

**REVIEWED***By Mike Buchanan at 3:34 pm, Jun 12, 2024***ANNUAL GROUNDWATER MONITORING REPORT**

**LANGILE MATTIX PENROSE SAND UNIT TRASH PIT  
1RP-3360  
UNIT O, SECTION 27, TOWNSHIP 22S, RANGE 37E  
EDDY COUNTY, NEW MEXICO  
32.357998, -103.147318  
RANGER REFERENCE NO. 5375**

Review of the Annual Groundwater Monitoring Report for Langile Mattix Penrose Sand Unit Trash Pit: content satisfactory

1. Continue to sample groundwater on a semi-annual basis/schedule as previously approved for COCs.

2. Sampling method may be changed to Hydrasleeve, or other passive sampling technique. Please include those details on which method in the next annual groundwater report to OCD.

3. Propose an option for remediation of TDS and chloride in groundwater at the site from the release.

4. Submit the 2024 Annual Groundwater Report with recommendations by April 1, 2025.

**PREPARED FOR:**

**TEAM OPERATING  
PO BOX 835  
PINEHURST, TEXAS 77362**

**PREPARED BY:**

**RANGER ENVIRONMENTAL SERVICES, LLC  
P.O. BOX 201179  
AUSTIN, TEXAS 78720**

**APRIL 26, 2024**

**Patrick K. Finn, P.G. (TX)  
Project Geoscientist**

**William Kierdorf, REM  
Project Manager**

## TABLE OF CONTENTS

---

1.0	SITE LOCATION AND BACKGROUND .....	1
2.0	GROUNDWATER MONITORING (JUNE & DECEMBER 2023) .....	3
2.1	June 2023 Groundwater Sampling Methodologies.....	3
2.2	December 2023 Groundwater Sampling Methodologies .....	3
2.3	Well Gauging Results .....	4
2.4	Groundwater Analytical Results .....	5
3.0	CONCLUSIONS AND RECOMMENDATIONS.....	5

### FIGURES

- Topographic Map
- Area Map
- Site Map
- Groundwater Gradient Maps
- Groundwater TDS and Chloride Isoconcentration Maps

### TABLES

- Cumulative Well Gauging Data
- Cumulative Groundwater Analytical Summary Table

### ATTACHMENTS

- Attachment 1 – Site Photographs
- Attachment 2 – Laboratory Analytical Reports
- Attachment 3 – NMOCD Correspondence



**ANNUAL GROUNDWATER MONITORING REPORT  
LANGILE MATTIX PENROSE SAND UNIT TRASH PIT  
1RP-3360  
UNIT O, SECTION 27, TOWNSHIP 22S, RANGE 37E  
LEA COUNTY, NEW MEXICO  
32.357998, -103.147318  
RANGER REFERENCE NO. 5375**

Ranger Environmental Services, LLC (Ranger) was retained by Team Operating, LLC in November 2023 to assist in the second 2023 semi-annual groundwater monitoring event at the Langile Mattix Penrose Sand Unit Trash Pit ("subject site"). The monitoring event was conducted by Ranger on December 20, 2023. This *Annual Groundwater Monitoring Report* has been prepared in order to document the completion of the 2023 site groundwater monitoring activities.

In March 2024, Ranger corresponded with Mr. Mike Buchanan of the New Mexico Oil Conservation Division (NMOCD) and requested a 30-day extension to allow for preparation of this report. On March 26, 2024, Mr. Buchanan approved the 30-day extension (copy attached). Notification of the December 20, 2023 groundwater monitoring event was submitted to the NMOCD on December 14, 2023.

This report also presents the results of the June 9, 2023 groundwater monitoring activities conducted at the subject site by Larson & Associates, Inc. (LAI). The June 9, 2023 groundwater monitoring event results were previously presented in the LAI-prepared *2023 1<sup>st</sup> Semi-Annual (January-June) Groundwater Monitoring Report*, dated July 24, 2023. This information has been re-presented in this report in order to bring the site reporting into accordance with the September 2023 NMOCD approval of a semi-annual groundwater monitoring schedule with associated annual reporting.

Attached are a *Topographic Map* and aerial *Area Map* which illustrate the location of the subject site and surrounding areas. Also attached is a *Site Map* which illustrates pertinent site features and the locations of the monitoring wells installed at the subject site.

## **1.0 SITE LOCATION AND BACKGROUND**

The subject site is a historic oil and gas location situated approximately 5.5 miles south-southeast of Eunice, in Lea County, New Mexico. The Site is situated in Unit O, Section 27, Township 22 South, Range 27 East, at approximate GPS coordinates 32.357998, -103.147318.

On May 16, 2011, the NMOCD issued a letter to the current and past operators of the subject site that referenced a complaint from a nearby landowner that burial of miscellaneous refuse and debris had occurred at the Site. In order to investigate the allegations, Etech Environmental & Safety Solutions, Inc. (Etech) was retained by the operator at that time (Legacy) to investigate the site. Etech used a metal detector to identify locations where metallic waste may have been buried and excavated five (5) locations to a maximum depth of about 20 feet below ground surface (bgs).

Waste and debris were excavated and segregated from the soil. The waste was disposed at a permitted facility and about 7,500 to 9,000 cubic yards of soil was retained on the Site. Etech installed monitoring well MW-1 in 2013, about 50 feet southwest of the subject site. The monitoring well was drilled to about 64 feet bgs; however, no construction documentation is available for MW-1.

In March 2014, LAI was retained to complete the investigation and close the excavations. Total petroleum hydrocarbon (TPH) concentrations above the action level of 100 mg/Kg was documented in nine (9) bottom and 13 side samples. Chloride concentrations in excess of 250 mg/Kg were documented in the excavation bottom and in six (6) side samples. Fifteen (15) soil borings were subsequently installed and sampled to delineate the vertical and horizontal extent of the TPH and chloride soil impacts. The vertical and lateral extent of the TPH impacts were ultimately delineated by the soil borings. However, chloride concentrations in excess of 250 mg/Kg were unable to be vertically delineated in nine of the boring locations (such as the 3,530 mg/Kg chloride impact at a depth of 35 feet in soil boring SB-3) and as such suggested the impacts had migrated to groundwater.

Approximately 1,630 cubic yards of soil was subsequently disposed at Sundance Services, located east of Eunice, New Mexico. On August 1, 2014, OCD District 1 in Hobbs, New Mexico, approved closing the excavations by installing a 20 mil thickness polyethylene liner in the bottom of the excavations, at a minimum depth of four (4) feet bgs, and filling with soil from the remaining on-site stockpiles. A layer of clean sand was placed over the liner prior to filling with soil from the stockpiles in order to protect the liner. Excavation closure was completed on August 30, 2014.

On May 11, 2014, LAI personnel collected groundwater samples from monitor well MW-1. Benzene, toluene, ethylbenzene and xylenes (BTEX) were found to be below the laboratory method reporting limits. Chloride and TDS were found to exceed the WQCC water quality standards of 250 mg/L and 1,000 mg/L, respectfully. Two (2) historic emergency pits (closed) located north of monitor well MW-1 were excavated with the trash pit and were suspected as the source for the chloride and TDS groundwater impacts in MW-1.

Based upon the above, on June 12, 2014 and April 15, 2015, three additional site monitoring wells were installed (MW's 2-4). From 2015 to 2023, quarterly groundwater monitoring and semi-annual reporting activities were conducted. In their *2023 1<sup>st</sup> Semi-Annual (January-June) Groundwater Monitoring Report*, dated July 24, 2023, LAI proposed to reduce the monitoring frequency from quarterly to semi-annual events.

In a September 14, 2023 email, the NMOCD approved of the proposed reduction in monitoring frequency (from quarterly to semiannual) since the groundwater plume had been documented to be stable. The NMOCD response also approved the discontinuance of sampling for nitrate (due to lack of any nitrate impacts) and requested the submittal of a 2023 annual groundwater monitoring report on or before April 1, 2024.

Copies of the historic files for the subject site are available via the NMOCD online portal:

(<https://ocdimage.emnrd.nm.gov/imaging/AEOrderFileView.aspx?appNo=pTO1427255423>)



## 2.0 GROUNDWATER MONITORING (JUNE & DECEMBER 2023)

Groundwater monitoring events were conducted at the subject site in June and December, 2023. Ranger has compiled and attached cumulative tables of the site well gauging and groundwater analytical data. Also attached are groundwater gradient and chloride and TDS isoconcentration maps for each event, as well as copies of the laboratory analytical reports for the June and December 2023 sampling events. As summarized above, the June 2023 sampling event was conducted by LAI and the December 2023 event was conducted by Ranger. Full details of the June 2023 sampling event were also provided in the LAI-prepared 2023 1<sup>st</sup> Semi-Annual (January-June) Groundwater Monitoring Report, dated July 24, 2023.

### 2.1 June 2023 Groundwater Sampling Methodologies

Based on the available information, the four site monitor wells were gauged on June 8, 2023 and groundwater samples were collected from the wells on June 9, 2023. The LAI prepared 2023 1<sup>st</sup> Semi-Annual (January-June) Groundwater Monitoring Report, dated July 24, 2023, included the following information regarding the groundwater sample collection methodologies employed at the site:

*"Groundwater samples were collected using the low stress or low flow method according to EPA protocol (EQASOP-GW4, Revision 4, September 19, 2017) where an environmental pump is submerged near the middle of the water column and the well is pumped at a low rate until environmental parameters stabilize. Groundwater samples were collected from discharge through dedicated disposable Tygon® tubing. The tubing was discarded after each use and the pump was thoroughly cleaned with a solution of potable water and laboratory-grade detergent (Alconox®) and rinsed with distilled water."*

In addition to the samples collected from the four monitor wells at the Site, a duplicate sample for laboratory analysis was collected from monitor well MW-2 for comparative purposes.

Upon collection, the groundwater samples were submitted for laboratory analysis at DHL Analytical, Inc. (DHL), in Round Rock, Texas. The samples were analyzed for BTEX using laboratory Method SW-8260D, cations (calcium, magnesium, potassium, and sodium) using Method SW-6020B, anions (chloride and sulfate) using EPA Method 300, alkalinity utilizing EPA Method M-2320B, and TDS utilizing EPA Method M-2540C.

### 2.2 December 2023 Groundwater Sampling Methodologies

Prior to initiating the well gauging and sampling activities on December 20, 2023, the site monitoring wells were opened and allowed to equilibrate for approximately 30 minutes. The monitoring wells were then gauged with a decontaminated interface probe to determine the depth to groundwater in each monitor well, and any light non-aqueous phase liquid (LNAPL) thicknesses, if any. This data was utilized to determine the site groundwater flow direction and gradient.

During the December 2023 monitoring event, Ranger personnel had intended to utilize low-flow groundwater sampling techniques. However, due to equipment failure, only one monitor well (MW-2) was able to be sampled using low-flow techniques. During the sampling of MW-2, a groundwater sample and duplicate were collected using low-flow sampling techniques. The well was purged and sampled using a low flow rate (0.026 to 0.264 gpm) that minimized drawdown. The pump-intake was located in the middle or slightly above the middle of the saturated screened



interval. The well was purged until the field water quality parameters (i.e., pH, temperature, and conductivity) stabilized. Parameters were considered to have stabilized if, over three consecutive readings, the following criteria were met:

- pH  $\pm 0.1$  unit
- Temperature within 3%
- Conductivity within 3%

Following the completion of the MW-2 sampling activities, the low-flow pump failed and attempts to repair the pump in the field were unsuccessful. Due to the pump failure, the remaining three wells (MW-1, MW-3, and MW-4) were unable to be sampled utilizing low-flow sampling techniques. As such, passive grab samples were collected from these three wells using new disposable bailers.

All sample containers were filled with minimal turbulence. Due to sample turbidity, the samples collected for dissolved metals analysis were first field-filtered through a 10-micron pore size filter. Ranger personnel wore new nitrile gloves while handling each sample in order to prevent cross-contamination of samples.

All samples were containerized using properly selected and cleaned containers, which were preserved by the laboratory as needed for the particular analysis to be performed. All VOC sample vials were filled completely to minimize head space. The samples were subsequently sealed in one or more ziplock bags and stored in a sample shuttle containing ice until arrival at the laboratory for chemical analysis. All sample containers were labeled with the project name, sample identification, date and time of sample collection, and samplers' initials. Chain-of-custody forms were completed to document sample transport to the analytical laboratory.

The groundwater samples were subsequently submitted to Hall Environmental Analysis Laboratory, Inc. in Albuquerque, New Mexico for chemical analysis. The samples were analyzed for BTEX using EPA Method 8021B, dissolved metals (calcium, magnesium, potassium, and sodium) using EPA Method 6010B, anions (chloride and sulfate) using EPA Method 300, alkalinity utilizing Method SM-2320B, and total dissolved solids (TDS) utilizing Method SM-2540C.

All purge water generated during the sampling event was placed in a sealed and labeled container and was temporarily stored on-site pending off-site disposal.

### **2.3 Well Gauging Results**

No LNAPL was documented to be present in the site monitoring wells during the June and December 2023 sampling events. During the June 2023 event the depth to groundwater in the site monitoring wells was documented to range from approximately 41.57' below top-of-casing (btoc) in MW-4 to a maximum of approximately 45.21' bgs in MW-3. During the December 2023 event the depth to groundwater in the site monitoring wells was documented to range from approximately 41.66' below top-of-casing (btoc) in MW-4 to a maximum of approximately 45.27' bgs in MW-3.

As illustrated on the attached groundwater gradient maps, the site groundwater gradient and flow direction was documented to be approximately 0.0004 ft/ft to the southeast during both the June and December 2023 monitoring events, consistent with historical observations.





## 2.4 Groundwater Analytical Results

- *Groundwater Anions (Chloride and Sulfate):* Concentrations of chloride above the NMWQCC criteria were documented in MW-1 and MW-3 during both monitoring events. A sulfate concentration above the NMWQCC criteria was documented in MW-1 during the June 2023 event. During the December 2023 event, all wells were documented to have sulfate concentrations below the NMWQCC criteria.
- *Dissolved Metals (Calcium, Magnesium, Potassium, and Sodium):* Results for these constituents were consistent with historical results.
- *BTEX:* All BTEX results were found to be nondetectable during both monitoring events, consistent with historical results.
- *Alkalinity and TDS:* Elevated TDS concentrations were documented in MW-1 and MW-3 during both monitoring events.

The results from the duplicate samples collected during the June and December 2023 monitoring events from monitor well MW-2 were consistent with the MW-2 results and indicate that the data are usable and valid. The results from monitor wells MW-1, MW-3, and MW-4, from which passive grab samples were collected using new disposable bailers (due to the low-flow pump failure), were highly comparable to the historic results from these wells.

In summary, the June and December 2023 groundwater monitoring results were consistent with historical observations and indicative of a stable condition.

## 3.0 CONCLUSIONS AND RECOMMENDATIONS

- The June and December 2023 groundwater monitoring results were consistent with historic results and indicative of stable conditions.
- Monitor well MW-1, located to the south and down gradient of the former pit area, continues to exhibit the most elevated chloride and TDS concentrations at the site. The results from monitor well MW-2, located to the north and upgradient of the former pit area, continue to exhibit what appears to be background chloride and TDS concentrations.
- Ranger recommends the continuation of the approved semi-annual groundwater monitoring and annual reporting program. In addition, since the analytical results from MW's 1, 3, and 4 were highly comparable to the historic results from these wells, Ranger recommends that future sampling events be conducted using passive grab sampling techniques.

## FIGURES

Topographic Map

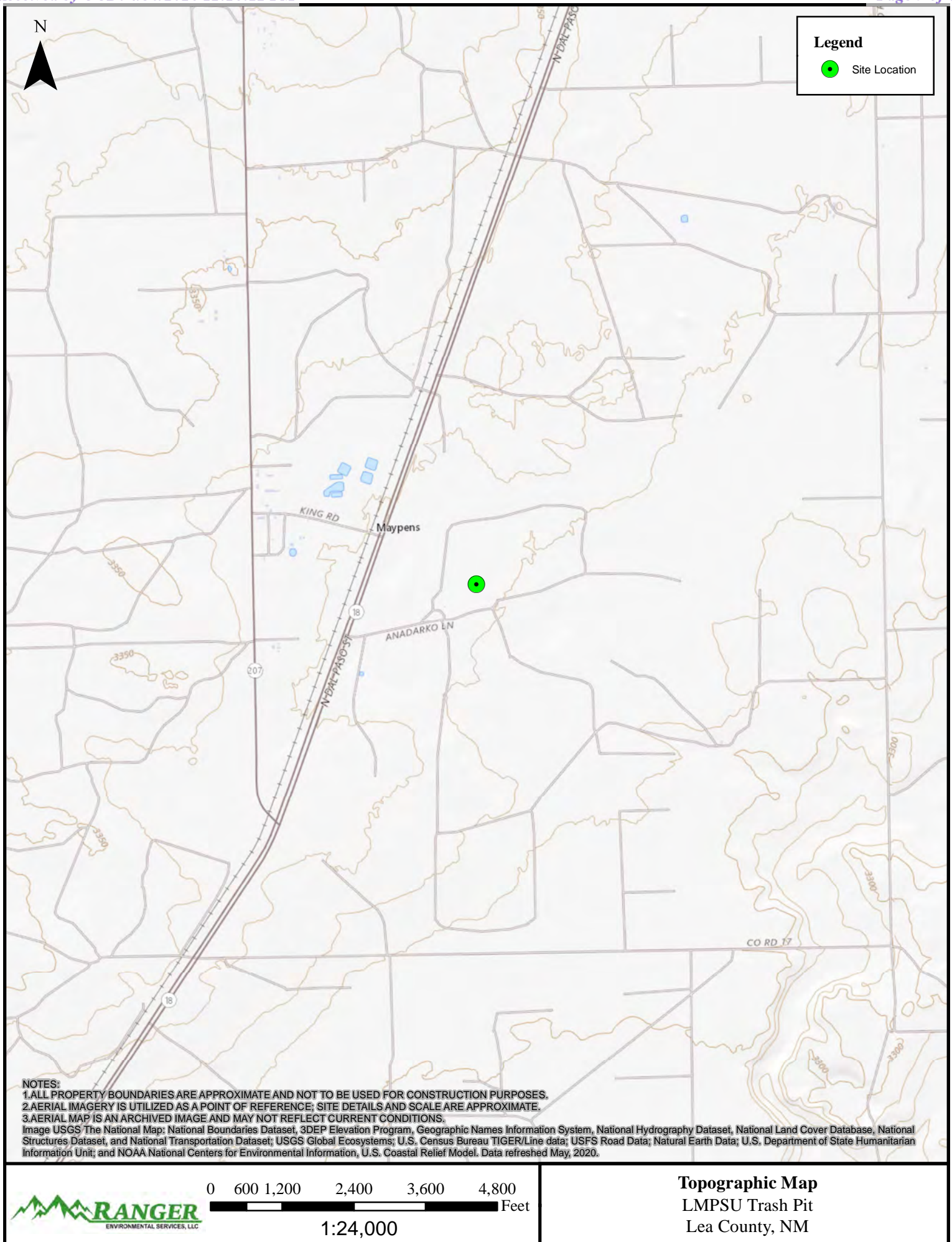
Area Map

Site Map

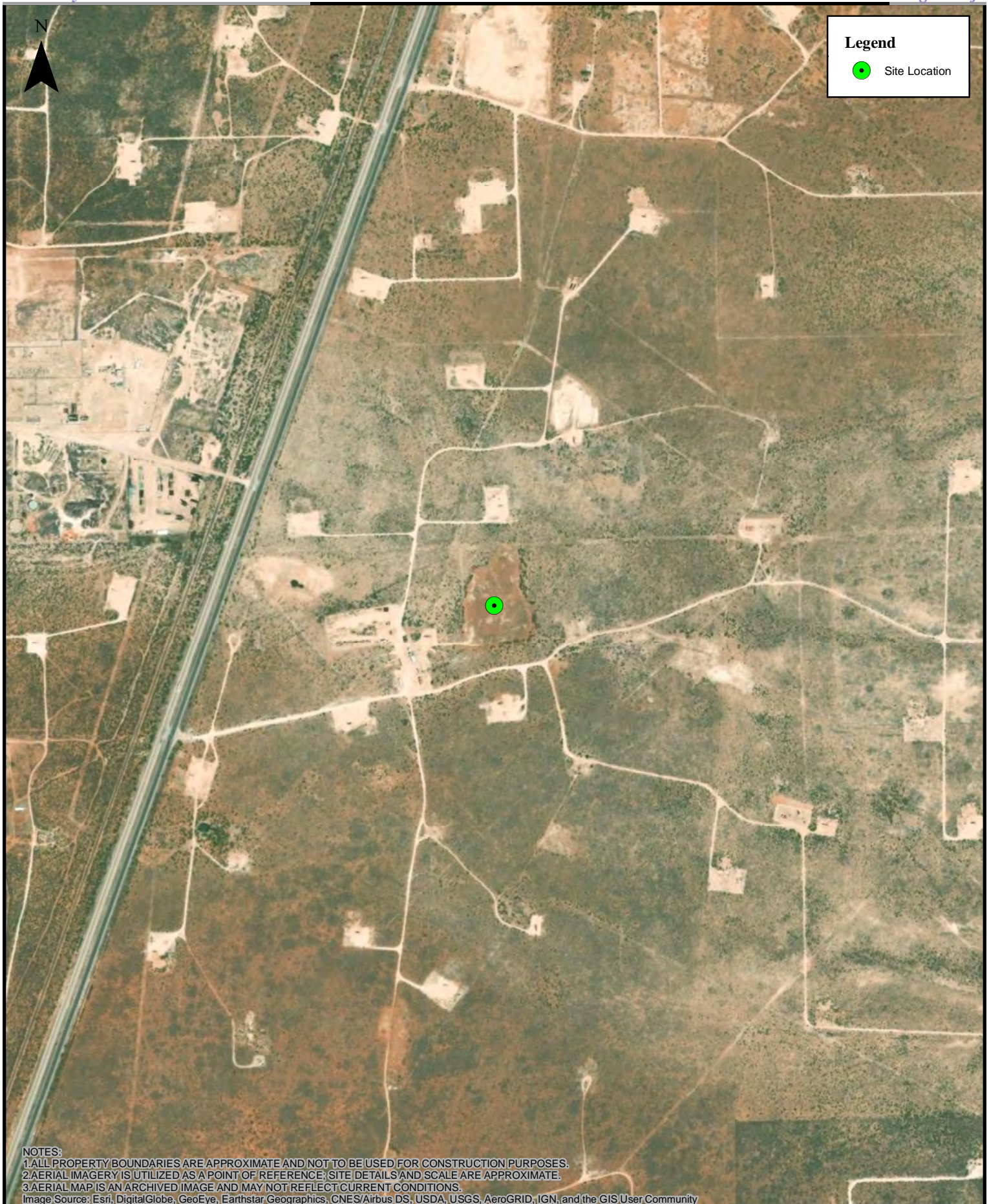
Groundwater Gradient Maps


Groundwater TDS and Chloride Isoconcentration Maps







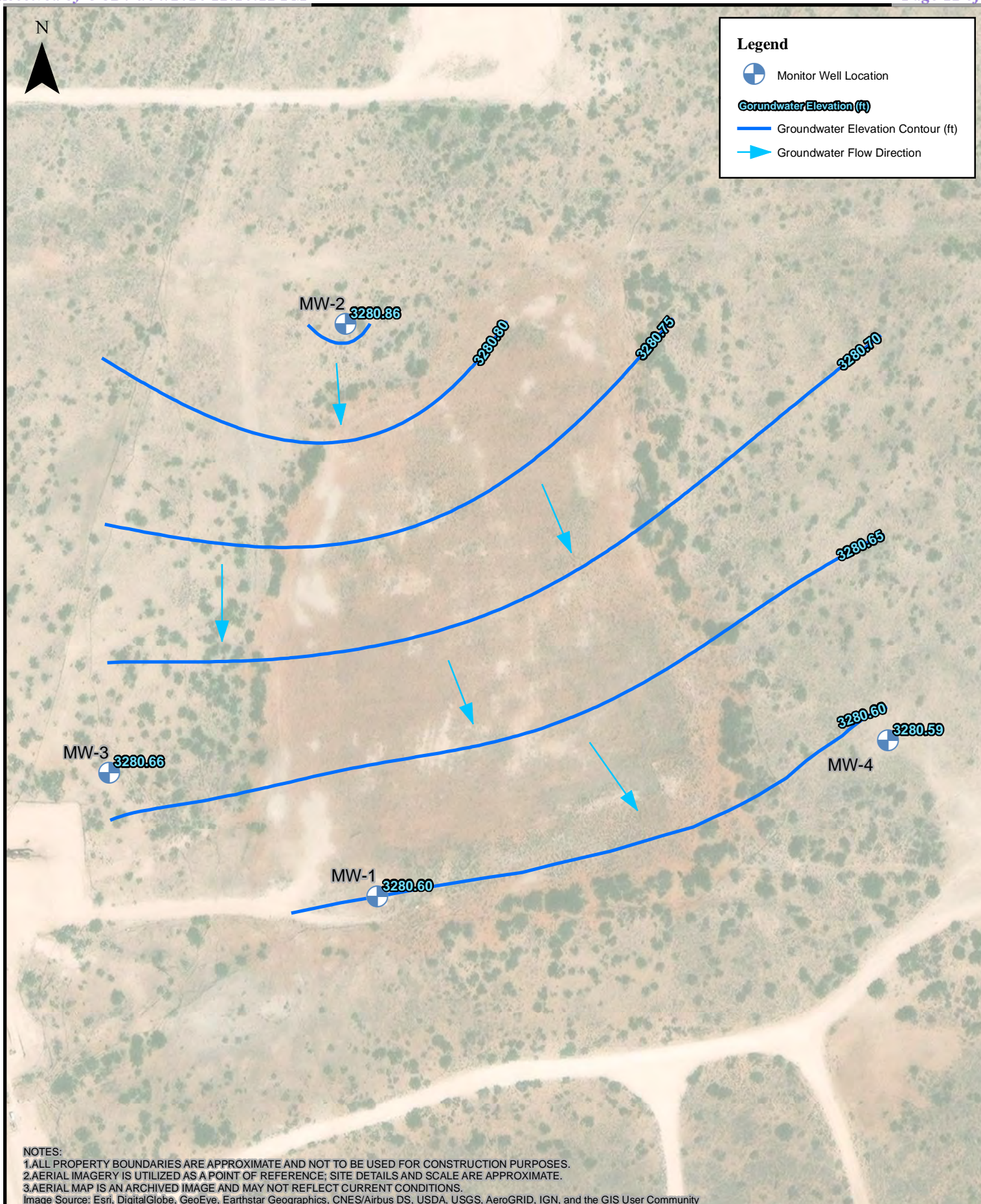


 <p>0 250 500 1,000 1,500 2,000 Feet</p> <p>1:10,000</p>	<p><b>Area Map</b></p> <p>LMPSU Trash Pit</p> <p>Lea County, NM</p>
--	---









0 35 70 140 210 280 Feet

1:1,500

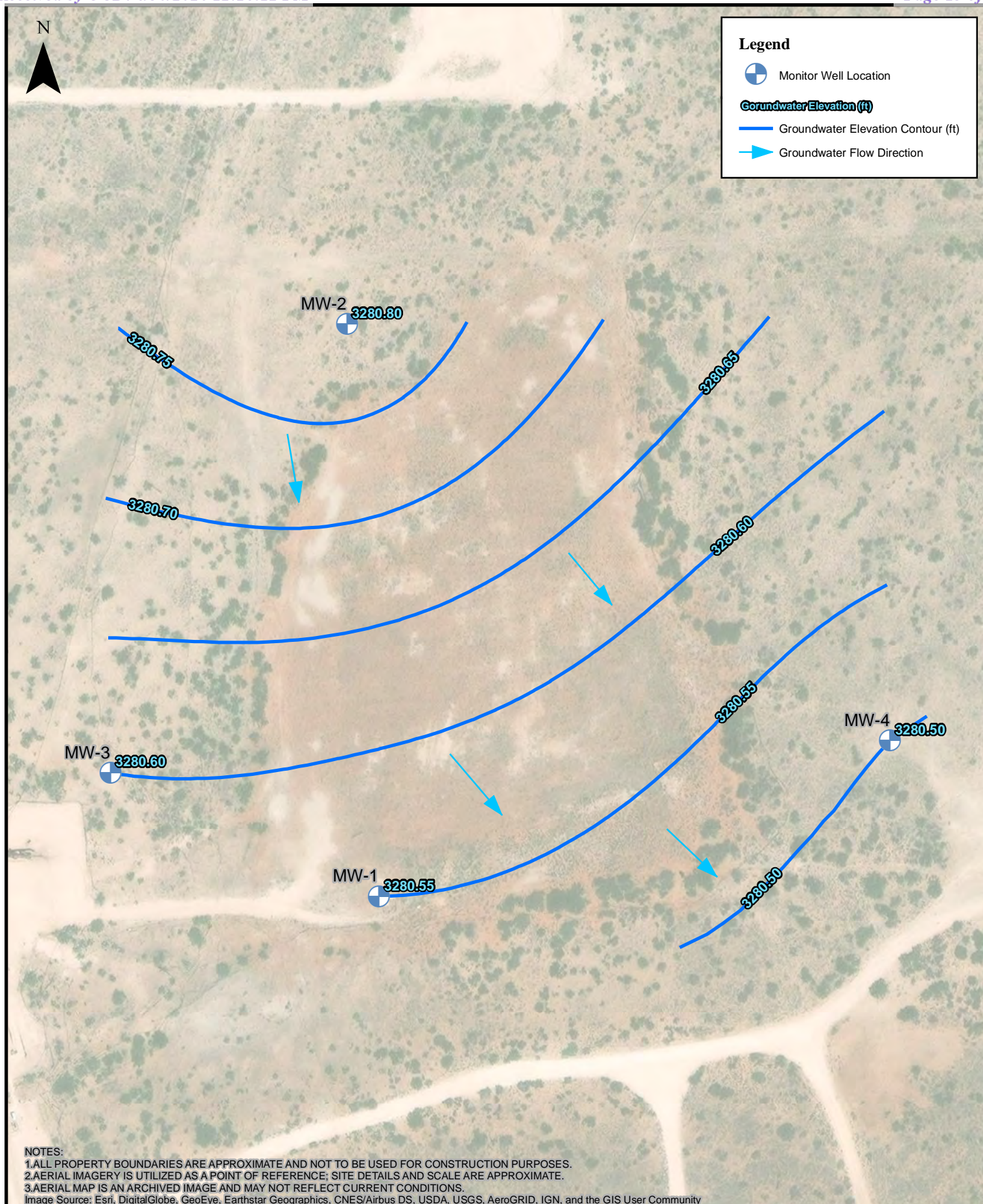
### Groundwater Elevation Contour Map

(06/08/2023)

LMPSU Trash Pit

Lea County, NM





0 35 70 140 210 280 Feet

1:1,500

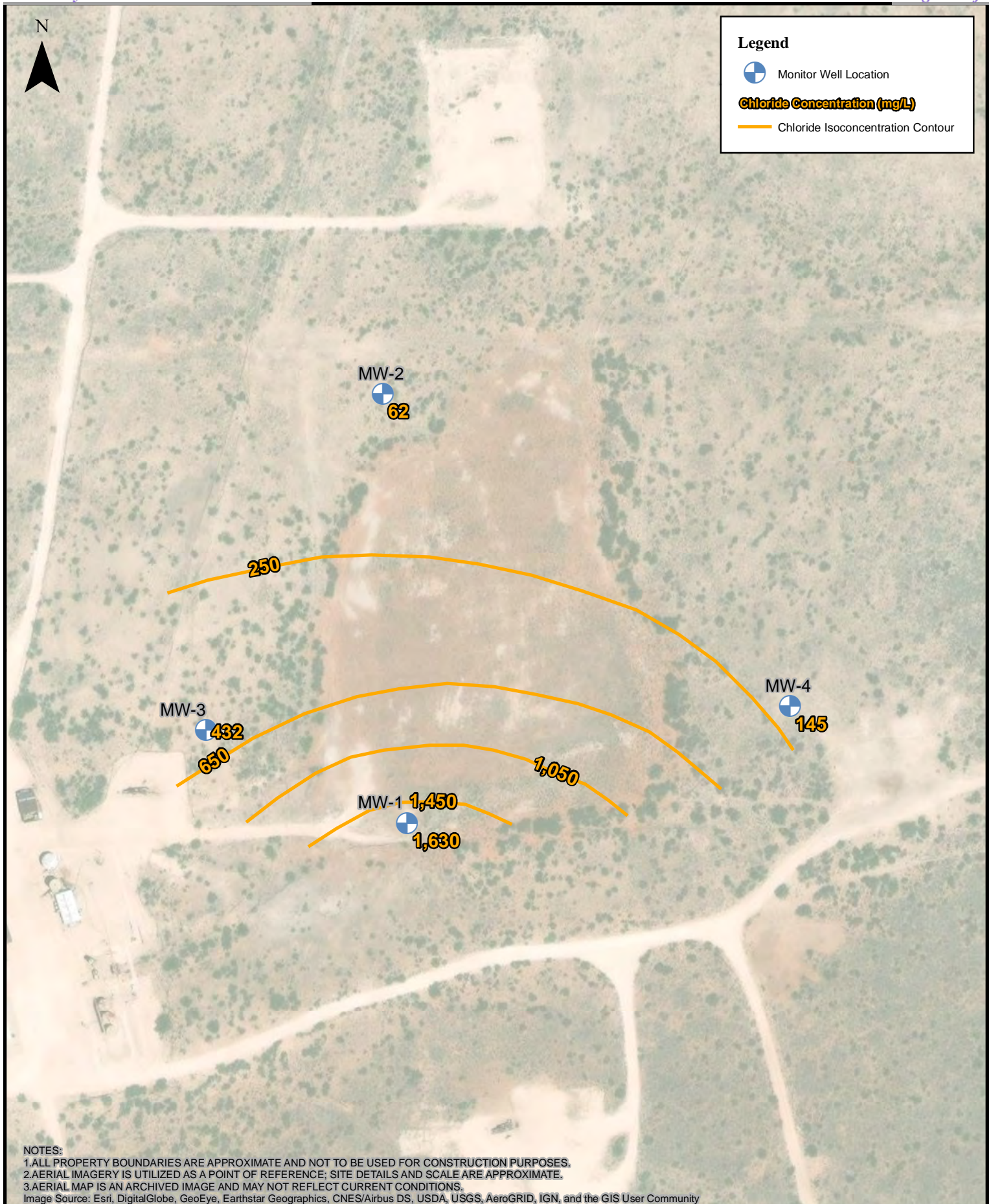
### Groundwater Elevation Contour Map

(12/20/2023)

LMPSU Trash Pit

Lea County, NM





0 50 100 200 300 400 Feet

1:2,000

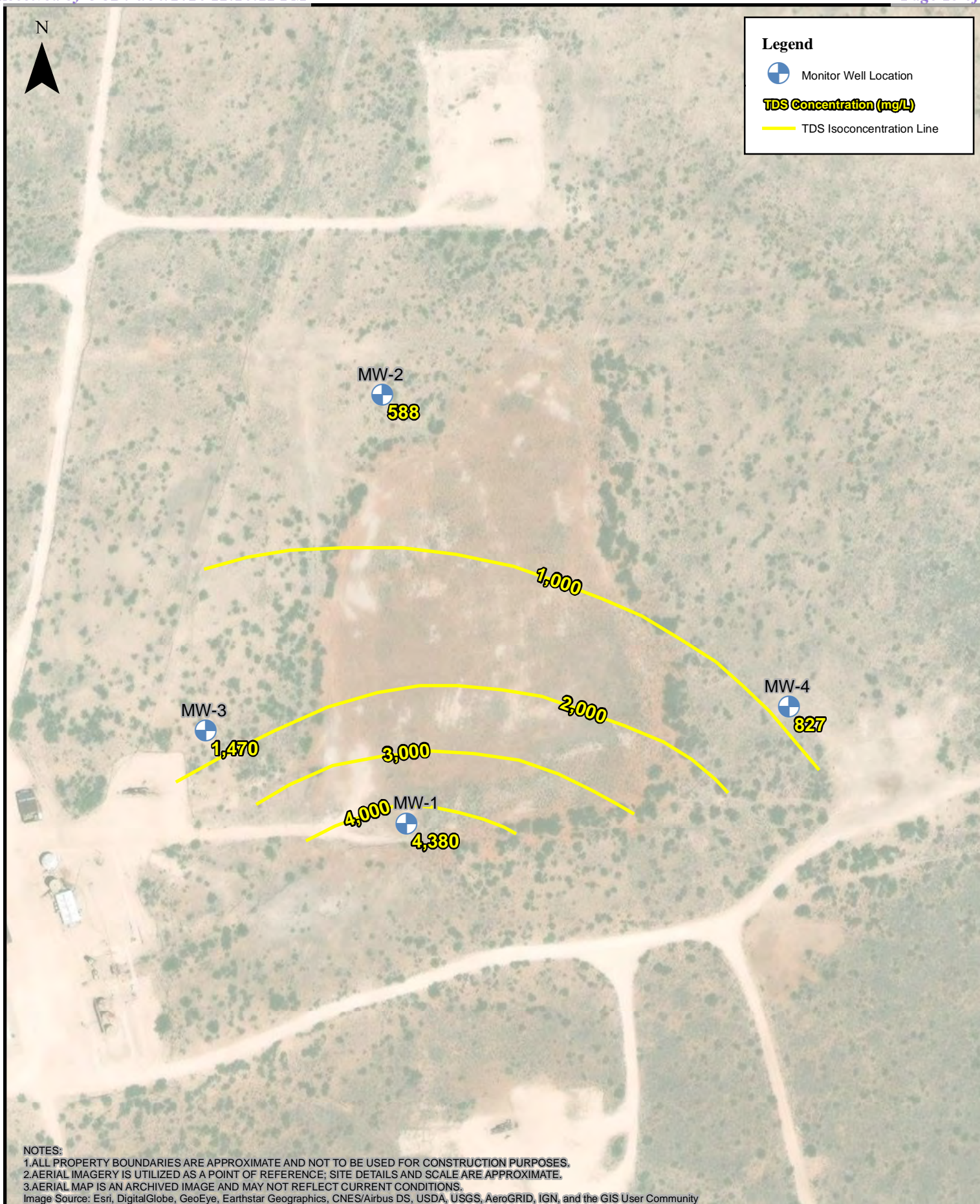
### Chloride Isoconcentration Map

(06/09/2023)

LMPSU Trash Pit

Lea County, NM





0 50 100 200 300 400 Feet

1:2,000

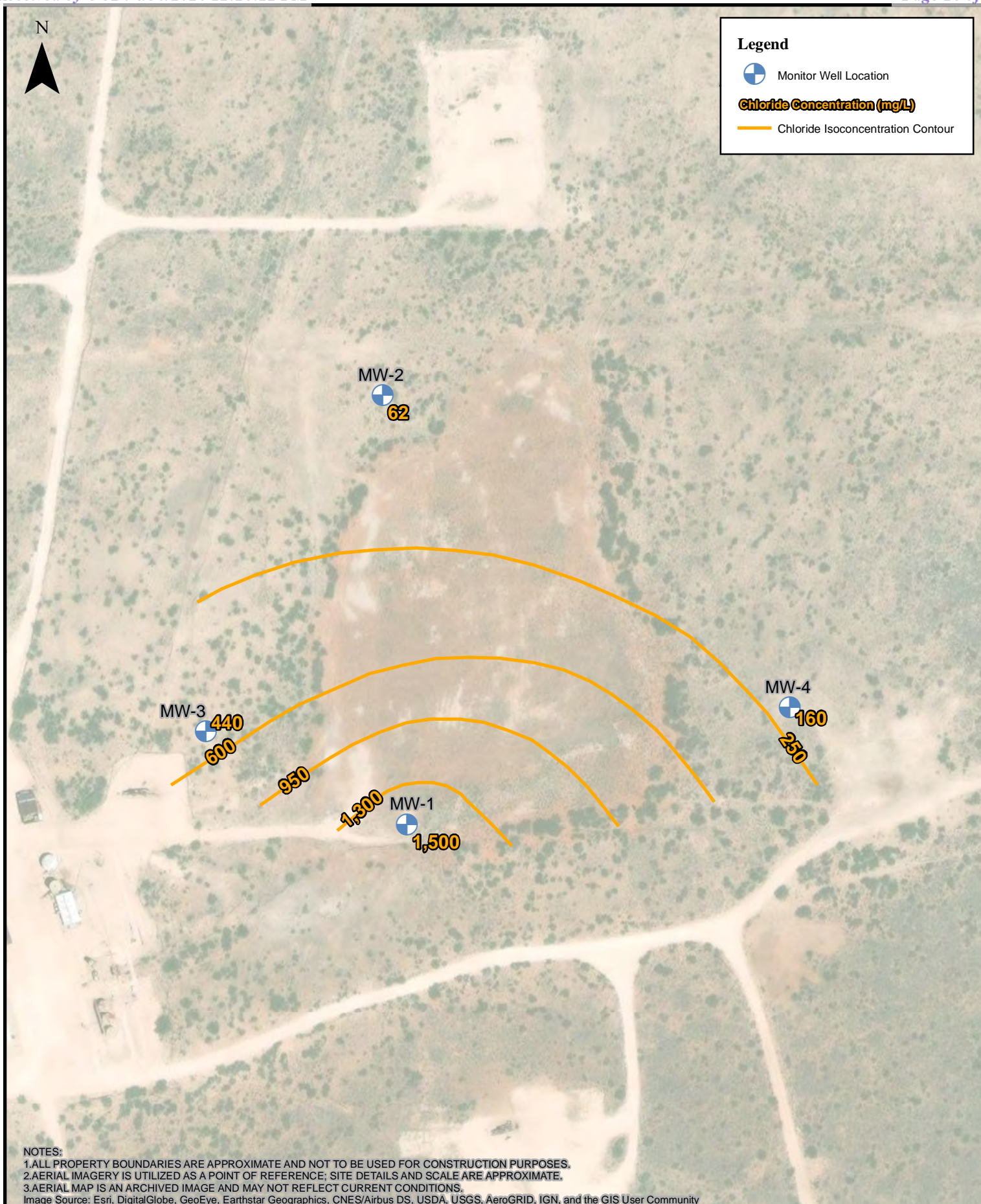
### TDS Isoconcentration Map

(06/09/2023)

LMPSU Trash Pit

Lea County, NM





0 50 100 200 300 400 Feet

1:2,000

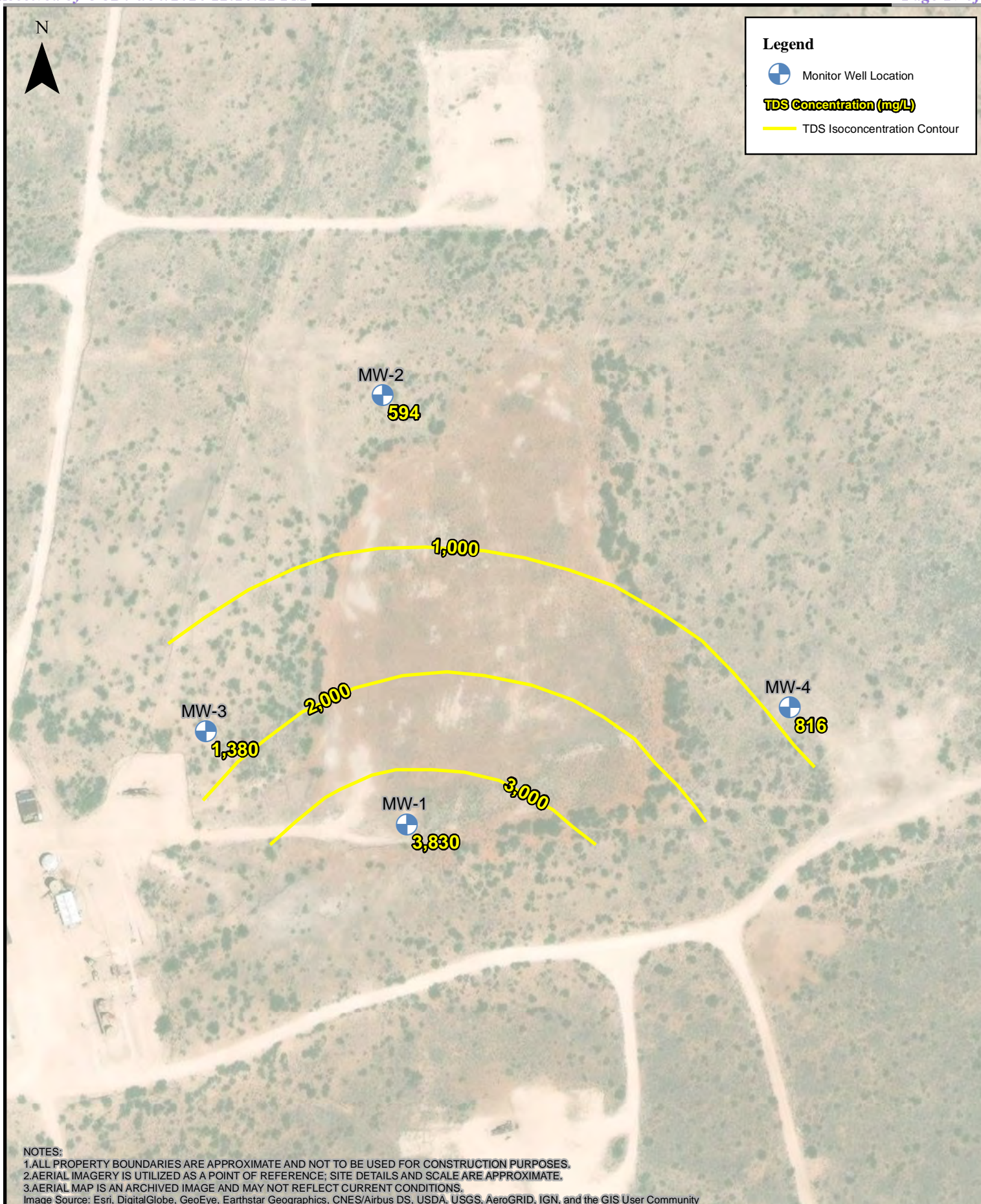
### Chloride Isoconcentration Map

(12/20/2023)

LMPSU Trash Pit

Lea County, NM





0 50 100 200 300 400 Feet

1:2,000

### TDS Isoconcentration Map

(12/20/2023)

LMPSU Trash Pit

Lea County, NM

## TABLES

Cumulative Well Gauging Data  
Cumulative Groundwater Analytical Summary Table

**CUMULATIVE WELL GAUGING DATA**  
**LMPSU TRASH PIT**  
**LEA COUNTY, NEW MEXICO**  
**1RP-3360**

<b>WELL NUMBER</b>	<b>DATE</b>	<b>CASING ELEV. (FT)</b>	<b>DEPTH TO WATER (FT-BTOC)</b>	<b>LNAPL THICKNESS (FT)</b>	<b>GW ELEVATION (FT)</b>	<b>SCREENED INTERVAL (FT-BGS)</b>
MW-1	1/28/2015	3324.09	43.79	0.00	3280.30	---
MW-1	6/1/2015	3324.09	43.69	0.00	3280.40	---
MW-1	8/18/2015	3324.09	46.60	0.00	3277.49	---
MW-1	9/11/2015	3324.09	43.60	0.00	3280.49	---
MW-1	12/3/2015	3324.09	42.55	0.00	3281.54	---
MW-1	3/17/2016	3324.09	43.45	0.00	3280.64	---
MW-1	7/19/2016	3324.09	43.46	0.00	3280.63	---
MW-1	8/26/2016	3324.09	43.46	0.00	3280.63	---
MW-1	10/18/2016	3324.09	43.33	0.00	3280.76	---
MW-1	1/18/2017	3324.09	43.35	0.00	3280.74	---
MW-1	4/25/2017	3324.09	43.47	0.00	3280.62	---
MW-1	9/13/2017	3324.09	43.28	0.00	3280.81	---
MW-1	12/19/2017	3324.09	43.28	0.00	3280.81	---
MW-1	2/26/2018	3324.09	43.28	0.00	3280.81	---
MW-1	5/7/2018	3324.09	43.28	0.00	3280.81	---
MW-1	8/2/2018	3324.09	43.33	0.00	3280.76	---
MW-1	12/10/2018	3324.09	44.39	0.00	3279.70	---
MW-1	2/18/2019	3324.09	43.55	0.00	3280.54	---
MW-1	5/7/2019	3324.09	43.35	0.00	3280.74	---
MW-1	8/1/2019	3324.09	43.40	0.00	3280.69	---
MW-1	12/5/2019	3324.09	43.37	0.00	3280.72	---
MW-1	2/17/2020	3324.09	43.90	0.00	3280.19	---
MW-1	5/4/2020	3324.09	43.30	0.00	3280.79	---
MW-1	8/12/2020	3324.09	43.40	0.00	3280.69	---
MW-1	10/5/2020	3324.09	43.45	0.00	3280.64	---
MW-1	1/4/2021	3324.09	45.19	0.00	3278.90	---
MW-1	2/1/2021	3324.09	43.50	0.00	3280.59	---
MW-1	4/30/2021	3324.09	43.46	0.00	3280.63	---
MW-1	8/9/2021	3324.09	43.41	0.00	3280.68	---
MW-1	11/19/2021	3324.09	43.40	0.00	3280.69	---
MW-1	2/25/2022	3324.09	43.43	0.00	3280.66	---
MW-1	5/18/2022	3324.09	43.41	0.00	3280.68	---

**CUMULATIVE WELL GAUGING DATA**  
**LMPSU TRASH PIT**  
**LEA COUNTY, NEW MEXICO**  
**1RP-3360**

<b>WELL NUMBER</b>	<b>DATE</b>	<b>CASING ELEV. (FT)</b>	<b>DEPTH TO WATER (FT-BTOC)</b>	<b>LNAPL THICKNESS (FT)</b>	<b>GW ELEVATION (FT)</b>	<b>SCREENED INTERVAL (FT-BGS)</b>
MW-1	8/19/2022	3324.09	43.50	0.00	3280.59	---
MW-1	12/19/2022	3324.09	43.49	0.00	3280.60	---
MW-1	3/17/2023	3324.09	43.49	0.00	3280.60	---
MW-1	6/8/2023	3324.09	43.49	0.00	3280.60	---
MW-1	12/20/2023	3324.09	43.54	0.00	3280.55	---
MW-2	1/28/2015	3325.18	43.79	0.00	3281.39	38.17 - 57.77
MW-2	6/1/2015	3325.18	49.88	0.00	3275.30	38.17 - 57.78
MW-2	8/18/2015	3325.18	44.75	0.00	3280.43	38.17 - 57.79
MW-2	9/11/2015	3325.18	44.50	0.00	3280.68	38.17 - 57.80
MW-2	12/3/2015	3325.18	44.65	0.00	3280.53	38.17 - 57.81
MW-2	3/17/2016	3325.18	44.66	0.00	3280.52	38.17 - 57.82
MW-2	7/19/2016	3325.18	44.35	0.00	3280.83	38.17 - 57.83
MW-2	8/26/2016	3325.18	44.35	0.00	3280.83	38.17 - 57.77
MW-2	10/18/2016	3325.18	44.25	0.00	3280.93	38.17 - 57.78
MW-2	1/18/2017	3325.18	44.31	0.00	3280.87	38.17 - 57.79
MW-2	4/25/2017	3325.18	43.15	0.00	3282.03	38.17 - 57.80
MW-2	9/13/2017	3325.18	44.17	0.00	3281.01	38.17 - 57.81
MW-2	12/19/2017	3325.18	44.18	0.00	3281.00	38.17 - 57.82
MW-2	2/26/2018	3325.18	44.16	0.00	3281.02	38.17 - 57.83
MW-2	5/7/2018	3325.18	44.16	0.00	3281.02	38.17 - 57.84
MW-2	8/2/2018	3325.18	44.18	0.00	3281.00	38.17 - 57.85
MW-2	12/10/2018	3325.18	44.25	0.00	3280.93	38.17 - 57.86
MW-2	2/18/2019	3325.18	44.22	0.00	3280.96	38.17 - 57.87
MW-2	5/7/2019	3325.18	44.20	0.00	3280.98	38.17 - 57.88
MW-2	8/1/2019	3325.18	44.21	0.00	3280.97	38.17 - 57.89
MW-2	12/5/2019	3325.18	44.21	0.00	3280.97	38.17 - 57.90
MW-2	2/17/2020	3325.18	44.30	0.00	3280.88	38.17 - 57.77
MW-2	5/4/2020	3325.18	44.18	0.00	3281.00	38.17 - 57.78
MW-2	8/12/2020	3325.18	44.30	0.00	3280.88	38.17 - 57.79
MW-2	10/5/2020	3325.18	44.30	0.00	3280.88	38.17 - 57.80
MW-2	1/4/2021	3325.18	41.59	0.00	3283.59	38.17 - 57.81
MW-2	2/1/2021	3325.18	44.35	0.00	3280.83	38.17 - 57.82
MW-2	4/30/2021	3325.18	44.34	0.00	3280.84	38.17 - 57.83
MW-2	8/9/2021	3325.18	44.30	0.00	3280.88	38.17 - 57.84
MW-2	11/19/2021	3325.18	44.26	0.00	3280.92	38.17 - 57.85



**CUMULATIVE WELL GAUGING DATA**  
**LMPSU TRASH PIT**  
**LEA COUNTY, NEW MEXICO**  
**1RP-3360**

<b>WELL NUMBER</b>	<b>DATE</b>	<b>CASING ELEV. (FT)</b>	<b>DEPTH TO WATER (FT-BTOC)</b>	<b>LNAPL THICKNESS (FT)</b>	<b>GW ELEVATION (FT)</b>	<b>SCREENED INTERVAL (FT-BGS)</b>
MW-2	2/25/2022	3325.18	44.31	0.00	3280.87	38.17 - 57.86
MW-2	5/18/2022	3325.18	44.29	0.00	3280.89	38.17 - 57.87
MW-2	8/19/2022	3325.18	44.36	0.00	3280.82	38.17 - 57.88
MW-2	12/19/2022	3325.18	44.36	0.00	3280.82	38.17 - 57.89
MW-2	3/17/2023	3325.18	44.36	0.00	3280.82	38.17 - 57.90
MW-2	6/8/2023	3325.18	44.32	0.00	3280.86	38.17 - 57.77
MW-2	12/20/2023	3325.18	44.38	0.00	3280.80	38.17 - 57.77
MW-3	4/15/2015	3325.87	46.00	0.00	3279.87	34.69 - 54.75
MW-3	6/1/2015	3325.87	45.53	0.00	3280.34	34.69 - 54.76
MW-3	8/18/2015	3325.87	45.42	0.00	3280.45	34.69 - 54.77
MW-3	9/11/2015	3325.87	45.40	0.00	3280.47	34.69 - 54.78
MW-3	12/3/2015	3325.87	45.21	0.00	3280.66	34.69 - 54.79
MW-3	3/17/2016	3325.87	45.35	0.00	3280.52	34.69 - 54.80
MW-3	7/19/2016	3325.87	45.12	0.00	3280.75	34.69 - 54.81
MW-3	8/26/2016	3325.87	45.13	0.00	3280.74	34.69 - 54.75
MW-3	10/18/2016	3325.87	45.01	0.00	3280.86	34.69 - 54.76
MW-3	1/18/2017	3325.87	45.07	0.00	3280.80	34.69 - 54.77
MW-3	4/25/2017	3325.87	44.93	0.00	3280.94	34.69 - 54.78
MW-3	9/13/2017	3325.87	44.90	0.00	3280.97	34.69 - 54.79
MW-3	12/19/2017	3325.87	44.94	0.00	3280.93	34.69 - 54.80
MW-3	2/26/2018	3325.87	44.94	0.00	3280.93	34.69 - 54.81
MW-3	5/7/2018	3325.87	44.94	0.00	3280.93	34.69 - 54.82
MW-3	8/2/2018	3325.87	45.02	0.00	3280.85	34.69 - 54.83
MW-3	12/10/2018	3325.87	45.09	0.00	3280.78	34.69 - 54.84
MW-3	2/18/2019	3325.87	45.10	0.00	3280.77	34.69 - 54.85
MW-3	5/7/2019	3325.87	45.02	0.00	3280.85	34.69 - 54.86
MW-3	8/1/2019	3325.87	45.09	0.00	3280.78	34.69 - 54.87
MW-3	12/5/2019	3325.87	45.07	0.00	3280.80	34.69 - 54.88
MW-3	2/17/2020	3325.87	45.00	0.00	3280.87	34.69 - 54.75
MW-3	5/4/2020	3325.87	45.05	0.00	3280.82	34.69 - 54.76
MW-3	8/12/2020	3325.87	45.10	0.00	3280.77	34.69 - 54.77
MW-3	10/5/2020	3325.87	45.15	0.00	3280.72	34.69 - 54.78
MW-3	1/4/2021	3325.87	44.34	0.00	3281.53	34.69 - 54.79
MW-3	2/1/2021	3325.87	45.20	0.00	3280.67	34.69 - 54.80
MW-3	4/30/2021	3325.87	45.20	0.00	3280.67	34.69 - 54.81

**CUMULATIVE WELL GAUGING DATA**  
**LMPSU TRASH PIT**  
**LEA COUNTY, NEW MEXICO**  
**1RP-3360**

<b>WELL NUMBER</b>	<b>DATE</b>	<b>CASING ELEV. (FT)</b>	<b>DEPTH TO WATER (FT-BTOC)</b>	<b>LNAPL THICKNESS (FT)</b>	<b>GW ELEVATION (FT)</b>	<b>SCREENED INTERVAL (FT-BGS)</b>
MW-3	8/9/2021	3325.87	45.11	0.00	3280.76	34.69 - 54.82
MW-3	11/19/2021	3325.87	45.11	0.00	3280.76	34.69 - 54.83
MW-3	2/25/2022	3325.87	45.15	0.00	3280.72	34.69 - 54.84
MW-3	5/18/2022	3325.87	45.14	0.00	3280.73	34.69 - 54.85
MW-3	8/19/2022	3325.87	45.19	0.00	3280.68	34.69 - 54.86
MW-3	12/19/2022	3325.87	45.21	0.00	3280.66	34.69 - 54.87
MW-3	3/17/2023	3325.87	45.24	0.00	3280.63	34.69 - 54.88
MW-3	6/8/2023	3325.87	45.21	0.00	3280.66	34.69 - 54.75
MW-3	12/20/2023	3325.87	45.27	0.00	3280.60	34.69 - 54.75
MW-4	4/15/2015	3322.16	42.08	0.00	3280.08	38.31 - 57.77
MW-4	6/1/2015	3322.16	42.35	0.00	3279.81	38.31 - 57.78
MW-4	8/18/2015	3322.16	42.20	0.00	3279.96	38.31 - 57.79
MW-4	9/11/2015	3322.16	42.00	0.00	3280.16	38.31 - 57.80
MW-4	12/3/2015	3322.16	41.77	0.00	3280.39	38.31 - 57.81
MW-4	3/17/2016	3322.16	42.02	0.00	3280.14	38.31 - 57.82
MW-4	7/19/2016	3322.16	41.65	0.00	3280.51	38.31 - 57.83
MW-4	8/26/2016	3322.16	41.64	0.00	3280.52	38.31 - 57.77
MW-4	10/18/2016	3322.16	41.51	0.00	3280.65	38.31 - 57.78
MW-4	1/18/2017	3322.16	41.54	0.00	3280.62	38.31 - 57.79
MW-4	4/25/2017	3322.16	41.47	0.00	3280.69	38.31 - 57.80
MW-4	9/13/2017	3322.16	41.39	0.00	3280.77	38.31 - 57.81
MW-4	12/19/2017	3322.16	41.43	0.00	3280.73	38.31 - 57.82
MW-4	2/26/2018	3322.16	41.44	0.00	3280.72	38.31 - 57.83
MW-4	5/7/2018	3322.16	41.41	0.00	3280.75	38.31 - 57.84
MW-4	8/2/2018	3322.16	41.48	0.00	3280.68	38.31 - 57.85
MW-4	12/10/2018	3322.16	41.49	0.00	3280.67	38.31 - 57.86
MW-4	2/18/2019	3322.16	41.49	0.00	3280.67	38.31 - 57.87
MW-4	5/7/2019	3322.16	41.45	0.00	3280.71	38.31 - 57.88
MW-4	8/1/2019	3322.16	41.50	0.00	3280.66	38.31 - 57.89
MW-4	12/5/2019	3322.16	41.49	0.00	3280.67	38.31 - 57.90
MW-4	2/17/2020	3322.16	42.50	0.00	3279.66	38.31 - 57.77
MW-4	5/4/2020	3322.16	41.45	0.00	3280.71	38.31 - 57.78
MW-4	8/12/2020	3322.16	41.50	0.00	3280.66	38.31 - 57.79
MW-4	10/5/2020	3322.16	41.49	0.00	3280.67	38.31 - 57.80

**CUMULATIVE WELL GAUGING DATA**  
**LMPSU TRASH PIT**  
**LEA COUNTY, NEW MEXICO**  
**1RP-3360**

<b>WELL NUMBER</b>	<b>DATE</b>	<b>CASING ELEV. (FT)</b>	<b>DEPTH TO WATER (FT-BTOC)</b>	<b>LNAPL THICKNESS (FT)</b>	<b>GW ELEVATION (FT)</b>	<b>SCREENED INTERVAL (FT-BGS)</b>
MW-4	1/4/2021	3322.16	43.47	0.00	3278.69	38.31 - 57.81
MW-4	2/1/2021	3322.16	41.60	0.00	3280.56	38.31 - 57.82
MW-4	4/30/2021	3322.16	41.60	0.00	3280.56	38.31 - 57.83
MW-4	8/9/2021	3322.16	41.44	0.00	3280.72	38.31 - 57.84
MW-4	11/19/2021	3322.16	41.49	0.00	3280.67	38.31 - 57.85
MW-4	2/25/2022	3322.16	41.54	0.00	3280.62	38.31 - 57.86
MW-4	5/18/2022	3322.16	41.56	0.00	3280.60	38.31 - 57.87
MW-4	8/19/2022	3322.16	41.61	0.00	3280.55	38.31 - 57.88
MW-4	12/19/2022	3322.16	41.61	0.00	3280.55	38.31 - 57.89
MW-4	3/17/2023	3322.16	41.59	0.00	3280.57	38.31 - 57.90
MW-4	6/8/2023	3322.16	41.57	0.00	3280.59	38.31 - 57.77
MW-4	12/20/2023	3322.16	41.66	0.00	3280.50	38.31 - 57.77

**Notes:**

1. Elevations referenced to a temporary on-site benchmark.
2. BTOC = below top of casing
3. All depth-to-water information prior to the 12/2023 data was collected by a previous consultant.
4. All well survey data was collected by other parties and not verified by Ranger. The presented groundwater elevation data is based on information provided to Ranger.

CUMULATIVE GROUNDWATER ANALYTICAL SUMMARY TABLE  
LMPSU TRASH PIT  
LEA COUNTY, NEW MEXICO  
1RP-3360

All Values Presented in Parts Per Million (mg/L) unless otherwise noted

SAMPLE ID	DATE	Benzene	Toluene	Ethylbenzene	Xylenes	Calcium	Magnesium	Potassium	Sodium	Chloride	Sulfate	Alkalinity	Nitrate	TDS
MW-1	12/11/2014	--	--	--	--	186	242	22.3	913	1,600	543	888	<0.100	5,330
MW-1	1/28/2015	--	--	--	--	610	437	32.5	1,430	3,230	947	417	<0.100	6,260
MW-1	6/1/2015	<0.001	<0.001	<0.001	<0.001	201	270	27.6	950	1,560	446	653	<0.2	3,920
MW-1	8/18/2015	<0.0008	<0.002	<0.002	<0.003	152	224	21.5	820	1,600	433	723	<0.10	3,830
MW-1	12/3/2015	<0.0008	<0.002	<0.002	<0.003	310	258	22.6	930	1,820	431	727	<0.1	4,230
MW-1	3/17/2016	<0.002	<0.006	<0.006	<0.009	184	283	22.7	982	1,920	432	---	<0.500	4,130
MW-1	7/19/2016	<0.002	<0.006	<0.006	<0.009	185	292	21.6	1,020	2,040	478	714	<0.500	4,690
MW-1	8/29/2016	<0.002	<0.006	<0.006	<0.009	166	278	19.9	986	1,840	450	721	<0.500	5,130
MW-1	10/18/2016	<0.002	<0.006	<0.006	<0.009	2,030	318	25	1,040	2,030	406	739	<0.500	5,040
MW-1	1/18/2017	<0.002	<0.006	<0.006	<0.006	212	333	22.9	1,130	2,080	454	766	<0.500	5,500
MW-1	4/25/2017	<0.002	<0.006	<0.006	<0.006	313	366	26.6	1,290	2,840	852	439	<0.500	9,820
MW-1	9/13/2017	<0.002	<0.006	<0.006	<0.006	217	329	21.8	1,070	1,920	361	811	<1.00	4,950
MW-1	12/19/2017	<0.002	<0.006	<0.006	<0.006	214	325	21.9	1,070	2,170	521	734	<0.0800	4,910
MW-1	2/26/2018	<0.002	<0.006	<0.006	<0.006	217	336	21.3	1,160	2,190	559	751	<0.0500	4,930
MW-1	5/7/2018	<0.002	<0.006	<0.006	<0.006	218	338	20.5	1,150	2,170	643	725	<0.0500	5,000
MW-1	8/2/2018	<0.00200	<0.00600	<0.00600	<0.00600	227	329	22.4	1,080	2,040	693	726	<0.0500	5,060
MW-1	12/10/2018	<0.00200	<0.00600	<0.00600	<0.00600	219	341	20.4	1,100	1,980	696	714	<0.0500	5,340
MW-1	2/18/2019	<0.00200	<0.00600	<0.00600	<0.00600	--	--	--	--	2,610	--	--	--	--
MW-1	5/7/2019	<0.00200	<0.00600	<0.00600	<0.00600	--	--	--	--	2,570	--	--	--	--
MW-1	8/1/2019	<0.00200	<0.00600	<0.00600	<0.00600	--	--	--	--	2,010	--	--	--	--
MW-1	12/5/2019	<0.00200	<0.00600	<0.00600	<0.00600	--	--	--	--	2,110	--	--	--	--
MW-1	2/17/2020	<0.00200	<0.00600	<0.00600	<0.00600	--	--	--	--	1,950	--	--	--	--
MW-1	5/4/2020	<0.00200	<0.00600	<0.00600	<0.00600	--	--	--	--	2,240	--	--	--	--
MW-1	1/4/2021	<0.00200	<0.00600	<0.00600	<0.00600	63.5	71.4	9.76	288	449	261	204	--	1,420
MW-1	2/1/2021	<0.00200	<0.00600	<0.00600	<0.00600	196	325	19.7	1,130	2,130	652	694	--	5,060
MW-1	4/30/2021	<0.000800	<0.00200	<0.00200	<0.00200	207	314	19.1	1,100	2,120	750	657	--	4,940
MW-1	8/9/2021	<0.000800	<0.00200	<0.00200	<0.00200	192	297	18.5	1,090	1,930	737	646	--	4,800
MW-1	11/19/2021	<0.000800	<0.00200	<0.00200	<0.00200	191	288	18	1,000	1,950	724	613	--	4,770
MW-1	2/25/2022	<0.000800	<0.00200	<0.00200	<0.00200	170	278	18.2	1,100	1,930	690	638	--	4,570
MW-1	5/18/2022	<0.000800	<0.00200	<0.00200	<0.00200	183	269	17.8	1,000	1,980	703	566	--	4,550
MW-1	8/19/2022	<0.000800	<0.00200	<0.00200	<0.00200	155	258	18.7	1,080	1,890	675	670	--	4,670
MW-1	12/19/2022	<0.000800	<0.00200	<0.00200	<0.00200	166	254	18.8	1,040	1,890	713	620	--	4,400
MW-1	3/17/2023	<0.000800	<0.00200	<0.00200	<0.00200	153	254	18.7	1,080	2,130	741	706	--	5,020
MW-1	6/9/2023	<0.000800	<0.00200	<0.00200	<0.00200	175	246	18.6	987	1,630	631	620	--	4,380
MW-1	12/20/2023	<0.001	<0.001	<0.001	<0.002	160	240	24	1,200	1,500	540	611.1	--	3,830

CUMULATIVE GROUNDWATER ANALYTICAL SUMMARY TABLE  
LMPSU TRASH PIT  
LEA COUNTY, NEW MEXICO  
1RP-3360

All Values Presented in Parts Per Million (mg/L) unless otherwise noted

SAMPLE ID	DATE	Benzene	Toluene	Ethylbenzene	Xylenes	Calcium	Magnesium	Potassium	Sodium	Chloride	Sulfate	Alkalinity	Nitrate	TDS
MW-2	12/11/2014	--	--	--	--	64.5	34.9	8.29	116	71.8	119	361	1.42	619
MW-2	1/28/2015	--	--	--	--	91.1	36.6	7.3	126	71.3	112	288	1.36	573
MW-2	6/1/2015	<0.001	<0.001	<0.001	<0.001	54.9	34.6	<10	117	57.8	112	281	1.63	578
MW-2	8/18/2015	<0.0008	<0.002	<0.002	<0.003	118	32.6	6.01	104	73.9	114	274	1.35	583
MW-2	12/3/2015	<0.0008	<0.002	<0.002	<0.003	214	31.8	6.22	106	67	112	247	1.23	582
MW-2	3/17/2016	<0.002	<0.006	<0.006	<0.009	45	27.2	6.02	99	63.8	114	---	1.57	560
MW-2	7/19/2016	<0.002	<0.006	<0.006	<0.009	42.6	28	5.69	109	65.6	113	221	1.44	605
MW-2	8/29/2016	<0.002	<0.006	<0.006	<0.009	45.8	28.1	5.99	107	61.5	109	262	1.53	923
MW-2	10/18/2016	<0.002	<0.006	<0.006	<0.009	45.6	28.6	6.4	103	59.8	105	241	1.52	571
MW-2	1/18/2017	<0.002	<0.006	<0.006	<0.006	45.7	28.3	5.79	107	60	109	246	1.53	591
MW-2	4/25/2017	<0.002	<0.006	<0.006	<0.006	44.4	28.7	5.55	108	59.9	112	248	1.43	649
MW-2	9/13/2017	<0.002	<0.006	<0.006	<0.006	49.3	28.4	6.15	102	61.2	111	256	1.58	577
MW-2	12/19/2017	<0.002	<0.006	<0.006	<0.006	46.3	28.3	5.55	104	63	106	298	1.39	571
MW-2	2/26/2018	<0.002	<0.006	<0.006	<0.006	46.3	28.3	5.75	107	64.6	111	301	1.34	593
MW-2	5/7/2018	<0.002	<0.006	<0.006	<0.006	49.2	29.1	5.64	109	63.2	125	257	1.45	580
MW-2	8/2/2018	<0.00200	<0.00600	<0.00600	<0.00600	51.7	28.4	5.72	106	68.8	120	274	1.21	616
MW-2	12/10/2018	<0.00200	<0.00600	<0.00600	<0.00600	46.4	28.4	5.54	109	65.4	112	260	1.33	601
MW-2	2/18/2019	<0.00200	<0.00600	<0.00600	<0.00600	--	--	--	--	67	--	--	--	--
MW-2	5/7/2019	<0.00200	<0.00600	<0.00600	<0.00600	--	--	--	--	67.1	--	--	--	--
MW-2	8/1/2019	<0.00200	<0.00600	<0.00600	<0.00600	--	--	--	--	72.2	--	--	--	--
MW-2	12/5/2019	<0.00200	<0.00600	<0.00600	<0.00600	--	--	--	--	58.2	--	--	--	--
MW-2	2/17/2020	<0.00200	<0.00600	<0.00600	<0.00600	--	--	--	--	67.6	--	--	--	--
MW-2	5/4/2020	<0.00200	<0.00600	<0.00600	<0.00600	--	--	--	--	68.4	--	--	--	--
MW-2	1/4/2021	<0.00200	<0.00600	<0.00600	<0.00600	69.8	45.3	8.07	169	194	207	244	--	917
MW-2	2/1/2021	<0.00200	<0.00600	<0.00600	<0.00600	56.2	45.1	6.4	135	73	258	274	--	827
MW-2	4/30/2021	<0.000800	<0.00200	<0.00200	<0.00200	52.7	28	5.36	107	61.4	126	258	--	607
MW-2	8/9/2021	<0.000800	<0.00200	<0.00200	<0.00200	50.0	29.4	5.39	114	65.4	121	269	--	605
MW-2	11/19/2021	<0.000800	<0.00200	<0.00200	<0.00200	50.5	27.6	5.4	101	65.5	118	257	--	597
MW-2	2/25/2022	<0.000800	<0.00200	<0.00200	<0.00200	50.4	29.8	5.74	118	73.7	124	264	--	638
MW-2	5/18/2022	<0.000800	<0.00200	<0.00200	<0.00200	53.1	28.1	5.31	109	78.5	131	270	--	650
MW-2	8/19/2022	<0.000800	<0.00200	<0.00200	<0.00200	54.5	31.7	5.44	126	73.5	121	284	--	649
MW-2	12/19/2022	<0.000800	<0.00200	<0.00200	<0.00200	50.6	28.1	6.03	112	68.6	116	247	--	585
MW-2	3/17/2023	<0.000800	<0.00200	<0.00200	<0.00200	48.4	28.8	5.91	110	63.6	114	256	--	608
MW-2	6/9/2023	<0.000800	<0.00200	<0.00200	<0.00200	52.6	27.9	5.33	102	63.6	111	262	--	588
MW-2	12/20/2023	<0.001	<0.001	<0.001	<0.002	51.0	28	5.9	99	62	110	254.8	--	594

CUMULATIVE GROUNDWATER ANALYTICAL SUMMARY TABLE  
LMPSU TRASH PIT  
LEA COUNTY, NEW MEXICO  
1RP-3360

All Values Presented in Parts Per Million (mg/L) unless otherwise noted

SAMPLE ID	DATE	Benzene	Toluene	Ethylbenzene	Xylenes	Calcium	Magnesium	Potassium	Sodium	Chloride	Sulfate	Alkalinity	Nitrate	TDS
MW-3	6/1/2015	<0.001	<0.001	<0.001	<0.001	57.6	60.5	10.7	324	399	234	290	2.19	1,180
MW-3	8/18/2015	<0.0008	<0.002	<0.002	<0.003	147	51.5	8.22	284	405	239	230	1.5	1,380
MW-3	12/3/2015	<0.0008	<0.002	<0.002	<0.003	221	51.9	8.48	284	350	222	232	1.19	1,260
MW-3	3/17/2016	<0.002	<0.006	<0.006	<0.009	49.2	47.9	8.58	284	334	232	---	1.85	1,050
MW-3	7/19/2016	<0.002	<0.006	<0.006	<0.009	41.5	47.7	7.93	301	349	233	244	1.75	1,260
MW-3	8/29/2016	<0.002	<0.006	<0.006	<0.009	51.9	47.4	7.78	277	327	252	230	1.83	1,240
MW-3	10/18/2016	<0.002	<0.006	<0.006	<0.009	49.6	56.4	9.32	324	340	223	219	1.78	1,280
MW-3	1/18/2017	<0.002	<0.006	<0.006	<0.006	45.7	51.8	8.54	312	342	240	215	1.75	1,340
MW-3	4/25/2017	<0.002	<0.006	<0.006	<0.006	50.0	62.5	9.6	392	342	223	220	1.6	1,510
MW-3	9/13/2017	<0.002	<0.006	<0.006	<0.006	49.6	54.2	9.22	314	380	227	218	1.91	1,410
MW-3	12/19/2017	<0.002	<0.006	<0.006	<0.006	52.9	56.2	9.21	304	379	243	207	1.81	1,280
MW-3	2/26/2018	<0.002	<0.006	<0.006	<0.006	49.7	53.7	8.66	296	378	216	218	2.13	1,280
MW-3	5/7/2018	<0.002	<0.006	<0.006	<0.006	53.7	56.6	8.85	311	414	249	204	2.21	1,300
MW-3	8/2/2018	<0.00200	<0.00600	<0.00600	<0.00600	55.8	54.2	9.09	283	388	256	210	2.13	1,330
MW-3	12/10/2018	<0.00200	<0.00600	<0.00600	<0.00600	53.6	59.2	8.66	298	391	251	207	1.81	1,330
MW-3	2/18/2019	<0.00200	<0.00600	<0.00600	<0.00600	--	--	--	--	421	--	--	--	--
MW-3	5/7/2019	<0.00200	<0.00600	<0.00600	<0.00600	--	--	--	--	432	--	--	--	--
MW-3	8/1/2019	<0.00200	<0.00600	<0.00600	<0.00600	--	--	--	--	421	--	--	--	--
MW-3	12/5/2019	<0.00200	<0.00600	<0.00600	<0.00600	--	--	--	--	429	--	--	--	--
MW-3	2/17/2020	<0.00200	<0.00600	<0.00600	<0.00600	--	--	--	--	424	--	--	--	--
MW-3	5/4/2020	<0.00200	<0.00600	<0.00600	<0.00600	--	--	--	--	451	--	--	--	--
MW-3	1/4/2021	<0.00200	<0.00600	<0.00600	<0.00600	48.7	27.7	5.67	106	65.9	108	259	--	596
MW-3	2/1/2021	<0.00200	<0.00600	<0.00600	<0.00600	64.4	74.2	9.8	295	452	262	197	--	1,410
MW-3	4/30/2021	<0.000800	<0.00200	<0.00200	<0.00200	65.3	70.1	10	300	483	269	195	--	1,480
MW-3	8/9/2021	<0.000800	<0.00200	<0.00200	<0.00200	65.3	72.1	9.81	294	447	278	194	--	1,380
MW-3	11/19/2021	<0.000800	<0.00200	<0.00200	<0.00200	70.4	70.2	9.34	266	457	484	193	--	1,410
MW-3	2/25/2022	<0.000800	<0.00200	<0.00200	<0.00200	65.4	72.3	9.75	296	453	266	195	--	1,400
MW-3	5/18/2022	<0.000800	<0.00200	<0.00200	<0.00200	75.7	73.2	9.85	278	470	277	194	--	1,370
MW-3	8/19/2022	<0.000800	<0.00200	<0.00200	<0.00200	69.2	76.4	10.1	304	461	274	190	--	1,460
MW-3	12/19/2022	<0.000800	<0.00200	<0.00200	<0.00200	71.2	74.4	10.1	290	475	289	191	--	1,410
MW-3	3/17/2023	<0.000800	<0.00200	<0.00200	<0.00200	70.6	77.2	9.94	294	448	285	189	--	1,530
MW-3	6/9/2023	<0.000800	<0.00200	<0.00200	<0.00200	76.2	76.6	9.9	274	432	258	198	--	1,470
MW-3	12/20/2023	<0.001	<0.001	<0.001	<0.002	82.0	74	9.8	260	440	280	204.5	--	1,380



CUMULATIVE GROUNDWATER ANALYTICAL SUMMARY TABLE  
LMPSU TRASH PIT  
LEA COUNTY, NEW MEXICO  
1RP-3360

All Values Presented in Parts Per Million (mg/L) unless otherwise noted

SAMPLE ID	DATE	Benzene	Toluene	Ethylbenzene	Xylenes	Calcium	Magnesium	Potassium	Sodium	Chloride	Sulfate	Alkalinity	Nitrate	TDS
MW-4	6/1/2015	<0.001	<0.001	<0.001	0.0015	83	58.6	10.1	186	190	251	236	2.34	918
MW-4	8/18/2015	<0.0008	<0.002	<0.002	<0.003	70.6	52.8	8.28	160	213	251	256	1.54	974
MW-4	12/3/2015	<0.0008	<0.002	<0.002	<0.003	93.5	54.7	8.91	190	218	239	266	1.19	1,050
MW-4	3/17/2016	<0.002	<0.006	<0.006	<0.009	83.9	57.2	10.7	171	214	252	---	1.76	945
MW-4	7/19/2016	<0.002	<0.006	<0.006	<0.009	80.6	58.7	8.75	213	259	273	252	1.61	1,100
MW-4	8/29/2016	<0.002	<0.006	<0.006	<0.009	81.8	57.2	9.25	202	247	276	266	1.72	1,500
MW-4	10/18/2016	<0.002	<0.006	<0.006	<0.009	81.8	55.8	8.85	205	255	264	248	1.7	1,270
MW-4	1/18/2017	<0.002	<0.006	<0.006	<0.006	86.2	58.9	8.93	203	262	279	245	1.66	1,210
MW-4	4/25/2017	<0.002	<0.006	<0.006	<0.006	86.8	61.9	9.24	213	285	279	239	1.51	1,510
MW-4	9/13/2017	<0.002	<0.006	<0.006	<0.006	99.3	65	11.1	213	288	278	236	1.78	1,280
MW-4	12/19/2017	<0.002	<0.006	<0.006	<0.006	95.6	64.2	9.33	209	298	296	226	1.73	1,240
MW-4	2/26/2018	<0.002	<0.006	<0.006	<0.006	91.8	62.5	9.32	211	320	306	239	1.93	1,250
MW-4	5/7/2018	<0.002	<0.006	<0.006	<0.006	96.2	64.2	9.6	214	296	299	234	1.9	1,220
MW-4	8/2/2018	<0.00200	<0.00600	<0.00600	<0.00600	90.1	54.6	9.23	189	254	277	245	1.95	1,140
MW-4	12/10/2018	<0.00200	<0.00600	<0.00600	<0.00600	77.9	53.6	8.49	195	223	243	249	1.79	1,110
MW-4	2/18/2019	<0.00200	<0.00600	<0.00600	<0.00600	--	--	--	--	231	--	--	--	--
MW-4	5/7/2019	<0.00200	<0.00600	<0.00600	<0.00600	--	--	--	--	215	--	--	--	--
MW-4	8/1/2019	<0.00200	<0.00600	<0.00600	<0.00600	--	--	--	--	213	--	--	--	--
MW-4	12/5/2019	<0.00200	<0.00600	<0.00600	<0.00600	--	--	--	--	211	--	--	--	--
MW-4	2/17/2020	<0.00200	<0.00600	<0.00600	<0.00600	--	--	--	--	195	--	--	--	--
MW-4	5/4/2020	<0.00200	<0.00600	<0.00600	<0.00600	--	--	--	--	211	--	--	--	--
MW-4	1/4/2021	<0.00200	<0.00600	<0.00600	<0.00600	210	323	18.9	1100	2,160	686	665	--	4,950
MW-4	2/1/2021	<0.00200	<0.00600	<0.00600	<0.00600	68.7	46.4	8.1	168	192	221	246	--	948
MW-4	4/30/2021	<0.000800	<0.00200	<0.00200	<0.00200	75.3	44.5	8.41	158	179	209	244	--	910
MW-4	8/9/2021	<0.000800	<0.00200	<0.00200	<0.00200	65.0	43.5	7.98	165	181	211	243	--	877
MW-4	11/19/2021	<0.000800	<0.00200	<0.00200	<0.00200	70.4	70.2	9.34	266	169	208	243	--	883
MW-4	2/22/2022	<0.000800	<0.00200	<0.00200	<0.00200	62	42.7	7.83	165	176	200	256	--	861
MW-4	5/18/2022	<0.000800	<0.00200	<0.00200	<0.00200	67	40.8	7.85	156	175	194	247	--	880
MW-4	8/19/2022	<0.000800	<0.00200	<0.00200	<0.00200	65	42.6	8.13	162	163	189	247	--	857
MW-4	12/19/2022	<0.000800	<0.00200	<0.00200	<0.00200	63	41.2	8.02	157	166	195	246	--	850
MW-4	3/17/2023	<0.000800	<0.00200	<0.00200	<0.00200	62	43	7.79	160	245	189	245	--	951
MW-4	6/9/2023	<0.000800	<0.00200	<0.00200	<0.00200	65	41.6	7.73	148	145	170	246	--	827
MW-4	12/20/2023	<0.001	<0.001	<0.001	<0.002	68	43	8.2	140	160	180	244.8	--	816

CUMULATIVE GROUNDWATER ANALYTICAL SUMMARY TABLE														
LMPSU TRASH PIT														
LEA COUNTY, NEW MEXICO														
1RP-3360														
All Values Presented in Parts Per Million (mg/L) unless otherwise noted														
SAMPLE ID	DATE	Benzene	Toluene	Ethylbenzene	Xylenes	Calcium	Magnesium	Potassium	Sodium	Chloride	Sulfate	Alkalinity	Nitrate	TDS
Dup-1 (MW-1)	2/17/2020	<0.00200	<0.00600	<0.00600	<0.00600	--	--	--	--	--	--	--	--	2,200
Dup-1 (MW-3)	5/4/2020	<0.00200	<0.00600	<0.00600	<0.00600	--	--	--	--	--	--	--	--	449
Dup-1 (MW-2)	1/4/2021	<0.00200	<0.00600	<0.00600	<0.00600	69	45	8.00	166	191	204	247	--	927
Dup-1 (MW-2)	2/1/2021	<0.00200	<0.00600	<0.00600	<0.00600	56	49	6.50	145	74	285	269	--	860
Dup-1 (MW-2)	4/30/2021	<0.000800	<0.00200	<0.00200	<0.00200	53	28	5.30	106	60	125	262	--	612
Dup-1 (MW-2)	8/9/2021	<0.000800	<0.00200	<0.00200	<0.00200	65	44	7.98	165	181	211	243	--	877
Dup-1 (MW-2)	11/19/2021	<0.000800	<0.00200	<0.00200	<0.00200	47	27	5.38	98	65	118	244	--	594
Dup-1 (MW-2)	2/25/2022	<0.000800	<0.00200	<0.00200	<0.00200	48	28	5.61	113	71	118	254	--	598
Dup-1 (MW-2)	5/18/2022	<0.000800	<0.00200	<0.00200	<0.00200	54	29	5.09	111	78	129	265	--	650
Dup-1 (MW-2)	8/19/2022	<0.000800	<0.00200	<0.00200	<0.00200	51	29	5.27	117	73	120	278	--	651
DUP-1 (MW-2)	12/19/2022	<0.000800	<0.00200	<0.00200	<0.00200	49	28	5.97	112	68	115	248	--	586
DUP-1 (MW-2)	3/17/2023	<0.000800	<0.00200	<0.00200	<0.00200	50	29	5.92	112	63	112	257	--	602
DUP-1 (MW-2)	6/9/2023	<0.000800	<0.00200	<0.00200	<0.00200	53	28	5.52	104	62	109	257	--	604
Duplicate (MW-2)	12/20/2024	<0.001	<0.001	<0.001	<0.002	54	28	6.00	100	61	110	253.8	--	603
20.6.2.3103 NMAC GW STANDARDS														
(<10,000 mg/L)														
A. Human Health Standards		0.005	1	0.7	0.62	---	---	---	---	250	600	---	10 <sup>1</sup>	1,000
B. Other Standards for Domestic Water Supply														
C. Standards for Irrigation Use														
Notes:														
1. This standarad is for nitrate. The nitrite standard is 1.0 mg/L.														
2. Exceedances of the listed closure criteria highlighted in bold, red type.														

## ATTACHMENT 1 – SITE PHOTOGRAPHS



**PHOTOGRAPH NO. 1 – A general view of the low-flow sampling methodology at monitor well MW-2 on December 20, 2023.**

*(Approximate GPS Coordinates: 32.358891, -103.147709)*



**PHOTOGRAPH NO. 2 – A view of monitor well MW-1. The view is towards the east.**

*(Approximate GPS Coordinates: 32.357308, -103.147637)*

## ATTACHMENT 2 – LABORATORY ANALYTICAL REPORTS



June 20, 2023

Mark Larson  
Larson & Associates  
507 N. Marienfeld #202  
Midland, TX 79701  
TEL: (432) 687-0901  
FAX (432) 687-0456  
RE: Trashpit

Order No.: 2306135

Dear Mark Larson:

DHL Analytical, Inc. received 5 sample(s) on 6/13/2023 for the analyses presented in the following report.

There were no problems with the analyses and all data met requirements of NELAP except where noted in the Case Narrative. All non-NELAP methods will be identified accordingly in the case narrative and all estimated uncertainties of test results are within method or EPA specifications.

If you have any questions regarding these tests results, please feel free to call. Thank you for using DHL Analytical.

Sincerely,

A handwritten signature in red ink, appearing to read "John DuPont".

John DuPont  
General Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification  
Number: T104704211-23-29





## Table of Contents

Miscellaneous Documents .....	3
CaseNarrative 2306135 .....	6
WorkOrderSampleSummary 2306135 .....	7
PrepDatesReport 2306135 .....	8
AnalyticalDatesReport 2306135 .....	10
Analytical Report 2306135 .....	12
AnalyticalQCSummaryReport 2306135 .....	17



ORIGIN ID:MAFA (432) 687-0901  
MARK LARSON

507 N MARIENFELD ST STE 202

MIDLAND, TX 79701  
UNITED STATES US

SHIP DATE: 12JUN23  
ACTWGT: 40.00 LB  
CAD: 7074331/INET4610  
DIMS: 24x14x14 IN

BILL SENDER

TO JOHN DUPONT  
DHL ANALYTICAL, INC  
2300 DOUBLE CREEK DRIVE

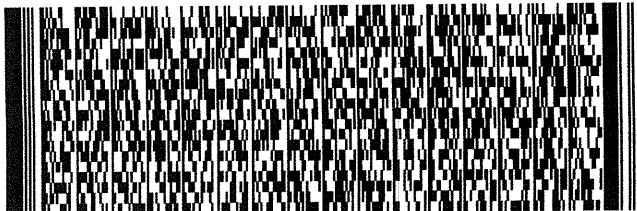
ROUND ROCK TX 78664

(512) 388-8222

REF: 6-0141

INV:  
PO:

DEPT:



563.02/29ABFE2D

1 of 2

TRK#

0201

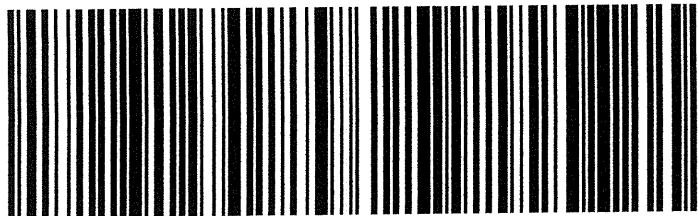
7724 2216 7990

## MASTER ##

A8 BSMA

78664  
TX-US AUS

TUE - 13 JUN 10:30A  
PRIORITY OVERNIGHT



**After printing this label:**

1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

**Warning:** Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.

Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on [fedex.com](http://fedex.com). FedEx will not be responsible for any claim in excess of \$100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental consequential, or special is limited to the greater of \$100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is \$1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

**CUSTODY SEAL**

DATE 6/12/2023

SIGNATURE DS4



## DHL Analytical, Inc.

## Sample Receipt Checklist

Client Name: **Larson & Associates**Date Received: **6/13/2023**Work Order Number: **2306135**Received by: **GLK**

Checklist completed by:  6/13/2023  
 Signature Date

Reviewed by:  6/13/2023  
 Initials Date

Carrier name: FedEx 1day

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Water - VOA vials have zero headspace?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input type="checkbox"/> NA <input type="checkbox"/>
Water - pH<2 acceptable upon receipt?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> LOT #
	Adjusted? _____	Checked by _____	
Water - pH>9 (S) or pH>10 (CN) acceptable upon receipt?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/> LOT #
	Adjusted? _____	Checked by _____	
Container/Temp Blank temperature in compliance?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	

Cooler # 1Temp °C 1.8Seal Intact Y

Any No response must be detailed in the comments section below.

Client contacted: \_\_\_\_\_ Date contacted: \_\_\_\_\_ Person contacted: \_\_\_\_\_

Contacted by: \_\_\_\_\_ Regarding: \_\_\_\_\_

Comments: \_\_\_\_\_

Corrective Action: \_\_\_\_\_

**DHL Analytical, Inc.****Date:** 20-Jun-23**CLIENT:** Larson & Associates**Project:** Trashpit**Lab Order:** 2306135**CASE NARRATIVE**

Samples were analyzed using the methods outlined in the following references:

Method SW8260D - Volatile Aromatics Analysis

Method E300 - Anions Analysis

Method SW6020B - Dissolved Metals Analysis

Method M2320 B - Alkalinity Analysis

Method M2540C - Total Dissolved Solids Analysis

**LOG IN**

The samples were received and log-in performed on 6/13/2023. A total of 5 samples were received and analyzed. The samples arrived in good condition and were properly packaged. The samples were collected in Mountain Standard Time.

**ANIONS ANALYSIS**

For Anions analysis, the recoveries of up to two anions for the Matrix Spike and Matrix Spike Duplicate(s) (2306142-02 and 2306135-04 MS/MSD) were outside of the method control limits. These are flagged accordingly in the QC Summary Report. These analytes were within method control limits in the associated LCS. No further corrective action was taken.

**VOLATILE AROMATICS ANALYSIS**

For Volatile Aromatics Analysis, the recovery of Benzene for the Matrix Spike Duplicate (2306134-04 MSD) was slightly above the method control limits. This is flagged accordingly in the QC Summary Report. This compound was within method control limits in the associated LCS/MS. No further corrective action was taken.

DHL Analytical, Inc.

Date: 20-Jun-23

CLIENT: Larson & Associates  
Project: Trashpit  
Lab Order: 2306135

Work Order Sample Summary

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
2306135-01	MW-2		06/09/23 09:30 AM	06/13/2023
2306135-02	MW-4		06/09/23 10:11 AM	06/13/2023
2306135-03	MW-3		06/09/23 11:04 AM	06/13/2023
2306135-04	MW-1		06/09/23 12:00 PM	06/13/2023
2306135-05	Dup-1		06/09/23	06/13/2023

## DHL Analytical, Inc.

20-Jun-23

Lab Order: 2306135  
Client: Larson & Associates  
Project: Trashpit

## PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
2306135-01A	MW-2	06/09/23 09:30 AM	Aqueous	SW5030C	Purge and Trap Water GC/MS	06/13/23 12:00 PM	110626
2306135-01B	MW-2	06/09/23 09:30 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	06/19/23 07:48 AM	110709
	MW-2	06/09/23 09:30 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	06/19/23 07:48 AM	110709
2306135-01D	MW-2	06/09/23 09:30 AM	Aqueous	M2320 B	Alkalinity Preparation	06/14/23 12:40 PM	110629
	MW-2	06/09/23 09:30 AM	Aqueous	E300	Anion Preparation	06/14/23 09:05 AM	110642
	MW-2	06/09/23 09:30 AM	Aqueous	M2540C	TDS Preparation	06/14/23 02:09 PM	110650
2306135-02A	MW-4	06/09/23 10:11 AM	Aqueous	SW5030C	Purge and Trap Water GC/MS	06/13/23 12:00 PM	110626
2306135-02B	MW-4	06/09/23 10:11 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	06/19/23 07:48 AM	110709
	MW-4	06/09/23 10:11 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	06/19/23 07:48 AM	110709
2306135-02D	MW-4	06/09/23 10:11 AM	Aqueous	M2320 B	Alkalinity Preparation	06/14/23 12:40 PM	110629
	MW-4	06/09/23 10:11 AM	Aqueous	E300	Anion Preparation	06/14/23 09:05 AM	110642
	MW-4	06/09/23 10:11 AM	Aqueous	M2540C	TDS Preparation	06/14/23 02:09 PM	110650
2306135-03A	MW-3	06/09/23 11:04 AM	Aqueous	SW5030C	Purge and Trap Water GC/MS	06/13/23 12:00 PM	110626
2306135-03B	MW-3	06/09/23 11:04 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	06/19/23 07:48 AM	110709
	MW-3	06/09/23 11:04 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	06/19/23 07:48 AM	110709
2306135-03D	MW-3	06/09/23 11:04 AM	Aqueous	M2320 B	Alkalinity Preparation	06/14/23 12:40 PM	110629
	MW-3	06/09/23 11:04 AM	Aqueous	E300	Anion Preparation	06/14/23 09:05 AM	110642
	MW-3	06/09/23 11:04 AM	Aqueous	M2540C	TDS Preparation	06/14/23 02:09 PM	110650
2306135-04A	MW-1	06/09/23 12:00 PM	Aqueous	SW5030C	Purge and Trap Water GC/MS	06/13/23 12:00 PM	110626
2306135-04B	MW-1	06/09/23 12:00 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	06/19/23 07:48 AM	110709
	MW-1	06/09/23 12:00 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	06/19/23 07:48 AM	110709
2306135-04D	MW-1	06/09/23 12:00 PM	Aqueous	M2320 B	Alkalinity Preparation	06/14/23 12:40 PM	110629
	MW-1	06/09/23 12:00 PM	Aqueous	E300	Anion Preparation	06/14/23 09:05 AM	110642
	MW-1	06/09/23 12:00 PM	Aqueous	M2540C	TDS Preparation	06/14/23 02:09 PM	110650
2306135-05A	Dup-1	06/09/23	Aqueous	SW5030C	Purge and Trap Water GC/MS	06/13/23 12:00 PM	110626
2306135-05B	Dup-1	06/09/23	Aqueous	SW3005A	Aq Prep Metals: Dissolved	06/19/23 07:48 AM	110709
	Dup-1	06/09/23	Aqueous	SW3005A	Aq Prep Metals: Dissolved	06/19/23 07:48 AM	110709
2306135-05D	Dup-1	06/09/23	Aqueous	M2320 B	Alkalinity Preparation	06/14/23 12:40 PM	110629

Lab Order: 2306135  
Client: Larson & Associates  
Project: Trashpit

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
2306135-05D	Dup-1	06/09/23	Aqueous	E300	Anion Preparation	06/14/23 09:05 AM	110642
	Dup-1	06/09/23	Aqueous	M2540C	TDS Preparation	06/14/23 02:09 PM	110650



## DHL Analytical, Inc.

20-Jun-23

Lab Order: 2306135  
Client: Larson & Associates  
Project: Trashpit

## ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
2306135-01A	MW-2	Aqueous	SW8260D	Volatile Aromatics by GC/MS	110626	1	06/13/23 06:11 PM	GCMS3_230613A
2306135-01B	MW-2	Aqueous	SW6020B	Metals-ICPMS (Dissolved)	110709	1	06/19/23 11:30 AM	ICP-MS4_230619C
	MW-2	Aqueous	SW6020B	Metals-ICPMS (Dissolved)	110709	10	06/19/23 12:00 PM	ICP-MS4_230619C
2306135-01D	MW-2	Aqueous	M2320 B	Alkalinity	110629	1	06/14/23 02:04 PM	TITRATOR_230614A
	MW-2	Aqueous	E300	Anions by IC method - Water	110642	10	06/14/23 05:31 PM	IC2_230614B
	MW-2	Aqueous	M2540C	Total Dissolved Solids	110650	1	06/14/23 05:15 PM	WC_230614C
2306135-02A	MW-4	Aqueous	SW8260D	Volatile Aromatics by GC/MS	110626	1	06/13/23 06:36 PM	GCMS3_230613A
2306135-02B	MW-4	Aqueous	SW6020B	Metals-ICPMS (Dissolved)	110709	1	06/19/23 11:36 AM	ICP-MS4_230619C
	MW-4	Aqueous	SW6020B	Metals-ICPMS (Dissolved)	110709	10	06/19/23 12:06 PM	ICP-MS4_230619C
2306135-02D	MW-4	Aqueous	M2320 B	Alkalinity	110629	1	06/14/23 02:26 PM	TITRATOR_230614A
	MW-4	Aqueous	E300	Anions by IC method - Water	110642	10	06/14/23 06:56 PM	IC2_230614B
	MW-4	Aqueous	M2540C	Total Dissolved Solids	110650	1	06/14/23 05:15 PM	WC_230614C
2306135-03A	MW-3	Aqueous	SW8260D	Volatile Aromatics by GC/MS	110626	1	06/13/23 07:02 PM	GCMS3_230613A
2306135-03B	MW-3	Aqueous	SW6020B	Metals-ICPMS (Dissolved)	110709	20	06/19/23 12:08 PM	ICP-MS4_230619C
	MW-3	Aqueous	SW6020B	Metals-ICPMS (Dissolved)	110709	1	06/19/23 11:38 AM	ICP-MS4_230619C
2306135-03D	MW-3	Aqueous	M2320 B	Alkalinity	110629	1	06/14/23 02:36 PM	TITRATOR_230614A
	MW-3	Aqueous	E300	Anions by IC method - Water	110642	10	06/14/23 07:13 PM	IC2_230614B
	MW-3	Aqueous	M2540C	Total Dissolved Solids	110650	1	06/14/23 05:15 PM	WC_230614C
2306135-04A	MW-1	Aqueous	SW8260D	Volatile Aromatics by GC/MS	110626	1	06/13/23 07:27 PM	GCMS3_230613A
2306135-04B	MW-1	Aqueous	SW6020B	Metals-ICPMS (Dissolved)	110709	1	06/19/23 11:40 AM	ICP-MS4_230619C
	MW-1	Aqueous	SW6020B	Metals-ICPMS (Dissolved)	110709	50	06/19/23 12:10 PM	ICP-MS4_230619C
2306135-04D	MW-1	Aqueous	M2320 B	Alkalinity	110629	1	06/14/23 03:04 PM	TITRATOR_230614A
	MW-1	Aqueous	E300	Anions by IC method - Water	110642	100	06/14/23 03:32 PM	IC2_230614B
	MW-1	Aqueous	M2540C	Total Dissolved Solids	110650	1	06/14/23 05:15 PM	WC_230614C
2306135-05A	Dup-1	Aqueous	SW8260D	Volatile Aromatics by GC/MS	110626	1	06/13/23 07:52 PM	GCMS3_230613A
2306135-05B	Dup-1	Aqueous	SW6020B	Metals-ICPMS (Dissolved)	110709	1	06/19/23 11:42 AM	ICP-MS4_230619C
	Dup-1	Aqueous	SW6020B	Metals-ICPMS (Dissolved)	110709	10	06/19/23 12:12 PM	ICP-MS4_230619C
2306135-05D	Dup-1	Aqueous	M2320 B	Alkalinity	110629	1	06/14/23 03:15 PM	TITRATOR_230614A

Lab Order: 2306135  
Client: Larson & Associates  
Project: Trashpit

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
2306135-05D	Dup-1	Aqueous	E300	Anions by IC method - Water	110642	10	06/14/23 07:30 PM	IC2_230614B
	Dup-1	Aqueous	M2540C	Total Dissolved Solids	110650	1	06/14/23 05:15 PM	WC_230614C

**DHL Analytical, Inc.**

Date: 20-Jun-23

**CLIENT:** Larson & Associates  
**Project:** Trashpit  
**Project No:** 14-0107-01  
**Lab Order:** 2306135

**Client Sample ID:** MW-2  
**Lab ID:** 2306135-01  
**Collection Date:** 06/09/23 09:30 AM  
**Matrix:** AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>VOLATILE AROMATICS BY GC/MS</b>		<b>SW8260D</b>		Analyst: <b>JVR</b>			
Benzene	<0.000800	0.000800	0.00200		mg/L	1	06/13/23 06:11 PM
Ethylbenzene	<0.00200	0.00200	0.00600		mg/L	1	06/13/23 06:11 PM
Toluene	<0.00200	0.00200	0.00600		mg/L	1	06/13/23 06:11 PM
Total Xylenes	<0.00200	0.00200	0.00600		mg/L	1	06/13/23 06:11 PM
Surr: 1,2-Dichloroethane-d4	94.6	0	72-119		%REC	1	06/13/23 06:11 PM
Surr: 4-Bromofluorobenzene	103	0	76-119		%REC	1	06/13/23 06:11 PM
Surr: Dibromofluoromethane	101	0	85-115		%REC	1	06/13/23 06:11 PM
Surr: Toluene-d8	90.4	0	81-120		%REC	1	06/13/23 06:11 PM
<b>METALS-ICPMS (DISSOLVED)</b>		<b>SW6020B</b>		Analyst: <b>SP</b>			
Dissolved Calcium	52.6	1.00	3.00		mg/L	10	06/19/23 12:00 PM
Dissolved Magnesium	27.9	1.00	3.00		mg/L	10	06/19/23 12:00 PM
Dissolved Potassium	5.33	0.100	0.300		mg/L	1	06/19/23 11:30 AM
Dissolved Sodium	102	1.00	3.00		mg/L	10	06/19/23 12:00 PM
<b>ANIONS BY IC METHOD - WATER</b>		<b>E300</b>		Analyst: <b>RA</b>			
Chloride	62.0	3.00	10.0		mg/L	10	06/14/23 05:31 PM
Sulfate	111	10.0	30.0		mg/L	10	06/14/23 05:31 PM
<b>ALKALINITY</b>		<b>M2320 B</b>		Analyst: <b>MFW</b>			
Alkalinity, Bicarbonate (As CaCO3)	262	10.0	20.0		mg/L @ pH 4.54	1	06/14/23 02:04 PM
Alkalinity, Carbonate (As CaCO3)	<10.0	10.0	20.0		mg/L @ pH 4.54	1	06/14/23 02:04 PM
Alkalinity, Hydroxide (As CaCO3)	<10.0	10.0	20.0		mg/L @ pH 4.54	1	06/14/23 02:04 PM
Alkalinity, Total (As CaCO3)	262	10.0	20.0		mg/L @ pH 4.54	1	06/14/23 02:04 PM
<b>TOTAL DISSOLVED SOLIDS</b>		<b>M2540C</b>		Analyst: <b>JS</b>			
Total Dissolved Solids (Residue, Filterable)	588	10.0	10.0		mg/L	1	06/14/23 05:15 PM

<b>Qualifiers:</b>	*	Value exceeds TCLP Maximum Concentration Level	C	Sample Result or QC discussed in the Case Narrative
	DF	Dilution Factor	E	TPH pattern not Gas or Diesel Range Pattern
	J	Analyte detected between MDL and RL	MDL	Method Detection Limit
	ND	Not Detected at the Method Detection Limit	RL	Reporting Limit
	S	Spike Recovery outside control limits	N	Parameter not NELAP certified

**DHL Analytical, Inc.**

Date: 20-Jun-23

**CLIENT:** Larson & Associates  
**Project:** Trashpit  
**Project No:** 14-0107-01  
**Lab Order:** 2306135

**Client Sample ID:** MW-4  
**Lab ID:** 2306135-02  
**Collection Date:** 06/09/23 10:11 AM  
**Matrix:** AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>VOLATILE AROMATICS BY GC/MS</b>		<b>SW8260D</b>		Analyst: <b>JVR</b>			
Benzene	<0.000800	0.000800	0.00200		mg/L	1	06/13/23 06:36 PM
Ethylbenzene	<0.00200	0.00200	0.00600		mg/L	1	06/13/23 06:36 PM
Toluene	<0.00200	0.00200	0.00600		mg/L	1	06/13/23 06:36 PM
Total Xylenes	<0.00200	0.00200	0.00600		mg/L	1	06/13/23 06:36 PM
Surr: 1,2-Dichloroethane-d4	94.8	0	72-119		%REC	1	06/13/23 06:36 PM
Surr: 4-Bromofluorobenzene	103	0	76-119		%REC	1	06/13/23 06:36 PM
Surr: Dibromofluoromethane	99.9	0	85-115		%REC	1	06/13/23 06:36 PM
Surr: Toluene-d8	90.7	0	81-120		%REC	1	06/13/23 06:36 PM
<b>METALS-ICPMS (DISSOLVED)</b>		<b>SW6020B</b>		Analyst: <b>SP</b>			
Dissolved Calcium	64.8	1.00	3.00		mg/L	10	06/19/23 12:06 PM
Dissolved Magnesium	41.6	1.00	3.00		mg/L	10	06/19/23 12:06 PM
Dissolved Potassium	7.73	0.100	0.300		mg/L	1	06/19/23 11:36 AM
Dissolved Sodium	148	1.00	3.00		mg/L	10	06/19/23 12:06 PM
<b>ANIONS BY IC METHOD - WATER</b>		<b>E300</b>		Analyst: <b>RA</b>			
Chloride	145	3.00	10.0		mg/L	10	06/14/23 06:56 PM
Sulfate	170	10.0	30.0		mg/L	10	06/14/23 06:56 PM
<b>ALKALINITY</b>		<b>M2320 B</b>		Analyst: <b>MFW</b>			
Alkalinity, Bicarbonate (As CaCO3)	246	10.0	20.0		mg/L @ pH 4.54	1	06/14/23 02:26 PM
Alkalinity, Carbonate (As CaCO3)	<10.0	10.0	20.0		mg/L @ pH 4.54	1	06/14/23 02:26 PM
Alkalinity, Hydroxide (As CaCO3)	<10.0	10.0	20.0		mg/L @ pH 4.54	1	06/14/23 02:26 PM
Alkalinity, Total (As CaCO3)	246	10.0	20.0		mg/L @ pH 4.54	1	06/14/23 02:26 PM
<b>TOTAL DISSOLVED SOLIDS</b>		<b>M2540C</b>		Analyst: <b>JS</b>			
Total Dissolved Solids (Residue, Filterable)	827	10.0	10.0		mg/L	1	06/14/23 05:15 PM

**Qualifiers:**

- \* Value exceeds TCLP Maximum Concentration Level
- DF Dilution Factor
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- S Spike Recovery outside control limits

- C Sample Result or QC discussed in the Case Narrative
- E TPH pattern not Gas or Diesel Range Pattern
- MDL Method Detection Limit
- RL Reporting Limit
- N Parameter not NELAP certified

**DHL Analytical, Inc.**

Date: 20-Jun-23

**CLIENT:** Larson & Associates  
**Project:** Trashpit  
**Project No:** 14-0107-01  
**Lab Order:** 2306135

**Client Sample ID:** MW-3  
**Lab ID:** 2306135-03  
**Collection Date:** 06/09/23 11:04 AM  
**Matrix:** AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>VOLATILE AROMATICS BY GC/MS</b>		<b>SW8260D</b>		Analyst: <b>JVR</b>			
Benzene	<0.000800	0.000800	0.00200		mg/L	1	06/13/23 07:02 PM
Ethylbenzene	<0.00200	0.00200	0.00600		mg/L	1	06/13/23 07:02 PM
Toluene	<0.00200	0.00200	0.00600		mg/L	1	06/13/23 07:02 PM
Total Xylenes	<0.00200	0.00200	0.00600		mg/L	1	06/13/23 07:02 PM
Surr: 1,2-Dichloroethane-d4	94.7	0	72-119		%REC	1	06/13/23 07:02 PM
Surr: 4-Bromofluorobenzene	103	0	76-119		%REC	1	06/13/23 07:02 PM
Surr: Dibromofluoromethane	101	0	85-115		%REC	1	06/13/23 07:02 PM
Surr: Toluene-d8	90.7	0	81-120		%REC	1	06/13/23 07:02 PM
<b>METALS-ICPMS (DISSOLVED)</b>		<b>SW6020B</b>		Analyst: <b>SP</b>			
Dissolved Calcium	76.2	2.00	6.00		mg/L	20	06/19/23 12:08 PM
Dissolved Magnesium	76.6	2.00	6.00		mg/L	20	06/19/23 12:08 PM
Dissolved Potassium	9.90	0.100	0.300		mg/L	1	06/19/23 11:38 AM
Dissolved Sodium	274	2.00	6.00		mg/L	20	06/19/23 12:08 PM
<b>ANIONS BY IC METHOD - WATER</b>		<b>E300</b>		Analyst: <b>RA</b>			
Chloride	432	3.00	10.0		mg/L	10	06/14/23 07:13 PM
Sulfate	258	10.0	30.0		mg/L	10	06/14/23 07:13 PM
<b>ALKALINITY</b>		<b>M2320 B</b>		Analyst: <b>MFW</b>			
Alkalinity, Bicarbonate (As CaCO3)	198	10.0	20.0		mg/L @ pH 4.53	1	06/14/23 02:36 PM
Alkalinity, Carbonate (As CaCO3)	<10.0	10.0	20.0		mg/L @ pH 4.53	1	06/14/23 02:36 PM
Alkalinity, Hydroxide (As CaCO3)	<10.0	10.0	20.0		mg/L @ pH 4.53	1	06/14/23 02:36 PM
Alkalinity, Total (As CaCO3)	198	10.0	20.0		mg/L @ pH 4.53	1	06/14/23 02:36 PM
<b>TOTAL DISSOLVED SOLIDS</b>		<b>M2540C</b>		Analyst: <b>JS</b>			
Total Dissolved Solids (Residue, Filterable)	1470	50.0	50.0		mg/L	1	06/14/23 05:15 PM

**Qualifiers:**

- \* Value exceeds TCLP Maximum Concentration Level
- DF Dilution Factor
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- S Spike Recovery outside control limits

- C Sample Result or QC discussed in the Case Narrative
- E TPH pattern not Gas or Diesel Range Pattern
- MDL Method Detection Limit
- RL Reporting Limit
- N Parameter not NELAP certified



**DHL Analytical, Inc.**

Date: 20-Jun-23

**CLIENT:** Larson & Associates  
**Project:** Trashpit  
**Project No:** 14-0107-01  
**Lab Order:** 2306135

**Client Sample ID:** MW-1  
**Lab ID:** 2306135-04  
**Collection Date:** 06/09/23 12:00 PM  
**Matrix:** AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>VOLATILE AROMATICS BY GC/MS</b>		<b>SW8260D</b>		Analyst: <b>JVR</b>			
Benzene	<0.000800	0.000800	0.00200		mg/L	1	06/13/23 07:27 PM
Ethylbenzene	<0.00200	0.00200	0.00600		mg/L	1	06/13/23 07:27 PM
Toluene	<0.00200	0.00200	0.00600		mg/L	1	06/13/23 07:27 PM
Total Xylenes	<0.00200	0.00200	0.00600		mg/L	1	06/13/23 07:27 PM
Surr: 1,2-Dichloroethane-d4	94.4	0	72-119		%REC	1	06/13/23 07:27 PM
Surr: 4-Bromofluorobenzene	104	0	76-119		%REC	1	06/13/23 07:27 PM
Surr: Dibromofluoromethane	100	0	85-115		%REC	1	06/13/23 07:27 PM
Surr: Toluene-d8	90.3	0	81-120		%REC	1	06/13/23 07:27 PM
<b>METALS-ICPMS (DISSOLVED)</b>		<b>SW6020B</b>		Analyst: <b>SP</b>			
Dissolved Calcium	175	5.00	15.0		mg/L	50	06/19/23 12:10 PM
Dissolved Magnesium	246	5.00	15.0		mg/L	50	06/19/23 12:10 PM
Dissolved Potassium	18.6	0.100	0.300		mg/L	1	06/19/23 11:40 AM
Dissolved Sodium	987	5.00	15.0		mg/L	50	06/19/23 12:10 PM
<b>ANIONS BY IC METHOD - WATER</b>		<b>E300</b>		Analyst: <b>RA</b>			
Chloride	1630	30.0	100		mg/L	100	06/14/23 03:32 PM
Sulfate	631	100	300		mg/L	100	06/14/23 03:32 PM
<b>ALKALINITY</b>		<b>M2320 B</b>		Analyst: <b>MFW</b>			
Alkalinity, Bicarbonate (As CaCO3)	620	10.0	20.0		mg/L @ pH 4.54	1	06/14/23 03:04 PM
Alkalinity, Carbonate (As CaCO3)	<10.0	10.0	20.0		mg/L @ pH 4.54	1	06/14/23 03:04 PM
Alkalinity, Hydroxide (As CaCO3)	<10.0	10.0	20.0		mg/L @ pH 4.54	1	06/14/23 03:04 PM
Alkalinity, Total (As CaCO3)	620	10.0	20.0		mg/L @ pH 4.54	1	06/14/23 03:04 PM
<b>TOTAL DISSOLVED SOLIDS</b>		<b>M2540C</b>		Analyst: <b>JS</b>			
Total Dissolved Solids (Residue, Filterable)	4380	50.0	50.0		mg/L	1	06/14/23 05:15 PM

<b>Qualifiers:</b>	*	Value exceeds TCLP Maximum Concentration Level	C	Sample Result or QC discussed in the Case Narrative
	DF	Dilution Factor	E	TPH pattern not Gas or Diesel Range Pattern
	J	Analyte detected between MDL and RL	MDL	Method Detection Limit
	ND	Not Detected at the Method Detection Limit	RL	Reporting Limit
	S	Spike Recovery outside control limits	N	Parameter not NELAP certified

**DHL Analytical, Inc.**

Date: 20-Jun-23

**CLIENT:** Larson & Associates  
**Project:** Trashpit  
**Project No:** 14-0107-01  
**Lab Order:** 2306135

**Client Sample ID:** Dup-1  
**Lab ID:** 2306135-05  
**Collection Date:** 06/09/23  
**Matrix:** AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
<b>VOLATILE AROMATICS BY GC/MS</b>		<b>SW8260D</b>		Analyst: <b>JVR</b>			
Benzene	<0.000800	0.000800	0.00200		mg/L	1	06/13/23 07:52 PM
Ethylbenzene	<0.00200	0.00200	0.00600		mg/L	1	06/13/23 07:52 PM
Toluene	<0.00200	0.00200	0.00600		mg/L	1	06/13/23 07:52 PM
Total Xylenes	<0.00200	0.00200	0.00600		mg/L	1	06/13/23 07:52 PM
Surr: 1,2-Dichloroethane-d4	94.9	0	72-119		%REC	1	06/13/23 07:52 PM
Surr: 4-Bromofluorobenzene	103	0	76-119		%REC	1	06/13/23 07:52 PM
Surr: Dibromofluoromethane	100	0	85-115		%REC	1	06/13/23 07:52 PM
Surr: Toluene-d8	90.1	0	81-120		%REC	1	06/13/23 07:52 PM
<b>METALS-ICPMS (DISSOLVED)</b>		<b>SW6020B</b>		Analyst: <b>SP</b>			
Dissolved Calcium	52.5	1.00	3.00		mg/L	10	06/19/23 12:12 PM
Dissolved Magnesium	28.4	1.00	3.00		mg/L	10	06/19/23 12:12 PM
Dissolved Potassium	5.52	0.100	0.300		mg/L	1	06/19/23 11:42 AM
Dissolved Sodium	104	1.00	3.00		mg/L	10	06/19/23 12:12 PM
<b>ANIONS BY IC METHOD - WATER</b>		<b>E300</b>		Analyst: <b>RA</b>			
Chloride	62.4	3.00	10.0		mg/L	10	06/14/23 07:30 PM
Sulfate	109	10.0	30.0		mg/L	10	06/14/23 07:30 PM
<b>ALKALINITY</b>		<b>M2320 B</b>		Analyst: <b>MFW</b>			
Alkalinity, Bicarbonate (As CaCO3)	257	10.0	20.0		mg/L @ pH 4.53	1	06/14/23 03:15 PM
Alkalinity, Carbonate (As CaCO3)	<10.0	10.0	20.0		mg/L @ pH 4.53	1	06/14/23 03:15 PM
Alkalinity, Hydroxide (As CaCO3)	<10.0	10.0	20.0		mg/L @ pH 4.53	1	06/14/23 03:15 PM
Alkalinity, Total (As CaCO3)	257	10.0	20.0		mg/L @ pH 4.53	1	06/14/23 03:15 PM
<b>TOTAL DISSOLVED SOLIDS</b>		<b>M2540C</b>		Analyst: <b>JS</b>			
Total Dissolved Solids (Residue, Filterable)	604	10.0	10.0		mg/L	1	06/14/23 05:15 PM

<b>Qualifiers:</b>	*	Value exceeds TCLP Maximum Concentration Level	C	Sample Result or QC discussed in the Case Narrative
	DF	Dilution Factor	E	TPH pattern not Gas or Diesel Range Pattern
	J	Analyte detected between MDL and RL	MDL	Method Detection Limit
	ND	Not Detected at the Method Detection Limit	RL	Reporting Limit
	S	Spike Recovery outside control limits	N	Parameter not NELAP certified

DHL Analytical, Inc.

Date: 20-Jun-23

**CLIENT:** Larson & Associates  
**Work Order:** 2306135  
**Project:** Trashpit

**ANALYTICAL QC SUMMARY REPORT****RunID: GCMS3\_230613A**

The QC data in batch 110626 applies to the following samples: 2306135-01A, 2306135-02A, 2306135-03A, 2306135-04A, 2306135-05A

Sample ID: <b>LCS-110626</b>	Batch ID: <b>110626</b>	TestNo: <b>SW8260D</b>	Units: <b>mg/L</b>							
SampType: <b>LCS</b>	Run ID: <b>GCMS3_230613A</b>	Analysis Date: <b>6/13/2023 1:42:00 PM</b>	Prep Date: <b>6/13/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Benzene	0.0256	0.00200	0.0232	0	110	81	122			
Ethylbenzene	0.0239	0.00600	0.0232	0	103	73	127			
Toluene	0.0216	0.00600	0.0232	0	93.2	77	122			
Total Xylenes	0.0711	0.00600	0.0696	0	102	80	121			
Surr: 1,2-Dichloroethane-d4	186		200.0		92.9	72	119			
Surr: 4-Bromofluorobenzene	206		200.0		103	76	119			
Surr: Dibromofluoromethane	198		200.0		99.2	85	115			
Surr: Toluene-d8	178		200.0		89.1	81	120			

Sample ID: <b>MB-110626</b>	Batch ID: <b>110626</b>	TestNo: <b>SW8260D</b>	Units: <b>mg/L</b>							
SampType: <b>MBLK</b>	Run ID: <b>GCMS3_230613A</b>	Analysis Date: <b>6/13/2023 2:06:00 PM</b>	Prep Date: <b>6/13/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Benzene	<0.000800	0.00200								
Ethylbenzene	<0.00200	0.00600								
Toluene	<0.00200	0.00600								
Total Xylenes	<0.00200	0.00600								
Surr: 1,2-Dichloroethane-d4	187		200.0		93.6	72	119			
Surr: 4-Bromofluorobenzene	206		200.0		103	76	119			
Surr: Dibromofluoromethane	200		200.0		99.9	85	115			
Surr: Toluene-d8	179		200.0		89.4	81	120			

Sample ID: <b>2306134-04AMSD</b>	Batch ID: <b>110626</b>	TestNo: <b>SW8260D</b>	Units: <b>mg/L</b>							
SampType: <b>MSD</b>	Run ID: <b>GCMS3_230613A</b>	Analysis Date: <b>6/13/2023 3:19:00 PM</b>	Prep Date: <b>6/13/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Benzene	0.291	0.0200	0.232	0	125	81	122	13.0	20	S
Ethylbenzene	0.260	0.0600	0.232	0	112	73	127	8.83	20	
Toluene	0.244	0.0600	0.232	0	105	77	122	11.6	20	
Total Xylenes	0.773	0.0600	0.696	0	111	80	121	8.14	20	
Surr: 1,2-Dichloroethane-d4	1920		2000		95.8	72	119	0	0	
Surr: 4-Bromofluorobenzene	2050		2000		102	76	119	0	0	
Surr: Dibromofluoromethane	2010		2000		101	85	115	0	0	
Surr: Toluene-d8	1800		2000		90.2	81	120	0	0	

Sample ID: <b>2306134-04AMS</b>	Batch ID: <b>110626</b>	TestNo: <b>SW8260D</b>	Units: <b>mg/L</b>							
SampType: <b>MS</b>	Run ID: <b>GCMS3_230613A</b>	Analysis Date: <b>6/13/2023 3:55:00 PM</b>	Prep Date: <b>6/13/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

**Qualifiers:** B Analyte detected in the associated Method Blank  
 J Analyte detected between MDL and RL  
 ND Not Detected at the Method Detection Limit  
 RL Reporting Limit  
 J Analyte detected between SDL and RL

DF Dilution Factor  
 MDL Method Detection Limit  
 R RPD outside accepted control limits  
 S Spike Recovery outside control limits  
 N Parameter not NELAP certified

Page 1 of 13

CLIENT: Larson & Associates

Work Order: 2306135

Project: Trashpit

ANALYTICAL QC SUMMARY REPORT

RunID: GCMS3\_230613A

Sample ID: 2306134-04AMS	Batch ID: 110626	TestNo: SW8260D	Units: mg/L							
SampType: MS	Run ID: GCMS3_230613A	Analysis Date: 6/13/2023 3:55:00 PM	Prep Date: 6/13/2023							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.255	0.0200	0.232	0	110	81	122			
Ethylbenzene	0.238	0.0600	0.232	0	103	73	127			
Toluene	0.218	0.0600	0.232	0	93.8	77	122			
Total Xylenes	0.713	0.0600	0.696	0	102	80	121			
Surr: 1,2-Dichloroethane-d4	1910		2000		95.3	72	119			
Surr: 4-Bromofluorobenzene	2060		2000		103	76	119			
Surr: Dibromofluoromethane	2030		2000		101	85	115			
Surr: Toluene-d8	1810		2000		90.4	81	120			

Qualifiers:

B

Analyte detected in the associated Method Blank

J

Analyte detected between MDL and RL

ND

Not Detected at the Method Detection Limit

RL

Reporting Limit

J

Analyte detected between SDL and RL

DF

Dilution Factor

MDL

Method Detection Limit

R

RPD outside accepted control limits

S

Spike Recovery outside control limits

N

Parameter not NELAP certified

Page 2 of 13

CLIENT: Larson & Associates

Work Order: 2306135

Project: Trashpit

ANALYTICAL QC SUMMARY REPORT

RunID: GCMS3\_230613A

Sample ID: <b>ICV-230613</b>	Batch ID: <b>R127337</b>	TestNo: <b>SW8260D</b>		Units: <b>mg/L</b>						
SampType: <b>ICV</b>	Run ID: <b>GCMS3_230613A</b>	Analysis Date: <b>6/13/2023 1:18:00 PM</b>		Prep Date:						
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0510	0.00200	0.0464	0	110	70	130			
Ethylbenzene	0.0482	0.00600	0.0464	0	104	70	130			
Toluene	0.0436	0.00600	0.0464	0	93.9	70	130			
Total Xylenes	0.144	0.00600	0.139	0	103	70	130			
Surr: 1,2-Dichloroethane-d4	186		200.0		92.9	72	119			
Surr: 4-Bromofluorobenzene	206		200.0		103	76	119			
Surr: Dibromofluoromethane	198		200.0		98.8	85	115			
Surr: Toluene-d8	179		200.0		89.7	81	120			

Qualifiers:

B

Analyte detected in the associated Method Blank

J

Analyte detected between MDL and RL

ND

Not Detected at the Method Detection Limit

RL

Reporting Limit

J

Analyte detected between SDL and RL

DF

Dilution Factor

MDL

Method Detection Limit

R

RPD outside accepted control limits

S

Spike Recovery outside control limits

N

Parameter not NELAP certified

Page 3 of 13



CLIENT: Larson &amp; Associates

Work Order: 2306135

Project: Trashpit

## ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4\_230619C

The QC data in batch 110709 applies to the following samples: 2306135-01B, 2306135-02B, 2306135-03B, 2306135-04B, 2306135-05B

Sample ID: <b>MB-110709</b>	Batch ID: <b>110709</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>							
SampType: <b>MBLK</b>	Run ID: <b>ICP-MS4_230619C</b>	Analysis Date: <b>6/19/2023 11:19:00 AM</b>	Prep Date: <b>6/19/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Dissolved Calcium	<0.100	0.300								
Dissolved Magnesium	<0.100	0.300								
Dissolved Potassium	<0.100	0.300								
Dissolved Sodium	<0.100	0.300								

Sample ID: <b>MB-110631-FILTER</b>		Batch ID: <b>110709</b>		TestNo: <b>SW6020B</b>		Units: <b>mg/L</b>					
SampType: <b>MBLK</b>		Run ID: <b>ICP-MS4_230619C</b>		Analysis Date: <b>6/19/2023 11:21:00 AM</b>		Prep Date: <b>6/19/2023</b>					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Dissolved Calcium	<0.100	0.300								
Dissolved Magnesium	<0.100	0.300								
Dissolved Potassium	<0.100	0.300								
Dissolved Sodium	<0.100	0.300								

Sample ID: <b>LCS-110709</b>	Batch ID: <b>110709</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>							
SampType: <b>LCS</b>	Run ID: <b>ICP-MS4_230619C</b>	Analysis Date: <b>6/19/2023 11:24:00 AM</b>	Prep Date: <b>6/19/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Dissolved Calcium	5.09	0.300	5.00	0	102	80	120			
Dissolved Magnesium	4.84	0.300	5.00	0	96.7	80	120			
Dissolved Potassium	4.91	0.300	5.00	0	98.3	80	120			
Dissolved Sodium	4.78	0.300	5.00	0	95.6	80	120			

Sample ID: <b>LCSD-110709</b>	Batch ID: <b>110709</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>							
SampType: <b>LCSD</b>	Run ID: <b>ICP-MS4_230619C</b>	Analysis Date: <b>6/19/2023 11:26:00 AM</b>	Prep Date: <b>6/19/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Dissolved Calcium	4.87	0.300	5.00	0	97.5	80	120	4.30	15	
Dissolved Magnesium	4.82	0.300	5.00	0	96.3	80	120	0.420	15	
Dissolved Potassium	4.90	0.300	5.00	0	98.1	80	120	0.189	15	
Dissolved Sodium	4.75	0.300	5.00	0	94.9	80	120	0.731	15	

Sample ID: <b>2306135-01B SD</b>	Batch ID: <b>110709</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>							
SampType: <b>SD</b>	Run ID: <b>ICP-MS4_230619C</b>	Analysis Date: <b>6/19/2023 11:32:00 AM</b>	Prep Date: <b>6/19/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Potassium	5.45	1.50	0	5.33				2.16	20	
-----------	------	------	---	------	--	--	--	------	----	--

**Qualifiers:** B Analyte detected in the associated Method Blank  
J Analyte detected between MDL and RL  
ND Not Detected at the Method Detection Limit  
RL Reporting Limit  
J Analyte detected between SDL and RL

DF Dilution Factor  
MDL Method Detection Limit  
R RPD outside accepted control limits  
S Spike Recovery outside control limits  
N Parameter not NELAP certified

**CLIENT:** Larson & Associates  
**Work Order:** 2306135  
**Project:** Trashpit

## ANALYTICAL QC SUMMARY REPORT

**RunID:** ICP-MS4\_230619C

Sample ID: <b>2306135-01B PDS</b>	Batch ID: <b>110709</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>							
SampType: <b>PDS</b>	Run ID: <b>ICP-MS4_230619C</b>	Analysis Date: <b>6/19/2023 11:46:00 AM</b>	Prep Date: <b>6/19/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Potassium	9.58	0.300	5.00	5.33	84.9	75	125			

Sample ID: <b>2306135-01B MS</b>	Batch ID: <b>110709</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>							
SampType: <b>MS</b>	Run ID: <b>ICP-MS4_230619C</b>	Analysis Date: <b>6/19/2023 11:49:00 AM</b>	Prep Date: <b>6/19/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dissolved Potassium	10.1	0.300	5.00	5.33	94.6	75	125			

Sample ID: <b>2306135-01B MSD</b>	Batch ID: <b>110709</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>							
SampType: <b>MSD</b>	Run ID: <b>ICP-MS4_230619C</b>	Analysis Date: <b>6/19/2023 11:51:00 AM</b>	Prep Date: <b>6/19/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dissolved Potassium	10.2	0.300	5.00	5.33	96.5	75	125	0.897	15	

Sample ID: 2306135-01B SD	Batch ID: 110709	TestNo: SW6020B	Units: mg/L							
SampType: SD	Run ID: ICP-MS4_230619C	Analysis Date: 6/19/2023 12:02:00 PM	Prep Date: 6/19/2023							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	50.2	15.0	0	52.6				4.66	20	
Magnesium	27.9	15.0	0	27.9				0.193	20	
Sodium	104	15.0	0	102				1.58	20	

Sample ID: <b>2306135-01B PDS</b>	Batch ID: <b>110709</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>							
SampType: <b>PDS</b>	Run ID: <b>ICP-MS4_230619C</b>	Analysis Date: <b>6/19/2023 12:16:00 PM</b>	Prep Date: <b>6/19/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	103	3.00	50.0	52.6	101	75	125			
Magnesium	73.8	3.00	50.0	27.9	91.8	75	125			
Sodium	148	3.00	50.0	102	92.6	75	125			

Sample ID: <b>2306135-01B MS</b>	Batch ID: <b>110709</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>							
SampType: <b>MS</b>	Run ID: <b>ICP-MS4_230619C</b>	Analysis Date: <b>6/19/2023 12:18:00 PM</b>	Prep Date: <b>6/19/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dissolved Calcium	56.9	3.00	5.00	52.6	86.9	75	125			
Dissolved Magnesium	32.8	3.00	5.00	27.9	98.6	75	125			
Dissolved Sodium	107	3.00	5.00	102	101	75	125			

**Qualifiers:** B Analyte detected in the associated Method Blank  
 J Analyte detected between MDL and RL  
 ND Not Detected at the Method Detection Limit  
 RL Reporting Limit  
 J Analyte detected between SDL and RL

DF Dilution Factor  
 MDL Method Detection Limit  
 R RPD outside accepted control limits  
 S Spike Recovery outside control limits  
 N Parameter not NELAP certified

CLIENT: Larson & Associates

Work Order: 2306135

Project: Trashpit

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4\_230619C

Sample ID: 2306135-01B MSD	Batch ID: 110709	TestNo: SW6020B	Units: mg/L							
SampType: MSD	Run ID: ICP-MS4_230619C	Analysis Date: 6/19/2023 12:20:00 PM	Prep Date: 6/19/2023							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dissolved Calcium	56.8	3.00	5.00	52.6	84.9	75	125	0.174	15	
Dissolved Magnesium	33.1	3.00	5.00	27.9	103	75	125	0.719	15	
Dissolved Sodium	108	3.00	5.00	102	113	75	125	0.585	15	

Qualifiers:

B

Analyte detected in the associated Method Blank

J

Analyte detected between MDL and RL

ND

Not Detected at the Method Detection Limit

RL

Reporting Limit

J

Analyte detected between SDL and RL

DF

Dilution Factor

MDL

Method Detection Limit

R

RPD outside accepted control limits

S

Spike Recovery outside control limits

N

Parameter not NELAP certified

Page 6 of 13

**CLIENT:** Larson & Associates  
**Work Order:** 2306135  
**Project:** Trashpit

## ANALYTICAL QC SUMMARY REPORT

**RunID:** ICP-MS4\_230619C

Sample ID: <b>ICV-230619</b>	Batch ID: <b>R127452</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>							
SampType: <b>ICV</b>	Run ID: <b>ICP-MS4_230619C</b>	Analysis Date: <b>6/19/2023 10:34:00 AM</b>	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dissolved Calcium	2.74	0.300	2.50	0	110	90	110			
Dissolved Magnesium	2.55	0.300	2.50	0	102	90	110			
Dissolved Potassium	2.57	0.300	2.50	0	103	90	110			
Dissolved Sodium	2.52	0.300	2.50	0	101	90	110			

Sample ID: <b>LCVL-230619</b>	Batch ID: <b>R127452</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>							
SampType: <b>LCVL</b>	Run ID: <b>ICP-MS4_230619C</b>	Analysis Date: <b>6/19/2023 10:57:00 AM</b>	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dissolved Calcium	0.0975	0.300	0.100	0	97.5	80	120			
Dissolved Magnesium	0.0989	0.300	0.100	0	98.9	80	120			
Dissolved Potassium	0.111	0.300	0.100	0	111	80	120			
Dissolved Sodium	0.101	0.300	0.100	0	101	80	120			

Sample ID: <b>CCV1-230619</b>	Batch ID: <b>R127452</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>							
SampType: <b>CCV</b>	Run ID: <b>ICP-MS4_230619C</b>	Analysis Date: <b>6/19/2023 11:56:00 AM</b>	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dissolved Calcium	4.94	0.300	5.00	0	98.8	90	110			
Dissolved Magnesium	4.78	0.300	5.00	0	95.5	90	110			
Dissolved Potassium	4.87	0.300	5.00	0	97.3	90	110			
Dissolved Sodium	4.75	0.300	5.00	0	95.1	90	110			

Sample ID: <b>CCV2-230619</b>	Batch ID: <b>R127452</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>							
SampType: <b>CCV</b>	Run ID: <b>ICP-MS4_230619C</b>	Analysis Date: <b>6/19/2023 12:22:00 PM</b>	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dissolved Calcium	5.11	0.300	5.00	0	102	90	110			
Dissolved Magnesium	4.75	0.300	5.00	0	95.0	90	110			
Dissolved Sodium	4.74	0.300	5.00	0	94.8	90	110			

**Qualifiers:** B Analyte detected in the associated Method Blank  
 J Analyte detected between MDL and RL  
 ND Not Detected at the Method Detection Limit  
 RL Reporting Limit  
 J Analyte detected between SDL and RL

DF Dilution Factor  
 MDL Method Detection Limit  
 R RPD outside accepted control limits  
 S Spike Recovery outside control limits  
 N Parameter not NELAP certified



**CLIENT:** Larson & Associates  
**Work Order:** 2306135  
**Project:** Trashpit

## ANALYTICAL QC SUMMARY REPORT

**RunID:** IC2\_230614B

The QC data in batch 110642 applies to the following samples: 2306135-01D, 2306135-02D, 2306135-03D, 2306135-04D, 2306135-05D

Sample ID: <b>MB-110642</b>	Batch ID: <b>110642</b>	TestNo: <b>E300</b>	Units: <b>mg/L</b>							
SampType: <b>MBLK</b>	Run ID: <b>IC2_230614B</b>	Analysis Date: <b>6/14/2023 10:44:06 AM</b>	Prep Date: <b>6/14/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	<0.300	1.00								
Sulfate	<1.00	3.00								

Sample ID: LCS-110642		Batch ID: 110642		TestNo: E300		Units: mg/L				
SampType: LCS		Run ID: IC2_230614B		Analysis Date: 6/14/2023 11:01:06 AM		Prep Date: 6/14/2023				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.00	1.00	10.00	0	90.0	90	110			
Sulfate	28.6	3.00	30.00	0	95.4	90	110			

Sample ID: <b>LCSD-110642</b>	Batch ID: <b>110642</b>	TestNo: <b>E300</b>	Units: <b>mg/L</b>							
SampType: <b>LCSD</b>	Run ID: <b>IC2_230614B</b>	Analysis Date: <b>6/14/2023 11:18:06 AM</b>	Prep Date: <b>6/14/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.02	1.00	10.00	0	90.2	90	110	0.217	20	
Sulfate	28.7	3.00	30.00	0	95.6	90	110	0.196	20	

Sample ID: 2306135-04DMS		Batch ID: 110642		TestNo: E300		Units: mg/L				
SampType: MS		Run ID: IC2_230614B		Analysis Date: 6/14/2023 3:49:07 PM		Prep Date: 6/14/2023				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	3270	100	2000	1626	82.2	90	110			S
Sulfate	2450	300	2000	631.4	90.8	90	110			

Sample ID: 2306135-04DMSD		Batch ID: 110642		TestNo: E300		Units: mg/L				
SampType: MSD		Run ID: IC2_230614B		Analysis Date: 6/14/2023 4:06:07 PM		Prep Date: 6/14/2023				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	3290	100	2000	1626	83.2	90	110	0.608	20	S
Sulfate	2480	300	2000	631.4	92.5	90	110	1.33	20	

Sample ID: 2306142-02CMS	Batch ID: 110642	TestNo: E300	Units: mg/L							
SampType: MS	Run ID: IC2_230614B	Analysis Date: 6/14/2023 9:29:06 PM	Prep Date: 6/14/2023							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	967	10.0	200.0	0	484	90	110			S
Sulfate	1570	30.0	200.0	1494	35.9	90	110			S

**Qualifiers:** B Analyte detected in the associated Method Blank  
 J Analyte detected between MDL and RL  
 ND Not Detected at the Method Detection Limit  
 RL Reporting Limit  
 J Analyte detected between SDL and RL

DF Dilution Factor  
 MDL Method Detection Limit  
 R RPD outside accepted control limits  
 S Spike Recovery outside control limits  
 N Parameter not NELAP certified

CLIENT: Larson & Associates

Work Order: 2306135

Project: Trashpit

ANALYTICAL QC SUMMARY REPORT

RunID: IC2\_230614B

Sample ID: 2306142-02CMSD	Batch ID: 110642	TestNo: E300	Units: mg/L							
SampType: MSD	Run ID: IC2_230614B	Analysis Date: 6/14/2023 9:46:06 PM	Prep Date: 6/14/2023							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	948	10.0	200.0	0	474	90	110	2.00	20	S
Sulfate	1570	30.0	200.0	1494	37.1	90	110	0.155	20	S

Qualifiers:

B

Analyte detected in the associated Method Blank

J

Analyte detected between MDL and RL

ND

Not Detected at the Method Detection Limit

RL

Reporting Limit

J

Analyte detected between SDL and RL

DF

Dilution Factor

MDL

Method Detection Limit

R

RPD outside accepted control limits

S

Spike Recovery outside control limits

N

Parameter not NELAP certified

Page 9 of 13

**CLIENT:** Larson & Associates  
**Work Order:** 2306135  
**Project:** Trashpit

## ANALYTICAL QC SUMMARY REPORT

**RunID:** IC2\_230614B

Sample ID: <b>ICV-230614</b>		Batch ID: <b>R127375</b>		TestNo: <b>E300</b>		Units: <b>mg/L</b>				
SampType: <b>ICV</b>		Run ID: <b>IC2_230614B</b>		Analysis Date: <b>6/14/2023 10:10:06 AM</b>		Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	22.9	1.00	25.00	0	91.6	90	110			
Sulfate	74.6	3.00	75.00	0	99.5	90	110			

Sample ID: <b>CCV1-230614</b>	Batch ID: <b>R127375</b>	TestNo: <b>E300</b>	Units: <b>mg/L</b>							
SampType: <b>CCV</b>	Run ID: <b>IC2_230614B</b>	Analysis Date: <b>6/14/2023 6:22:07 PM</b>	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.07	1.00	10.00	0	90.7	90	110			
Sulfate	28.7	3.00	30.00	0	95.6	90	110			

Sample ID: <b>CCV2-230614</b>	Batch ID: <b>R127375</b>	TestNo: <b>E300</b>	Units: <b>mg/L</b>							
SampType: <b>CCV</b>	Run ID: <b>IC2_230614B</b>	Analysis Date: <b>6/14/2023 10:54:06 PM</b>	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.16	1.00	10.00	0	91.6	90	110			
Sulfate	29.1	3.00	30.00	0	97.0	90	110			

**Qualifiers:** B Analyte detected in the associated Method Blank  
J Analyte detected between MDL and RL  
ND Not Detected at the Method Detection Limit  
RL Reporting Limit  
J Analyte detected between SDL and RL

DF Dilution Factor  
MDL Method Detection Limit  
R RPD outside accepted control limits  
S Spike Recovery outside control limits  
N Parameter not NELAP certified

CLIENT: Larson &amp; Associates

Work Order: 2306135

Project: Trashpit

## ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR\_230614A

The QC data in batch 110629 applies to the following samples: 2306135-01D, 2306135-02D, 2306135-03D, 2306135-04D, 2306135-05D

Sample ID: <b>LCS-110629</b>	Batch ID: <b>110629</b>	TestNo: <b>M2320 B</b>	Units: <b>mg/L @ pH 4.53</b>							
SampType: <b>LCS</b>	Run ID: <b>TITRATOR_230614A</b>	Analysis Date: <b>6/14/2023 1:29:00 PM</b>	Prep Date: <b>6/14/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Alkalinity, Total (As CaCO3)	47.7	20.0	50.00	0	95.4	74	129			
------------------------------	------	------	-------	---	------	----	-----	--	--	--

Sample ID: <b>LCSD-110629</b>	Batch ID: <b>110629</b>	TestNo: <b>M2320 B</b>	Units: <b>mg/L @ pH 4.53</b>							
SampType: <b>LCSD</b>	Run ID: <b>TITRATOR_230614A</b>	Analysis Date: <b>6/14/2023 1:34:00 PM</b>	Prep Date: <b>6/14/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Alkalinity, Total (As CaCO3)	47.3	20.0	50.00	0	94.6	74	129	0.842	20	
------------------------------	------	------	-------	---	------	----	-----	-------	----	--

Sample ID: <b>MB-110629</b>	Batch ID: <b>110629</b>	TestNo: <b>M2320 B</b>	Units: <b>mg/L @ pH 4.52</b>							
SampType: <b>MBLK</b>	Run ID: <b>TITRATOR_230614A</b>	Analysis Date: <b>6/14/2023 1:36:00 PM</b>	Prep Date: <b>6/14/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Alkalinity, Bicarbonate (As CaCO3)	<10.0	20.0								
------------------------------------	-------	------	--	--	--	--	--	--	--	--

Alkalinity, Carbonate (As CaCO3)	<10.0	20.0								
----------------------------------	-------	------	--	--	--	--	--	--	--	--

Alkalinity, Hydroxide (As CaCO3)	<10.0	20.0								
----------------------------------	-------	------	--	--	--	--	--	--	--	--

Alkalinity, Total (As CaCO3)	<10.0	20.0								
------------------------------	-------	------	--	--	--	--	--	--	--	--

Sample ID: <b>2306135-01D-DUP</b>	Batch ID: <b>110629</b>	TestNo: <b>M2320 B</b>	Units: <b>mg/L @ pH 4.54</b>							
SampType: <b>DUP</b>	Run ID: <b>TITRATOR_230614A</b>	Analysis Date: <b>6/14/2023 2:15:00 PM</b>	Prep Date: <b>6/14/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Alkalinity, Bicarbonate (As CaCO3)	258	20.0	0	262.2				1.42	20	
------------------------------------	-----	------	---	-------	--	--	--	------	----	--

Alkalinity, Carbonate (As CaCO3)	<10.0	20.0	0	0				0	20	
----------------------------------	-------	------	---	---	--	--	--	---	----	--

Alkalinity, Hydroxide (As CaCO3)	<10.0	20.0	0	0				0	20	
----------------------------------	-------	------	---	---	--	--	--	---	----	--

Alkalinity, Total (As CaCO3)	258	20.0	0	262.2				1.42	20	
------------------------------	-----	------	---	-------	--	--	--	------	----	--

Sample ID: <b>2306142-02C-DUP</b>	Batch ID: <b>110629</b>	TestNo: <b>M2320 B</b>	Units: <b>mg/L @ pH 4.53</b>							
SampType: <b>DUP</b>	Run ID: <b>TITRATOR_230614A</b>	Analysis Date: <b>6/14/2023 4:11:00 PM</b>	Prep Date: <b>6/14/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Alkalinity, Bicarbonate (As CaCO3)	220	20.0	0	219.8				0.091	20	
------------------------------------	-----	------	---	-------	--	--	--	-------	----	--

Alkalinity, Carbonate (As CaCO3)	<10.0	20.0	0	0				0	20	
----------------------------------	-------	------	---	---	--	--	--	---	----	--

Alkalinity, Hydroxide (As CaCO3)	<10.0	20.0	0	0				0	20	
----------------------------------	-------	------	---	---	--	--	--	---	----	--

Alkalinity, Total (As CaCO3)	220	20.0	0	219.8				0.091	20	
------------------------------	-----	------	---	-------	--	--	--	-------	----	--

**Qualifiers:**

B Analyte detected in the associated Method Blank

J Analyte detected between MDL and RL

ND Not Detected at the Method Detection Limit

RL Reporting Limit

J Analyte detected between SDL and RL

DF Dilution Factor

MDL Method Detection Limit

R RPD outside accepted control limits

S Spike Recovery outside control limits

N Parameter not NELAP certified

Page 11 of 13



**CLIENT:** Larson & Associates  
**Work Order:** 2306135  
**Project:** Trashpit

## ANALYTICAL QC SUMMARY REPORT

**RunID:** TITRATOR\_230614A

Sample ID: <b>ICV-230614</b>	Batch ID: <b>R127380</b>	TestNo: <b>M2320 B</b>				Units: <b>mg/L @ pH 4.52</b>				
SampType: <b>ICV</b>	Run ID: <b>TITRATOR_230614A</b>	Analysis Date: <b>6/14/2023 1:21:00 PM</b>				Prep Date: <b>6/14/2023</b>				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	18.0	20.0	0							
Alkalinity, Carbonate (As CaCO3)	83.0	20.0	0							
Alkalinity, Hydroxide (As CaCO3)	<10.0	20.0	0							
Alkalinity, Total (As CaCO3)	101	20.0	100.0	0	101	98	102			

Sample ID: <b>CCV-230614</b>	Batch ID: <b>R127380</b>	TestNo: <b>M2320 B</b>	Units: <b>mg/L @ pH 4.53</b>							
SampType: <b>CCV</b>	Run ID: <b>TITRATOR_230614A</b>	Analysis Date: <b>6/14/2023 3:49:00 PM</b>	Prep Date: <b>6/14/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	32.8	20.0	0							
Alkalinity, Carbonate (As CaCO3)	69.1	20.0	0							
Alkalinity, Hydroxide (As CaCO3)	<10.0	20.0	0							
Alkalinity, Total (As CaCO3)	102	20.0	100.0	0	102	90	110			

Sample ID: <b>CCV1-230614</b>	Batch ID: <b>R127380</b>	TestNo: <b>M2320 B</b>				Units: <b>mg/L @ pH 4.53</b>				
SampType: <b>CCV</b>	Run ID: <b>TITRATOR_230614A</b>	Analysis Date: <b>6/14/2023 5:18:00 PM</b>				Prep Date: <b>6/14/2023</b>				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	31.1	20.0	0							
Alkalinity, Carbonate (As CaCO3)	60.8	20.0	0							
Alkalinity, Hydroxide (As CaCO3)	<10.0	20.0	0							
Alkalinity, Total (As CaCO3)	91.9	20.0	100.0	0	91.9	90	110			

**Qualifiers:** B Analyte detected in the associated Method Blank  
 J Analyte detected between MDL and RL  
 ND Not Detected at the Method Detection Limit  
 RL Reporting Limit  
 J Analyte detected between SDL and RL

DF Dilution Factor  
 MDL Method Detection Limit  
 R RPD outside accepted control limits  
 S Spike Recovery outside control limits  
 N Parameter not NELAP certified

**CLIENT:** Larson & Associates  
**Work Order:** 2306135  
**Project:** Trashpit

## ANALYTICAL QC SUMMARY REPORT

**RunID:** WC\_230614C

The QC data in batch 110650 applies to the following samples: 2306135-01D, 2306135-02D, 2306135-03D, 2306135-04D, 2306135-05D

Sample ID: <b>MB-110650</b>	Batch ID: <b>110650</b>	TestNo: <b>M2540C</b>	Units: <b>mg/L</b>							
SampType: <b>MBLK</b>	Run ID: <b>WC_230614C</b>	Analysis Date: <b>6/14/2023 5:15:00 PM</b>	Prep Date: <b>6/14/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera <10.0 10.0

Sample ID: <b>LCS-110650</b>	Batch ID: <b>110650</b>	TestNo: <b>M2540C</b>	Units: <b>mg/L</b>							
SampType: <b>LCS</b>	Run ID: <b>WC_230614C</b>	Analysis Date: <b>6/14/2023 5:15:00 PM</b>	Prep Date: <b>6/14/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera 750 10.0 745.6 0 101 90 113

Sample ID: <b>2306115-02B-DUP</b>	Batch ID: <b>110650</b>	TestNo: <b>M2540C</b>	Units: <b>mg/L</b>							
SampType: <b>DUP</b>	Run ID: <b>WC_230614C</b>	Analysis Date: <b>6/14/2023 5:15:00 PM</b>	Prep Date: <b>6/14/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera 10400 200 0 10540 0.953 5

Sample ID: <b>2306135-04D-DUP</b>	Batch ID: <b>110650</b>	TestNo: <b>M2540C</b>	Units: <b>mg/L</b>							
SampType: <b>DUP</b>	Run ID: <b>WC_230614C</b>	Analysis Date: <b>6/14/2023 5:15:00 PM</b>	Prep Date: <b>6/14/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera 4320 50.0 0 4375 1.38 5

**Qualifiers:** B Analyte detected in the associated Method Blank  
J Analyte detected between MDL and RL  
ND Not Detected at the Method Detection Limit  
RL Reporting Limit  
J Analyte detected between SDL and RL

DF Dilution Factor  
MDL Method Detection Limit  
R RPD outside accepted control limits  
S Spike Recovery outside control limits  
N Parameter not NELAP certified



Eurofins Environment Testing South  
Central, LLC  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

January 09, 2024

Max Cook

Ranger Environmental Services, LLC

P.O. Box 201179

Austin, TX 78720

TEL: (512) 335-1785

FAX: (512) 335-0527

RE: LMPSU Trash Pit

OrderNo.: 2312D40

Dear Max Cook:

Eurofins Environment Testing South Central, LLC received 5 sample(s) on 12/22/2023 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please do not hesitate to contact Eurofins Albuquerque for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman".

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

CLIENT: Ranger Environmental Services, LLC

Client Sample ID: MW-1

Project: LMPSU Trash Pit

Collection Date: 12/20/2023 1:45:00 PM

Lab ID: 2312D40-001

Matrix: AQUEOUS

Received Date: 12/22/2023 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	1.0		µg/L	1	12/27/2023 5:15:18 PM
Toluene	ND	1.0		µg/L	1	12/27/2023 5:15:18 PM
Ethylbenzene	ND	1.0		µg/L	1	12/27/2023 5:15:18 PM
Xylenes, Total	ND	2.0		µg/L	1	12/27/2023 5:15:18 PM
Surr: 4-Bromofluorobenzene	92.5	52.4-148		%Rec	1	12/27/2023 5:15:18 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	1500	50	*	mg/L	100	12/23/2023 11:08:20 AM
Sulfate	540	50	*	mg/L	100	12/23/2023 11:08:20 AM
EPA METHOD 6010B: DISSOLVED METALS						Analyst: VP
Calcium	160	5.0		mg/L	5	12/29/2023 9:04:34 AM
Magnesium	240	5.0		mg/L	5	12/29/2023 9:04:34 AM
Potassium	24	1.0		mg/L	1	12/29/2023 8:50:54 AM
Sodium	1200	20		mg/L	20	1/3/2024 10:15:37 AM
SM2320B: ALKALINITY						Analyst: RBC
Bicarbonate (As CaCO3)	611.1	20.00		mg/L Ca	1	12/28/2023 7:16:08 PM
Carbonate (As CaCO3)	ND	2.000		mg/L Ca	1	12/28/2023 7:16:08 PM
Total Alkalinity (as CaCO3)	611.1	20.00		mg/L Ca	1	12/28/2023 7:16:08 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: KS
Total Dissolved Solids	3830	50.0	*	mg/L	1	1/2/2024 9:59:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		



## Analytical Report

Lab Order 2312D40

Date Reported: 1/9/2024

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Ranger Environmental Services, LLC

Client Sample ID: MW-2

Project: LMPSU Trash Pit

Collection Date: 12/20/2023 10:10:00 AM

Lab ID: 2312D40-002

Matrix: AQUEOUS

Received Date: 12/22/2023 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: JJP
Benzene	ND	1.0		µg/L	1	12/27/2023 5:39:04 PM
Toluene	ND	1.0		µg/L	1	12/27/2023 5:39:04 PM
Ethylbenzene	ND	1.0		µg/L	1	12/27/2023 5:39:04 PM
Xylenes, Total	ND	2.0		µg/L	1	12/27/2023 5:39:04 PM
Surr: 4-Bromofluorobenzene	95.6	52.4-148		%Rec	1	12/27/2023 5:39:04 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: SNS
Chloride	62	5.0		mg/L	10	12/23/2023 11:23:29 AM
Sulfate	110	5.0		mg/L	10	12/23/2023 11:23:29 AM
<b>EPA METHOD 6010B: DISSOLVED METALS</b>						Analyst: VP
Calcium	51	1.0		mg/L	1	12/29/2023 9:07:48 AM
Magnesium	28	1.0		mg/L	1	12/29/2023 9:07:48 AM
Potassium	5.9	1.0		mg/L	1	12/29/2023 9:07:48 AM
Sodium	99	1.0		mg/L	1	12/29/2023 9:07:48 AM
<b>SM2320B: ALKALINITY</b>						Analyst: RBC
Bicarbonate (As CaCO <sub>3</sub> )	254.8	20.00		mg/L Ca	1	12/28/2023 7:40:48 PM
Carbonate (As CaCO <sub>3</sub> )	ND	2.000		mg/L Ca	1	12/28/2023 7:40:48 PM
Total Alkalinity (as CaCO <sub>3</sub> )	254.8	20.00		mg/L Ca	1	12/28/2023 7:40:48 PM
<b>SM2540C MOD: TOTAL DISSOLVED SOLIDS</b>						Analyst: KS
Total Dissolved Solids	594	50.0	*	mg/L	1	1/2/2024 9:59:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

## Analytical Report

Lab Order 2312D40

Date Reported: 1/9/2024

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Ranger Environmental Services, LLC

Client Sample ID: MW-3

Project: LMPSU Trash Pit

Collection Date: 12/20/2023 1:10:00 PM

Lab ID: 2312D40-003

Matrix: AQUEOUS

Received Date: 12/22/2023 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: JJP
Benzene	ND	1.0		µg/L	1	12/27/2023 6:02:38 PM
Toluene	ND	1.0		µg/L	1	12/27/2023 6:02:38 PM
Ethylbenzene	ND	1.0		µg/L	1	12/27/2023 6:02:38 PM
Xylenes, Total	ND	2.0		µg/L	1	12/27/2023 6:02:38 PM
Surr: 4-Bromofluorobenzene	91.6	52.4-148		%Rec	1	12/27/2023 6:02:38 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: SNS
Chloride	440	50	*	mg/L	100	12/23/2023 1:09:35 PM
Sulfate	280	5.0	*	mg/L	10	12/23/2023 12:54:27 PM
<b>EPA METHOD 6010B: DISSOLVED METALS</b>						Analyst: VP
Calcium	82	1.0		mg/L	1	12/29/2023 9:13:36 AM
Magnesium	74	1.0		mg/L	1	12/29/2023 9:13:36 AM
Potassium	9.8	1.0		mg/L	1	12/29/2023 9:13:36 AM
Sodium	260	5.0		mg/L	5	12/29/2023 9:16:53 AM
<b>SM2320B: ALKALINITY</b>						Analyst: RBC
Bicarbonate (As CaCO <sub>3</sub> )	204.5	20.00		mg/L Ca	1	12/28/2023 7:53:19 PM
Carbonate (As CaCO <sub>3</sub> )	ND	2.000		mg/L Ca	1	12/28/2023 7:53:19 PM
Total Alkalinity (as CaCO <sub>3</sub> )	204.5	20.00		mg/L Ca	1	12/28/2023 7:53:19 PM
<b>SM2540C MOD: TOTAL DISSOLVED SOLIDS</b>						Analyst: KS
Total Dissolved Solids	1380	50.0	*	mg/L	1	1/2/2024 9:59:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

## Analytical Report

Lab Order 2312D40

Date Reported: 1/9/2024

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Ranger Environmental Services, LLC

Client Sample ID: MW-4

Project: LMPSU Trash Pit

Collection Date: 12/20/2023 12:40:00 PM

Lab ID: 2312D40-004

Matrix: AQUEOUS

Received Date: 12/22/2023 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: JJP
Benzene	ND	1.0		µg/L	1	12/27/2023 6:26:37 PM
Toluene	ND	1.0		µg/L	1	12/27/2023 6:26:37 PM
Ethylbenzene	ND	1.0		µg/L	1	12/27/2023 6:26:37 PM
Xylenes, Total	ND	2.0		µg/L	1	12/27/2023 6:26:37 PM
Surr: 4-Bromofluorobenzene	92.8	52.4-148		%Rec	1	12/27/2023 6:26:37 PM
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: SNS
Chloride	160	5.0		mg/L	10	12/23/2023 1:24:45 PM
Sulfate	180	5.0		mg/L	10	12/23/2023 1:24:45 PM
<b>EPA METHOD 6010B: DISSOLVED METALS</b>						Analyst: VP
Calcium	68	1.0		mg/L	1	12/29/2023 9:19:51 AM
Magnesium	43	1.0		mg/L	1	12/29/2023 9:19:51 AM
Potassium	8.2	1.0		mg/L	1	12/29/2023 9:19:51 AM
Sodium	140	5.0		mg/L	5	12/29/2023 9:22:50 AM
<b>SM2320B: ALKALINITY</b>						Analyst: RBC
Bicarbonate (As CaCO <sub>3</sub> )	244.8	20.00		mg/L Ca	1	12/28/2023 8:09:14 PM
Carbonate (As CaCO <sub>3</sub> )	ND	2.000		mg/L Ca	1	12/28/2023 8:09:14 PM
Total Alkalinity (as CaCO <sub>3</sub> )	244.8	20.00		mg/L Ca	1	12/28/2023 8:09:14 PM
<b>SM2540C MOD: TOTAL DISSOLVED SOLIDS</b>						Analyst: KS
Total Dissolved Solids	816	100	*D	mg/L	1	1/2/2024 9:59:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

CLIENT: Ranger Environmental Services, LLC  
Project: LMPSU Trash Pit  
Lab ID: 2312D40-005

Client Sample ID: Duplicate  
Collection Date: 12/20/2023 10:20:00 AM  
Received Date: 12/22/2023 7:45:00 AM

Matrix: AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: JJP
Benzene	ND	1.0		µg/L	1	12/27/2023 6:50:11 PM
Toluene	ND	1.0		µg/L	1	12/27/2023 6:50:11 PM
Ethylbenzene	ND	1.0		µg/L	1	12/27/2023 6:50:11 PM
Xylenes, Total	ND	2.0		µg/L	1	12/27/2023 6:50:11 PM
Surr: 4-Bromofluorobenzene	92.0	52.4-148		%Rec	1	12/27/2023 6:50:11 PM
EPA METHOD 300.0: ANIONS						Analyst: SNS
Chloride	61	5.0		mg/L	10	12/23/2023 1:55:03 PM
Sulfate	110	5.0		mg/L	10	12/23/2023 1:55:03 PM
EPA METHOD 6010B: DISSOLVED METALS						Analyst: VP
Calcium	54	5.0		mg/L	5	12/29/2023 9:47:05 AM
Magnesium	28	1.0		mg/L	1	12/29/2023 9:25:47 AM
Potassium	6.0	1.0		mg/L	1	12/29/2023 9:25:47 AM
Sodium	100	5.0		mg/L	5	12/29/2023 9:47:05 AM
SM2320B: ALKALINITY						Analyst: RBC
Bicarbonate (As CaCO3)	253.8	20.00		mg/L Ca	1	12/28/2023 8:22:15 PM
Carbonate (As CaCO3)	ND	2.000		mg/L Ca	1	12/28/2023 8:22:15 PM
Total Alkalinity (as CaCO3)	253.8	20.00		mg/L Ca	1	12/28/2023 8:22:15 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: KS
Total Dissolved Solids	603	50.0	*	mg/L	1	1/2/2024 9:59:00 AM

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2312D40

09-Jan-24

Client: Ranger Environmental Services, LLC

Project: LMPSU Trash Pit

Sample ID: MB	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: R102083	RunNo: 102083								
Prep Date:	Analysis Date: 12/23/2023	SeqNo: 3767589 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								
Sulfate	ND	0.50								

Sample ID: LCS	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSW	Batch ID: R102083	RunNo: 102083								
Prep Date:	Analysis Date: 12/23/2023	SeqNo: 3767590 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.9	0.50	5.000	0	97.1	90	110			
Sulfate	9.9	0.50	10.00	0	99.0	90	110			

Sample ID: 2312D40-002BMS	SampType: MS	TestCode: EPA Method 300.0: Anions								
Client ID: MW-2	Batch ID: R102083	RunNo: 102083								
Prep Date:	Analysis Date: 12/23/2023	SeqNo: 3767599 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	110	5.0	50.00	61.75	97.5	80	120			
Sulfate	200	5.0	100.0	107.7	96.9	80	120			

Sample ID: 2312D40-002BMSD	SampType: MSD	TestCode: EPA Method 300.0: Anions								
Client ID: MW-2	Batch ID: R102083	RunNo: 102083								
Prep Date:	Analysis Date: 12/23/2023	SeqNo: 3767600 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	110	5.0	50.00	61.75	94.4	80	120	1.42	20	
Sulfate	200	5.0	100.0	107.7	94.1	80	120	1.41	20	

### Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2312D40

09-Jan-24

**Client:** Ranger Environmental Services, LLC**Project:** LMPSU Trash Pit

Sample ID: <b>100ng btex lcs</b>	SampType: <b>LCS</b>			TestCode: <b>EPA Method 8021B: Volatiles</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>BA102084</b>			RunNo: <b>102084</b>						
Prep Date:	Analysis Date: <b>12/27/2023</b>			SeqNo: <b>3768109</b>		Units: <b>µg/L</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	92.0	70	130			
Toluene	18	1.0	20.00	0	92.4	70	130			
Ethylbenzene	19	1.0	20.00	0	93.4	70	130			
Xylenes, Total	56	2.0	60.00	0	93.5	70	130			
Surr: 4-Bromofluorobenzene	19		20.00		95.1	52.4	148			

Sample ID: <b>mb</b>	SampType: <b>MBLK</b>			TestCode: <b>EPA Method 8021B: Volatiles</b>						
Client ID: <b>PBW</b>	Batch ID: <b>BA102084</b>			RunNo: <b>102084</b>						
Prep Date:	Analysis Date: <b>12/27/2023</b>			SeqNo: <b>3768110</b>		Units: <b>µg/L</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
Surr: 4-Bromofluorobenzene	19		20.00		96.1	52.4	148			

**Qualifiers:**

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2312D40

09-Jan-24

**Client:** Ranger Environmental Services, LLC**Project:** LMPSU Trash Pit

Sample ID: <b>MB-A</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 6010B: Dissolved Metals</b>							
Client ID: <b>PBW</b>	Batch ID: <b>A102146</b>		RunNo: <b>102146</b>							
Prep Date:	Analysis Date: <b>12/29/2023</b>		SeqNo: <b>3770190</b>		Units: <b>mg/L</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Magnesium	ND	1.0								
Potassium	ND	1.0								
Sodium	ND	1.0								

Sample ID: <b>LCS_CAT-A</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 6010B: Dissolved Metals</b>							
Client ID: <b>LCSW</b>	Batch ID: <b>A102146</b>		RunNo: <b>102146</b>							
Prep Date:	Analysis Date: <b>12/29/2023</b>		SeqNo: <b>3770197</b>		Units: <b>mg/L</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	54	1.0	50.00	0	108	80	120			
Magnesium	50	1.0	50.00	0	100	80	120			
Potassium	49	1.0	50.00	0	98.6	80	120			
Sodium	48	1.0	50.00	0	95.3	80	120			

Sample ID: <b>2312D40-005CMS</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 6010B: Dissolved Metals</b>							
Client ID: <b>Duplicate</b>	Batch ID: <b>A102146</b>		RunNo: <b>102146</b>							
Prep Date:	Analysis Date: <b>12/29/2023</b>		SeqNo: <b>3770212</b>		Units: <b>mg/L</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	78	1.0	50.00	28.44	98.9	75	125			
Potassium	56	1.0	50.00	5.996	100	75	125			

Sample ID: <b>2312D40-005CMSD</b>	SampType: <b>MSD</b>		TestCode: <b>EPA Method 6010B: Dissolved Metals</b>							
Client ID: <b>Duplicate</b>	Batch ID: <b>A102146</b>		RunNo: <b>102146</b>							
Prep Date:	Analysis Date: <b>12/29/2023</b>		SeqNo: <b>3770213</b>		Units: <b>mg/L</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	78	1.0	50.00	28.44	99.1	75	125	0.108	20	
Potassium	56	1.0	50.00	5.996	99.8	75	125	0.338	20	

Sample ID: <b>2312D40-005CMS</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 6010B: Dissolved Metals</b>							
Client ID: <b>Duplicate</b>	Batch ID: <b>A102146</b>		RunNo: <b>102146</b>							
Prep Date:	Analysis Date: <b>12/29/2023</b>		SeqNo: <b>3770218</b>		Units: <b>mg/L</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	330	5.0	250.0	53.92	110	75	125			
Sodium	360	5.0	250.0	104.8	103	75	125			

**Qualifiers:**

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2312D40  
09-Jan-24

Client: Ranger Environmental Services, LLC

Project: LMPSU Trash Pit

Sample ID: 2312D40-005CMSD		SampType: MSD		TestCode: EPA Method 6010B: Dissolved Metals						
Client ID: Duplicate		Batch ID: A102146		RunNo: 102146						
Prep Date:		Analysis Date: 12/29/2023		SeqNo: 3770219		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	330	5.0	250.0	53.92	111	75	125	0.605	20	
Sodium	370	5.0	250.0	104.8	107	75	125	2.61	20	

Sample ID: MB-A		SampType: MBLK		TestCode: EPA Method 6010B: Dissolved Metals						
Client ID: PBW		Batch ID: A102198		RunNo: 102198						
Prep Date:		Analysis Date: 1/3/2024		SeqNo: 3772839		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	ND	1.0								

Sample ID: LCS_CAT-A		SampType: LCS		TestCode: EPA Method 6010B: Dissolved Metals						
Client ID: LCSW		Batch ID: A102198		RunNo: 102198						
Prep Date:		Analysis Date: 1/3/2024		SeqNo: 3772842		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	52	1.0	50.00	0	104	80	120			

Qualifiers:

\* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank

E Above Quantitation Range/Estimated Value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2312D40

09-Jan-24

Client: Ranger Environmental Services, LLC

Project: LMPSU Trash Pit

Sample ID: <b>MB-1 Alk</b>	SampType: <b>MBLK</b>		TestCode: <b>SM2320B: Alkalinity</b>							
Client ID: <b>PBW</b>	Batch ID: <b>R102142</b>		RunNo: <b>102142</b>							
Prep Date:	Analysis Date: <b>12/28/2023</b>		SeqNo: <b>3769911</b>		Units: <b>mg/L CaCO3</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID: <b>LCS-1 Alk</b>	SampType: <b>LCS</b>		TestCode: <b>SM2320B: Alkalinity</b>							
Client ID: <b>LCSW</b>	Batch ID: <b>R102142</b>		RunNo: <b>102142</b>							
Prep Date:	Analysis Date: <b>12/28/2023</b>		SeqNo: <b>3769912</b>		Units: <b>mg/L CaCO3</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	77.76	20.00	80.00	0	97.2	90	110			

Sample ID: <b>MB-2 Alk</b>	SampType: <b>MBLK</b>		TestCode: <b>SM2320B: Alkalinity</b>							
Client ID: <b>PBW</b>	Batch ID: <b>R102142</b>		RunNo: <b>102142</b>							
Prep Date:	Analysis Date: <b>12/28/2023</b>		SeqNo: <b>3769934</b>		Units: <b>mg/L CaCO3</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID: <b>LCS-2 Alk</b>	SampType: <b>LCS</b>		TestCode: <b>SM2320B: Alkalinity</b>							
Client ID: <b>LCSW</b>	Batch ID: <b>R102142</b>		RunNo: <b>102142</b>							
Prep Date:	Analysis Date: <b>12/28/2023</b>		SeqNo: <b>3769935</b>		Units: <b>mg/L CaCO3</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	78.32	20.00	80.00	0	97.9	90	110			

Sample ID: <b>MB-3 Alk</b>	SampType: <b>MBLK</b>		TestCode: <b>SM2320B: Alkalinity</b>							
Client ID: <b>PBW</b>	Batch ID: <b>R102142</b>		RunNo: <b>102142</b>							
Prep Date:	Analysis Date: <b>12/28/2023</b>		SeqNo: <b>3769956</b>		Units: <b>mg/L CaCO3</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID: <b>LCS-3 Alk</b>	SampType: <b>LCS</b>		TestCode: <b>SM2320B: Alkalinity</b>							
Client ID: <b>LCSW</b>	Batch ID: <b>R102142</b>		RunNo: <b>102142</b>							
Prep Date:	Analysis Date: <b>12/28/2023</b>		SeqNo: <b>3769957</b>		Units: <b>mg/L CaCO3</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	78.40	20.00	80.00	0	98.0	90	110			

### Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2312D40

09-Jan-24

Client: Ranger Environmental Services, LLC

Project: LMPSU Trash Pit

Sample ID: MB-79605	SampType: MBLK	TestCode: SM2540C MOD: Total Dissolved Solids								
Client ID: PBW	Batch ID: 79605	RunNo: 102170								
Prep Date: 12/27/2023	Analysis Date: 1/2/2024	SeqNo: 3771486 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	50.0								

Sample ID: LCS-79605	SampType: LCS	TestCode: SM2540C MOD: Total Dissolved Solids								
Client ID: LCSW	Batch ID: 79605	RunNo: 102170								
Prep Date: 12/27/2023	Analysis Date: 1/2/2024	SeqNo: 3771487 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1010	50.0	1000	0	101	80	120			

Sample ID: 2312D40-002BDUP	SampType: DUP	TestCode: SM2540C MOD: Total Dissolved Solids								
Client ID: MW-2	Batch ID: 79605	RunNo: 102170								
Prep Date: 12/27/2023	Analysis Date: 1/2/2024	SeqNo: 3771506 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	610	50.0						2.66	10	*

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
PQL Practical Quantitative Limit  
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank  
E Above Quantitation Range/Estimated Value  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Limit



Environment Testin

Eurofins Environment Testing South  
Central, LLC

4901 Hawkins NE

Albuquerque, NM 87109

TEL: 505-345-3975 FAX: 505-345-4107

Website: www.hallenvironmental.com

## Sample Log-In Check List

Client Name: Ranger Environmental

Work Order Number: 2312D40

RcptNo: 1

Received By: Tracy Casarrubias

12/22/2023 7:45:00 AM

Completed By: Tracy Casarrubias

12/22/2023 11:02:13 AM

Reviewed By: *am*

12/22/23

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☒ No ☒ NA ☐ *7m 12/22/23*
9. Received at least 1 vial with headspace  $<1/4"$  for AQ VOA? Yes ☒ No ☐ NA ☐
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?  
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?  
(If no, notify customer for authorization.) Yes ☒ No ☐

# of preserved  
bottles checked  
for pH:*5*  
(*5* or  $>12$  unless noted)Adjusted? *yes*Checked by: *7m 12/22/23*Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: \_\_\_\_\_

Date: \_\_\_\_\_

By Whom: \_\_\_\_\_

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: \_\_\_\_\_

Client Instructions: \_\_\_\_\_

16. Additional remarks: *0.4ml of HNO3 (7342) was added to sample 005C for pH 22. 7m 12/22/23*

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.1	Good	Yes	Morty		





Please have all samples analyzed for the following constituents

Test	Method
BTEX	8021B
Anions :: including Chloride & Sulfate	300
Dissolved Metals :: including Calcium, Magnesium, Potassium, Sodium	6020B
Alkalinity :: including Bicarbonate, Carbonate, Hydroxide, Total Alkalinity	M2320B
TDS	M2540C

Ranger- Lmpsu Trash Pit

## ATTACHMENT 3 – NMOCD CORRESPONDENCE



max cook <maxcook4@gmail.com>

---

## LMPSU Trash Pit (1RP-3660) Groundwater Sampling Notice

---

max cook <max@rangerenv.com>

Thu, Dec 14, 2023 at 4:52 PM

To: OCD.Enviro@emnrd.nm.gov

On behalf of Team Operating, LLC, please let this email serve as notification that personnel from Ranger Environmental Services will be at the LMPSU Trash Pit (1RP-3660) on December 20, 2023, at approximately 8:00am MST to collect groundwater samples from four monitoring wells associated with the site.

If you have any questions, please do not hesitate to contact me.

Thanks!

--

Max Cook, CAPM  
Senior Program Manager  
Ranger Environmental Services  
P.O. Box 201179  
Austin, TX 78720  
[www.rangerenv.com](http://www.rangerenv.com)

512.335.1785 ext. 128 (o)  
512.497.1556 (c)



max cook <maxcook4@gmail.com>

---

## Legacy Reserves LMPSU Trash Pit (1RP-3660) Groundwater Sampling Notice

---

max cook <max@rangerenv.com>

Thu, Dec 14, 2023 at 4:43 PM

To: michael.buchanan@emnrd.nm.gov, nelson.velez@emnrd.nm.gov

Cc: Chris Kowalski <chris.kowalski@teamoperating.com>

On behalf of Team Operating, LLC, please let this email serve as notification that personnel from Ranger Environmental Services will be at the LMPSU Trash Pit (1RP-3660) on December 20, 2023, at approximately 8:00am MST to collect groundwater samples from four monitoring wells associated with the site.

If you have any questions, please do not hesitate to contact me.  
Thanks!

--

Max Cook, CAPM  
Senior Program Manager  
Ranger Environmental Services  
P.O. Box 201179  
Austin, TX 78720  
[www.rangerenv.com](http://www.rangerenv.com)

512.335.1785 ext. 128 (o)  
512.497.1556 (c)



max cook <maxcook4@gmail.com>

---

## LMPSU Trash Pit (1RP-3660) Groundwater Sampling Notice

---

**Wells, Shelly, EMNRD** <Shelly.Wells@emnrd.nm.gov>

Fri, Dec 15, 2023 at 10:08 AM

To: max cook <max@rangerenv.com>

Cc: "Bratcher, Michael, EMNRD" <mike.bratcher@emnrd.nm.gov>

Good morning Max,

Thank you for providing the notice. It has been received. Should sampling times or dates change please keep OCD informed.

Kind regards,

Shelly

**Shelly Wells** \* Environmental Specialist-Advanced

Environmental Bureau

EMNRD-Oil Conservation Division

1220 S. St. Francis Drive|Santa Fe, NM 87505

(505)469-7520|[Shelly.Wells@emnrd.nm.gov](mailto:Shelly.Wells@emnrd.nm.gov)

<http://www.emnrd.state.nm.us/OCD/>

---

**From:** max cook <[max@rangerenv.com](mailto:max@rangerenv.com)>

**Sent:** Thursday, December 14, 2023 3:53 PM

**To:** Enviro, OCD, EMNRD <[OCD.Enviro@emnrd.nm.gov](mailto:OCD.Enviro@emnrd.nm.gov)>

**Subject:** [EXTERNAL] LMPSU Trash Pit (1RP-3660) Groundwater Sampling Notice

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

[Quoted text hidden]





max cook &lt;maxcook4@gmail.com&gt;

---

**Langlie Mattix Penrose Sand Unit Trash Pit :: Incident ID nTO1427254875 ::  
Extension Request (30 days)**

---

**Buchanan, Michael, EMNRD** <Michael.Buchanan@emnrd.nm.gov>

Tue, Mar 26, 2024 at 11:56 AM

To: max cook &lt;max@rangerenv.com&gt;, "ocdonline, emnrd, EMNRD" &lt;emnrd.ocdonline@emnrd.nm.gov&gt;

Cc: "Bratcher, Michael, EMNRD" &lt;mike.bratcher@emnrd.nm.gov&gt;

Good morning, Max

This request for a thirty (30) day extension is approved. Please submit this correspondence as part of your next submission in the Annual Groundwater Monitoring report.

Thank you,

Mike Buchanan

---

**From:** max cook <max@rangerenv.com>**Sent:** Tuesday, March 26, 2024 9:02 AM**To:** ocdonline, emnrd, EMNRD <emnrd.ocdonline@emnrd.nm.gov>; Buchanan, Michael, EMNRD <Michael.Buchanan@emnrd.nm.gov>**Subject:** [EXTERNAL] Langlie Mattix Penrose Sand Unit Trash Pit :: Incident ID nTO1427254875 :: Extension Request (30 days)

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

Mr. Buchanan,

Please let this email serve as a 30-day extension request to submit an annual groundwater monitoring report for the listed site.

**Site Name ::** Langlie Mattix Penrose Sand Unit Trash Pit

**Incident ID ::** nTO1427254875

Per a September 14, 2023 correspondence letter, an annual groundwater monitoring report for the referenced site is due on April 1, 2024. Ranger Environmental Services (Ranger) was brought on to the project in December 2023. Since that time, we have completed one groundwater monitoring event at the site. A previous consultant (Revenir Energy) historically completed field work and reporting for this location, including a June 2023 groundwater monitoring event. However, Ranger only recently (this week) received the data for the Revenir June 2023 sampling event. Due to this, we feel a 30-

day extension would give us an appropriate amount of time to analyze their results and generate and submit an annual groundwater monitoring report incorporating both the June and December 2023 sampling events.

If you have any questions, please do not hesitate to contact me. I appreciate your regulatory assistance and look forward to working with you on this project.

--

Max Cook, CAPM

Senior Program Manager  
Ranger Environmental Services  
P.O. Box 201179

Austin, TX 78720  
[www.rangerenv.com](http://www.rangerenv.com)

512.335.1785 ext. 128 (o)  
512.497.1556 (c)

**District I**  
1625 N. French Dr., Hobbs, NM 88240  
Phone:(575) 393-6161 Fax:(575) 393-0720  
**District II**  
811 S. First St., Artesia, NM 88210  
Phone:(575) 748-1283 Fax:(575) 748-9720  
**District III**  
1000 Rio Brazos Rd., Aztec, NM 87410  
Phone:(505) 334-6178 Fax:(505) 334-6170  
**District IV**  
1220 S. St Francis Dr., Santa Fe, NM 87505  
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS  
  
Action 339099

CONDITIONS

Operator:  TEAM OPERATING, L.L.C. PO Box 835 Pinehurst, TX 77362	OGRID:	332148
	Action Number:	339099
	Action Type:	[UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
michael.buchanan	Review of the Annual Groundwater Monitoring Report for Langile Mattix Penrose Sand Unit Trash Pit: content satisfactory 1. Continue to sample groundwater on a semi-annual basis/schedule as previously approved for COCs. 2. Sampling method may be changed to Hydrasleeve, or other passive sampling technique. Please include those details on which method in the next annual groundwater report to OCD. 3. Propose an option for remediation of TDS and chloride in groundwater at the site from the release. 4. Submit the 2024 Annual Groundwater Report with recommendations by April 1, 2025.	6/12/2024