November 18,

2024

Tracking Number: nRM2031146817
2024 Third Quarter Groundwater Monitoring Report
Northeast Drinkard Unit #829, #830, #922, #928, and #929
Lea County, New Mexico

Prepared for:

Apache

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REVIEWED

By Mike Buchanan at 4:13 pm, Dec 02, 2024

Review of the 2024 Third Quarter Groundwater Monitoring Report Northeast Drinkard Unit(s) 829, 830, 922, 928, and 929: content satisfactory

1. Continue to conduct groundwater monitoring as proposed on a quarterly schedule.
2. Analyze samples for BTEX, chloride and TDS
3. Please provide a four (4) day business notice before collecting groundwater samples at the site(s).
4. Please provide sampling notice to the enviro email address at: ocd.enviro@emnrd.nm.gov

5. Submit the 4th Quarter 2024 groundwater monitoring report for the sites by February 30, 2025.

6. Sampling events must be consecutive for all wells. If insufficient volume of groundwater does not allow for the collection of samples, Apache must propose a contingency plan for that situation, drill wells deeper in order to collect a sufficient volume for samples, or provide a variance request as per 19.15.29 NMAC.

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1.0 EXECUTIVE SUMMARY

Larson & Associates, Inc. (LAI) has prepared this report on behalf of Apache Corporation (Apache) for submittal to the New Mexico Oil Conservation Division (NMOCD) District I in Hobbs and Santa Fe, New Mexico. This report presents 2024 third (3rd) quarter groundwater monitoring results for the Northeast Drinkard Unit (NEDU) #829, #830, #922, #928, and #929 (Sites). The Sites are located in Section 22, Township 21 South, Range 37 East, in Lea County, New Mexico. The approximate geodetic position is North 32.46294° and West -103.15153°.

The following activities occurred on July 29, 2024:

- Gauged depth to groundwater in four monitor wells (MW-1 through MW-4).
- Purged and collected groundwater samples from four monitor wells (MW-1 through MW-4) for laboratory analysis of benzene, toluene, ethylbenzene, and xylenes (BTEX), total dissolved solids (TDS), and chloride.

The following observations are documented in this report:

- Depth to groundwater ranged from 40.57 feet below ground surface (bgs) in MW-4 to 54.47 feet bgs in MW-1.
- Groundwater elevation ranged between 3,371.37 feet above mean sea level (MSL) at MW-4 (upgradient) and 3,354.81 feet above MSL at MW-3 (downgradient).
- BTEX compounds were below the analytical method reporting limit (RL) and New Mexico Water Quality Control Commission (NMWQCC) human health standards in samples from all monitor wells.
- Chloride was reported above the NMWQCC domestic water quality standard of 250 milligrams per liter (mg/L) in the groundwater sample from well MW-1 (1,200 mg/L) and MW-2 (258 mg/L).
- TDS was reported above the NMWQCC domestic water quality standard of 1,000 mg/L in the groundwater samples from wells MW-1 (2,840 mg/L) and MW-2 (1,030 mg/L).

Apache proposes the following:

- Apache will continue groundwater monitoring on a quarterly (4 times per year) schedule.
- Gauge all monitoring wells for depth to groundwater and collect groundwater samples from monitoring wells with sufficient groundwater during each quarterly event.
- Analyze samples for BTEX, chloride and TDS.
- Apache will provide notice to the NMOCD in Hobbs and Santa Fe, New Mexico, at least 48 hours prior to each monitoring event via the NMOCD web portal.

2.0 INTRODUCTON

LAI has prepared this report on behalf of Apache for submittal to the NMOCD District I in Hobbs and Santa Fe, New Mexico. This report presents 2024 quarterly groundwater monitoring results for the third quarter on October 16, 2024. The NMOCD was notified via web portal on October 11, 2024. During the second quarterly event, groundwater samples were collected from monitor wells MW-1 through MW-4, at the NEDU #829, #830, #922, #928, and #929 located in Lea County, New Mexico. The legal description is Section 22, Township 21 South, Range 37 East. The geodetic coordinates are as follows:

Site	North (°)	West (°)
NEDU #829	32.462947	-103-151539
NEDU #830	32.463967	-103.155761
NEDU #922	32.457803	-103.151181
NEDU #928	32.458019	-103.155831
NEDU #929	32.458022	-103.151450

Figure 1 presents a topographic map. Figure 2 presents an aerial map. Figure 3 presents a site map. Appendix A presents NMOCD communications.

2.1 Background

On April 6, 2001, the landowner reported to the NMOCD that an Apache contractor was closing drilling pits at the Sites by disposing pit fluid in open trenches adjacent to the drilling pits. Apache was notified and submitted the initial C-141 on April 23, 2001. NMOCD assigned the trenches remediation permit 1RP-313.

On April 23, 2001, Apache submitted a work plan for remediating the trenches. NMOCD approved the work plan on May 8, 2001. The work plan stated that the trenches at wells #829, #830 and #929 would be excavated to approximately 19 feet bgs and to approximately 13 feet bgs at #928. There is no evidence that the trench was excavated at #922. An Apache contractor collected bottom and composite samples from the excavations and found chloride above the remediation closure limit of 600 mg/Kg in all excavations. Total petroleum hydrocarbons (TPH) was also reported above the NMOCD closure limit of 100 mg/Kg in the excavation at #928. No documentation is available in NMOCD files to confirm the remediation.

On October 31, 2019, Apache submitted an administrative summary and path forward for remediating and closing the trenches. The plan requested a variance approval from the NMOCD to excavate soil to a depth of approximately four (4) feet bgs at each trench and install a 20-mil polyethylene liner in the bottom of the excavations. Additionally, Apache committed to installing monitoring wells hydraulically down gradient (east - southeast) approximately 50 feet from the trench. On May 19, 2021, the NMOCD approved the administrative summary and path forward for remediation but stated that “preapproval for monitoring well locations on map before installation” was required. On July 14, 2021, NMOCD approved the monitor well locations.

3.0 GROUNDWATER INVESTIGATION

3.1 Monitoring Well Installations

On July 19 and 20, 2021, Scarborough Drilling, Inc. (SDI), under the supervision of LAI, installed monitoring wells MW-1, MW-2, MW-3, and MW-4 utilizing an air rotary drilling rig at locations specified in the New Mexico Office of the State Engineer (OSE) permits. The wells were completed in 5-inch diameter borings advanced between about 65 and 76 feet below ground surface (bgs). Monitoring wells MW-1, MW-2, MW-3, and MW-4 were completed at depths of 74.08, 74.86, 65.35 and 76.01 feet bgs, respectively. The monitoring wells are completed with a 2-inch schedule 40 threaded PVC casing and 20 feet of 0.010-inch factory slotted screen installed above and below the groundwater level observed during drilling. Graded silica sand is positioned around the well screens to a depth about 2 feet above the screen. Sodium bentonite chips extend around the PVC riser and above the sand to about 1-foot bgs. The wells are secured with locking steel sleeves anchored in concrete.

On July 27 through 30, 2021, the wells were developed by pumping with an electric submersible pump to remove sediment disturbed drilling and well installation. Approximately 40 gallons of water were removed from each well was placed in 55-gallon drums and disposed in a NMOCD permitted commercial saltwater disposal well (SWD).

West Company, a State of New Mexico licensed Professional Land Surveyor (PLS Number 23263) surveyed the monitoring wells for location and elevation including top of casing and natural ground surface. Figure 3 presents Site drawing showing the monitoring well locations. Table 1 presents the monitoring well completion and gauging summary. Appendix B presents the boring logs and well completion records.

4.0 GROUNDWATER MONITORING

4.1 Depth to Groundwater and Groundwater Potentiometric Surface Elevation

On October 16, 2024, LAI personnel gauged monitoring wells MW-1 through MW-4 for depth to groundwater. Groundwater was gauged in monitoring wells MW-1 (54.57 feet bgs), MW-2 (55.41 feet bgs), MW-3 (51.91 feet bgs), and MW-4 (40.57 feet bgs). The groundwater potentiometric surface elevation was recorded 3,371.37 feet above MSL in well MW-4 (upgradient) and at 3,554.81 feet above MSL at well MW-3 (downgradient). The groundwater flow direction was to northeast and southeast at gradients of about 0.009 ft/ft and 0.014 ft/ft, respectfully. Figure 4 presents the groundwater potentiometric surface map for October 16, 2024.

4.2 Groundwater Samples and Analysis

On July 29, 2024, LAI personnel collected groundwater samples from monitoring wells MW-1 through MW-4, after removing approximately three (3) well volumes of groundwater by purging with dedicated disposable polyethylene bailers. The samples were transferred to labeled laboratory

containers and delivered under chain-of-custody control and preservation to Eurofins Laboratories (Eurofins), a National Environmental Laboratory Accreditation Conference (NELAC) accredited laboratory, in Midland, Texas. The samples were analyzed the samples for BTEX according to EPA SW-846 Method SW-8260D, TDS by Method SM 2540C, and chloride by EPA Method 300. A duplicate sample was collected from MW-2 for laboratory quality assurance and quality control (QA/QC). Table 2 presents the laboratory analytical summary. Appendix C presents the laboratory report.

4.2.1 Organic Analysis

BTEX concentrations were below the laboratory method reporting limit (RL) and NMWQCC human health standards in all groundwater samples. The results are consistent with previous groundwater monitoring events.

4.2.2 Inorganic Analysis

The chloride concentration was above NMWQCC domestic water quality standard in the sample from well MW-1 (1,200 mg/L) and MW-2 (258 mg/L). Chloride concentrations were below NMWQCC domestic water quality standard of 250 mg/L in monitoring wells MW-3 (124 mg/L), and MW-4 (161 mg/L). Chloride was reported at 228 mg/L in the QA/QC sample, DUP-1, and was a 11.6 percent decrease from the original chloride value of 258 mg/L reported for MW-2. No data exceptions were noted in the laboratory report case narratives. The chloride concentrations are consistent with previous groundwater monitoring events. Figure 5 presents the chloride concentration map for October 16, 2024. Appendix D presents the chloride control chart.

TDS concentrations were reported above the NMWQCC domestic water quality standard of 1,000 mg/L in groundwater samples collected from wells MW-1 (2,840 mg/L) and MW-2 (1,030 mg/L). TDS concentrations were below the NMWQCC domestic water quality standard in groundwater samples from wells MW-3 (616 mg/L) and MW-4 (851 mg/L). TDS was reported at 984 mg/L in the QA/QC sample, DUP-1, and was a 4.5 percent decrease from the original chloride value of 1,030 mg/L reported for MW-2. No data exceptions were noted in the laboratory case narratives. The TDS concentrations are consistent with previous groundwater monitoring events. Figure 6 presents the TDS concentration map for October 16, 2024. Appendix E presents the TDS control chart.

5.0 CONCLUSIONS

The following observations are documented in this report:

- Groundwater elevation ranged between 3,371.37 feet above MSL at well MW-4 (upgradient) and 3,354.81 above MSL at well MW-3 (downgradient).
- The groundwater flow direction was to northeast and southeast at gradients of about 0.009 ft/ft and 0.014 ft/ft, respectfully
- BTEX concentrations were below the analytical method RL and NMWQCC human health standards in all groundwater samples collected from monitoring wells MW-1 through MW-4.

- Chloride concentrations were above the NMWQCC domestic water quality standard of 250 mg/L in the sample from MW-1 (1,200 mg/L) and MW-2 (258 mg/L), and below the standard in samples from MW-3 (124 mg/L), and MW-4 (161 mg/L).
- TDS concentrations were above the NMWQCC domestic water quality standard of 1,000 mg/L in the groundwater samples MW-1 (2,840 mg/L) and MW-2 (1,030 mg/L), and below the standard in samples from MW-3 (616 mg/L) and MW-4 (851 mg/L).

6.0 RECOMMENDATIONS

Apache proposes the following:

- Continue groundwater monitoring on a quarterly (4 times per year).
- Gauge each well (MW-1 through MW-4) for depth to groundwater and collect groundwater samples from monitoring wells with sufficient groundwater during each quarterly event.
- Apache will provide notice to the NMOCD in Hobbs and Santa Fe, New Mexico at least 48 hours prior to each monitoring event via the NMOCD web portal.

Tables

Table 1
Monitoring Well Completion and Gauging Summary
Apache Corporation, NEDU Drill Pits
Lea County, New Mexico

Well Information									Groundwater Data				
Well ID	Drill Date	Well Depth (Feet TOC)	Drilled Depth (Feet bgs)	Well Diameter (Inches)	Screen Interval (Feet bgs)	Casing Stickup (Feet)	TOC Elevation (Feet AMSL)	Surface Elevation (Feet AMSL)	Date Gauged	Depth to Water (Feet TOC)	Depth to Water (Feet bgs)	Water Column (Feet)	Groundwater Elevation Feet AMSL
MW-1	07/19/2021	74.08	71.08	2	70.85-50.85	3.00	3,417.34	3417.34	07/29/2021	57.40	54.40	16.68	3,359.94
									11/08/2021	57.40	54.40	16.68	3,359.94
									03/02/2022	57.36	54.36	16.72	3,359.98
									05/24/2022	57.32	54.32	16.76	3,360.02
									08/17/2022	57.40	54.40	16.68	3,359.94
									12/14/2022	57.39	54.39	16.69	3,359.95
									03/10/2023	57.41	54.41	16.67	3,359.93
									06/05/2023	57.41	54.41	16.67	3,359.93
									09/08/2023	57.48	54.48	16.60	3,359.86
									12/28/2023	57.51	54.51	16.57	3,359.83
									03/18/2024	57.53	54.53	16.55	3,359.81
									07/29/2024	57.49	54.49	16.59	3,359.85
									10/16/2024	57.57	54.57	16.51	3,359.77
MW-2	07/19/2021	74.86	71.86	2	71.68-51.68	3.00	3,411.66	3408.43	07/29/2021	54.81	51.81	19.27	3,356.85
									11/08/2021	54.85	51.85	19.23	3,356.81
									03/02/2022	54.91	51.91	19.17	3,356.75
									05/24/2022	54.91	51.91	19.17	3,356.75
									08/17/2022	55.04	52.04	19.04	3,356.62
									12/14/2022	55.08	52.08	19.00	3,356.58
									03/10/2023	55.18	52.18	18.90	3,356.48
									06/05/2023	55.25	52.25	18.83	3,356.41
									09/08/2023	55.27	52.27	18.81	3,356.39

Table 1
Monitoring Well Completion and Gauging Summary
Apache Corporation, NEDU Drill Pits
Lea County, New Mexico

Well Information									Groundwater Data				
Well ID	Drill Date	Well Depth (Feet TOC)	Drilled Depth (Feet bgs)	Well Diameter (Inches)	Screen Interval (Feet bgs)	Casing Stickup (Feet)	TOC Elevation (Feet AMSL)	Surface Elevation (Feet AMSL)	Date Gauged	Depth to Water (Feet TOC)	Depth to Water (Feet bgs)	Water Column (Feet)	Groundwater Elevation Feet AMSL
									12/28/2023	55.31	52.31	18.77	3,356.35
									03/18/2024	55.36	52.36	18.72	3,356.30
									07/29/2024	55.25	52.25	18.83	3,356.41
									10/16/2024	55.41	52.41	18.67	3,356.25
MW-3	07/20/2021	65.35	62.75	2	65.15-45.15	2.60	3,409.32	3406.01	07/29/2021	53.55	50.95	11.80	3,355.77
									11/08/2021	53.67	51.07	11.68	3,355.65
									03/02/2022	53.83	51.23	11.52	3,355.49
									05/24/2022	53.88	51.28	11.47	3,355.44
									08/17/2022	54.08	51.48	11.27	3,355.24
									12/14/2022	54.21	51.61	11.14	3,355.11
													3,409.32
									03/10/2023	54.30	51.70	11.05	3,355.02
									06/05/2023	54.37	51.77	10.98	3,354.95
									09/08/2023	54.39	51.79	10.96	3,354.93
									12/28/2023	54.46	51.86	10.89	3,354.86
									03/18/2024	54.52	51.92	10.83	3,354.80
									07/29/2024	54.32	51.72	11.03	3,355.00
									10/16/2024	54.51	51.91	10.84	3,354.81
MW-4	07/20/2021	76.01	72.93	2	75.81-55.81	3.08	3,415.02	3412.51	07/30/2021	44.38	41.30	31.63	3,370.64
									11/08/2021	43.44	40.36	32.57	3,371.58
									03/02/2022	43.44	40.36	32.57	3,371.58
									05/24/2022	43.50	40.42	32.51	3,371.52

Table 1
Monitoring Well Completion and Gauging Summary
Apache Corporation, NEDU Drill Pits
Lea County, New Mexico

Well Information									Groundwater Data				
Well ID	Drill Date	Well Depth *(Feet TOC)*	Drilled Depth *(Feet bgs)*	Well Diameter *(Inches)*	Screen Interval *(Feet bgs)*	Casing Stickup *(Feet)*	TOC Elevation *(Feet AMSL)*	Surface Elevation *(Feet AMSL)*	Date Gauged	Depth to Water *(Feet TOC)*	Depth to Water *(Feet bgs)*	Water Column *(Feet)*	Groundwater Elevation *Feet AMSL*
									08/17/2022	42.63	39.55	33.38	3,372.39
									12/14/2022	43.64	40.56	32.37	3,371.38
									03/10/2023	43.62	40.54	32.39	3,371.40
									06/05/2023	43.71	40.63	32.30	3,371.31
									09/08/2023	43.76	40.68	32.25	3,371.26
									12/28/2023	43.58	40.50	32.43	3,371.44
									03/18/2024	43.47	40.39	32.54	3,371.55
									07/29/2024	43.60	40.52	32.41	3,371.42
									10/16/2024	43.65	40.57	32.36	3,371.37

Notes:
Monitoring wells installed by Scarborough Drilling, Inc. Lamesa, Texas, with 2 inch schedule 40 PVC casing and screen
bgs: below ground surface
TOC: top of casing
AMSL: feet above mean sea level

Table 2
Groundwater Sample Analytical Data Summary
Apache Corporation, NEDU Drill Pits
Lea County, New Mexico

Well ID	Collection Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (mg/L)	Chloride (mg/L)	TDS (mg/L)
NMWQCC Standard:		**0.005*	**1*	**0.7*	**0.62*	***250*	***1,000*
MW-1	07/29/2021	<0.00200	<0.00200	<0.00200	<0.00400	**446**	**2,510**
(NEDU #830)	11/08/2021	<0.00200	<0.00200	<0.00200	<0.00400	**1,270**	**2,490**
	03/02/2022	<0.00200	<0.00200	<0.00200	<0.00400	**1,250**	**2,500**
	05/24/2022	<0.00200	<0.00200	<0.00200	<0.00400	**912**	**2,500**
	08/17/2022	<0.00200	<0.00200	<0.00200	<0.00400	**1,070**	**2,670**
	12/14/2022	<0.00200	<0.00200	<0.00200	<0.00400	**893**	**2,520**
	03/10/2023	<0.00100	<0.00100	<0.00100	<0.00100	**1,210**	**2,600**
	06/05/2023	<0.00200	<0.00200	<0.00200	<0.00400	**1,140**	**2,950**
	09/08/2023	<0.00200	<0.00200	<0.00200	<0.00400	**1,010**	**3,000**
	12/28/2023	<0.00100	<0.00100	<0.00100	<0.0100	**1,040**	**3,210**
	03/18/2024	<0.00200	<0.00200	<0.00200	<0.00400	**1,280**	**2,500**
	07/29/2024	<0.00200	<0.00200	<0.00200	<0.00400	**1,480**	**2,670**
	10/16/2024	<0.00200	<0.00200	<0.00200	<0.00400	**1,200**	**2,840**
MW-2	07/29/2021	**0.0391**	<0.00200	<0.00219	<0.00400	**268**	**1,170**
(NEDU #922)	11/08/2021	<0.00200	<0.00200	<0.00200	<0.00400	**279**	**1,100**
	03/02/2022	<0.00200	<0.00200	<0.00200	<0.00400	**253**	**1,110**
	05/24/2022	<0.00200	<0.00200	<0.00200	<0.00400	200	**1,100**
	08/17/2022	<0.00200	<0.00200	<0.00200	<0.00400	239	**1,080**
	12/14/2022	<0.00200	<0.00200	<0.00200	<0.00400	167	983
	03/10/2023	<0.00100	<0.00100	<0.00100	<0.00100	**282**	**1,030**
	06/05/2023	<0.00200	<0.00200	<0.00200	<0.00400	**303**	**1,160**
	09/08/2023	<0.00200	<0.00200	<0.00200	<0.00400	232	**1,110**
	12/28/2023	<0.00100	<0.00100	<0.00100	<0.0100	248	**1,130**
	03/18/2024	<0.00200	<0.00200	<0.00200	<0.00400	**326**	988
	07/29/2024	<0.00200	<0.00200	<0.00200	<0.00400	218	**1,020**
	10/16/2024	<0.00200	<0.00200	<0.00200	<0.00400	**258**	**1,030**
MW-3	07/29/2021	0.00407	<0.00200	<0.00200	<0.00400	128	663
(NEDU #929)	11/08/2021	<0.00200	<0.00200	<0.00200	<0.00400	122	644
	03/02/2022	<0.00200	<0.00200	<0.00200	<0.00400	114	664
	05/24/2022	<0.00200	<0.00200	<0.00200	<0.00400	114	647
	08/17/2022	<0.00200	<0.00200	<0.00200	<0.00400	111	645
	12/14/2022	<0.00200	<0.00200	<0.00200	<0.00400	97.9	381
	03/10/2023	<0.00100	<0.00100	<0.00100	<0.00100	121	635
	06/05/2023	<0.00200	<0.00200	<0.00200	<0.00400	151	778

Table 2
Groundwater Sample Analytical Data Summary
Apache Corporation, NEDU Drill Pits
Lea County, New Mexico

Well ID	Collection Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (mg/L)	Chloride (mg/L)	TDS (mg/L)
NMWQCC Standard:		**0.005*	**1*	**0.7*	**0.62*	***250*	***1,000*
	09/08/2023	<0.00200	<0.00200	<0.00200	<0.00400	117	708
	12/28/2023	<0.00100	<0.00100	<0.00100	<0.0100	124	700
	03/18/2024	<0.00200	<0.00200	<0.00200	<0.00400	143	650
	07/29/2024	<0.00200	<0.00200	<0.00200	<0.00400	111	631
	10/16/2024	<0.00200	<0.00200	<0.00200	<0.00400	124	616
MW-4	07/30/2021	<0.00200	<0.00200	<0.00200	<0.00400	**559**	**1,030**
(NEDU #928)	11/08/2021	<0.00200	<0.00200	<0.00200	<0.00400	203	832
	03/02/2022	<0.00200	<0.00200	<0.00200	<0.00400	182	836
	05/24/2022	<0.00200	<0.00200	<0.00200	<0.00400	171	827
	08/17/2022	<0.00200	<0.00200	<0.00200	<0.00400	165	797
	12/14/2022	<0.00200	<0.00200	<0.00200	<0.00400	134	327
	03/10/2023	<0.00100	<0.00100	<0.00100	<0.00100	176	810
	06/05/2023	<0.00200	<0.00200	<0.00200	<0.00400	194	864
	09/08/2023	<0.00200	<0.00200	<0.00200	<0.00400	160	825
	12/28/2023	<0.00100	<0.00100	<0.00100	<0.0100	160	792
	03/18/2024	<0.00200	<0.00200	<0.00200	<0.00400	183	781
	07/29/2024	<0.00200	<0.00200	<0.00200	<0.00400	131	755
	10/16/2024	<0.00200	<0.00200	<0.00200	<0.00400	161	851
Dup-1 (MW-2)	07/29/2021	<0.00200	<0.00200	<0.00200	<0.00400	244	**1,160**
Dup-2 (MW-4)	07/30/2021	<0.00200	<0.00200	<0.00200	<0.00400	235	**1,030**
Dup-1 (MW-2)	11/08/2021	<0.00200	<0.00200	<0.00200	<0.00400	**270**	**1,100**
Dup-1 (MW-2)	03/02/2022	<0.00200	<0.00200	<0.00200	<0.00400	**268**	**1,090**
Dup-1 (MW-2)	05/24/2022	<0.00200	<0.00200	<0.00200	<0.00400	189	**1,100**
Dup-1 (MW-2)	08/17/2022	<0.00200	<0.00200	<0.00200	<0.00400	246	**1,090**
Dup-1 (MW-2)	12/14/2022	<0.00200	<0.00200	<0.00200	<0.00400	171	**1,100**
Dup-1 (MW-2)	03/10/2023	<0.00100	<0.00100	<0.00100	<0.00100	217	**1,000**
Dup-1 (MW-2)	06/05/2023	<0.00200	<0.00200	<0.00200	<0.00400	242	**1,270**
Dup-1 (MW-2)	09/08/2023	<0.00200	<0.00200	<0.00200	<0.00400	229	**1,180**
Dup-1 (MW-2)	12/28/2023	<0.00100	<0.00100	<0.00100	<0.0100	**251**	**1,100**
Dup-1 (MW-2)	03/18/2024	<0.00200	<0.00200	<0.00200	<0.00400	**306**	**1,050**
Dup-1 (MW-2)	07/29/2024	<0.00200	<0.00200	<0.00200	<0.00400	209	**1,030**
Dup-1 (MW-2)	10/16/2024	<0.00200	<0.00200	<0.00200	<0.00400	228	984

Table 2
Groundwater Sample Analytical Data Summary
Apache Corporation, NEDU Drill Pits
Lea County, New Mexico

Well ID	Collection Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (mg/L)	Chloride (mg/L)	TDS (mg/L)
NMWQCC Standard:		**0.005*	**1*	**0.7*	**0.62*	***250*	***1,000*

Notes:

Analysis performed by Eurofins Laboratories, Midland, Texas by EPA SW-846 Method 8021B (BTEX), Method 300 (chloride), and Method 2540C (TDS).

All values reported in milligrams per liter (mg/L); equivalent to parts per million (ppm)

<: indicates parameter concentration is less than the analytical method reporting limit (RL).

**: NMWQCC human health standard*

***: NMWQCC domestic water quality standard*

bgs: below ground surface

Bold and highlighted indicates that parameter concentration is above NMWQCC limits.

Figures

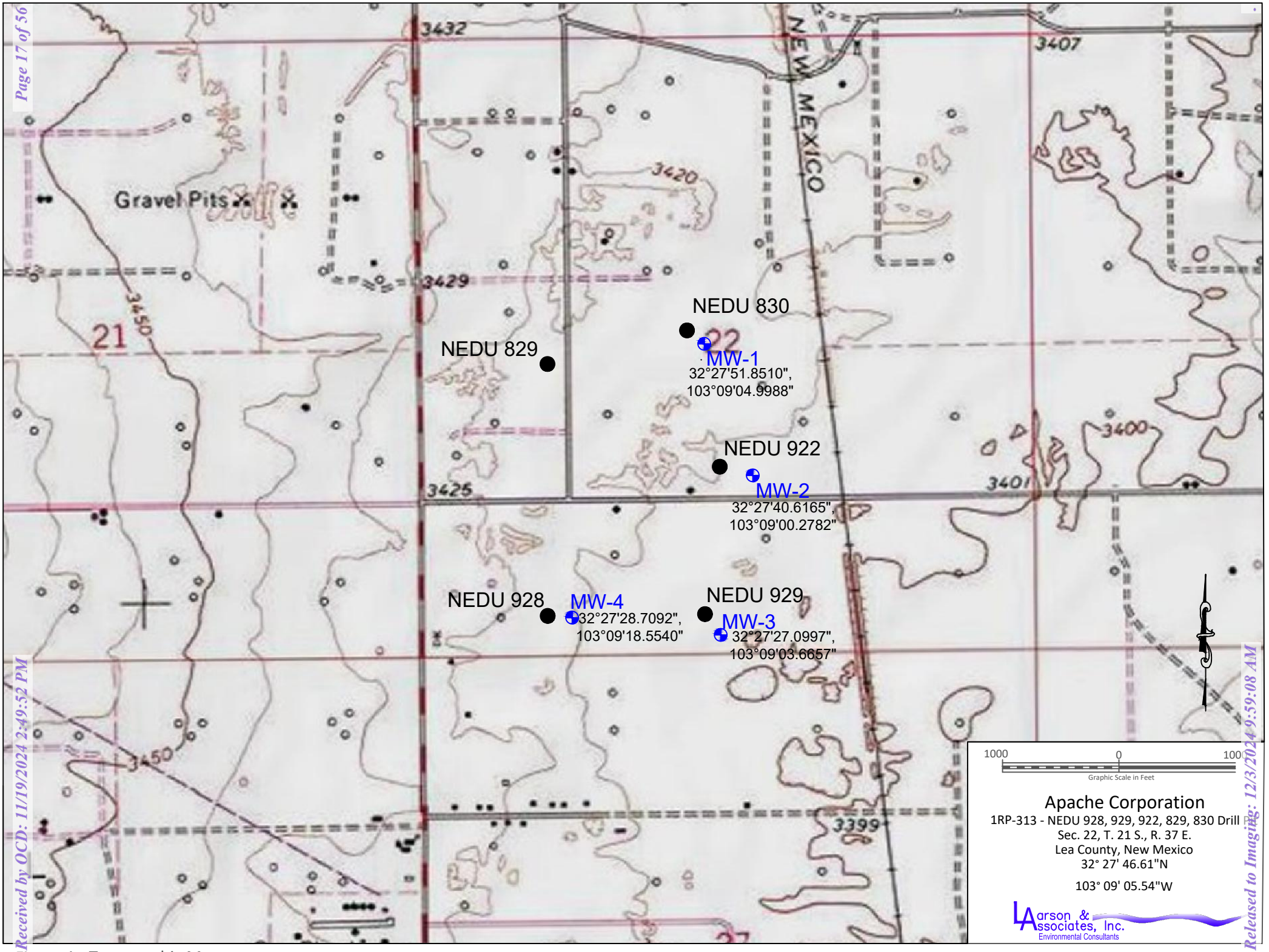


Figure 1 - Topographic Map

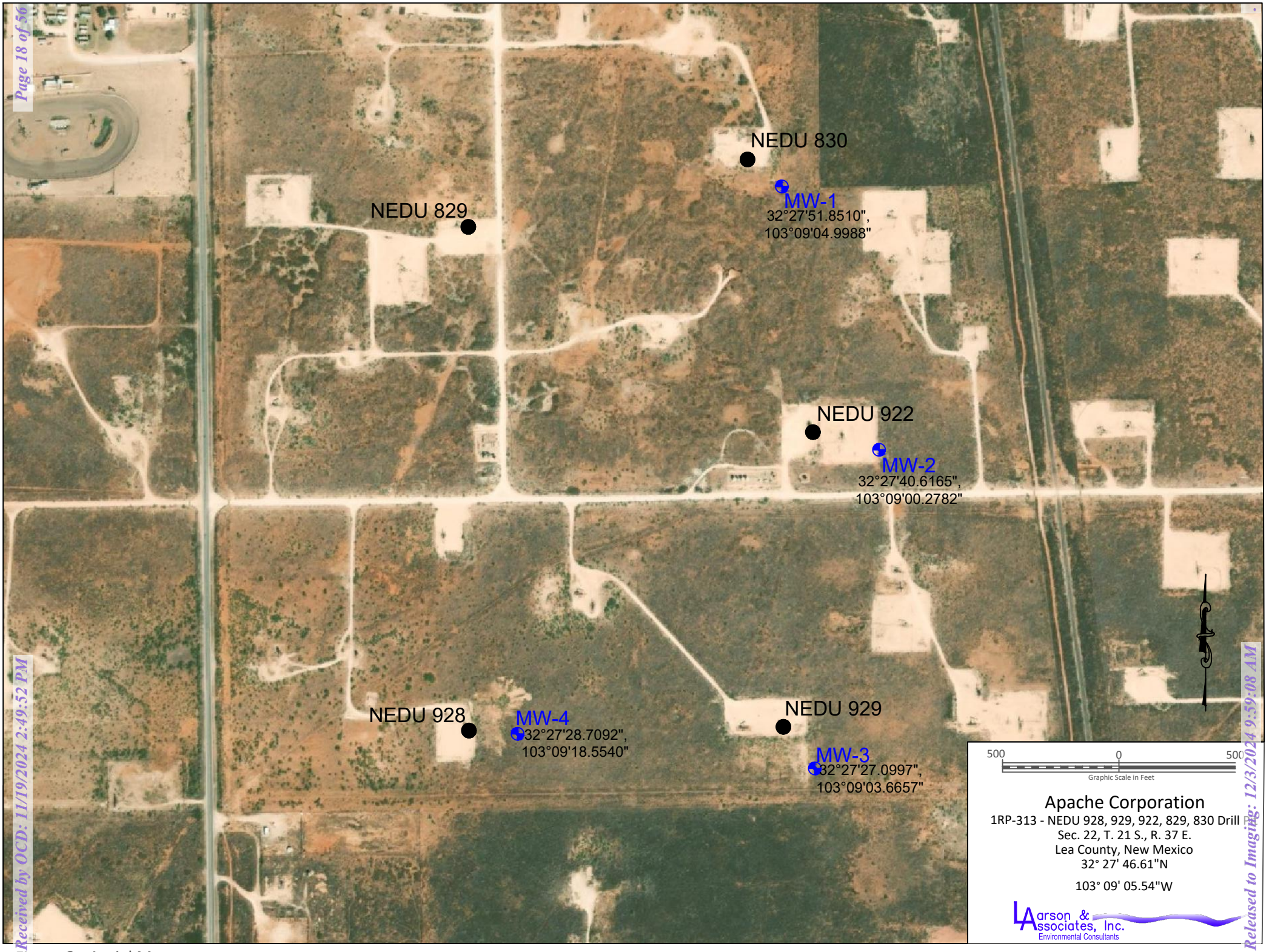


Figure 2 - Aerial Map

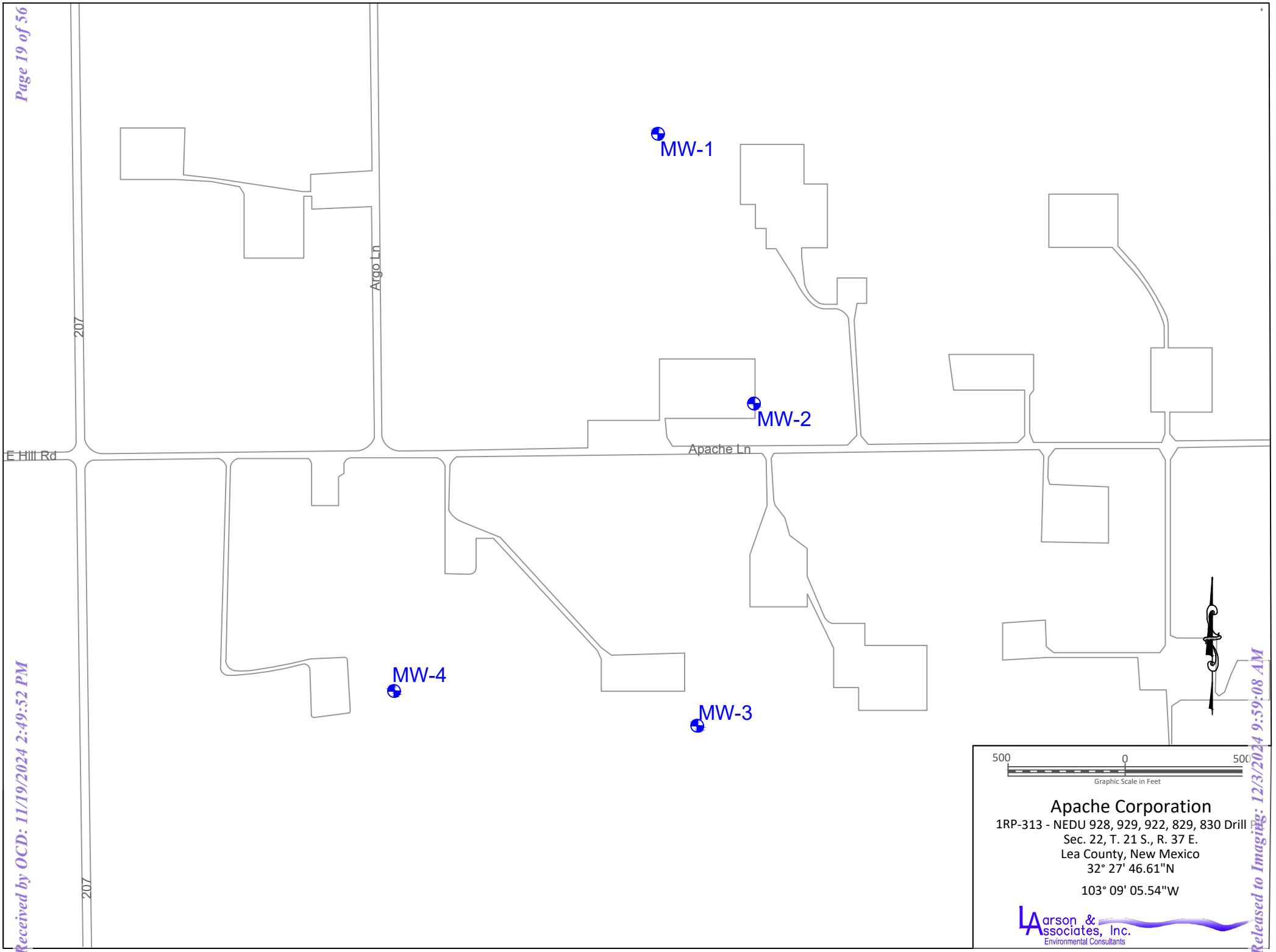


Figure 3 - Site Map

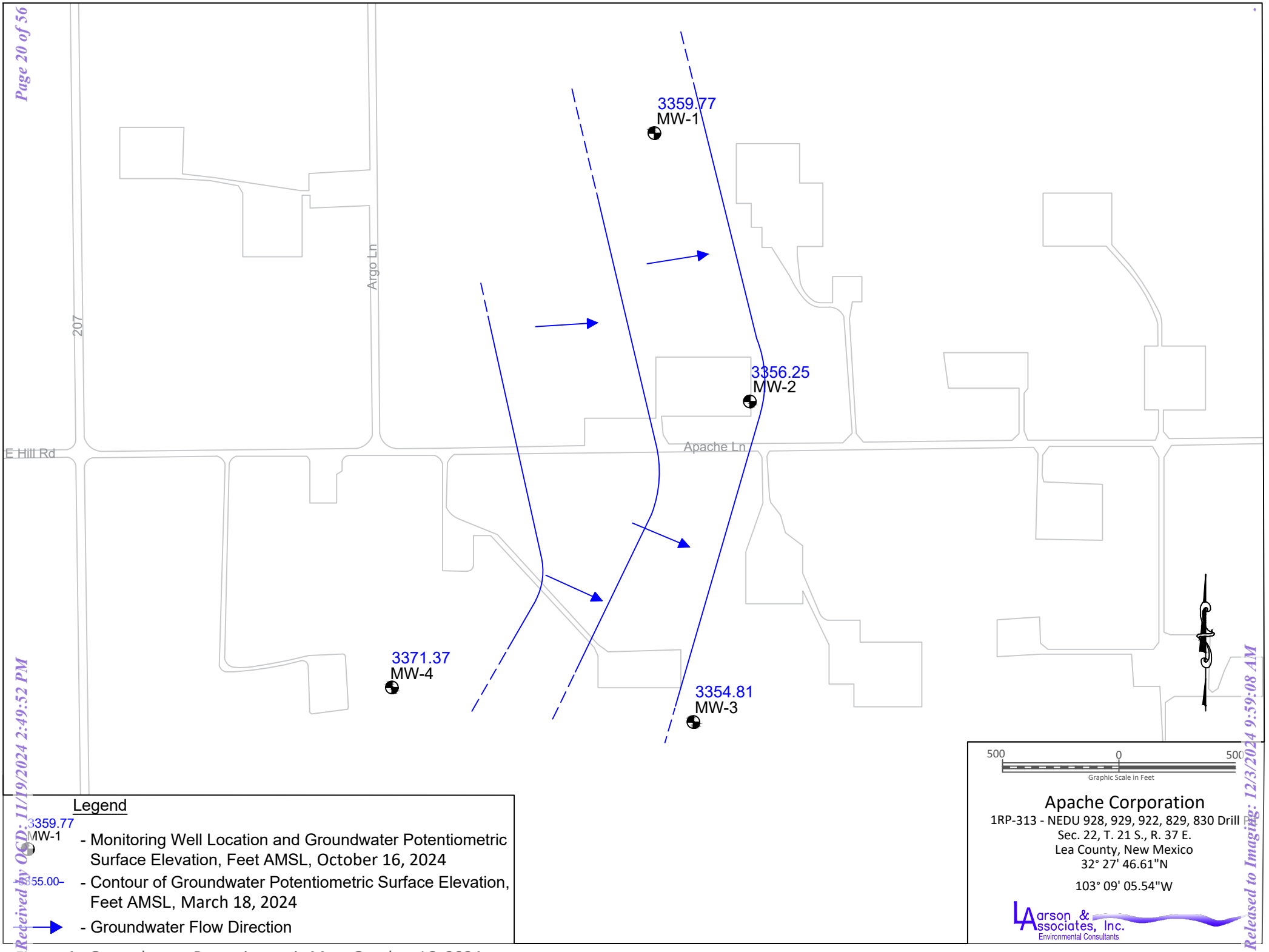


Figure 4 - Groundwater Potentiometric Map, October 16, 2024

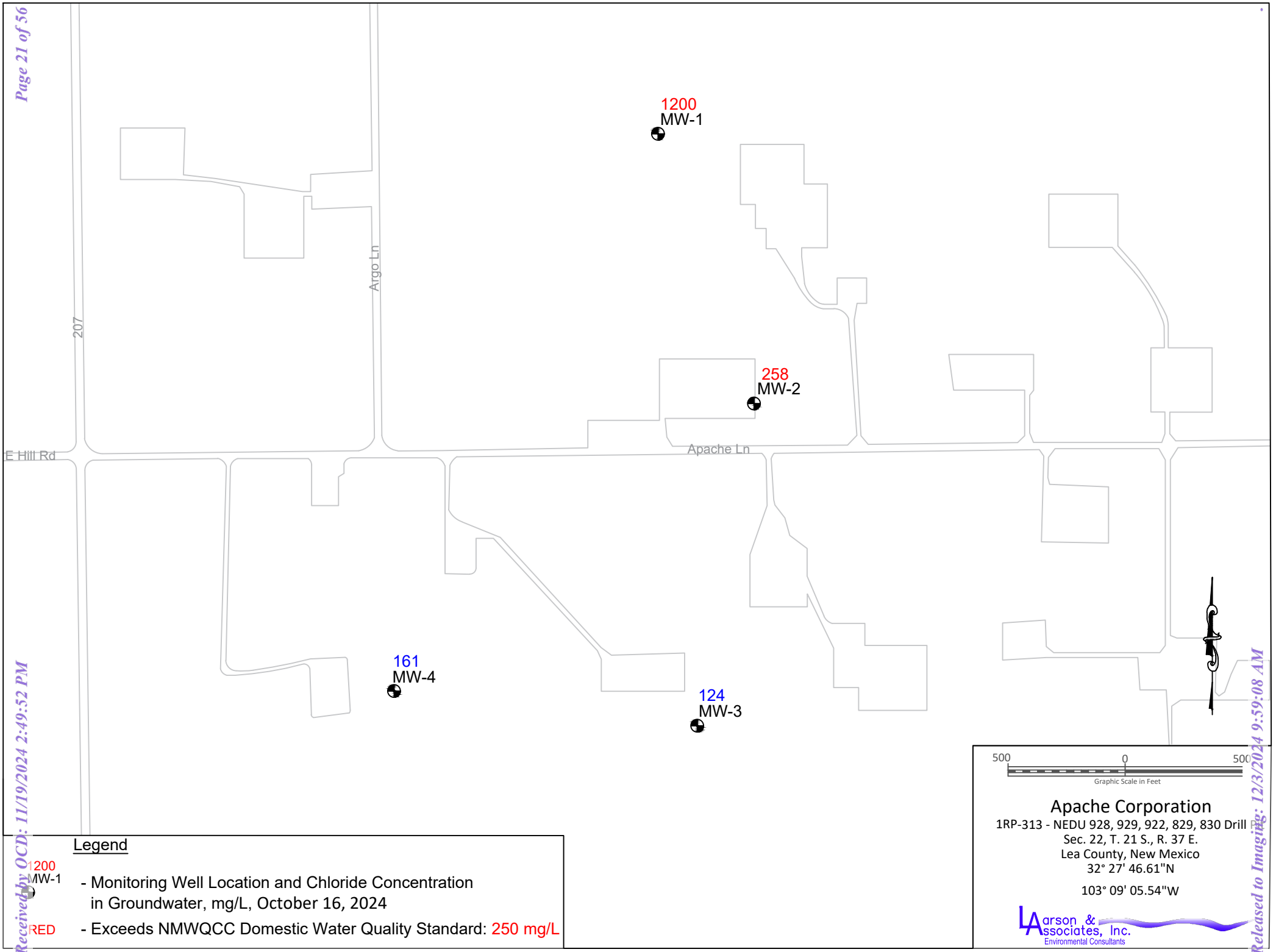


Figure 5 - Chloride Concentration in Groundwater,October 16, 2024

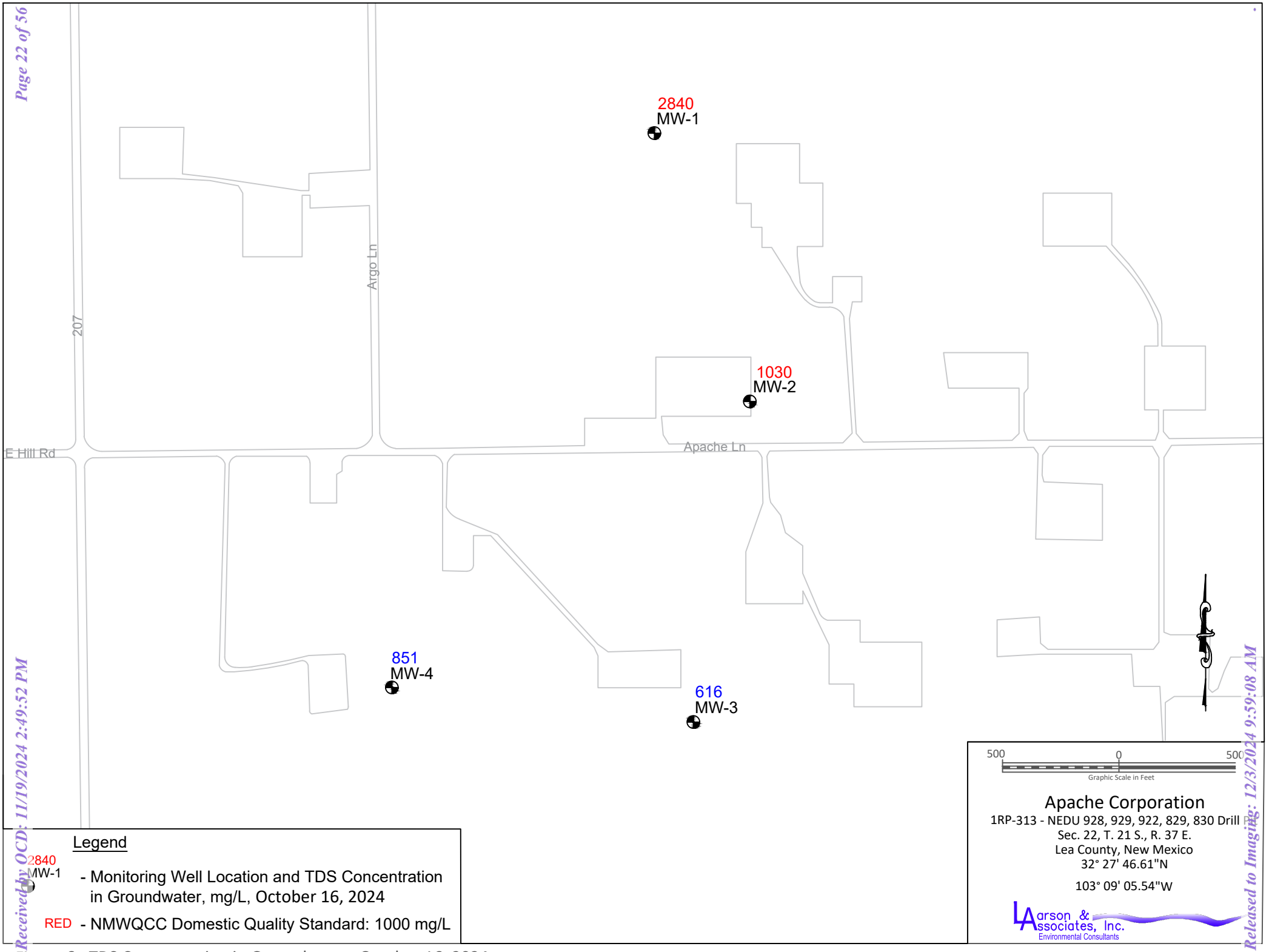


Figure 6 - TDS Concentration in Groundwater, October 16, 2024

Appendix A

NMOCD Communications

[NOTIFY] Notification Of Sampling (C-141N) Application

Submission Information

Submission ID:	391830	**Districts:**	Artesia
Operator:	[873] APACHE CORPORATION	**Counties:**	Eddy
Description:	APACHE CORPORATION [873] , NEDU 829 DRILL PIT , nRM2031146817		
Status:	APPROVED		
Status Date:	10/11/2024		
References (2):	fEEM0209352748, nRM2031146817		

Forms

This application type does not have attachments.

Questions

Prerequisites

Incident ID (n#)	**nRM2031146817**
Incident Name	**NRM2031146817 NEDU 829 DRILL PIT @ 0**
Incident Type	**Release Other**
Incident Status	**Remediation Closure Report Received**
Incident Facility	**[fEEM0209352748] O D E C O INC**

Location of Release Source

Site Name	**NEDU 829 DRILL PIT**
Date Release Discovered	**04/01/2001**
Surface Owner	**Private**

Sampling Event General Information

Please answer all the questions in this group.

What is the sampling surface area in square feet	1,000
What is the estimated number of samples that will be gathered	5
Sampling date pursuant to Subparagraph (a) of Paragraph (1) of Subsection D of 19.15.29.12 NMAC	10/16/2024
Time sampling will commence	09:30 AM

Warning: Notification can not be less than two business days prior to conducting final sampling.

Please provide any information necessary for observers to contact samplers	Dan 432-664-5357
Please provide any information necessary for navigation to sampling site	32.46294, -103.15153

Acknowledgments

This submission type does not have acknowledgments, at this time.

Comments

No comments found for this submission.

Conditions

Summary: *lbaker (10/11/2024),* Failure to notify the OCD of sampling events including any changes in date/time per the requirements of 19.15.29

Reasons

No reasons found for this submission.

Appendix B

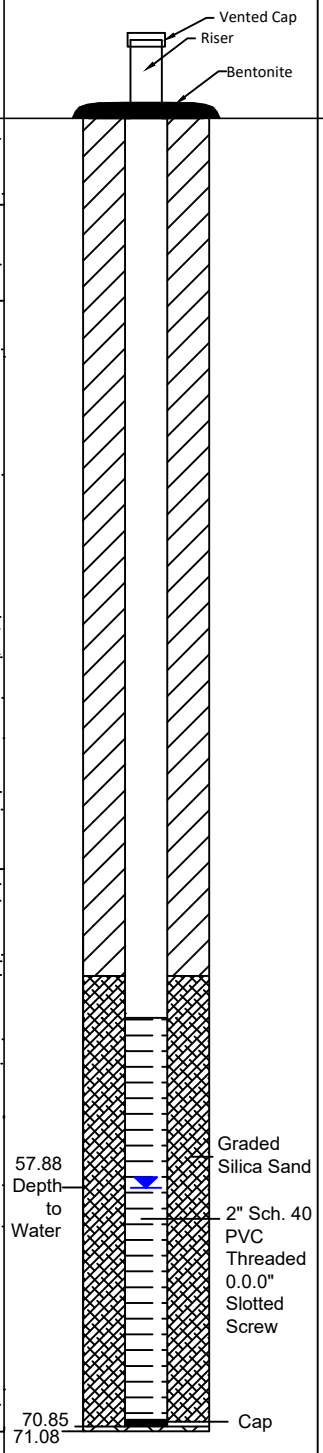
Monitoring Well Completion Records

BORING RECORD

Start: 10:49 MST
Finish: 12:37

Surface Elevation:
TOC Elecation:

GEOLOGIC UNIT	DEPTH	DESCRIPTION LITHOLOGIC	DESCRIPTION USCS	GRAPHIC LOG
	0	Sand, 10YR 5/6, Yellowish Brown, Fine Grained Quartz Sand, Well Sorted, Dry	SW	
	5	Silty Sand, 10YR 5/6, Yellowish Brown, Fine Grained Quartz Sand, Well Sorted, Dry	SM	
	10	Sand, 7.5YR 7/6, Reddish Yellow, Fine Grained Quartz Sand, Dry, Poorly Sorted	SW	
	15			
	20			
	25	Sand, 7.5YR 7/6, Reddish Brown, Fine Grained Quartz Sand, Dry, 4.75mm Clasts, Poorly Sorted		
	30			
	35			
	40	Silty Sand, 7.5YR 8/6, Pink, Well Sorted, Fine Grained Quartz Sand, Dry	SM	
	45	10 YR 7/6, Yellowish Brown, Fine Grained Quartz Sand, Well Sorted Dry		
	50	10 YR 7/6, Yellowish Brown, Moderately Sorted, 2mm Quartz Clasts, Dry		
57.88 Depth to Water	55	Water Injected at 55'		
	60			
	65			
	70			
		TD: 71.08'		
	75			



NUMBER	RECOVERY	DEPTH

REMARKS
BACKGROUND PID READING
SOIL : _____ PPM
SOIL : _____ PPM

ONE CONTINUOUS AUGER SAMPLER
STANDARD PENETRATION TEST
UNDISTURBED SAMPLE
WATER TABLE (24 HRS)
WATER TABLE (TIME OF BORING)
LABORATORY TEST LOCATION
PENETROMETER (TONS/ SQ. FT)
NR NO RECOVERY

Larson & Associates, Inc. Environmental Consultants

DRILL DATE : 07/19/2021
BORING NUMBER : MW-1

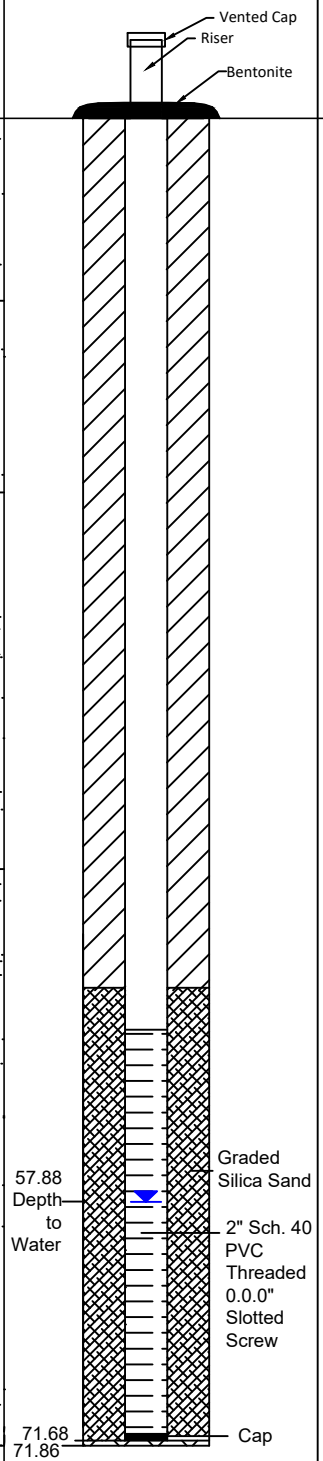
JOB NUMBER : 19-0112-22/ Apache
HOLE DIAMETER : 5'
LOCATION : NEDU #830
LAI GEOLOGIST : R. Nelson
DRILLING CONTRACTOR : SDI
DRILLING METHOD : Air Rotary

BORING RECORD

Start: 13:17 MST
Finish: 14:40

Surface Elevation:
TOC Elecation:

GEOLOGIC UNIT	DEPTH	DESCRIPTION LITHOLOGIC	DESCRIPTION USCS
	0	Sand, 7.5YR 4/6, Strong Brown, Fine Grained Quartz Sand, Well Sorted, Dry	SW
	10	Silty Sand, 7.5YR 7/4, Pink, Fine Grained Quartz Sand, Moderately Sorted, Dry, Quartz Clasts 2mm	SM
	20	7.5YR 6/6, Reddish Yellow, Fine Grained Quartz Sand, Moderately Sorted, Dry, Fine to Medium Quartz Clasts	
	25	Sand, 7.5YR 7/6, Reddish Yellow, Fine Grained Quartz Sand, Dry	SW
	30	7.5YR 7/6, Reddish Yellow, Fine Grained Quartz Sand, Quartz Clasts	
	40	Silty Sand, 7.5YR 5/6, Strong Brown, Fine Grained Quartz Sand, Well Sorted, Dry	SM
	50	7.5YR 5/6, Strong Brown, Fine Grained Quartz Sand, Well Sorted, Dry, Quartz Clasts Medium to Coarse Grained	
57.88 Depth to Water	55	Water Injected at 55'	
	70	TD: 71.86'	
	75		



NUMBER | RECOVERY | DEPTH

REMARKS
BACKGROUND PID READING
SOIL : PPM
SOIL : PPM

ONE CONTINUOUS AUGER SAMPLER
STANDARD PENETRATION TEST
UNDISTURBED SAMPLE
WATER TABLE (24 HRS)
WATER TABLE (TIME OF BORING)
LABORATORY TEST LOCATION
PENETROMETER (TONS/ SQ. FT)
NR NO RECOVERY

JOB NUMBER : 19-0112-22/ Apache
HOLE DIAMETER : 5'
LOCATION : NEDU #922
LAI GEOLOGIST : R. Nelson
DRILLING CONTRACTOR : SDI
DRILLING METHOD : Air Rotary

Larson & Associates, Inc. Environmental Consultants

DRILL DATE : 07/19/2021

BORING NUMBER : MW-2

BORING RECORD

Start: 13:45
Finish: 14:50

GEOLOGIC UNIT	DEPTH	DESCRIPTION LITHOLOGIC	DESCRIPTION USCS	GRAPHIC LOG	PID READING PPM X	SAMPLE NUMBER	SAMPLE PID READING	SAMPLE RECOVERY	SAMPLE DEPTH	REMARKS BACKGROUND PID READING
	0	2.5YR 4/6, Red, Fine Grained Quartz Rich Sand, Very Well Sorted, Well Rounded, Unconsolidated								
	5					1			5	13:50
	10	Increase in Depth Lithology Remains Same Color Changes to 2.5YR 7/3 to 7/4 Light Reddish Brown at 13'	SM			2			10	13:54
	15					3			15	13:58
	20					4			20	14:03
	25	5YR 7/4, Pink, Fine to Medium Grained Quartz Rich Sand, Moderately Sorted, Rounded to Sub Rounded	SM			5			25	14:10
	30					6			30	14:13
	35					7			35	14:20
	40	7.5YR 9/2, Pale Yellowish Pink, Very Fine to Fine Grained Quartz Grained Sand, Well Sorted, Well Rounded to Sub Rounded				8			40	14:22
	45					9			45	14:25
Depth to Water: 53.71	50	7.5YR 6/8, Reddish Yellow, Very Fine to Fine Grained Quartz Sand, Well Sorted, Well Rounded	SM			10			50	14:30
	55					11			55	14:42
	60					12			60	14:44
	65	TD: 65.35'				13			65	14:50

ONE CONTINUOUS AUGER SAMPLER
STANDARD PENETRATION TEST
UNDISTURBED SAMPLE
WATER TABLE (24 HRS)
WATER TABLE (TIME OF BORING)
LABORATORY TEST LOCATION
PENETROMETER (TONS/ SQ. FT)
NR NO RECOVERY

JOB NUMBER : Apache/19-0112-22
HOLE DIAMETER : 5"
LOCATION : NEDU 929
LAI GEOLOGIST : T. Jackson
DRILLING CONTRACTOR : SDI
DRILLING METHOD : Air Rotary

Larson & Associates, Inc. Environmental Consultants

DRILL DATE : 7/20/2021

BORING NUMBER : MW- 3

BORING RECORD

Start: 9:35
Finish: 12:10

GEOLOGIC UNIT	DEPTH	DESCRIPTION LITHOLOGIC	DESCRIPTION USCS	GRAPHIC LOG	PID READING PPM X	SAMPLE NUMBER	SAMPLE PID READING	SAMPLE RECOVERY	SAMPLE DEPTH	REMARKS BACKGROUND PID READING
	0	Sand, 2.5YR 4/6, Red, Fine Grained Quart Sand, Very Well Sorted, Well Rounded, Unconsolidated, Quartz Rich Sand	SM							SOIL : PPM SOIL : PPM
	5					1			5	9:38
	10					2			10	9:40
	15	Sand, 2.5YR 7/4, Light Reddish Brown, Very Fine to Fine Grained Quartz Sand, Moderately Sorted, Sub Angular to Sub Rounded, with Depth Decrease in Grain Size and Becomes Well Sorted, Quartz Rich Sand				3			15	9:40
	20					4			20	9:42
	25					5			25	9:45
	30	7.5YR 8/3, Pink, Fine to Medium Grained Quartz Sand, Sub Rounded to Sub Angular, Moderately Sorted, Quartz Rich Sand	SM			6			30	10:30
	35					7			35	10:35
Depth to Water: 41.05	40	7.5YR 6/4, Light Brown, Fine Grained Quartz Sand, Well Sorted, Rounded to Sub Rounded, with Depth Increase in Consolidation and Cementation, Quartz Rich Sand				8			40	10:38
	45					9			45	11:14
	50	7.5YR 7/4, Light Reddish Brown, Poorly Sorted, Fine to Coarse Grained Quartz Sand, Rounded to Angular, Very Consolidated with Red Sandstone Fragments in Cuttings, Quartz Rich Sand								
	55									
	60	Introduced Water with Drilling	SM							
	65									
	70									
	75	TD: 76.01								

ONE CONTINUOUS AUGER SAMPLER
STANDARD PENETRATION TEST
UNDISTURBED SAMPLE
WATER TABLE (24 HRS)
WATER TABLE (TIME OF BORING)
L LABORATORY TEST LOCATION
+ PENETROMETER (TONS/ SQ. FT)
NR NO RECOVERY

Larson & Associates, Inc. Environmental Consultants

DRILL DATE : 7/20/2021

BORING NUMBER : MW-4

JOB NUMBER : Apache/ 19-0112-22
HOLE DIAMETER : 5"
LOCATION : NEDU 928
LAI GEOLOGIST : T. Jackson
DRILLING CONTRACTOR : SDI
DRILLING METHOD : Air Rotary

Appendix C

Laboratory Report

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Brenda Balbino
Larson & Associates, Inc.
507 N Marienfeld
Suite 202
Midland, Texas 79701

Generated 10/22/2024 3:46:58 PM

JOB DESCRIPTION

NEDU Pits
19-0112-22

JOB NUMBER

880-49930-1

Eurofins Midland
1211 W. Florida Ave
Midland TX 79701

See page two for job notes and contact information.

my EOL

Eurofins Midland

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Authorization

Holly Taylor

Generated
10/22/2024 3:46:58 PM

Authorized for release by
Holly Taylor, Project Manager
Holly.Taylor@et.eurofinsus.com
(806)794-1296

Client: Larson & Associates, Inc.
Project/Site: NEDU Pits

Laboratory Job ID: 880-49930-1
SDG: 19-0112-22

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Definitions/Glossary

Client: Larson & Associates, Inc. Job ID: 880-49930-1
Project/Site: NEDU Pits SDG: 19-0112-22

Qualifiers

GC VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Larson & Associates, Inc. Job ID: 880-49930-1
Project: NEDU Pits

Job ID: 880-49930-1 Eurofins Midland

Job Narrative
880-49930-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 10/17/2024 3:05 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.5°C.

GC VOA
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: NEDU Pits

Job ID: 880-49930-1
SDG: 19-0112-22

Client Sample ID: MW-1

Date Collected: 10/16/24 10:40
Date Received: 10/17/24 15:05

Lab Sample ID: 880-49930-1
Matrix: Water

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<2.00	U	2.00		ug/L			10/22/24 01:41	1
Toluene	<2.00	U	2.00		ug/L			10/22/24 01:41	1
Ethylbenzene	<2.00	U	2.00		ug/L			10/22/24 01:41	1
m,p-Xylenes	<4.00	U	4.00		ug/L			10/22/24 01:41	1
o-Xylene	<2.00	U	2.00		ug/L			10/22/24 01:41	1
Xylenes, Total	<4.00	U	4.00		ug/L			10/22/24 01:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*		*10/22/24 01:41*	*1*
1,4-Difluorobenzene (Surr)	*100*		*70 - 130*		*10/22/24 01:41*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/L			10/22/24 01:41	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1200**		10.0		mg/L			10/21/24 12:26	20

General Chemistry

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**2840**		200		mg/L			10/18/24 17:00	1

Client Sample ID: MW-2

Date Collected: 10/16/24 10:00
Date Received: 10/17/24 15:05

Lab Sample ID: 880-49930-2
Matrix: Water

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<2.00	U	2.00		ug/L			10/22/24 02:02	1
Toluene	<2.00	U	2.00		ug/L			10/22/24 02:02	1
Ethylbenzene	<2.00	U	2.00		ug/L			10/22/24 02:02	1
m,p-Xylenes	<4.00	U	4.00		ug/L			10/22/24 02:02	1
o-Xylene	<2.00	U	2.00		ug/L			10/22/24 02:02	1
Xylenes, Total	<4.00	U	4.00		ug/L			10/22/24 02:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*		*10/22/24 02:02*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*		*10/22/24 02:02*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/L			10/22/24 02:02	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**258**		5.00		mg/L			10/21/24 12:33	10

General Chemistry

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**1030**		50.0		mg/L			10/18/24 17:00	1

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: NEDU Pits

Job ID: 880-49930-1
SDG: 19-0112-22

Client Sample ID: MW-3

Lab Sample ID: 880-49930-3
Matrix: Water
Date Collected: 10/16/24 11:50
Date Received: 10/17/24 15:05

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<2.00	U	2.00		ug/L			10/22/24 02:22	1
Toluene	<2.00	U	2.00		ug/L			10/22/24 02:22	1
Ethylbenzene	<2.00	U	2.00		ug/L			10/22/24 02:22	1
m,p-Xylenes	<4.00	U	4.00		ug/L			10/22/24 02:22	1
o-Xylene	<2.00	U	2.00		ug/L			10/22/24 02:22	1
Xylenes, Total	<4.00	U	4.00		ug/L			10/22/24 02:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*		*10/22/24 02:22*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*		*10/22/24 02:22*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/L			10/22/24 02:22	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**124**		2.50		mg/L			10/21/24 12:39	5

General Chemistry

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**616**		50.0		mg/L			10/18/24 17:00	1

Client Sample ID: MW-4

Lab Sample ID: 880-49930-4
Matrix: Water
Date Collected: 10/16/24 11:22
Date Received: 10/17/24 15:05

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<2.00	U	2.00		ug/L			10/22/24 02:43	1
Toluene	<2.00	U	2.00		ug/L			10/22/24 02:43	1
Ethylbenzene	<2.00	U	2.00		ug/L			10/22/24 02:43	1
m,p-Xylenes	<4.00	U	4.00		ug/L			10/22/24 02:43	1
o-Xylene	<2.00	U	2.00		ug/L			10/22/24 02:43	1
Xylenes, Total	<4.00	U	4.00		ug/L			10/22/24 02:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*		*10/22/24 02:43*	*1*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*		*10/22/24 02:43*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/L			10/22/24 02:43	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**161**		2.50		mg/L			10/21/24 12:45	5

General Chemistry

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**851**		50.0		mg/L			10/18/24 17:00	1

Client Sample Results

Client: Larson & Associates, Inc.
Project/Site: NEDU Pits

Job ID: 880-49930-1
SDG: 19-0112-22

Client Sample ID: Dup-1

Date Collected: 10/16/24 00:00
Date Received: 10/17/24 15:05

Lab Sample ID: 880-49930-5

Matrix: Water

Method: SW846 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<2.00	U	2.00		ug/L			10/22/24 03:03	1
Toluene	<2.00	U	2.00		ug/L			10/22/24 03:03	1
Ethylbenzene	<2.00	U	2.00		ug/L			10/22/24 03:03	1
m,p-Xylenes	<4.00	U	4.00		ug/L			10/22/24 03:03	1
o-Xylene	<2.00	U	2.00		ug/L			10/22/24 03:03	1
Xylenes, Total	<4.00	U	4.00		ug/L			10/22/24 03:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*		*10/22/24 03:03*	*1*
1,4-Difluorobenzene (Surr)	*99*		*70 - 130*		*10/22/24 03:03*	*1*

Method: TAL SOP Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/L			10/22/24 03:03	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**228**		5.00		mg/L			10/21/24 12:51	10

General Chemistry

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**984**		50.0		mg/L			10/18/24 17:00	1

Surrogate Summary

Client: Larson & Associates, Inc.
Project/Site: NEDU Pits

Job ID: 880-49930-1
SDG: 19-0112-22

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)											
		BFB1	DFBZ1										
Lab Sample ID	Client Sample ID	(70-130)	(70-130)										
880-49930-1	MW-1	101	100										
880-49930-2	MW-2	99	101										
880-49930-3	MW-3	99	101										
880-49930-4	MW-4	101	101										
880-49930-5	Dup-1	99	99										

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)											
		BFB2	DFBZ2										
Lab Sample ID	Client Sample ID	(70-130)	(70-130)										
LCS 880-93757/27	Lab Control Sample	104	101										
LCSD 880-93757/28	Lab Control Sample Dup	111	102										
MB 880-93757/32	Method Blank	101	96										
MB 880-93762/5-A	Method Blank	98	96										

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DFBZ = 1,4-Difluorobenzene (Surr)

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: NEDU Pits

Job ID: 880-49930-1
SDG: 19-0112-22

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-93757/32
Matrix: Water
Analysis Batch: 93757

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<2.00	U	2.00		ug/L			10/21/24 20:40	1
Toluene	<2.00	U	2.00		ug/L			10/21/24 20:40	1
Ethylbenzene	<2.00	U	2.00		ug/L			10/21/24 20:40	1
m,p-Xylenes	<4.00	U	4.00		ug/L			10/21/24 20:40	1
o-Xylene	<2.00	U	2.00		ug/L			10/21/24 20:40	1
Xylenes, Total	<4.00	U	4.00		ug/L			10/21/24 20:40	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*		*10/21/24 20:40*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*		*10/21/24 20:40*	*1*

Lab Sample ID: LCS 880-93757/27
Matrix: Water
Analysis Batch: 93757

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			100	95.55		ug/L		96	70 - 130		
Toluene			100	93.87		ug/L		94	70 - 130		
Ethylbenzene			100	103.6		ug/L		104	70 - 130		
m,p-Xylenes			200	190.6		ug/L		95	70 - 130		
o-Xylene			100	106.3		ug/L		106	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*
1,4-Difluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: LCSD 880-93757/28
Matrix: Water
Analysis Batch: 93757

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			100	97.67		ug/L		98	70 - 130	2	20
Toluene			100	95.77		ug/L		96	70 - 130	2	20
Ethylbenzene			100	104.7		ug/L		105	70 - 130	1	20
m,p-Xylenes			200	192.9		ug/L		96	70 - 130	1	20
o-Xylene			100	107.6		ug/L		108	70 - 130	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*
1,4-Difluorobenzene (Surr)	*102*		*70 - 130*

Lab Sample ID: MB 880-93762/5-A
Matrix: Water
Analysis Batch: 93757

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 93762

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<2.00	U	2.00		ug/L		10/21/24 09:11	10/21/24 11:58	1
Toluene	<2.00	U	2.00		ug/L		10/21/24 09:11	10/21/24 11:58	1

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: NEDU Pits

Job ID: 880-49930-1
SDG: 19-0112-22

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: MB 880-93762/5-A
Matrix: Water
Analysis Batch: 93757

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 93762

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	<2.00	U	2.00		ug/L		10/21/24 09:11	10/21/24 11:58	1
m,p-Xylenes	<4.00	U	4.00		ug/L		10/21/24 09:11	10/21/24 11:58	1
o-Xylene	<2.00	U	2.00		ug/L		10/21/24 09:11	10/21/24 11:58	1
Xylenes, Total	<4.00	U	4.00		ug/L		10/21/24 09:11	10/21/24 11:58	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*	*10/21/24 09:11*	*10/21/24 11:58*	*1*
1,4-Difluorobenzene (Surr)	*96*		*70 - 130*	*10/21/24 09:11*	*10/21/24 11:58*	*1*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-93754/3
Matrix: Water
Analysis Batch: 93754

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.500	U	0.500		mg/L			10/21/24 09:56	1

Lab Sample ID: LCS 880-93754/4
Matrix: Water
Analysis Batch: 93754

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			25.0	25.72		mg/L		103	90 - 110		

Lab Sample ID: LCSD 880-93754/5
Matrix: Water
Analysis Batch: 93754

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			25.0	25.72		mg/L		103	90 - 110	0	20

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 880-93719/1
Matrix: Water
Analysis Batch: 93719

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<25.0	U	25.0		mg/L			10/18/24 17:00	1

Lab Sample ID: LCS 880-93719/2
Matrix: Water
Analysis Batch: 93719

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Dissolved Solids			1000	1072		mg/L		107	80 - 120		

QC Sample Results

Client: Larson & Associates, Inc.
Project/Site: NEDU Pits

Job ID: 880-49930-1
SDG: 19-0112-22

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: LCSD 880-93719/3
Matrix: Water
Analysis Batch: 93719

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Dissolved Solids			1000	1031		mg/L		103	80 - 120	5	10

Lab Sample ID: 880-49930-4 DU
Matrix: Water
Analysis Batch: 93719

Client Sample ID: MW-4
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids	851			800.0		mg/L				6	10

QC Association Summary

Client: Larson & Associates, Inc.
Project/Site: NEDU Pits

Job ID: 880-49930-1
SDG: 19-0112-22

GC VOA

Analysis Batch: 93757

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-49930-1	MW-1	Total/NA	Water	8021B	
880-49930-2	MW-2	Total/NA	Water	8021B	
880-49930-3	MW-3	Total/NA	Water	8021B	
880-49930-4	MW-4	Total/NA	Water	8021B	
880-49930-5	Dup-1	Total/NA	Water	8021B	
MB 880-93757/32	Method Blank	Total/NA	Water	8021B	
MB 880-93762/5-A	Method Blank	Total/NA	Water	8021B	93762
LCS 880-93757/27	Lab Control Sample	Total/NA	Water	8021B	
LCSD 880-93757/28	Lab Control Sample Dup	Total/NA	Water	8021B	

Prep Batch: 93762

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-93762/5-A	Method Blank	Total/NA	Water	5035	

Analysis Batch: 93847

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-49930-1	MW-1	Total/NA	Water	Total BTEX	
880-49930-2	MW-2	Total/NA	Water	Total BTEX	
880-49930-3	MW-3	Total/NA	Water	Total BTEX	
880-49930-4	MW-4	Total/NA	Water	Total BTEX	
880-49930-5	Dup-1	Total/NA	Water	Total BTEX	

HPLC/IC

Analysis Batch: 93754

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-49930-1	MW-1	Total/NA	Water	300.0	
880-49930-2	MW-2	Total/NA	Water	300.0	
880-49930-3	MW-3	Total/NA	Water	300.0	
880-49930-4	MW-4	Total/NA	Water	300.0	
880-49930-5	Dup-1	Total/NA	Water	300.0	
MB 880-93754/3	Method Blank	Total/NA	Water	300.0	
LCS 880-93754/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 880-93754/5	Lab Control Sample Dup	Total/NA	Water	300.0	

General Chemistry

Analysis Batch: 93719

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-49930-1	MW-1	Total/NA	Water	SM 2540C	
880-49930-2	MW-2	Total/NA	Water	SM 2540C	
880-49930-3	MW-3	Total/NA	Water	SM 2540C	
880-49930-4	MW-4	Total/NA	Water	SM 2540C	
880-49930-5	Dup-1	Total/NA	Water	SM 2540C	
MB 880-93719/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 880-93719/2	Lab Control Sample	Total/NA	Water	SM 2540C	
LCSD 880-93719/3	Lab Control Sample Dup	Total/NA	Water	SM 2540C	
880-49930-4 DU	MW-4	Total/NA	Water	SM 2540C	

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: NEDU Pits

Job ID: 880-49930-1
SDG: 19-0112-22

Client Sample ID: MW-1
Date Collected: 10/16/24 10:40
Date Received: 10/17/24 15:05

Lab Sample ID: 880-49930-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	93757	10/22/24 01:41	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			93847	10/22/24 01:41	SM	EET MID
Total/NA	Analysis	300.0		20	10 mL	10 mL	93754	10/21/24 12:26	CH	EET MID
Total/NA	Analysis	SM 2540C		1	25 mL	200 mL	93719	10/18/24 17:00	CH	EET MID

Client Sample ID: MW-2
Date Collected: 10/16/24 10:00
Date Received: 10/17/24 15:05

Lab Sample ID: 880-49930-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	93757	10/22/24 02:02	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			93847	10/22/24 02:02	SM	EET MID
Total/NA	Analysis	300.0		10	10 mL	10 mL	93754	10/21/24 12:33	CH	EET MID
Total/NA	Analysis	SM 2540C		1	100 mL	200 mL	93719	10/18/24 17:00	CH	EET MID

Client Sample ID: MW-3
Date Collected: 10/16/24 11:50
Date Received: 10/17/24 15:05

Lab Sample ID: 880-49930-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	93757	10/22/24 02:22	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			93847	10/22/24 02:22	SM	EET MID
Total/NA	Analysis	300.0		5	10 mL	10 mL	93754	10/21/24 12:39	CH	EET MID
Total/NA	Analysis	SM 2540C		1	100 mL	200 mL	93719	10/18/24 17:00	CH	EET MID

Client Sample ID: MW-4
Date Collected: 10/16/24 11:22
Date Received: 10/17/24 15:05

Lab Sample ID: 880-49930-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	93757	10/22/24 02:43	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			93847	10/22/24 02:43	SM	EET MID
Total/NA	Analysis	300.0		5	10 mL	10 mL	93754	10/21/24 12:45	CH	EET MID
Total/NA	Analysis	SM 2540C		1	100 mL	200 mL	93719	10/18/24 17:00	CH	EET MID

Client Sample ID: Dup-1
Date Collected: 10/16/24 00:00
Date Received: 10/17/24 15:05

Lab Sample ID: 880-49930-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	93757	10/22/24 03:03	MNR	EET MID
Total/NA	Analysis	Total BTEX		1			93847	10/22/24 03:03	SM	EET MID
Total/NA	Analysis	300.0		10	10 mL	10 mL	93754	10/21/24 12:51	CH	EET MID
Total/NA	Analysis	SM 2540C		1	100 mL	200 mL	93719	10/18/24 17:00	CH	EET MID

Eurofins Midland

Lab Chronicle

Client: Larson & Associates, Inc.
Project/Site: NEDU Pits

Job ID: 880-49930-1
SDG: 19-0112-22

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Larson & Associates, Inc.
Project/Site: NEDU Pits

Job ID: 880-49930-1
SDG: 19-0112-22

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400	06-30-25

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
Total BTEX		Water	Total BTEX

Method Summary

Client: Larson & Associates, Inc.
Project/Site: NEDU Pits

Job ID: 880-49930-1
SDG: 19-0112-22

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	EET MID
Total BTEX	Total BTEX Calculation	TAL SOP	EET MID
300.0	Anions, Ion Chromatography	EPA	EET MID
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET MID
5030B	Purge and Trap	SW846	EET MID

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

EET MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: Larson & Associates, Inc.
Project/Site: NEDU Pits

Job ID: 880-49930-1
SDG: 19-0112-22

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-49930-1	MW-1	Water	10/16/24 10:40	10/17/24 15:05
880-49930-2	MW-2	Water	10/16/24 10:00	10/17/24 15:05
880-49930-3	MW-3	Water	10/16/24 11:50	10/17/24 15:05
880-49930-4	MW-4	Water	10/16/24 11:22	10/17/24 15:05
880-49930-5	Dup-1	Water	10/16/24 00:00	10/17/24 15:05

No. 2371

CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants
rienfeld, Ste. 202
Midland, TX 79701
432-687-0901

DATE: 10/17/2024 PAGE 1 OF 1

PO#: LAB WORK ORDER#: 49930

PROJECT LOCATION OR NAME: NEDU Pits

LAI PROJECT #: 19-0112-22 COLLECTOR: BB/IR

Data Reported to: Daniel St. Germain/ Mark Larson

TRRP report? ☐ Yes ☐ No

S=SOIL P=PAINT
W=WATER SL=SLUDGE
A=AIR OT=OTHER

TIME ZONE:
Time zone/State: MST/NM

Field Sample I.D.	Lab #	Date	Time	Matrix	# of Containers	PRESERVATION: HCl	HNO3	H2SO4	NaOH	ICE	UNPRESERVED	ANALYSES: BTEX	TPH 418.1	TPH 1005	TPH 1006	GASOLINE MOD 8015	DIESEL MOD 8015	OIL MOD 8015	VOC 8260	SVOC 8270	PAH 8270	HOLDPAH	8081+PESTICIDES	8082 PCB'S	8151 HERBICIDES	TCLP METALS (RCRA)	TCLP PEST	TOTAL METALS (RCRA)	LEAD	TCLP VOC	TCLP HERB	Semi-VOC	TOTAL (RCRA)	TOX	D W 200.8	OTHER LIST	TCLP	TDS	FLASHPOINT	pH	% MOISTURE	EXPLOSIVES	CYANIDE	HEXAVALENT CHROMIUM	CHLORIDE	PECHLORATE	ANIONS	ALKALINITY	FIELD NOTES
MW-1		10/16	10:40	W	5					X		X																								X				X								
MW-2			10:00		5																																												
MW-3			11:50		5																																												
MW-4			11:22		5																																												
Dup-1			—		5																																												
TOTAL	5				25																																												

RELINQUISHED BY:(Signature) Brandi Colton DATE/TIME 10/17 RECEIVED BY: (Signature) 1505

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

RELINQUISHED BY:(Signature) DATE/TIME RECEIVED BY: (Signature)

LABORATORY: Eurofins

TURN AROUND TIME
NORMAL ☒
1 DAY ☐
2 DAY ☐
OTHER ☐

LABORATORY USE ONLY:
RECEIVING TEMP 5.4/5.5 THERM#: IR4
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☐ NOT USED
☐ CARRIER BILL #
☐ HAND DELIVERED

Login Sample Receipt Checklist

Client: Larson & Associates, Inc.

Job Number: 880-49930-1
SDG Number: 19-0112-22

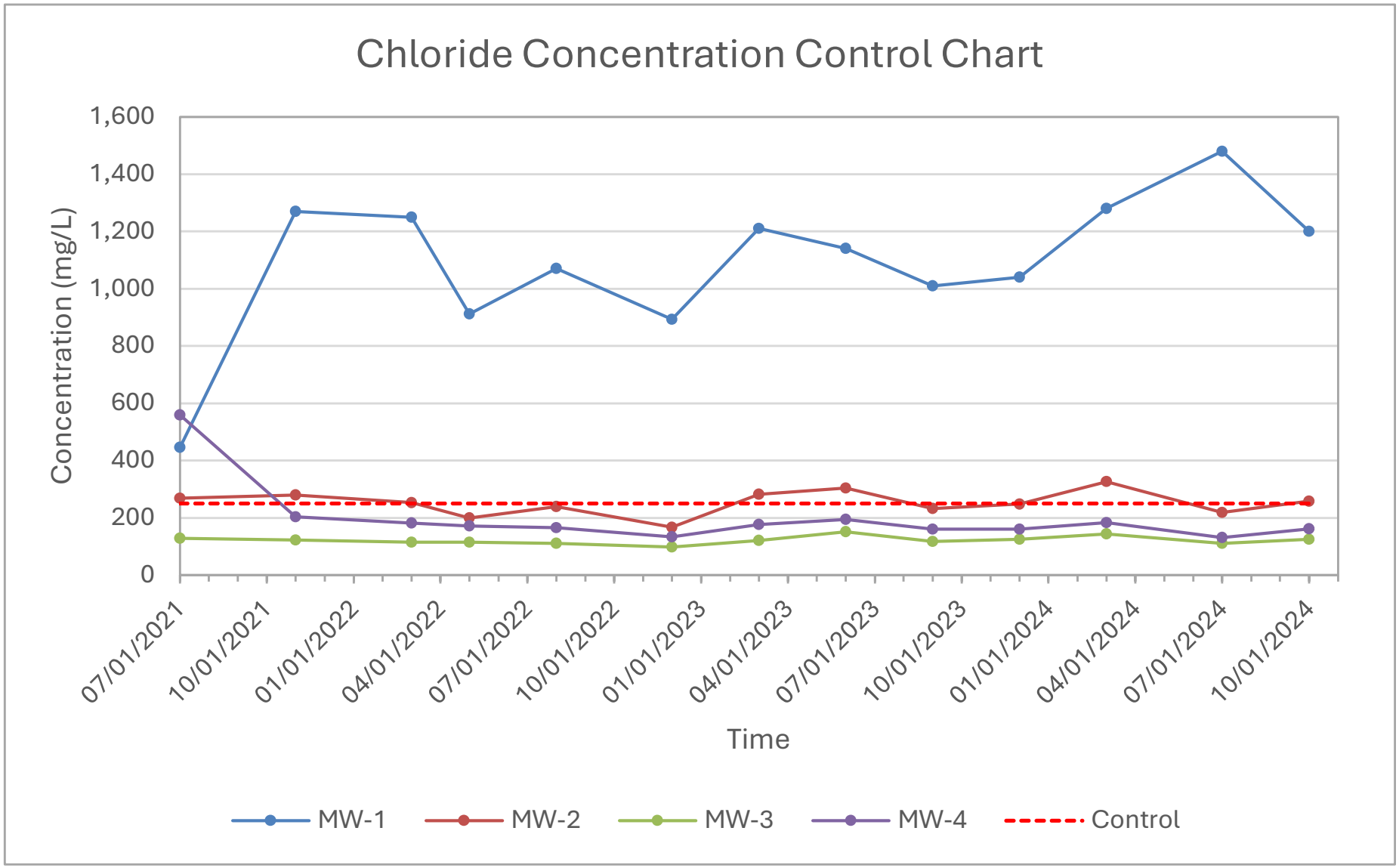
Login Number: 49930
List Number: 1
Creator: Vasquez, Julisa

List Source: Eurofins Midland

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

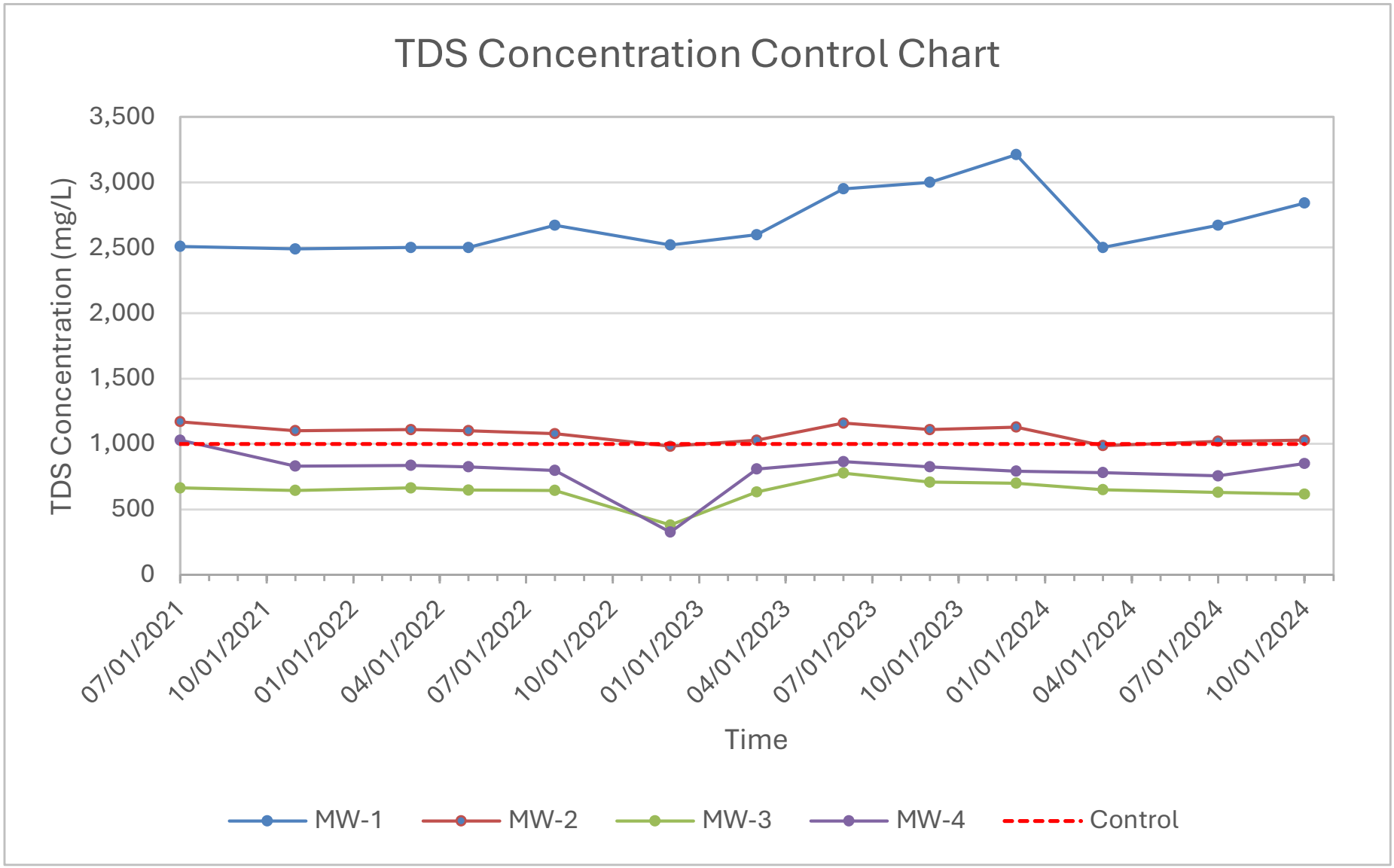
Appendix D

Chloride Control Chart


Chloride Concentration Control Chart
Concentration (mg/L)
1,600
1,400
1,200
1,000
800
600
400
200
0
07/01/2021
10/01/2021
01/01/2022
04/01/2022
07/01/2022
10/01/2022
01/01/2023
04/01/2023
07/01/2023
10/01/2023
01/01/2024
04/01/2024
07/01/2024
10/01/2024
Time
MW-1
MW-2
MW-3
MW-4
Control

Appendix E

TDS Control Chart


TDS Concentration Control Chart
TDS Concentration (mg/L)
3,500
3,000
2,500
2,000
1,500
1,000
500
0
07/01/2021
10/01/2021
01/01/2022
04/01/2022
07/01/2022
10/01/2022
01/01/2023
04/01/2023
07/01/2023
10/01/2023
01/01/2024
04/01/2024
07/01/2024
10/01/2024
Time
MW-1
MW-2
MW-3
MW-4
Control

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

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

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

CONDITIONS

Action 404911

CONDITIONS

Operator: APACHE CORPORATION 303 Veterans Airpark Ln Midland, TX 79705	OGRID: 873
	Action Number: 404911
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
michael.buchanan	Review of the 2024 Third Quarter Groundwater Monitoring Report Northeast Drinkard Unit(s) 829, 830, 922, 928, and 929: content satisfactory 1. Continue to conduct groundwater monitoring as proposed on a quarterly schedule. 2. Analyze samples for BTEX, chloride and TDS 3. Please provide a four (4) day business notice before collecting groundwater samples at the site(s). 4. Please provide sampling notice to the enviro email address at: ocd.enviro@emnrd.nm.gov 5. Submit the 4th Quarter 2024 groundwater monitoring report for the sites by February 30, 2025. 6. Sampling events must be consecutive for all wells. If insufficient volume of groundwater does not allow for the collection of samples, Apache must propose a contingency plan for that situation, drill wells deeper in order to collect a sufficient volume for samples, or provide a variance request as per 19.15.29 NMAC.	12/3/2024