12	115.00	105.50	3728.81
				09/27/12	115.00	105.83	3728.48
				12/19/12	115.00	106.69	3727.62
				01/17/13	115.00	107.03	3727.28
				04/19/13	115.00	106.85	3727.46
				07/18/13	115.00	107.33	3726.98
				10/17/13	115.00	107.30	3727.01
				03/06/14	115.00	107.03	3727.28
				09/09/14	115.00	107.50	3726.81
				03/11/15	115.00	107.82	3726.49
				09/16/15	115.00	107.98	3726.33
				03/30/16	115.07	108.70	3725.61
				09/05/16	---	109.30	3725.01
				03/06/17	115.91	110.31	3724.00
				09/05/17	---	112.61	3721.70
				04/12/18	---	113.98	3720.33
				10/01/18	115.00	114.80	3719.51
				02/04/19	116.12	115.02	3719.29
				12/02/19	115.20	111.94	3722.37
				04/20/20	115.20	111.46	3722.85
				05/12/21	115.06	113.49	3720.82
				11/17/21	115.21	114.69	3719.62
				05/16/22	115.32	115.08	3719.23
11/15/22	115.32	115.32	3718.99				
07/24/23	115.31	115.20	3719.11				
11/06/23	115.20	DRY	--				
07/08/24	117.44	DRY	--				
10/28/24	115.34	DRY	--				
05/12/25	115.26	DRY	--				
11/10/25	115.24	DRY	--				
MW-04	3831.95	4	95'-115'	01/19/10	115.00	98.23	3733.72
				02/25/10	115.00	98.28	3733.67
				03/01/11	115.00	99.94	3732.01
				04/13/11	115.00	100.18	3731.77
				07/15/11	115.00	100.45	3731.50
				12/22/11	115.00	100.48	3731.47
				03/22/12	115.00	101.50	3730.45
				06/13/12	115.00	101.55	3730.40
				09/27/12	115.00	102.07	3729.88
				12/19/12	115.00	102.84	3729.11
				01/17/13	115.00	102.91	3729.04
				04/18/13	115.00	102.78	3729.17
				07/18/13	115.00	103.23	3728.72
				10/17/13	115.00	103.18	3728.77
				03/06/14	115.00	103.05	3728.90
				09/08/14	115.00	103.62	3728.33
				03/10/15	115.00	103.89	3728.06
				09/16/15	115.00	104.25	3727.70
				03/30/16	114.53	105.09	3726.86
				09/05/16	115.00	105.91	3726.04
				03/06/17	114.83	106.87	3725.08
				09/05/17	115.00	107.78	3724.17
				04/12/18	114.60	108.08	3723.87
				10/01/18	114.91	109.15	3722.80
				02/04/19	115.11	108.53	3723.42
				12/02/19	114.58	107.27	3724.68
				04/20/20	114.52	106.61	3725.34
				05/12/21	114.90	109.64	3722.31
				11/17/21	114.66	111.13	3720.82
				05/16/22	114.60	111.78	3720.17
11/15/22	114.60	113.12	3718.83				
07/24/23	114.72	114.42	3717.53				
11/06/23	114.65	114.44	3717.51				
07/08/24	114.51	114.51	3717.44				
10/28/24	114.61	DRY	--				
05/12/25	114.54	DRY	--				
11/10/25	114.67	DRY	--				

Appendix C
 Cumulative Summary of Groundwater Potentiometric Elevation data
 Lovington Unit Water Plant
 Lea County, New Mexico



Well	TOC elev ¹	Well Diameter (inches)	Screen Interval (ft bgs ³)	Date	Total Depth (ft below TOC)	Depth to Water (ft below TOC)	Corrected Groundwater Elevation (ft above MSL ²)
MW-05	3830.07	4	95'-130'	03/22/12	133.00	100.15	3729.92
				06/13/12	133.00	100.23	3729.84
				09/27/12	133.00	100.72	3729.35
				12/19/12	133.00	101.28	3728.79
				01/17/13	133.00	101.65	3728.42
				04/18/13	133.00	101.70	3728.37
				07/18/13	133.00	101.81	3728.26
				10/17/13	133.00	102.03	3728.04
				03/06/14	133.00	102.03	3728.04
				09/08/14	133.00	102.44	3727.63
				03/10/15	133.00	103.20	3726.87
				09/16/15	133.00	102.99	3727.08
				03/30/16	132.60	103.70	3726.37
				09/05/16	---	104.26	3725.81
				03/06/17	---	105.27	3724.80
				09/05/17	---	106.50	3723.57
				04/12/18	131.95	107.61	3722.46
				10/01/18	131.83	108.63	3721.44
				02/04/19	131.73	108.66	3721.41
				12/02/19	131.31	106.74	3723.33
				04/20/20	131.41	106.17	3723.90
				05/12/21	131.96	108.41	3721.66
				11/17/21	131.57	109.86	3720.21
				05/16/22	131.31	110.59	3719.48
				11/15/22	131.31	111.71	3718.36
07/24/23	131.69	112.68	3717.39				
11/06/23	131.81	113.33	3716.74				
07/08/24	137.11	114.32	3715.75				
10/28/24	131.72	115.30	3714.77				
05/12/25	132.48	116.18	3713.89				
11/10/25	132.48	117.07	3713.00				
MW-06	3835.60	4	95'-130'	03/22/12	133.00	106.73	3728.87
				06/13/12	133.00	106.56	3729.04
				09/27/12	133.00	107.00	3728.60
				12/19/12	133.00	108.28	3727.32
				01/17/13	133.00	108.60	3727.00
				04/19/13	133.00	107.83	3727.77
				07/18/13	133.00	108.80	3726.80
				10/17/13	133.00	108.75	3726.85
				03/06/14	133.00	107.89	3727.71
				09/09/14	133.00	108.31	3727.29
				03/10/15	133.00	108.56	3727.04
				09/16/15	133.00	108.98	3726.62
				03/30/16	131.70	109.60	3726.00
				09/05/16	---	110.25	3725.35
				03/06/17	132.40	111.30	3724.30
				09/05/17	---	112.50	3723.10
				04/12/18	131.80	113.51	3722.09
				10/01/18	131.80	114.40	3721.20
				02/04/19	131.20	114.49	3721.11
				12/02/19	131.20	112.54	3723.06
				04/20/20	131.62	112.08	3723.52
				05/12/21	132.68	114.39	3721.21
				11/17/21	131.61	115.70	3719.90
				05/16/22	131.69	116.41	3719.19
				11/15/22	131.69	117.41	3718.19
07/24/23	131.72	118.77	3716.83				
11/06/23	131.95	119.34	3716.26				
07/08/24	133.74	120.47	3715.13				
10/28/24	131.69	121.30	3714.30				
05/12/25	131.56	122.23	3713.37				
11/10/25	131.55	123.14	3712.46				
MW-07	3834.46	4	95'-132'	03/22/12	135.00	105.97	3728.49
				06/13/12	135.00	106.23	3728.23
				09/27/12	135.00	106.44	3728.02
				12/19/12	135.00	107.31	3727.15
				01/17/13	135.00	107.53	3726.93
				04/18/13	135.00	107.46	3727.00
				07/18/13	135.00	108.01	3726.45
				10/17/13	135.00	107.98	3726.48
				03/06/14	135.00	107.55	3726.91
				09/09/14	135.00	108.05	3726.41
				03/10/15	135.00	108.50	3725.96
09/16/15	135.00	108.68	3725.78				

Appendix C
 Cumulative Summary of Groundwater Potentiometric Elevation data
 Lovington Unit Water Plant
 Lea County, New Mexico



Well	TOC elev ¹	Well Diameter (inches)	Screen Interval (ft bgs ³)	Date	Total Depth (ft below TOC)	Depth to Water (ft below TOC)	Corrected Groundwater Elevation (ft above MSL ²)
MW-7 cont.	3834.46	4	95'-132'	03/30/16	134.90	109.41	3725.05
				09/05/16	---	110.12	3724.34
				03/06/17	135.21	110.80	3723.66
				09/05/17	---	111.88	3722.58
				04/12/18	135.70	113.28	3721.18
				10/01/18	135.40	114.02	3720.44
				02/04/19	135.44	114.29	3720.17
				12/02/19	134.70	112.77	3721.69
				04/20/20	134.76	112.46	3722.00
				05/12/21	135.35	114.22	3720.24
				11/17/21	134.76	115.73	3718.73
				05/16/22	134.91	116.18	3718.28
				11/15/22	134.91	117.11	3717.35
				07/24/23	135.03	118.53	3715.93
				11/06/23	136.31	119.02	3715.44
				07/08/24	136.04	120.11	3714.35
				10/28/24	134.39	120.87	3713.59
05/12/25	135.50	121.87	3712.59				
11/10/25	135.50	122.62	3711.84				
MW-08	3832.40	4	97'-132'	03/22/12	135.00	104.71	3727.69
				06/13/12	135.00	104.84	3727.56
				09/27/12	135.00	105.21	3727.19
				12/19/12	135.00	105.82	3726.58
				01/17/13	135.00	106.10	3726.30
				04/18/13	135.00	106.27	3726.13
				07/18/13	135.00	106.55	3725.85
				10/17/13	135.00	106.55	3725.85
				03/06/14	135.00	106.75	3725.65
				09/09/14	135.00	107.27	3725.13
				03/10/15	135.00	107.59	3724.81
				09/16/15	135.00	107.73	3724.67
				03/30/16	135.23	108.35	3724.05
				09/05/16	---	108.82	3723.58
				03/06/17	135.50	109.65	3722.75
				09/05/17	---	110.70	3721.70
				04/12/18	135.63	112.23	3720.17
				10/01/18	134.81	112.40	3720.00
				02/04/19	134.99	113.48	3718.92
				12/03/19	132.54	112.38	3720.02
				04/20/20	135.10	112.00	3720.40
05/12/21	135.76	113.48	3718.92				
11/17/21	134.86	114.71	3717.69				
05/16/22	135.62	115.50	3716.90				
11/15/22	135.62	116.22	3716.18				
07/24/23	134.91	117.42	3714.98				
11/06/23	135.35	117.91	3714.49				
07/08/24	159.48	119.00	3713.40				
10/28/24	134.98	119.72	3712.68				
05/12/25	135.27	120.61	3711.79				
11/10/25	135.27	121.34	3711.06				
MW-09	3832.62	4	92'-222'	09/05/16	226.00	105.77	3726.85
				03/06/17	226.83	106.58	3726.04
				09/05/17	---	107.60	3725.02
				04/12/18	226.89	107.75	3724.87
				10/01/18	225.03	109.08	3723.54
				02/04/19	231.60	108.27	3724.35
				12/02/19	280.25	106.50	3726.12
				04/20/20	---	105.80	3726.82
				05/12/21	---	109.39	3723.23
				11/17/21	---	110.95	3721.67
				05/16/22	200+	111.56	3721.06
				11/15/22	200+	113.12	3719.50
				07/24/23	224.37	114.19	3718.43
				11/06/23	---	115.04	3717.58
07/08/24	200+	116.14	3716.48				
10/28/24	220.12	117.15	3715.47				
05/12/25	200+	117.92	3714.70				
11/10/25	200+	119.02	3713.60				
MW-10	3828.57	4.00	92'-223'	09/05/16	223.00	103.08	3725.49
				03/06/17	222.91	104.30	3724.27
				09/05/17	---	105.25	3723.32
				04/12/18	223.21	106.51	3722.06
				10/01/18	223.04	107.48	3721.09
				02/04/19	224.42	107.82	3720.75
				12/02/19	223.00	106.14	3722.43

Appendix C
 Cumulative Summary of Groundwater Potentiometric Elevation data
 Lovington Unit Water Plant
 Lea County, New Mexico



Well	TOC elev ¹	Well Diameter (inches)	Screen Interval (ft bgs ³)	Date	Total Depth (ft below TOC)	Depth to Water (ft below TOC)	Corrected Groundwater Elevation (ft above MSL ²)				
MW-10 cont.	3828.57	4.00	92'-223'	04/20/20	---	105.60	3722.97				
				05/12/21	---	107.52	3721.05				
				11/17/21	---	108.82	3719.75				
				05/16/22	200+	109.57	3719.00				
				11/15/22	200+	110.62	3717.95				
				07/24/23	223.34	111.64	3716.93				
				11/06/23	200.00	112.21	3716.36				
				07/08/24	200+	113.23	3715.34				
				10/28/24	223.32	114.10	3714.47				
				05/12/25	200+	114.94	3713.63				
				11/10/25	200+	115.71	3712.86				
				MW-11	3833.06	4.00	92'-223'	09/05/16	225.00	108.05	3725.01
								03/06/17	227.57	109.32	3723.74
09/05/17	---	111.38	3721.68								
04/12/18	225.42	112.71	3720.35								
10/01/18	226.31	113.60	3719.46								
02/04/19	226.64	113.95	3719.11								
12/3/2019	225.00	11.27	3821.79								
4/20/2020	---	110.72	3722.34								
05/12/21	---	112.68	3720.38								
11/17/21	---	113.79	3719.27								
05/16/22	200+	114.54	3718.52								
11/15/22	200+	115.52	3717.54								
07/24/23	224.82	116.98	3716.08								
11/06/23	200.00	117.16	3715.90								
07/08/24	200+	118.18	3714.88								
10/28/24	222.22	119.10	3713.96								
05/12/25	200+	119.95	3713.11								
11/10/25	200+	120.77	3712.29								
MW-12	3831.71	4	97'-227'	09/05/17	227.00	110.07	3721.64				
				04/12/18	227.87	111.37	3720.34				
				10/01/18	227.89	112.10	3719.61				
				02/04/19	226.34	112.69	3719.02				
				12/03/19	229.85	111.95	3719.76				
				04/20/20	---	111.60	3720.11				
				05/12/21	---	112.98	3718.73				
				11/17/21	---	114.09	3717.62				
				05/16/22	200+	114.82	3716.89				
				11/15/22	200+	115.66	3716.05				
				07/24/23	230.18	116.88	3714.83				
				11/06/23	200.00	117.37	3714.34				
				07/08/24	200+	118.49	3713.22				
				10/28/24	230.02	119.16	3712.55				
				05/12/25	200+	120.03	3711.68				
11/10/25	200+	120.89	3710.82								
MW-13	3831.06	4	104'-234'	09/05/17	234.00	109.22	3721.84				
				04/12/18	235.80	110.57	3720.49				
				10/01/18	230.61	111.41	3719.65				
				02/04/19	234.82	111.86	3719.20				
				12/03/19	227.18	110.81	3720.25				
				04/20/20	---	110.38	3720.68				
				05/12/21	---	111.98	3719.08				
				11/17/21	---	113.16	3717.90				
				05/16/22	200+	113.75	3717.31				
				11/15/22	200+	114.65	3716.41				
				07/24/23	223.57	115.86	3715.20				
				11/06/23	200.00	116.32	3714.74				
				07/08/24	200+	117.42	3713.64				
				10/28/24	230.02	118.14	3712.92				
				05/12/25	200+	118.92	3712.14				
11/10/25	200+	119.69	3711.37								
MW-14	3834.81	4	100'-130'	10/01/18	134.51	113.14	3721.67				
				02/04/19	134.53	113.44	3721.37				
				12/02/19	134.55	112.05	3722.76				
				04/20/20	134.61	111.71	3723.10				
				05/12/21	136.41	113.68	3721.13				
				11/17/21	134.30	114.81	3720.00				
				05/16/22	134.91	115.51	3719.30				
				11/15/22	134.91	116.48	3718.33				
				07/24/23	134.65	117.91	3716.90				
				11/06/23	135.39	118.41	3716.40				
				07/08/24	135.88	119.52	3715.29				
				10/28/24	134.39	120.29	3714.52				
				05/12/25	134.82	121.22	3713.59				
11/10/25	134.82	122.06	3712.75								

Appendix C
 Cumulative Summary of Groundwater Potentiometric Elevation data
 Lovington Unit Water Plant
 Lea County, New Mexico



Well	TOC elev ¹	Well Diameter (inches)	Screen Interval (ft bgs ³)	Date	Total Depth (ft below TOC)	Depth to Water (ft below TOC)	Corrected Groundwater Elevation (ft above MSL ²)
MW-15	3835.75	4	100'-130'	10/01/18	134.76	115.13	3720.62
				02/05/19	135.00	115.59	3720.16
				12/02/19	134.40	113.63	3722.12
				04/20/20	134.13	113.30	3722.45
				05/12/21	134.97	114.97	3720.78
				11/17/21	134.14	116.16	3719.59
				05/16/22	134.47	116.90	3718.85
				11/15/22	134.47	117.81	3717.94
				07/24/23	134.13	119.14	3716.61
				11/06/23	137.04	119.62	3716.13
				07/08/24	135.92	120.70	3715.05
				10/28/24	134.96	121.47	3714.28
				05/12/25	134.65	122.41	3713.34
				11/10/25	134.65	123.15	3712.60
MW-16	3835.36	4	100'-130'	10/01/18	134.10	112.44	3722.92
				02/04/19	134.70	112.27	3723.09
				12/02/19	134.15	110.77	3724.59
				04/20/20	134.23	110.27	3725.09
				05/12/21	136.37	112.88	3722.48
				11/17/21	133.98	114.18	3721.18
				05/16/22	133.86	114.85	3720.51
				11/15/22	133.86	116.00	3719.36
				07/24/23	134.01	117.40	3717.96
				11/06/23	134.62	118.01	3717.35
				07/08/24	136.35	119.18	3716.18
				10/28/24	134.21	119.97	3715.39
				05/12/25	136.08	120.93	3714.43
				11/10/25	136.08	121.85	3713.51

Notes:

¹ TOC - Top of Casing

² MSL - Mean Sea Level

³ bgs - below ground surface

ft = Feet

--- = Not Measured

Professional Survey conducted by West Company of Midland, Inc. in March 2013 and January 2015.

Appendix D

Cumulative Summary of Groundwater Analytical Results

Appendix D
 Cumulative Summary of Groundwater Analytical Results
 Lovington Unit Water Plant
 Lea County, New Mexico



Sample I.D. No.	Replete Sample I.D.	Date	NMWQCC Standards	
			Chloride	Total Dissolved Solids
			250 mg/L	1,000 mg/L
MW-1	DUP	01/19/10	336	1,080
		02/25/10	357	1,100
		03/01/11	264	870
		04/13/11	348	1,070
		07/15/11	271	740
		12/22/11	332	1,120
		12/22/11	339	1,010
		03/22/12	485	2,170
		06/14/12	502	1,550
		09/28/12	404	1,190
		12/19/12	401	1,000
		01/18/13	102	1,400
		04/18/13	567	1,250
		07/18/13	753	2,410
		10/21/13	578	2,010
		03/07/14	483	1,380
		09/09/14	211	861
		03/11/15	399	1,270
		09/17/15	791	1,780
		03/31/16	793	1,670
		09/06/16	359	1,300
		03/07/17	519	1,450
		09/06/17	618	1,560
		04/13/18	352	933
		10/01/18	Dry	Dry
02/05/19	ISW	ISW		
12/03/19	450	2,000		
04/21/20	760	2,300		
05/13/21	Dry	Dry		
11/17/21	747	2,000		
05/16/22	687	1,700		
11/15/22	ISW	ISW		
07/24/23	ISW	ISW		
11/06/23	Dry	Dry		
07/08/24	ISW	ISW		
10/28/24	ISW	ISW		
05/12/25	ISW	ISW		
11/10/25	ISW	ISW		
MW-2	DUP	01/19/10	857	2,180
		01/19/10	912	2,150
		02/25/10	901	2,440
	DUP	03/01/11	649	2,390
		03/01/11	627	2,400
		04/13/11	775	2,690
		07/15/11	384	3,220
		12/22/11	456	1,420
		03/23/12	614	2,640
		06/14/12	292	1,190
		09/28/12	467	1,490
		12/20/12	670	1,560
		01/18/13	486	1,620
		04/19/13	406	1,340
		07/18/13	582	2,000
		10/21/13	547	2,260
		03/07/14	483	1,280
		09/09/14	886	3,600
		03/11/15	1,390	4,440
		09/17/15	1,450	3,060
		03/31/16	1,050	1,880
		10/06/16	838	2,600
		03/07/17	636	1,790
		09/06/17	401	1,440
		04/12/18	657	1,460
	10/02/18	764	1,530	
	02/07/19	840	1,820	
	12/03/19	1,100	3,300	
	04/21/20	1,400	5,500	
	05/13/21	959	2,690	
	11/17/21	494	1,700	
	05/17/22	502	1,460	
	11/15/22	640	1,550	
	07/25/23	689	1,890	
	11/06/23	ISW	ISW	
	07/08/24	Dry	Dry	
	10/28/24	Dry	Dry	
	05/12/25	Dry	Dry	
	11/10/25	ISW	ISW	

Appendix D
 Cumulative Summary of Groundwater Analytical Results
 Lovington Unit Water Plant
 Lea County, New Mexico



Sample I.D. No.	Replete Sample I.D.	Date	NMWQCC Standards	
			Chloride	Total Dissolved Solids
			250 mg/L	1,000 mg/L
MW-3		01/19/10	734	1,920
		02/25/10	763	2,130
		03/01/11	944	2,670
		04/13/11	1,050	4,180
	DUP	04/13/11	1,070	3,650
		07/15/11	1,130	3,330
	DUP	07/15/11	1,120	3,480
		12/22/11	1,200	2,850
	DUP	03/23/12	1,380	4,220
		03/23/12	1,390	3,100
		06/14/12	1,290	4,220
		09/28/12	1,440	6,350
	DUP	09/28/12	1,430	5,650
		12/20/12	1,190	2,860
		01/18/13	1,210	3,850
	DUP	01/18/13	1,210	3,650
	DUP	04/18/13	928	2,310
		04/19/13	932	2,120
		07/18/13	1,120	3,340
	DUP	07/18/13	1,060	3,320
	DUP	10/20/13	1,140	3,380
		10/21/13	1,130	3,280
		03/07/14	1,280	2,890
	DUP	03/07/14	1,250	2,830
		09/09/14	807	2,850
	DUP	09/09/14	793	2,950
		03/11/15	785	2,440
	DUP	03/11/15	770	2,260
		09/17/15	354	1,110
	DUP	09/17/15	343	1,030
	03/31/16	279	751	
DUP	03/31/16	270	703	
	09/06/16	239	784	
DUP	09/06/16	236	759	
	03/07/17	505	1,170	
DUP	03/07/17	508	1,240	
	09/06/17	703	1,700	
DUP	09/06/17	693	1,780	
	10/01/18	ISW	ISW	
	02/05/19	ISW	ISW	
	12/03/19	580	1,800	
	04/21/20	250	1,100	
	05/13/21	200	748	
	11/17/21	210	672	
	05/16/22	ISW	ISW	
	11/15/22	ISW	ISW	
	07/24/23	Dry	Dry	
	11/06/23	Dry	Dry	
	07/08/24	Dry	Dry	
	10/28/24	Dry	Dry	
	05/12/25	Dry	Dry	
	11/10/25	Dry	Dry	
MW-4		01/19/10	212	622
		02/25/10	110	586
		03/01/11	73	452
		04/13/11	70	446
		07/15/11	66	366
		12/22/11	67	526
		03/22/12	92	626
		06/14/12	65	460
	DUP	06/14/12	66	436
		09/28/12	134	661
		12/19/12	125	501
		01/17/13	133	690
		04/18/13	83	468
		07/18/13	63	421
		10/18/13	72	446
		03/06/14	110	528
		09/08/14	107	613
		03/10/15	192	1,340
		09/16/15	433	1,400
		03/30/16	187	865
	09/06/16	400	1,490	
	03/07/17	372	1,110	
	09/06/17	503	1,240	
	04/12/18	126	702	
	10/05/18	410	999	
	02/06/19	219	720	
	12/03/19	1,200	3,500	

Appendix D
 Cumulative Summary of Groundwater Analytical Results
 Lovington Unit Water Plant
 Lea County, New Mexico



Sample I.D. No.	Replete Sample I.D.	Date	NMWQCC Standards	
			Chloride	Total Dissolved Solids
			250 mg/L	1,000 mg/L
MW-4 cont.	DUP	04/21/20	1,600	6,200
		05/13/21	883	1,930
		11/17/21	1,350	3,310
		05/17/22	1,060	2,750
		05/17/22	1,090	2,670
		11/15/22	311	450
		11/15/22	288	868
		07/24/23	Dry	Dry
		11/06/23	ISW	ISW
		07/08/24	ISW	ISW
		10/28/24	Dry	Dry
		05/12/25	Dry	Dry
		11/10/25	Dry	Dry
		MW-5		03/22/12
06/14/12	88			468
09/28/12	130			691
12/19/12	126			489
01/17/13	123			587
04/18/13	140			625
07/18/13	118			470
10/18/13	60			318
03/06/14	116			514
09/08/14	41			408
03/10/15	36			364
09/16/15	35			365
03/30/16	39			244
09/05/16	34			178
03/07/17	36			677
09/06/17	35			394
04/12/18	42			352
10/02/18	48			415
02/05/19	98			805
12/03/19	130			350
04/23/20	140			470
05/13/21	124			517
11/17/21	136			530
05/17/22	117			1,640
11/15/22	148	568 Q		
07/24/23	167	629		
11/06/23	179	639		
07/08/24	189	677		
10/28/24	198 V	707		
05/12/25	207	717		
11/10/25	223	839		
MW-6		03/22/12	243	1,140
		06/14/12	566	1,670
		09/28/12	1,040	2,300
		12/20/12	961	2,210
		01/18/13	1,310	2,700
		04/19/13	528	1,590
		07/18/13	256	970
		10/18/13	214	763
		03/07/14	576	1,510
		09/09/14	491	2,190
		03/10/15	341	1,250
		09/16/15	262	1,020
		03/31/16	833	1,310
		09/05/16	959	2,840
		03/07/17	842	1,940
		09/06/17	606	1,550
		04/12/18	202	636
		10/03/18	363	847
		10/03/18	361	861
		02/06/19	701	1,260
		12/03/19	220	690
		12/03/19	220	750
		04/21/20	390	1,400
		05/13/21	507	1,090
		11/17/21	1,030	2,770
		05/17/22	533	1,410
		11/15/22	451	1,450
		07/24/23	907	2,790
		11/06/23	718	2,170
		07/08/24	542	1,650
10/28/24	820	2,540		
10/28/24	805	2,530		
05/12/25	947	2,640		
11/10/25	798	2,440		

Appendix D
 Cumulative Summary of Groundwater Analytical Results
 Lovington Unit Water Plant
 Lea County, New Mexico



Sample I.D. No.	Replete Sample I.D.	Date	NMWQCC Standards	
			Chloride	Total Dissolved Solids
			250 mg/L	1,000 mg/L
MW-7		03/22/12	251	1,210
		06/14/12	196	926
		09/28/12	258	1,000
		12/19/12	192	683
		12/19/12	243	669
		01/18/13	221	776
		04/18/13	187	756
		07/18/13	178	736
		10/18/13	163	885
		03/06/14	188	763
		09/09/14	144	805
		03/10/15	140	676
		09/16/15	168	675
		03/30/16	297	422
		09/05/16	212	778
		03/07/17	185	984
		09/06/17	284	990
		04/12/18	117	667
		10/03/18	97	500
		02/06/19	131	545
	12/03/19	130	450	
	04/21/20	120	670	
	05/13/21	169	601	
	11/17/21	351	970 J3	
	05/16/22	279	957	
	11/15/22	313	1,070	
	07/24/23	337	1,260	
	11/07/23	199	793	
	07/08/24	168	681	
	10/29/24	187	717	
	05/13/25	214	787	
	11/10/25	273	1,050	
MW-8		03/22/12	192	910
		06/14/12	184	914
		09/28/12	210	814
		12/19/12	192	702
		01/17/13	205	923
		04/18/13	216	853
		07/18/13	219	885
		10/18/13	90	443
		03/06/14	222	819
		09/09/14	184	911
		03/10/15	198	772
		09/16/15	241	922
		03/31/16	271	712
		10/06/16	291	1,220
		03/07/17	338	1,220
		09/06/17	298	1,120
		04/13/18	305	923
		04/13/18	290	875
		10/02/18	304	854
		02/07/19	438	1,130
	12/03/19	330	1,200	
	04/23/20	550	2,200	
	05/13/21	469	1,060	
	11/17/21	536	1,530	
	05/16/22	436	1,210	
	11/16/22	442	1,510	
	07/24/23	398	1,320	
	11/07/23	421	1,300	
	07/08/24	476	1,540	
	10/29/24	455	1,550	
	05/13/25	392	1,280	
	11/11/25	395	1,370	
MW-9		09/06/16	87	462
		03/07/17	74	430
		09/06/17	163	658
		04/12/18	67	438
		10/03/18	59	449
		02/05/19	70	451
		12/03/19	3,100	3,500
		04/21/20	3,400	6,000
		04/21/20	2,200	6,400
		05/13/21	111	490
		05/13/21	108	483
		11/17/21	110	489
		11/17/21	110	478
		05/17/22	91.1	<500
		11/15/22	111	514
		07/24/23	92.2	499
		07/24/23	123	520
	11/06/23	105	484	
	07/08/24	119	528	
	10/28/24	117 J6	536	
	05/12/25	112	551	
	11/10/25	101	531	

Appendix D
 Cumulative Summary of Groundwater Analytical Results
 Lovington Unit Water Plant
 Lea County, New Mexico



Sample I.D. No.	Replete Sample I.D.	Date	NMWQCC Standards	
			Chloride	Total Dissolved Solids
			250 mg/L	1,000 mg/L
MW-10		09/06/16	64	346
		03/07/17	106	463
		09/06/17	96	534
		04/12/18	47	441
		10/02/18	33	330
		02/05/19	99	510
		12/03/19	85	330
		04/23/20	89	410
		05/13/21	169	560
		11/17/21	166	502
		05/16/22	84.4	710
		11/15/22	181	701
		07/24/23	180	629
		11/06/23	191	700
	07/08/24	187	727	
	10/28/24	173	721	
	05/12/25	182	644	
	11/11/25	169	743	
MW-11		09/06/16	98	549
		03/07/17	592	1,330
		09/06/17	390	1,040
		04/13/18	75	487
		10/04/18	140	547
		02/06/19	955	1,460
		12/03/19	580	1,500
		04/23/20	550	2,100
		05/13/21	267	780
		11/17/21	294	853
		05/16/22	319	799
		11/16/22	282	992
		07/24/23	240	784
		11/07/23	25.7	946
		07/08/24	313	964
		10/29/24	230	953
	05/12/25	3,500	2,140	
	11/10/25	4,080	7,600	
MW-12		09/06/17	1,160	2,710
		04/13/18	592	1,380
		10/02/18	477	1,200
		02/07/19	1,760	2,850
		02/07/19	1,730	2,570
		12/03/19	880	2,500
		04/23/20	1,100	3,600
		05/13/21	1,130	3,450
		11/17/21	1,530	2,570
		05/16/22	1,220	1,300
		11/16/22	1,350	2,640
		07/24/23	940	2,570
		11/07/23	1,630	2,360
		DUP 11/07/23	1,450	3,680
		DUP 07/08/24	1,100	4,140
	DUP 07/08/24	1,030	4,740	
	DUP 10/28/24	1,130	2,870	
	DUP 05/13/25	1,140	3,190 T8	
	DUP 05/13/25	1,160	3,090	
	DUP 11/11/25	1,110	3,260	
	DUP 11/11/25	1,030	2,920	
MW-13		09/06/17	206	810
		04/13/18	306	859
		10/02/18	93	439
		02/05/19	230	750
		12/03/19	160	490
		04/23/20	110	480
		05/13/21	156	624
		11/17/21	226	756
		05/16/22	161	663
		11/16/22	250	2,490
		07/24/23	259	720
		11/07/23	130	882
		07/09/24	65.2 J6	470
	10/29/24	91	422	
	05/12/25	163	457	
	11/11/25	104	528	
MW-14		10/03/18	98	479
		02/06/19	76	468
		12/03/19	96	330
		04/21/20	120	560
		05/13/21	116	536
		11/17/21	153	549
		05/16/22	165	717
		11/15/22	256	885
		07/25/23	341	1,140
		11/07/23	355	1,050
		07/08/24	443	1,320
		10/29/24	452	1,440
		05/13/25	476	1,490
	11/10/25	473	1,630	

Appendix D
 Cumulative Summary of Groundwater Analytical Results
 Lovington Unit Water Plant
 Lea County, New Mexico



Sample I.D. No.	Replacate Sample I.D.	Date	NMWQCC Standards	
			Chloride	Total Dissolved Solids
			250 mg/L	1,000 mg/L
MW-15		10/03/18	325	910
		02/07/19	483	1,110
		12/03/19	330	990
		04/23/20	310	1,300
		05/13/21	336	898
		11/17/21	326	976
		05/16/22	238	871
		11/16/22	270	790
		07/25/23	278	868
		11/07/23	320	910
		07/08/24	268	822
		10/29/24	222	717
		05/13/25	252	779
		11/10/25	226	1,050
MW-16		10/04/18	56	434
		02/06/19	215	698
		12/03/19	430	1,300
		04/21/20	510	1,900
		05/13/21	778	1,910
		11/17/21	689	1,780
		05/17/22	697	1,620
		11/15/22	736	2,000
		07/24/23	755	1,850 J3
		11/06/23	776	2,140
		07/08/24	675	1,950
		10/28/24	380	1,560
		05/12/25	339	952
	11/11/25	261	914	
RW-1 (Waterflood Supply Well)		10/21/13	178	848

Notes:

- 1) RCRA Metals Analysis by Environment Protections Agency (EPA) Methods 6010B and 7470A.
- 2) Groundwater Quality by EPA Methods 160.1, 300.0, 310.1 and 2540 C-2011.
- 3) Highlighted values indicate concentrations above NMWQCC Other Standards for Domestic Water Supply.
- 4) **Bold and Italics** values indicate concentrations above NMWQCC Standards for Domestic Water Supply.
- 5) ¹ NMWQCC Human Health Standards Per NMAC 20.6.2.3103A.
- 6) ² NMWQCC Other Standards for Domestic Water Supply Per NMAC 20.6.2.3103B.
- 7) < = Analyte not detected at or above the laboratory reporting limit
- 8) * = Likely an order of magnitude higher then actual result; however reported value was verified by the laboratory
- 9) D = Dilution factors are included in the final results. The result is from a diluted sample.
- 10) DUP = Duplicate sample
- 11) F1 = MS and/or MSD recovery exceeds control limits.
- 12) F2 = MS/MSD RPD exceeds control limits
- 13) J6 = The sample matrix interfered with the ability to make any accurate determination; spike value is low.
- 14) mg/L = Milligrams per litre
- 15) NA= Not analyzed
- 16) NMWQCC = New Mexico Water Quality Control Commission
- 17) NMAC = New Mexico Administrative Code
- 18) MS/MSD = Matrix Spike/Matrix Spike Duplicate
- 19) Q = Sample was prepared and/or analyzed past holding time as defined in the method. Concentrations should be considered minimum values.
- 20) RPD = Relative Percentage Difference
- 21) T8 = Sample(s) received past/too close to holding time expiration.
- 22) V = The sample concentration is too high to evaluate accurate spike recoveries.

Appendix E

Analytical Reports



ANALYTICAL REPORT

May 29, 2025

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Arcadis - Chevron - NM

Sample Delivery Group: L1858873
 Samples Received: 05/14/2025
 Project Number: 30189992.00003
 Description: Lovington Water Plant - UEM4869
 Site: UEM4869
 Report To: Morgan Jordan
 1004 N Big Spring Street
 Suite 121
 Midland, TX 79701

Entire Report Reviewed By:

Katie Ingram
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.



Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 mydata.pacelabs.com

Cp: Cover Page 1

Tc: Table of Contents 2

Ss: Sample Summary 3

Cn: Case Narrative 5

Sr: Sample Results 6

 MW-6-W-250512 L1858873-01 6

 MW-16-W-250512 L1858873-02 7

 MW-9-W-250512 L1858873-03 8

 MW-5-W-250512 L1858873-04 9

 MW-10-W-250512 L1858873-05 10

 MW-11-W-250512 L1858873-06 11

 MW-13-W-250512 L1858873-07 12

 MW-12-W-250513 L1858873-08 13

 MW-8-W-250513 L1858873-09 14

 DUP-1-W-250513 L1858873-10 15

 MW-15-W-250513 L1858873-11 16

 MW-7-W-250513 L1858873-12 17

 MW-14-W-250513 L1858873-13 18

Qc: Quality Control Summary 19

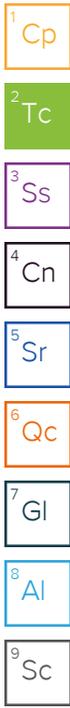
 Gravimetric Analysis by Method 2540 C-2011 19

 Wet Chemistry by Method 300.0 22

Gl: Glossary of Terms 23

Al: Accreditations & Locations 24

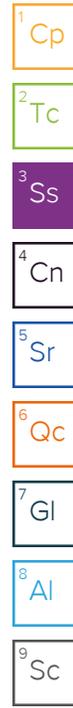
Sc: Sample Chain of Custody 25



MW-6-W-250512 L1858873-01

Collected by Daniel McGee
 Collected date/time 05/12/25 10:00
 Received date/time 05/14/25 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2515901	1	05/15/25 13:37	05/15/25 15:52	AMG	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2515513	50	05/19/25 18:53	05/19/25 18:53	ZSA	Mt. Juliet, TN



MW-16-W-250512 L1858873-02

Collected by Daniel McGee
 Collected date/time 05/12/25 10:30
 Received date/time 05/14/25 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2515901	1	05/15/25 13:37	05/15/25 15:52	AMG	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2515513	5	05/19/25 19:09	05/19/25 19:09	ZSA	Mt. Juliet, TN

MW-9-W-250512 L1858873-03

Collected by Daniel McGee
 Collected date/time 05/12/25 11:05
 Received date/time 05/14/25 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2515901	1	05/15/25 13:37	05/15/25 15:52	AMG	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2515513	5	05/19/25 19:25	05/19/25 19:25	ZSA	Mt. Juliet, TN

MW-5-W-250512 L1858873-04

Collected by Daniel McGee
 Collected date/time 05/12/25 12:30
 Received date/time 05/14/25 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2515901	1	05/15/25 13:37	05/15/25 15:52	AMG	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2515513	5	05/19/25 19:42	05/19/25 19:42	ZSA	Mt. Juliet, TN

MW-10-W-250512 L1858873-05

Collected by Daniel McGee
 Collected date/time 05/12/25 13:10
 Received date/time 05/14/25 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2515901	1	05/15/25 13:37	05/15/25 15:52	AMG	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2515513	5	05/19/25 19:58	05/19/25 19:58	ZSA	Mt. Juliet, TN

MW-11-W-250512 L1858873-06

Collected by Daniel McGee
 Collected date/time 05/12/25 13:40
 Received date/time 05/14/25 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2515901	1	05/15/25 13:37	05/15/25 15:52	AMG	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2515513	50	05/19/25 20:14	05/19/25 20:14	ZSA	Mt. Juliet, TN

MW-13-W-250512 L1858873-07

Collected by Daniel McGee
 Collected date/time 05/12/25 14:20
 Received date/time 05/14/25 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2518233	1	05/19/25 10:12	05/19/25 16:45	MMF	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2515513	5	05/19/25 20:31	05/19/25 20:31	ZSA	Mt. Juliet, TN

MW-12-W-250513 L1858873-08

Collected by Daniel McGee
Collected date/time 05/13/25 10:20
Received date/time 05/14/25 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2520861	1	05/22/25 10:14	05/22/25 12:56	AMG	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2515513	50	05/19/25 21:20	05/19/25 21:20	ZSA	Mt. Juliet, TN



MW-8-W-250513 L1858873-09

Collected by Daniel McGee
Collected date/time 05/13/25 11:00
Received date/time 05/14/25 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2515901	1	05/15/25 13:37	05/15/25 15:52	AMG	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2515513	5	05/19/25 21:36	05/19/25 21:36	ZSA	Mt. Juliet, TN



DUP-1-W-250513 L1858873-10

Collected by Daniel McGee
Collected date/time 05/13/25 00:00
Received date/time 05/14/25 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2515901	1	05/15/25 13:37	05/15/25 15:52	AMG	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2515513	50	05/19/25 21:53	05/19/25 21:53	ZSA	Mt. Juliet, TN



MW-15-W-250513 L1858873-11

Collected by Daniel McGee
Collected date/time 05/13/25 11:40
Received date/time 05/14/25 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2515901	1	05/15/25 13:37	05/15/25 15:52	AMG	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2515513	5	05/19/25 22:09	05/19/25 22:09	ZSA	Mt. Juliet, TN

MW-7-W-250513 L1858873-12

Collected by Daniel McGee
Collected date/time 05/13/25 12:10
Received date/time 05/14/25 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2515901	1	05/15/25 13:37	05/15/25 15:52	AMG	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2515513	5	05/19/25 22:25	05/19/25 22:25	ZSA	Mt. Juliet, TN

MW-14-W-250513 L1858873-13

Collected by Daniel McGee
Collected date/time 05/13/25 12:30
Received date/time 05/14/25 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2515901	1	05/15/25 13:37	05/15/25 15:52	AMG	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2515513	10	05/19/25 22:42	05/19/25 22:42	ZSA	Mt. Juliet, TN

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.

Katie Ingram
Project Manager

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Collected date/time: 05/12/25 10:00

L1858873

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	2640		50.0	1	05/15/2025 15:52	WG2515901

1 Cp

2 Tc

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	947		27.4	50.0	50	05/19/2025 18:53	WG2515513

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Collected date/time: 05/12/25 10:30

L1858873

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	952		20.0	1	05/15/2025 15:52	WG2515901

1 Cp

2 Tc

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	339		2.74	5.00	5	05/19/2025 19:09	WG2515513

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Collected date/time: 05/12/25 11:05

L1858873

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	551		10.0	1	05/15/2025 15:52	WG2515901

¹ Cp

² Tc

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	112		2.74	5.00	5	05/19/2025 19:25	WG2515513

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Collected date/time: 05/12/25 12:30

L1858873

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	717		13.3	1	05/15/2025 15:52	WG2515901

¹ Cp

² Tc

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	207		2.74	5.00	5	05/19/2025 19:42	WG2515513

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Collected date/time: 05/12/25 13:10

L1858873

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	644		10.0	1	05/15/2025 15:52	WG2515901

1 Cp

2 Tc

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	182		2.74	5.00	5	05/19/2025 19:58	WG2515513

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Collected date/time: 05/12/25 13:40

L1858873

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	2140		50.0	1	05/15/2025 15:52	WG2515901

1 Cp

2 Tc

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	3500		27.4	50.0	50	05/19/2025 20:14	WG2515513

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Collected date/time: 05/12/25 14:20

L1858873

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	457		10.0	1	05/19/2025 16:45	WG2518233

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	163		2.74	5.00	5	05/19/2025 20:31	WG2515513

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Collected date/time: 05/13/25 10:20

L1858873

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	3190	<u>T8</u>	50.0	1	05/22/2025 12:56	WG2520861

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Sample Narrative:

L1858873-08 WG2520861: Duplicate Analysis performed due to QC failure. Reporting out of hold data.

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	1140		27.4	50.0	50	05/19/2025 21:20	WG2515513

Collected date/time: 05/13/25 11:00

L1858873

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	1280		20.0	1	05/15/2025 15:52	WG2515901

1 Cp

2 Tc

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	392		2.74	5.00	5	05/19/2025 21:36	WG2515513

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Collected date/time: 05/13/25 00:00

L1858873

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	3090		50.0	1	05/15/2025 15:52	WG2515901

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	1160		27.4	50.0	50	05/19/2025 21:53	WG2515513

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Collected date/time: 05/13/25 11:40

L1858873

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	779		13.3	1	05/15/2025 15:52	WG2515901

1 Cp

2 Tc

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	252		2.74	5.00	5	05/19/2025 22:09	WG2515513

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Collected date/time: 05/13/25 12:10

L1858873

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	787		13.3	1	05/15/2025 15:52	WG2515901

1 Cp

2 Tc

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	214		2.74	5.00	5	05/19/2025 22:25	WG2515513

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Collected date/time: 05/13/25 12:30

L1858873

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	1490		20.0	1	05/15/2025 15:52	WG2515901

1 Cp

2 Tc

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	476		5.47	10.0	10	05/19/2025 22:42	WG2515513

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

[L1858873-01,02,03,04,05,06,09,10,11,12,13](#)

Method Blank (MB)

(MB) R4216396-1 05/15/25 15:52

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Dissolved Solids	U		10.0	10.0

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1858914-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1858914-01 05/15/25 15:52 • (DUP) R4216396-3 05/15/25 15:52

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	2630	2660	1	1.13		10

L1858914-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1858914-03 05/15/25 15:52 • (DUP) R4216396-4 05/15/25 15:52

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	2790	2820	1	0.892		10

Laboratory Control Sample (LCS)

(LCS) R4216396-2 05/15/25 15:52

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Dissolved Solids	8800	8530	96.9	90.0-110	

Gravimetric Analysis by Method 2540 C-2011

[L1858873-07](#)

Method Blank (MB)

(MB) R4218095-1 05/19/25 16:45

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Dissolved Solids	U		10.0	10.0

1 Cp

2 Tc

3 Ss

L1860287-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1860287-09 05/19/25 16:45 • (DUP) R4218095-4 05/19/25 16:45

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	566	559	1	1.24		10

4 Cn

5 Sr

Laboratory Control Sample (LCS)

(LCS) R4218095-2 05/19/25 16:45

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Dissolved Solids	8800	8720	99.1	90.0-110	

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R4220245-1 05/22/25 12:56

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Dissolved Solids	U	↓	10.0	10.0

1 Cp

2 Tc

3 Ss

L1859241-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1859241-01 05/22/25 12:56 • (DUP) R4220245-3 05/22/25 12:56

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	7980	7860	1	1.52		10

4 Cn

5 Sr

L1861250-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1861250-01 05/22/25 12:56 • (DUP) R4220245-4 05/22/25 12:56

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	2390	2520	1	5.30		10

6 Qc

7 Gl

8 Al

Laboratory Control Sample (LCS)

(LCS) R4220245-2 05/22/25 12:56

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Dissolved Solids	8800	8580	97.5	90.0-110	

9 Sc

Wet Chemistry by Method 300.0

[L1858873-01,02,03,04,05,06,07,08,09,10,11,12,13](#)

Method Blank (MB)

(MB) R4217420-1 05/19/25 17:35

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Chloride	U		0.547	1.00

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1858924-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1858924-01 05/19/25 22:52 • (DUP) R4217420-3 05/19/25 23:02

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Chloride	U	U	1	0.000		15

L1858989-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1858989-01 05/19/25 23:33 • (DUP) R4217420-6 05/19/25 23:43

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Chloride	25.6	25.3	1	0.871		15

Laboratory Control Sample (LCS)

(LCS) R4217420-2 05/19/25 17:47

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Chloride	40.0	40.0	99.9	90.0-110	

L1858924-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1858924-01 05/19/25 22:52 • (MS) R4217420-4 05/19/25 23:13 • (MSD) R4217420-5 05/19/25 23:23

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Chloride	40.0	U	39.5	39.6	98.7	99.0	1	90.0-110			0.335	15

L1858989-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1858989-01 05/19/25 23:33 • (MS) R4217420-7 05/19/25 23:54

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Chloride	40.0	25.6	60.8	88.0	1	90.0-110	J6

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.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
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.

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Qualifier Description

J	The identification of the analyte is acceptable; the reported value is an estimate.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
T8	Sample(s) received past/too close to holding time expiration.

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:
Arcadis - Chevron - NM
 1004 N Big Spring Street
 Suite 121
 Midland, TX 79701

Billing Information:
 Attn: Morgan Jordan
 630 Plaza Drive, Suite 200
 Highlands Ranch, CO 80129

Pres
 Chk

Report to:
Morgan Jordan 432-687-5400

Email To:
 lauren.krueger@arcadis.com;douglas.jordan@a

Project Description:
Lovington Water Plant - UEM4869

City/State Collected: *Lovington, NM*

Please Circle:
 PT MT **CT** ET

Regulatory Program(DOD,RCRA,DW,etc):
 Client Project # **30189992.00003**

Lab Project #
CHEVARCNM-LOV WP

Collected by (print):
Daniel McHugh

Site/Facility ID #
UEM4869

P.O. #

Collected by (Signature):

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

Quote #
 Date Results Needed
Standard

Immediately Packed on Ice N ___ Y *X*

No. of
 Cntrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time													
MW-6-W-250512	G	GW	WW	5-12-25	1000	2	X	X										
MW-16-W-250512			WW		1030	2	X	X										
MW-9-W-250512			WW		1165	2	X	X										
MW-5-W-250512			WW		1230	2	X	X										
MW-10-W-250512			WW		1310	2	X	X										
MW-11-W-250512			WW		1340	2	X	X										
MW-13-W-250512			WW	5-12-25	1470	2	X	X										
MW-12-W-250513			WW	5-13-25	1020	2	X	X										
MW-8-W-250513			WW		1100	2	X	X										
DUP-1-W-250513	G	GW	WW	5-13-25		2	X	X										

CHLORIDE 125mlHDPE-NoPres

TDS 250mlHDPE NoPres

Analysis / Container / Preservative

Chain of Custody Page 1 of 1



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 #

1898873

E121

Acctnum: **CHEVARCNM**

Template: **T199267**

Prelogin: **P1149442**

PM: **840 - Katie Ingram**

PB:

Shipped Via:

Remarks

Sample # (lab only)

-01
-02
-03
-04
-05
-06
-07
-08
-09
-10

- * 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 ___ FedEx ___ Courier _____

Tracking # *74640846 5788*

Sample Receipt Checklist

COC Seal Present/Intact: ___ NP ___ N

COC Signed/Accurate: ___ N

Bottles arrive intact: ___ N

Correct bottles used: ___ N

Sufficient volume sent: ___ N

If Applicable

VOA Zero Headpace: ___ Y ___ N

Preservation Correct/Checked: ___ Y ___ N

RAD Screen <0.5 mR/hr: ___ Y ___ N

Relinquished by: (Signature)

Date: *5-13-25*

Time: *14150*

Received by: (Signature)

Trip Blank Received: Yes / No
 HCL / MeOH
 TBR

Relinquished by: (Signature)

Date: *5-19-25*

Time: *1540*

Received by: (Signature)

Temp: °C
28.4 23.2 26

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date:

Time:

Received for lab by: (Signature)

Date: *5/14/25* Time: *0845*

Hold: Condition: NCF / *OK*



ANALYTICAL REPORT

November 19, 2025

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Arcadis - Chevron - NM

Sample Delivery Group: L1917357
 Samples Received: 11/12/2025
 Project Number: 30189992.00003
 Description: Lovington Water Plant - UEM4869
 Site: UEM4869
 Report To: Morgan Jordan
 1004 N Big Spring Street
 Suite 121
 Midland, TX 79701

Entire Report Reviewed By:

Katie Ingram
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.



Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 mydata.pacelabs.com

Cp: Cover Page 1

Tc: Table of Contents 2

Ss: Sample Summary 3

Cn: Case Narrative 5

Sr: Sample Results 6

 MW-5-W-251110 L1917357-01 6

 MW-9-W-251110 L1917357-02 7

 MW-6-W-251110 L1917357-03 8

 MW-14-W-251110 L1917357-04 9

 MW-7-W-251110 L1917357-05 10

 MW-15-W-251110 L1917357-06 11

 MW-11-W-251110 L1917357-07 12

 MW-8-W-251111 L1917357-08 13

 MW-13-W-251111 L1917357-09 14

 MW-16-W-251111 L1917357-10 15

 MW-12-W-251111 L1917357-11 16

 MW-10-W-251111 L1917357-12 17

 DUP-1-W-251111 L1917357-13 18

Qc: Quality Control Summary 19

 Gravimetric Analysis by Method 2540 C-2011 19

 Wet Chemistry by Method 300.0 20

Gl: Glossary of Terms 22

Al: Accreditations & Locations 23

Sc: Sample Chain of Custody 24



MW-5-W-25110 L1917357-01

Collected by Heath Boyd
 Collected date/time 11/10/25 09:30
 Received date/time 11/12/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2639230	1	11/12/25 23:46	11/13/25 08:38	AMG	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2638945	5	11/14/25 05:47	11/14/25 05:47	ZSA	Mt. Juliet, TN

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

MW-9-W-25110 L1917357-02

Collected by Heath Boyd
 Collected date/time 11/10/25 10:15
 Received date/time 11/12/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2639230	1	11/12/25 23:46	11/13/25 08:38	AMG	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2638945	5	11/14/25 06:19	11/14/25 06:19	ZSA	Mt. Juliet, TN

MW-6-W-25110 L1917357-03

Collected by Heath Boyd
 Collected date/time 11/10/25 11:35
 Received date/time 11/12/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2639230	1	11/12/25 23:46	11/13/25 08:38	AMG	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2638945	50	11/14/25 06:30	11/14/25 06:30	ZSA	Mt. Juliet, TN

MW-14-W-25110 L1917357-04

Collected by Heath Boyd
 Collected date/time 11/10/25 13:05
 Received date/time 11/12/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2639230	1	11/12/25 23:46	11/13/25 08:38	AMG	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2638945	10	11/14/25 06:41	11/14/25 06:41	ZSA	Mt. Juliet, TN

MW-7-W-25110 L1917357-05

Collected by Heath Boyd
 Collected date/time 11/10/25 13:55
 Received date/time 11/12/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2639230	1	11/12/25 23:46	11/13/25 08:38	AMG	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2638945	5	11/19/25 03:07	11/19/25 03:07	ZSA	Mt. Juliet, TN

MW-15-W-25110 L1917357-06

Collected by Heath Boyd
 Collected date/time 11/10/25 15:20
 Received date/time 11/12/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2639230	1	11/12/25 23:46	11/13/25 08:38	AMG	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2638945	5	11/19/25 03:17	11/19/25 03:17	ZSA	Mt. Juliet, TN

MW-11-W-25110 L1917357-07

Collected by Heath Boyd
 Collected date/time 11/10/25 16:00
 Received date/time 11/12/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2639230	1	11/12/25 23:46	11/13/25 08:38	AMG	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2638945	100	11/19/25 03:27	11/19/25 03:27	ZSA	Mt. Juliet, TN

MW-8-W-251111 L1917357-08

Collected by Heath Boyd
Collected date/time 11/11/25 09:10
Received date/time 11/12/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2639230	1	11/12/25 23:46	11/13/25 08:38	AMG	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2638945	10	11/19/25 03:58	11/19/25 03:58	ZSA	Mt. Juliet, TN



MW-13-W-251111 L1917357-09

Collected by Heath Boyd
Collected date/time 11/11/25 10:10
Received date/time 11/12/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2639230	1	11/12/25 23:46	11/13/25 08:38	AMG	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2638945	5	11/19/25 04:08	11/19/25 04:08	ZSA	Mt. Juliet, TN



MW-16-W-251111 L1917357-10

Collected by Heath Boyd
Collected date/time 11/11/25 11:00
Received date/time 11/12/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2639230	1	11/12/25 23:46	11/13/25 08:38	AMG	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2638945	5	11/19/25 04:19	11/19/25 04:19	ZSA	Mt. Juliet, TN



MW-12-W-251111 L1917357-11

Collected by Heath Boyd
Collected date/time 11/11/25 13:05
Received date/time 11/12/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2639230	1	11/12/25 23:46	11/13/25 08:38	AMG	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2638945	20	11/19/25 04:29	11/19/25 04:29	ZSA	Mt. Juliet, TN

MW-10-W-251111 L1917357-12

Collected by Heath Boyd
Collected date/time 11/11/25 14:40
Received date/time 11/12/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2639230	1	11/12/25 23:46	11/13/25 08:38	AMG	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2638986	5	11/18/25 18:26	11/18/25 18:26	JDG	Mt. Juliet, TN

DUP-1-W-251111 L1917357-13

Collected by Heath Boyd
Collected date/time 11/11/25 00:00
Received date/time 11/12/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2639230	1	11/12/25 23:46	11/13/25 08:38	AMG	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2638986	20	11/18/25 18:49	11/18/25 18:49	JDG	Mt. Juliet, TN

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.

Katie Ingram
Project Manager

- ¹ Cp
- ² Tc
- ³ Ss
- ⁴ Cn
- ⁵ Sr
- ⁶ Qc
- ⁷ Gl
- ⁸ Al
- ⁹ Sc

Collected date/time: 11/10/25 09:30

L1917357

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	839		13.3	1	11/13/2025 08:38	WG2639230

1 Cp

2 Tc

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	223		2.74	5.00	5	11/14/2025 05:47	WG2638945

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Collected date/time: 11/10/25 10:15

L1917357

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	531		10.0	1	11/13/2025 08:38	WG2639230

1 Cp

2 Tc

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	101		2.74	5.00	5	11/14/2025 06:19	WG2638945

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Collected date/time: 11/10/25 11:35

L1917357

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	2440		50.0	1	11/13/2025 08:38	WG2639230

1 Cp

2 Tc

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	798		27.4	50.0	50	11/14/2025 06:30	WG2638945

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Collected date/time: 11/10/25 13:05

L1917357

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	1630		25.0	1	11/13/2025 08:38	WG2639230

1 Cp

2 Tc

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	473		5.47	10.0	10	11/14/2025 06:41	WG2638945

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Collected date/time: 11/10/25 13:55

L1917357

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	1050		20.0	1	11/13/2025 08:38	WG2639230

1 Cp

2 Tc

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	273		2.74	5.00	5	11/19/2025 03:07	WG2638945

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Collected date/time: 11/10/25 15:20

L1917357

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	1050		20.0	1	11/13/2025 08:38	WG2639230

¹ Cp

² Tc

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	226		2.74	5.00	5	11/19/2025 03:17	WG2638945

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Collected date/time: 11/10/25 16:00

L1917357

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	7600		200	1	11/13/2025 08:38	WG2639230

1 Cp

2 Tc

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	4080		54.7	100	100	11/19/2025 03:27	WG2638945

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Collected date/time: 11/11/25 09:10

L1917357

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	1370		20.0	1	11/13/2025 08:38	WG2639230

1 Cp

2 Tc

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	395		5.47	10.0	10	11/19/2025 03:58	WG2638945

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Collected date/time: 11/11/25 10:10

L1917357

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	528		10.0	1	11/13/2025 08:38	WG2639230

1 Cp

2 Tc

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	104		2.74	5.00	5	11/19/2025 04:08	WG2638945

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Collected date/time: 11/11/25 11:00

L1917357

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	914		20.0	1	11/13/2025 08:38	WG2639230

1 Cp

2 Tc

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	261		2.74	5.00	5	11/19/2025 04:19	WG2638945

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Collected date/time: 11/11/25 13:05

L1917357

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	3260		50.0	1	11/13/2025 08:38	WG2639230

1 Cp

2 Tc

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	1110		10.9	20.0	20	11/19/2025 04:29	WG2638945

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Collected date/time: 11/11/25 14:40

L1917357

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	743		13.3	1	11/13/2025 08:38	WG2639230

1 Cp

2 Tc

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	169		2.74	5.00	5	11/18/2025 18:26	WG2638986

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Collected date/time: 11/11/25 00:00

L1917357

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	2920		50.0	1	11/13/2025 08:38	WG2639230

1 Cp

2 Tc

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Chloride	1030		10.9	20.0	20	11/18/2025 18:49	WG2638986

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

[L1917357-01,02,03,04,05,06,07,08,09,10,11,12,13](#)

Method Blank (MB)

(MB) R4301054-1 11/13/25 08:38

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Dissolved Solids	U		10.0	10.0

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1916718-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1916718-10 11/13/25 08:38 • (DUP) R4301054-3 11/13/25 08:38

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	383	391	1	2.07		10

L1917357-13 Original Sample (OS) • Duplicate (DUP)

(OS) L1917357-13 11/13/25 08:38 • (DUP) R4301054-4 11/13/25 08:38

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	2920	3130	1	6.94		10

Laboratory Control Sample (LCS)

(LCS) R4301054-2 11/13/25 08:38

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Dissolved Solids	8800	8350	94.9	90.0-110	

Wet Chemistry by Method 300.0

[L1917357-01,02,03,04,05,06,07,08,09,10,11](#)

Method Blank (MB)

(MB) R4302542-1 11/14/25 02:56

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Chloride	U		0.547	1.00

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1917253-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1917253-01 11/14/25 03:18 • (DUP) R4302542-3 11/14/25 03:28

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Chloride	4.01	4.09	1	2.12		15

L1917253-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1917253-03 11/14/25 04:00 • (DUP) R4302542-6 11/14/25 04:11

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Chloride	1.80	1.60	1	11.9		15

Laboratory Control Sample (LCS)

(LCS) R4302542-2 11/14/25 03:07

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Chloride	40.0	37.8	94.5	90.0-110	

L1917253-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1917253-01 11/14/25 03:18 • (MS) R4302542-4 11/14/25 03:39 • (MSD) R4302542-5 11/14/25 03:50

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Chloride	40.0	4.01	41.8	42.1	94.4	95.2	1	90.0-110			0.770	15

L1917253-03 Original Sample (OS) • Matrix Spike (MS)

(OS) L1917253-03 11/14/25 04:00 • (MS) R4302542-7 11/14/25 04:22

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Chloride	40.0	1.80	39.4	94.1	1	90.0-110	

Wet Chemistry by Method 300.0

[L1917357-12,13](#)

Method Blank (MB)

(MB) R4302373-1 11/15/25 20:56

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Chloride	U		0.547	1.00

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1917357-12 Original Sample (OS) • Duplicate (DUP)

(OS) L1917357-12 11/18/25 18:26 • (DUP) R4303104-1 11/18/25 18:37

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Chloride	169	172	5	1.44		15

L1917357-13 Original Sample (OS) • Duplicate (DUP)

(OS) L1917357-13 11/18/25 18:49 • (DUP) R4303104-2 11/18/25 19:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Chloride	1030	1070	20	3.40		15

Laboratory Control Sample (LCS)

(LCS) R4302373-2 11/15/25 21:07

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Chloride	40.0	40.8	102	90.0-110	

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.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
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.
U (Radiochemistry)	Result + Error < MDA.
J (Radiochemistry)	Result < MDA; Result + Error > MDA.
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

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

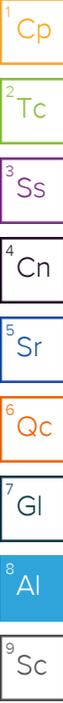
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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: Arcadis - Chevron - NM 1004 N Big Spring Street Suite 121 Midland, TX 79701			Billing Information: Attn: Morgan Jordan 630 Plaza Drive, Suite 200 Highlands Ranch, CO 80129			Pres Chk	Analysis / Container / Preservative										Chain of Custody Page <u>2</u> of <u>2</u>		
Report to: Morgan Jordan 432-687-5400			Email To: lauren.krueger@arcadis.com;douglas.jordan@arcadis.com															 MT JULIET, TN <small>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</small>	
Project Description: Lovington Water Plant - UEM4869		City/State Collected: Lovington, NM		Please Circle: PT <input checked="" type="radio"/> MT <input type="radio"/> CT <input type="radio"/> ET														SDG # L1917357	
Regulatory Program(DOD,RCRA,DW,etc):		Client Project # 30189992.00003		Lab Project # CHEVARCNM-LOV WP														Table #	
Collected by (print): Heath Boyd		Site/Facility ID # UEM4869		P.O. #														Acctnum: CHEVARCNM	
Collected by (signature): 		Rush? (Lab MUST Be Notified) <input type="checkbox"/> Same Day <input type="checkbox"/> Five Day <input type="checkbox"/> Next Day <input type="checkbox"/> 5 Day (Rad Only) <input type="checkbox"/> Two Day <input type="checkbox"/> 10 Day (Rad Only) <input checked="" type="checkbox"/> Three Day <input checked="" type="checkbox"/> STD TAT		Quote #														Template: T199267	
Immediately Packed on Ice N <input type="checkbox"/> Y <input checked="" type="checkbox"/>				Date Results Needed														Prelogin: P1188758	
																		PM: 840 - Katie Ingram	
																		PB:	
																		Shipped Via:	
Sample ID		Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs											Remarks	
MW-5-W-251110		Grab	WW		11/10/25	930	2	X	X									- 01	
MW-9-W-251110			WW			1015	2	X	X									- 02	
MW-6-W-251110			WW			1135	2	X	X									- 03	
MW-14-W-251110			WW			1305	2	X	X									- 04	
MW-7-W-251110			WW			1355	2	X	X									- 05	
MW-15-W-251110			WW			1520	2	X	X									- 06	
MW-11-W-251110			WW		X	1600	2	X	X									- 07	
MW-8-W-251110			WW		11/11/25	910	2	X	X									- 08	
MW-13-W-251111			WW		1	1010	2	X	X									- 09	
MW-16-W-251111		X	WW		X	1100	2	X	X									- 10	
* Matrix: SS - Soil AIR - Air F - Filter GW - Groundwater B - Bioassay WW - WasteWater DW - Drinking Water OT - Other _____		Remarks: pH _____ Temp _____ Flow _____ Other _____										Sample Receipt Checklist COC Seal Present/Intact: <input type="checkbox"/> NP <input type="checkbox"/> Y <input type="checkbox"/> N COC Signed/Accurate: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Bottles arrive intact: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Correct bottles used: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Sufficient volume sent: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N If Applicable VOA Zero Headspace: <input type="checkbox"/> Y <input type="checkbox"/> N Preservation Correct/Checked: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N RAD Screen <0.5 mR/hr: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N							
Samples returned via: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Courier		Tracking # Multi																	
Relinquished by: (Signature) 		Date: 11/11/25	Time: 1700	Received by: (Signature)				Trip Blank Received: Yes / No HCL / MeOH TBR											
Relinquished by: (Signature)		Date:	Time:	Received by: (Signature)				Temp: °C Multi 26		Bottles Received:		If preservation required by Login: Date/Time							
Relinquished by: (Signature)		Date:	Time:	Received for lab by: (Signature) Eustin Rogers				Date: 11/12/25		Time: 0900		Hold:		Condition: NCF / <input checked="" type="radio"/> OK					

Company Name/Address: Arcadis - Chevron - NM 1004 N Big Spring Street Suite 121 Midland, TX 79701		Billing Information: Attn: Morgan Jordan 630 Plaza Drive, Suite 200 Highlands Ranch, CO 80129		Pres Chk		Analysis / Container / Preservative										Chain of Custody Page <u>1</u> of <u>2</u>					
Report to: Morgan Jordan 432-687-5400		Email To: lauren.krueger@arcadis.com;douglas.jordan@a														 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/hubs/pas-standard-terms.pdf					
Project Description: Lovington Water Plant - UEM4869		City/State Collected: <u>Lovington, NM</u>		Please Circle: PT <input checked="" type="radio"/> MT <input type="radio"/> CT <input type="radio"/> ET <input type="radio"/>												SDG # <u>U917357</u>					
Regulatory Program(DOD,RCRA,DW,etc):		Client Project # 30189992.00003		Lab Project # CHEVARCNM-LOV WP												Table # K209					
Collected by (print): <u>Heath Boyd</u>		Site/Facility ID # UEM4869		P.O. #												Acctnum: CHEVARCNM					
Collected by (signature): <u>[Signature]</u>		Rush? (Lab MUST Be Notified) ___ Same Day ___ Five Day ___ Next Day ___ 5 Day (Rad Only) ___ Two Day ___ 10 Day (Rad Only) ___ Three Day <input checked="" type="checkbox"/> STD TAT		Quote #												Template: T199267					
Immediately Packed on Ice N ___ Y <input checked="" type="checkbox"/>		Date Results Needed		No. of Cntrs												Prelogin: P1188758					
Sample ID		Comp/Grab	Matrix *	Depth	Date	Time	Cntrs	CHLORIDE 125mlHDPE-NoPres	TDS 1L-HDPE-NoPres											PB: 840 - Katie Ingram	
																				Shipped Via:	
																				Remarks	Sample # (lab only)
<u>MW-12-W-251111</u>		<u>Grab</u>	<u>WW</u>		<u>11/11/25</u>	<u>1305</u>	<u>2</u>	<u>X</u>	<u>X</u>												<u>-11</u>
<u>MW-10-W-251111</u>		<u>Grab</u>			<u>11/11/25</u>	<u>1440</u>	<u>2</u>	<u>X</u>	<u>X</u>												<u>12</u>
<u>Dup-1-W-251111</u>		<u>Grab</u>			<u>-</u>	<u>-</u>	<u>2</u>	<u>X</u>	<u>X</u>												<u>13</u>

Arcadis U.S., Inc.
1330 Post Oak Blvd., Suite 2250
Houston
Texas 77056
Phone: 713 953 4800
www.arcadis.com

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
<https://www.emnrd.nm.gov/oecd/contact-us>

**State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505**

CONDITIONS

Action 554786

CONDITIONS

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID: 4323
	Action Number: 554786
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
shanna.smith	OCD records indicate that an approved Stage 1/2 plan is not on file. Pursuant to 19.15.30 NMAC Chevron must submit a Stage 1/2 Abatement plan no later than May 29, 2026, that meets all of the requirements of 19.15.30.13 NMAC.	2/20/2026
shanna.smith	The site has not been fully delineated.	2/20/2026
shanna.smith	Comparing historical and current groundwater data, plume has migrated.	2/20/2026
shanna.smith	All groundwater samples will be analyzed for EPA Method 8260 BTEX, chlorides, and TDS. Operators may request to reduce sampling constituents based upon future results.	2/20/2026
shanna.smith	Transition from submitting annual monitoring and sampling reports to submitting quarterly monitoring and sampling reports.	2/20/2026