June 17,

2022

Quarterly (2nd) Groundwater Monitoring Report (April- June)
3 Bear Energy Services, LLC, Cottonwood Facility (2RF-128)
Eddy County, New Mexico

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1.0 EXECUTIVE SUMMARY

Larson & Associates, Inc. (LAI) has prepared this report on behalf of 3Bear Energy Services, LLC (3Bear) for submittal to the New Mexico Oil Conservation Division (NMOCD). The report presents the results of 2022 second (2nd) quarter (April - June) groundwater monitoring performed at the Cottonwood Facility (Site) on May 19, 2022. The Site is a produced water recycling facility permitted by NMOCD (2RF-128) and located in Unit N (SE/4, SW/4), Section 20, Township 26 South, and Range 26 East in Eddy County, New Mexico. The geodetic position is North 32.02104° and West -104.31879°. The surface and mineral owner is the U.S. Government administered by the Bureau of Land Management (BLM).

The following activities occurred on May 19, 2022:

- Gauged four (4) monitoring wells (MW-1 through MW-4) for light non-aqueous phase liquid (LNAPL) and depth to groundwater.
- Collect groundwater samples from two (2) wells (MW-1 and MW-4).
- Monitoring well MW-2 and MW-2 had insufficient water for collecting samples.
- Analyzed samples for benzene, toluene, ethylbenzene, xylenes (BTEX) and total petroleum hydrocarbons (TPH) by EPA SW-846 Methods 8021B and 8015, respectively, and chloride by EPA Method 300.0.

The following observations are documented in this report:

- Depth to groundwater ranged from 27.98 feet below ground surface (bgs) at MW-1 to 65.84 feet bgs at MW-4 on May 19, 2022.
- Depth to groundwater during the second quarter (May 19, 2022) decreased (rising conditions) in wells MW-1 (0.66 feet) and MW-4 (2.98 feet) and increased (lowering conditions) in MW-2 (0.27 feet) and MW-3 (2.03 feet) compared to the previous monitoring period (February 24, 2022).
- No samples were collected from monitoring wells MW-2 and MW-3 on May 19, 2022, due to insufficient water for sample collection.
- On May 19, 2022, the groundwater potentiometric surface elevation ranged from 3,432.31 feet above mean sea level (MSL) at well MW-1 (up gradient) to 3,390.22 feet above MSL at MW-4 (cross gradient and down gradient).
- An apparent groundwater divide occurs in the area between monitoring well MW-1 and monitoring well MW-3 that causes groundwater to flow to the northeast towards wells MW-2, east towards MW-3 and southeast towards well MW-4 at gradients between 0.031 and 0.186 feet per foot.
- No significant change in the groundwater elevation, flow direction or gradient was observed during the 2nd quarter monitoring event.
- BTEX concentrations were less than the analytical method reporting limits (RL) in all samples on May 19, 2022.
- TPH reported as diesel range organics (0.264 mg/L) was reported in the sample from MW-4 and is similar to the results reported during earlier events. There is no WQCC human health or domestic water quality standard for TPH.
- Chloride was below the WQCC domestic water quality standard (250 mg/L) in groundwater samples from monitoring well MW-1, which is consistent with previous monitoring periods.
- Chloride exceeded the WQCC domestic water quality standard in the groundwater sample from MW-4 (13,400 mg/L) and is consistent with the previous monitoring periods.
- The Site does not appear to be the source for the TPH and chloride reported in samples from monitoring well MW-4 based on the initial laboratory results from the groundwater samples collected on January 29, 2019.

3 Bear routinely monitors the leak detection system and has found no fluid to indicate a leak from the pond.

3 Bear continues to monitor the leak detection system, as required by the permit conditions, and immediately report any changes to the NMOCD. 3 Bear will also continue monitoring groundwater on a quarterly (4 times per year) schedule. Notification will be provided to the NMOCD at least 7 working days prior to each monitoring event, and as soon as possible upon any significant change in analyte concentrations.

2.0 INTRODUCTION

Larson & Associates, Inc. (LAI) has prepared this report on behalf of 3 Bear Energy Services LLC (3 Bear) for submittal to the New Mexico Oil Conservation Division (NMOCD) to present 2022 quarterly (4 times per year) groundwater monitoring results from four (4) monitoring wells (MW-1, MW-2, MW-3, and MW-4) at the Cottonwood Facility (Site) in Eddy County, New Mexico. This report is for groundwater samples collected during the second (2nd) quarter 2022 on May 19, 2022.

2.1 Background

The Site is permitted by the NMOCD as a produced water recycle facility (2RF-128) located in Unit N (SE 1/4, SW 1/4), Section 20, Township 26 South, and Range 26 East, in Eddy County, New Mexico. The surface and mineral owner is the U.S. Government administered by the Bureau of Land Management (BLM). The geodetic position is North 32.02104° and West -104.31879°. Figure 1 presents a location and topographic map. Figure 2 presents an aerial map.

3.0 DEPTH TO GROUNDWATER AND GROUNDWATER ELEVATION

On May 19, 2022, LAI personnel gauged monitoring wells MW-1 through MW-4 for light non-aqueous phase liquid (LNAPL) and depth to groundwater. LNAPL was not present in the monitoring wells. Groundwater was gauged at 30.74 (MW-1), 56.93 (MW-2), 47.88 (MW-3) and 68.82 (MW-4) feet below top of casing (TOC). Depth to groundwater during the second (2nd) quarter (May 19, 2022) decreased (rising) in wells MW-1 (0.66feet) and MW-4 (2.98 feet) and increased (lowering) in MW-2 (0.27 feet and MW-3 (2.03 feet) compared to the previous monitoring period (February 24, 2022). The groundwater surface in well MW-2 and MW-3 has steadily declined over time from 42.52-feet TOC and 43.55-feet TOC, respectively, on December 12, 2018, to 56.93-feet TOC and 47.88-feet TOC, respectively, on May 19, 2022, and likely due to recharge in fractured bedrock. Wells MW-2 and MW-3 had insufficient water for sample collection on May 19, 2022.

The groundwater potentiometric surface elevation ranged from 3,432.31 feet above mean sea level (MSL) at well MW-1 (up gradient) to 3,390.22 feet above MSL at MW-4 (cross gradient and down gradient). An apparent groundwater divide occurs in the area that causes groundwater to flow to the northeast and east towards wells MW-2 and MW-3, respectively, and southeast towards well MW-4 at gradients between 0.031 and 0.186 feet per foot (ft/ft). No significant change in the groundwater flow direction or gradient was observed on May 19, 2022. Table 1 presents the groundwater gauging summary. Figure 3 presents the groundwater potentiometric map for May 19, 2022. Appendix A presents a control chart for groundwater elevation over time.

4.0 GROUNDWATER SAMPLES AND ANALYSIS

On May 19, 2022, LAI personnel collected groundwater samples from monitoring wells MW-1 using the low stress or low flow method, according to EPA protocol (EQASOP-GW4, Revision 4, September 19, 2017), and disposable Tygon® tubing. The low stress or low flow method uses an environmental pump that 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 the discharge of the dedicated disposable Tygon tubing. The tubing was discarded after each use and the pump was thoroughly cleaned with a solution potable water and laboratory grade detergent (Alconox®) and rinsed with distilled water. Groundwater samples were collected from monitoring wells MW-4 using a dedicated disposable polyethylene bailer after removing approximately three (3) well volumes of groundwater. A duplicate

sample was collected from well MW-1 for laboratory quality assurance and quality control (QA/QC). Groundwater samples were not collected from well MW-2 and MW-3 due to insufficient water (1.77 feet and 5.02 feet, respectively) and accumulated sediment in the well sump reducing the water column/volume.

The samples were carefully transferred to laboratory containers that were labeled, sealed with custody labels, packed in an ice filled chest and delivered under chain of custody to DHL Analytical, Inc. (DHL), a National Environmental Laboratory Accreditation Conference (NELAC) accredited laboratory, located in Round Rock, Texas. DHL analyzed the samples for benzene, toluene, ethylbenzene, xylene (BTEX) according to EPA SW-846 Method SW-8021B, total petroleum hydrocarbons (TPH) according to EPA SW-846 Method 8015M, including gasoline range organics (C6 to C10), diesel range organics (>C10 to C28) and oil range organics (>C28 to C35), and chloride by EPA Method 300. Table 2 presents the laboratory analytical data summary. Appendix B presents the laboratory report.

4.1 Organic Analysis

- BTEX was not detected at concentrations above the analytical method reporting limits (RL) in the groundwater samples from MW-1 and MW-4 on May 19, 2022. TPH reported as diesel range organics (0.264 mg/L) was reported in the sample from MW-4 and is similar to the results reported during earlier events. There is no WQCC human health or domestic water quality standard for TPH.

4.2 Inorganic Analysis

Chloride was reported above the WQCC domestic water quality standard (250 mg/L) in the groundwater sample from monitoring well MW-4 (13,400 mg/L) which is consistent with the initial chloride concentration of 22,300 mg/L reported on January 29, 2019. 3Bear monitors the leak detection system and has found no leaks in the system therefore the source for the chloride is unknown. The duplicate (QA/QC) sample collected from monitoring well MW-1 is within 0.9 percent (236 mg/L) of the original chloride value (194 mg/L) reported for sample MW-1 on May 19, 2022. No data quality exceptions were noted in DHL case narratives. Figure 4 presents a map showing chloride concentrations in groundwater on May 19, 2022.

On January 29, 2019, and May 15, 2019, the laboratory analyzed a precipitate layer that was observed on the groundwater samples from monitoring well MW-4. DHL reported chloride at 87,700 mg/L and 25,900 mg/L, from the precipitate layer on January 29, 2019, and May 15, 2019, respectively. The precipitate is considered naturally occurring and is likely associated with naturally elevated chloride reported in the formation Table 3 presents the precipitate sample analytical data summary.

5.0 CONCLUSIONS

The following observations are documented in this report:

- A hydrologic divide in the vicinity of monitoring well MW-1 causing groundwater to flow to the northeast, east and southeast at gradients between 0.031 and 0.186 ft/ft.
- No significant changes in the groundwater flow direction and gradient were observed on May 19, 2022.
- BTEX compounds were below the laboratory method RLs in all samples on May 19, 2022.

- TPH reported as diesel range organics (0.264 mg/L) was reported in the sample from MW-4 and is similar to the results reported during earlier events. There is no WQCC human health or domestic water quality standard for TPH.
- Chloride was below the WQCC domestic water quality standard in all samples except well MW-4 (13,400 mg/L).
- The Site does not appear to be the source for the chloride reported in samples from monitoring well MW-4 based on laboratory results that are consistent with the initial groundwater sample results on January 29, 2019.
- 3Bear continues to monitor the leak detection system and has found no leaks in the system.

6.0 RECOMMENDATIONS

3 Bear will continue quarterly (4 times per year) groundwater monitoring. LAI will gauge and sample monitoring wells in the following order: MW-2, MW-3, MW-1, and MW-4. Groundwater samples will be collected using the low stress or low flow method and dedicated Tygon® tubing. Wells demonstrating insufficient water volume will not be sampled. Notification will be provided to the OCD at least 7 working days prior to each monitoring event, and as soon as possible upon any significant change in analyte concentrations.

Tables

Table 1
Monitoring Well Completion and Gauging Summary
3 Bear Energy, LLC, Cottonwood Facilty
Eddy County, New Mexico

Well Information									Groundwater Information				
Well	Date	Well Depth (Feet TOC)	Drilled Depth (Feet BGS)	Well Diameter (Inches)	Surfaace Elevation (Feet AMSL)	Screen Interval (Feet BGS)	Casing Stickup (Feet)	TOC Elevation (Feet AMSL)	Date Gauged	Depth to Groundwater (Feet TOC)	Depth to Groundwater (FeetBGS)	Water Column (Feet)	Grounwater Elevation (Feet AMSL)
MW-1	08/15/2018	92.40	89.40	2	3,460.29	74.40 - 89.40	2.76	3,463.05	09/25/2018	31.85	29.09	60.55	3,431.20
									11/13/2018	31.81	29.05	60.59	3,431.24
									12/12/2018	31.69	28.93	60.71	3,431.36
									01/29/2019	32.62	29.86	59.78	3,430.43
									05/15/2019	32.50	29.74	59.90	3,430.55
									09/12/2019	31.51	28.75	60.89	3,431.54
									09/20/2019	32.40	29.64	60.00	3,430.65
									12/04/2019	31.73	28.97	60.67	3,431.32
									02/18/2020	31.50	28.74	60.90	3,431.55
									05/07/2020	31.72	28.96	60.68	3,431.33
									08/13/2020	31.82	29.06	60.58	3,431.23
									10/06/2020	31.89	29.13	60.51	3,431.16
									01/05/2021	31.47	28.71	60.93	3,431.58
									04/29/2021	31.45	28.69	60.95	3,431.60
									06/25/2021	31.84	29.08	60.56	3,431.21
									09/01/2021	31.31	28.55	61.09	3,431.74
									11/18/2021	31.48	28.72	60.92	3,431.57
									02/24/2022	31.40	28.64	61.00	3,431.65
									05/19/2022	30.74	27.98	61.66	3,432.31
MW-2	08/16/2018	58.7	61.70	2	3,455.22	40.70 - 55.70	3.04	3,458.26	09/25/2018	DRY			
									11/13/2018	DRY			
									12/12/2018	42.52	39.48	16.18	3,415.74
									01/29/2019	42.07	39.03	16.63	3,416.19
									05/15/2019	42.70	39.66	16.00	3,415.56
									09/12/2019	43.98	40.94	14.72	3,414.28
									09/20/2019	44.78	41.74	13.92	3,413.48
									12/04/2019	45.01	41.97	13.69	3,413.25
									02/18/2020	45.10	42.06	13.60	3,413.16
									05/07/2020	49.30	46.26	9.40	3,408.96
									08/13/2020	51.69	48.65	7.01	3,406.57
									10/06/2020	52.00	48.96	6.70	3,406.26
									01/05/2021	52.21	49.17	6.49	3,406.05

Table 1
Monitoring Well Completion and Gauging Summary
3 Bear Energy, LLC, Cottonwood Facilty
Eddy County, New Mexico

Well	Date	Well Depth (Feet TOC)	Drilled Depth (Feet BGS)	Well Diameter (Inches)	Surfaace Elevation (Feet AMSL)	Screen Interval (Feet BGS)	Casing Stickup (Feet)	TOC Elevation (Feet AMSL)	Date Gauged	Depth to Groundwater (Feet TOC)	Depth to Groundwater (FeetBGS)	Water Column (Feet)	Grounwater Elevation (Feet AMSL)
										Well Information			Groundwater Information
									04/29/2021	54.75	51.71	3.95	3,403.51
									09/01/2021	56.93	53.89	1.77	3,401.33
									11/18/2021	57.94	54.90	0.76	3,400.32
									02/24/2022	56.88	53.84	1.82	3401.38
									05/19/2022	56.93	53.89	1.77	3401.33
MW-3	08/16/2018	52.9	49.90	2	3,455.52	34.90 - 49.90	3.00	3,458.33	09/25/2018	43.55	40.55	9.40	3,414.78
									11/13/2018	42.65	39.65	10.25	3,415.68
									12/12/2018	42.16	39.16	10.74	3,416.17
									01/29/2019	41.85	38.85	11.05	3,416.48
									05/15/2019	42.61	39.61	10.29	3,415.72
									09/12/2019	44.30	41.30	8.60	3,414.03
									09/20/2019	44.10	41.10	8.80	3,414.23
									12/04/2019	44.83	41.83	8.07	3,413.50
									02/18/2020	45.60	42.60	7.30	3,412.73
									05/07/2020	45.68	42.68	7.22	3,412.65
									08/13/2020	45.64	42.64	7.26	3,412.69
									10/06/2020	46.19	43.19	6.71	3,412.14
									01/05/2021	46.66	43.66	6.24	3,411.67
									04/29/2021	DRY			
									09/01/2021	47.59	44.59	5.31	3,410.74
									11/18/2021	46.98	43.98	5.92	3,411.35
									02/24/2022	45.85	42.85	7.05	3,412.48
									05/19/2022	47.88	44.88	5.02	3,410.45
MW-4	08/14/2018	78.1	75.10	2	3,456.06	60.10 - 75.00	2.98	3,459.04	09/25/2018	DRY			
									11/13/2018	DRY			
									12/12/2018	74.36	71.38	3.74	3,384.68
									01/29/2019	71.34	68.36	6.76	3,387.70
									05/15/2019	71.50	68.52	6.60	3,387.54
									09/12/2019	67.38	64.40	10.72	3,391.66
									09/20/2019	71.41	68.43	6.69	3,387.63
									12/04/2019	66.31	63.33	11.79	3,392.73

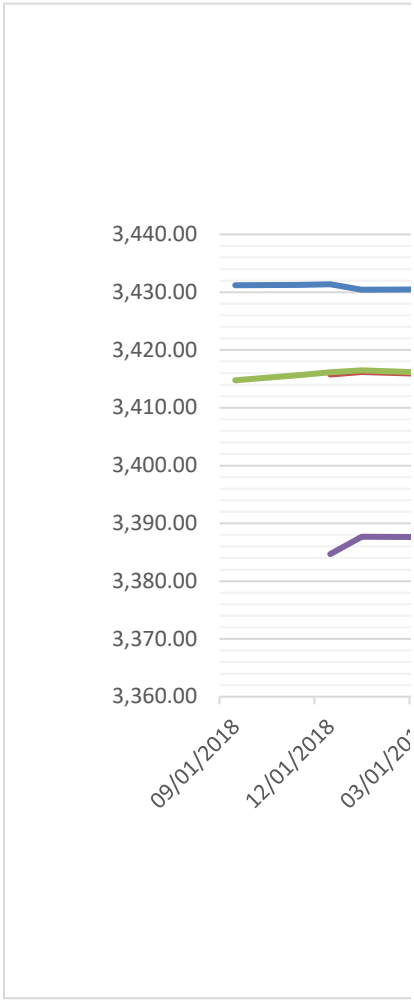
Table 1
Monitoring Well Completion and Gauging Summary
3 Bear Energy, LLC, Cottonwood Facilty
Eddy County, New Mexico

									02/18/2020	71.80	68.82	6.30	3,387.24
									05/07/2020	72.20	69.22	5.90	3,386.84
									08/13/2020	70.10	67.12	8.00	3,388.94
									10/06/2020	68.09	65.11	10.01	3,390.95
									01/05/2021	68.88	65.90	9.22	3,390.16
									04/29/2021	70.14	67.16	7.96	3,388.90
									06/25/2021	69.92	66.94	8.18	3,389.12
									09/01/2021	72.55	69.57	5.55	3,386.49
									11/18/2021	71.61	68.63	6.49	3,387.43
									02/24/2022	70.05	67.07	8.05	3,388.99
									05/19/2022	68.82	65.84	9.28	3,390.22

Notes: monitoring wells installed by Environ-Drill, Albuquerque, New Mexico with 2 inch schedule 40 PVC casing and screen
bgs - below ground surface
TOC - top of casing
AMSL: denotes elevation in feet above mean sea level

GW Elev

Date	MW-1	MW-2	MW-3	MW-4
09/25/2018	3,431.20		3,414.78	
11/13/2018	3,431.24		3,415.63	
12/12/2018	3,431.36	3,415.74	3,416.17	3,384.68
01/29/2019	3,430.43	3,416.19	3,416.48	3,387.70
05/15/2019	3,430.55	3,415.56	3,415.72	3,387.54
09/12/2019	3,431.54	3,414.28	3,414.02	3,391.66
12/04/2019	3,431.32	3,413.25	3,413.50	3,392.73
02/18/2020	3,431.55	3,413.16	3,412.73	3,387.24
05/07/2020	3,431.33	3,408.96	3,412.65	3,386.84
08/13/2020	3,431.23	3,406.57	3,412.69	3,388.94
10/06/2020	3,431.16	3,406.26	3,412.14	3,390.95
01/05/2021	3,431.58	3,406.05	3,411.67	3,390.16
04/29/2021	3,431.60	3,403.51		3,388.90
09/01/2021	3,431.74	3,401.33	3,410.74	3,386.49
11/18/2021	3,431.57	3,400.32	3,411.35	3,387.43
02/24/2022	3,431.65	3,401.33	3,412.48	3,388.99
05/19/2022	3,432.31	3,401.33	3,410.45	3,390.22



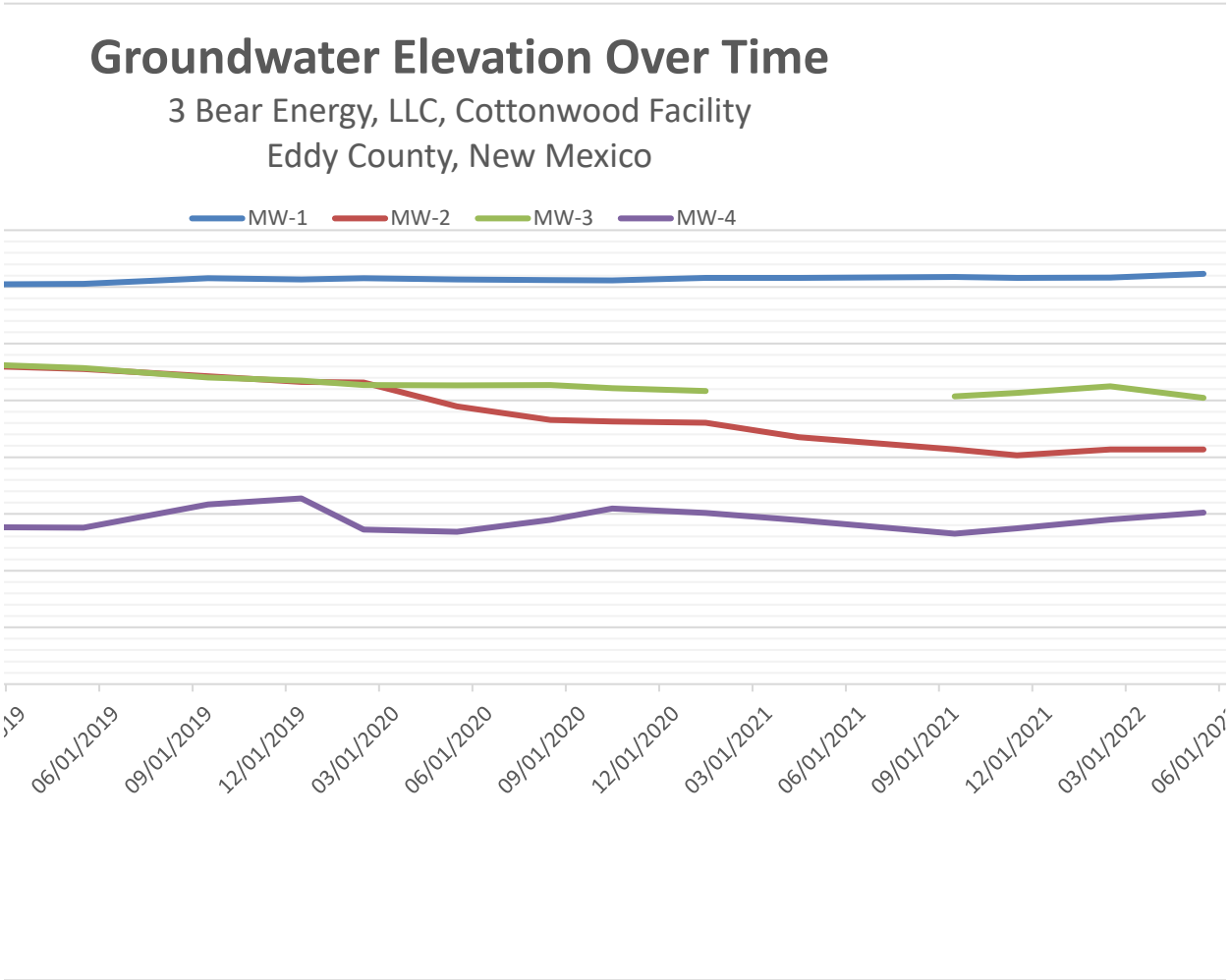

Groundwater Elevation Over Time
3 Bear Energy, LLC, Cottonwood Facility
Eddy County, New Mexico
MW-1
MW-2
MW-3
MW-4
06/01/2019
09/01/2019
12/01/2019
03/01/2020
06/01/2020
09/01/2020
12/01/2020
03/01/2021
06/01/2021
09/01/2021
12/01/2021
03/01/2022

Table 2
Groundwater Sample Organic and Inorganic Analytical Data Summary
3 Bear Energy, LLC, Cottonwood Facility
Eddy County, New Mexico

Well	Collection Date	Benzene (mg/L)	Ethylbenzene (mg/L)	Toluene (mg/L)	Xylenes (mg/L)	GRO C6 - C10 (mg/L)	DRO >C10 - C28 (mg/L)	ORO >C28 - C35 (mg/L)	TPH C6 - C35 (mg/L)	Chloride (mg/L)
QCC Standard:		*0.001	*0.75	*0.75	*0.62					**250
MW-1	09/25/2018	<0.000800	<0.00200	<0.00200	<0.00200	<0.556	<0.556	<0.556	<0.556	210
	11/13/2018	0.00124	<0.00200	<0.00200	<0.00200	<0.527	<0.527	<0.527	<0.527	**1,220**
	12/12/2018	0.0013	<0.00200	<0.00200	<0.00200	<0.537	<0.537	<0.537	<0.537	**677**
	01/29/2019	0.00489	<0.00400	<0.00400	<0.00400	<0.0600	<0.0789	<0.0789	<0.2178	**1,750**
	05/15/2019	<0.000800	<0.00200	<0.00200	<0.00200	<0.0600	<0.0749	<0.0749	<0.7498	214
	09/20/2019	<0.000800	<0.00200	<0.00200	<0.00200	<0.0600	<0.0730	<0.0730	<0.206	248
	12/04/2019	<0.000800	<0.00200	<0.00200	<0.00200	<0.0600	<0.0739	<0.0739	<0.2078	224
	02/18/2020	<0.000800	<0.00200	<0.00200	<0.00200	<0.0600	<0.0772	<0.0772	<0.2144	214
	05/07/2020	<0.000800	<0.00200	<0.00200	<0.00200	<0.0600	<0.0787	<0.0787	<0.2174	246
	08/13/2020	<0.000800	<0.00200	<0.00200	<0.00200	<0.0600	**0.107**	<0.0758	**0.107**	228
	10/06/2020	<0.000800	<0.00200	<0.00200	<0.00200	<0.0600	<0.0782	<0.0782	<0.2164	218
	01/05/2021	<0.000800	<0.00200	<0.00200	<0.00200	<0.0600	<0.0785	<0.0785	<0.2170	192
	04/29/2021	<0.000800	<0.00200	<0.00200	<0.00200	<0.0600	**2.33**	**0.783**	**3.113**	201
	06/25/2021	--	--	--	--	<0.0600	<0.0790	<0.0790	<0.218	--
	09/01/2021	<0.000800	<0.00200	<0.00200	<0.00200	<0.0600	<0.149	<0.149	<0.358	202
	11/18/2021	<0.000800	<0.00200	<0.00200	<0.00200	<0.0600	<0.0836	<0.0836	<0.0836	182
	02/24/2022	<0.008000	<0.00200	<0.00200	<0.00200	<0.0600	<0.0789	<0.0789	<0.0789	228
	05/19/2022	<0.000800	<0.00200	<0.00200	<0.00200	<0.0600	<0.0787	<0.0787	<0.0787	194
MW-2	09/25/2018	Dry								
	11/13/2018	Dry								
	01/29/2019	<0.000800	<0.00200	<0.00200	<0.00200	<0.0600	<0.0767	<0.0767	<0.0767	136
	05/15/2019	<0.000800	<0.00200	<0.00200	<0.00200	<0.0600	<0.0744	<0.0744	<0.2088	106
	09/20/2019	<0.000800	<0.00200	<0.00200	<0.00200	<0.0600	<0.0748	<0.0748	<0.2096	117
	12/04/2019	<0.000800	<0.00200	<0.00200	<0.00200	<0.0600	<0.0751	<0.0751	<0.2102	105
	02/18/2020	<0.000800	<0.00200	<0.00200	<0.00200	<0.0600	<0.0766	<0.0766	<0.2132	120
	05/07/2020	<0.00800	<0.00200	<0.00200	<0.00200	<0.0600	<0.0823	<0.0823	<0.2246	121
	08/13/2020	<0.00800	<0.00200	<0.00200	<0.00200	<0.0600	<0.0841	<0.0841	<0.2282	124
	10/06/2020	<0.000800	<0.00200	<0.00200	<0.00200	<0.0600	<0.0789	<0.0789	<0.2178	137
	01/05/2021	<0.000800	<0.00200	<0.00200	<0.00200	<0.0600	<0.0874	<0.0874	<0.2348	130
	04/29/2021	<0.000800	<0.00200	<0.00200	<0.00200	<0.0600	<0.0946	<0.0946	<0.24.92	132
	09/01/2021	<0.000800	<0.00200	<0.00200	<0.00200	<0.0600	<0.150	<0.150	<0.360	142

Table 2
Groundwater Sample Organic and Inorganic Analytical Data Summary
3 Bear Energy, LLC, Cottonwood Facility
Eddy County, New Mexico

Well	Collection Date	Benzene (mg/L)	Ethylbenzene (mg/L)	Toluene (mg/L)	Xylenes (mg/L)	GRO C6 - C10 (mg/L)	DRO >C10 - C28 (mg/L)	ORO >C28 - C35 (mg/L)	TPH C6 - C35 (mg/L)	Chloride (mg/L)
/QCC Standard:		***0.001**	***0.75**	***0.75**	***0.62**					****250**
	11/18 &22/2021	<0.000800	<0.00200	<0.00200	<0.00200	<0.00600	**1.07**	<0.494	**1.07**	149
	02/24/2022	Insufficient Water for Sample Collection								
	05/19/2022	Insufficent Water for Sample Collection								
MW-3	09/25/2018	<0.000800	<0.00200	<0.00200	<0.00200	<0.554	<0.554	<0.554	<0.554	101
	11/13/2018	<0.000800	<0.00200	<0.00200	<0.00200	<0.574	<0.574	<0.574	<0.574	103
	01/29/2019	<0.000800	<0.00200	<0.00200	<0.00200	<0.0600	<0.0780	<0.0780	<0.0780	140
	05/15/2019	<0.000800	<0.00200	<0.00200	<0.00200	<0.0600	<0.0758	<0.0758	<0.2116	121
	09/20/2019	<0.000800	<0.00200	<0.00200	<0.00200	<0.0600	<0.0737	<0.0737	<0.2074	130
	12/04/2019	<0.000800	<0.00200	<0.00200	<0.00200	<0.0600	<0.0752	<0.0752	<0.2104	111
	02/18/2020	<0.00800	<0.00200	<0.00200	<0.00200	<0.0600	<0.0794	<0.0794	<0.2188	120
	05/07/2020	<0.00800	<0.00200	<0.00200	<0.00200	<0.0600	<0.0997	<0.0997	<0.2594	**305**
	08/13/2020	<0.000800	<0.00200	<0.00200	<0.00200	<0.0600	<0.0822	<0.0822	<0.2244	125
	10/06/2020	<0.000800	<0.00200	<0.00200	<0.00200	<0.0600	<0.0787	<0.0787	<0.2174	111
	01/05/2021	<0.000800	<0.00200	<0.00200	<0.00200	<0.0600	<0.0858	<0.0858	<0.2316	112
	04/29/2021	Dry								
	09/01/2021	<0.000800	<0.00200	<0.00200	<0.00200	<0.0600	<0.150	<0.150	<0.360	123
	11/18/2021	<0.000800	<0.00200	<0.00200	<0.00200	<0.0600	<0.0878	<0.0878	<0.0878	120
	02/24/2022	<0.000800	<0.00200	<0.00200	<0.00200	<0.0600	<0.0783	<0.0783	<0.0783	147
	05/19/2022	Insufficent Water for Sample Collection								
MW-4	09/25/2018	Dry								
	11/13/2018	Dry								
	01/29/2019	<0.000800	<0.00200	<0.00200	<0.00200	<0.0600	**0.216**	<0.110	**0.216**	**22,300**
	05/15/2019	<0.000800	<0.00200	<0.00200	<0.00200	<0.0600	<0.762	<0.762	<0.2114	**22,900**
	09/20/2019	<0.000800	<0.00200	<0.00200	<0.00200	<0.0600	<0.741	<0.741	<0.082	**26,000**
	12/04/2019	<0.000800	<0.00200	<0.00200	<0.00200	<0.600	<0.752	<0.752	<2.104	**24,400**
	02/18/2020	<0.00800	<0.0200	<0.0200	<0.0200	<0.600	<0.577	<0.577	<1.754	**25,800**
	05/07/2020	<0.00800	<0.0200	<0.0200	<0.0200	<0.600	<0.110	<0.110	<0.820	**25,400**
	08/13/2020	<0.00800	<0.00200	<0.00200	<0.00200	<0.600	**0.137**	<0.0566	**0.137**	**19,800**
	10/06/2020	<0.00800	<0.0200	<0.0200	<0.0200	<0.600	**0.251**	<0.0790	**0.251**	**21,000**
	01/05/2021	<0.00800	<0.0200	<0.0200	<0.0200	<0.600	**0.126**	<0.0880	**0.126**	**16,200**
	04/29/2021	<0.00800	<0.0200	<0.0200	<0.0200	<0.600	**0.377**	<0.0906	**0.377**	**16,100**
	06/25/2021	--	--	--	--	<0.600	<0.0900	<0.0900	<0.2400	--
	09/01/2021	<0.000800	<0.00200	<0.00200	<0.00200	<0.0600	<0.149	<0.149	<0.358	**23,600**
	11/18/2021	<0.00800	<0.0200	<0.0200	<0.0200	<0.600	**0.118**	<0.0840	**0.118**	**17,500**
	02/24/2022	<0.00800	<0.0200	<0.0200	<0.0200	<0.0600	<0.0853	<0.0853	<0.0853	**20,400**
	05/19/2022	<0.00800	<0.0200	<0.0200	<0.0200	<0.600	**0.264**	<0.0787	**0.264**	**13,400**
	QA/QC (Duplicate) Samples									
up-1 (MW-	02/18/2020	<0.000800	<0.00200	<0.00200	<0.00200	<0.0600	<0.0802	<0.0802	<0.2204	210
up-1 (MW-	05/07/2020	<0.000800	<0.00200	<0.00200	<0.00200	<0.0600	<0.0800	<0.0800	<0.2200	221
up-1 (MW-	08/13/2020	<0.000800	<0.00200	<0.00200	<0.00200	<0.0600	<0.0747	<0.0747	<0.2094	213

Table 2
Groundwater Sample Organic and Inorganic Analytical Data Summary
3 Bear Energy, LLC, Cottonwood Facility
Eddy County, New Mexico

Well	Collection Date	Benzene (mg/L)	Ethylbenzene (mg/L)	Toluene (mg/L)	Xylenes (mg/L)	GRO C6 - C10 (mg/L)	DRO >C10 - C28 (mg/L)	ORO >C28 - C35 (mg/L)	TPH C6 - C35 (mg/L)	Chloride (mg/L)
/QCC Standard:		*0.001	*0.75	*0.75	*0.62					**250
up-1 (MW-	10/06/2020	<0.000800	<0.00200	<0.00200	<0.00200	<0.0600	<0.0785	<0.0785	<0.2170	196
up-1 (MW-	01/05/2021	<0.000800	<0.00200	<0.00200	<0.00200	<0.0600	<0.0751	<0.0751	<0.2102	194
up-1 (MW-	04/29/2021	<0.000800	<0.00200	<0.00200	<0.00200	<0.0600	<0.0918	<0.0918	<0.2436	199
up-1 (MW-	06/25/2021	--	--	--	--	<0.0600	<0.0775	<0.0775	<0.2150	--
up-1 (MW-	09/01/2021	<0.000800	<0.00200	<0.00200	<0.00200	<0.0600	<0.1490	<0.1490	<0.898	204
up-1 (MW-	11/18/2021	<0.000800	<0.00200	<0.00200	<0.00200	<0.00600	<0.0816	<0.0816	<0.0816	183
up-1 (MW-	02/24/2022	<0.000800	<0.00200	<0.00200	<0.00200	<0.0600	<0.0832	<0.0832	<0.0832	198
up-1 (MW-	05/19/2022	<0.000800	<0.00200	<0.00200	<0.00200	<0.0600	<0.0786	<0.0786	<0.0786	236

Notes: Analysis performed by DHL Analytical, Round Rock, Texas, by EPA SW-846 Method 8021B (BTEX), Method 8015M (TPH) and Method 300 (chloride)
All values reported in milligrams per liter (mg/L) equivelent to parts per million (ppm)
-- No data available
< values - denootes concentration is less than method reporting limit (RL).
* - Human health standard
** - Domestic water quality standard
([1]) - resampled on June 25, 2021 due to sample being collected from polyethylene tubing.

Table 3
Groundwater Precipitate Sample Analytical Data Summary
3Bears Cottonwood Facility
Eddy County, New Mexico

Well No.	Collection Date	Barium (mg/L)	Calcium (mg/L)	Iron (mg/L)	Magnesium (mg/L)	Potassium (mg/L)	Sodium (mg/L)	Strontium (mg/L)
MW-4	1/29/2019	<0.463	347	46.9	20,500	894	87,700	8.87
	5/15/2019	--	333	--	50,500	2,370	25,900	--

Well No.	Collection Date	Bicarbonate mg/L	Carbonate mg/L	Hydroxide mg/L	Total mg/L			
MW-4	1/29/2019	--	--	--	--			
	5/15/2019	5140	<	<	5140			
MW-2	5/15/2019	116	<	<	116			

Notes: Analysis performed by DHL Analytical, Round Rock, Texas, by EPA SW-846 Method 8021B (BTEX), Method 8015M (TPH) and Method 300 (chloride)
All values reported in milligrams per liter (mg/L) equivelent to parts per million (ppm)
-- No data vailable
< values - denootes concentration is less than method reporting limit (RL).
* - Human health standard
** - Domestic water quality standard

Figures

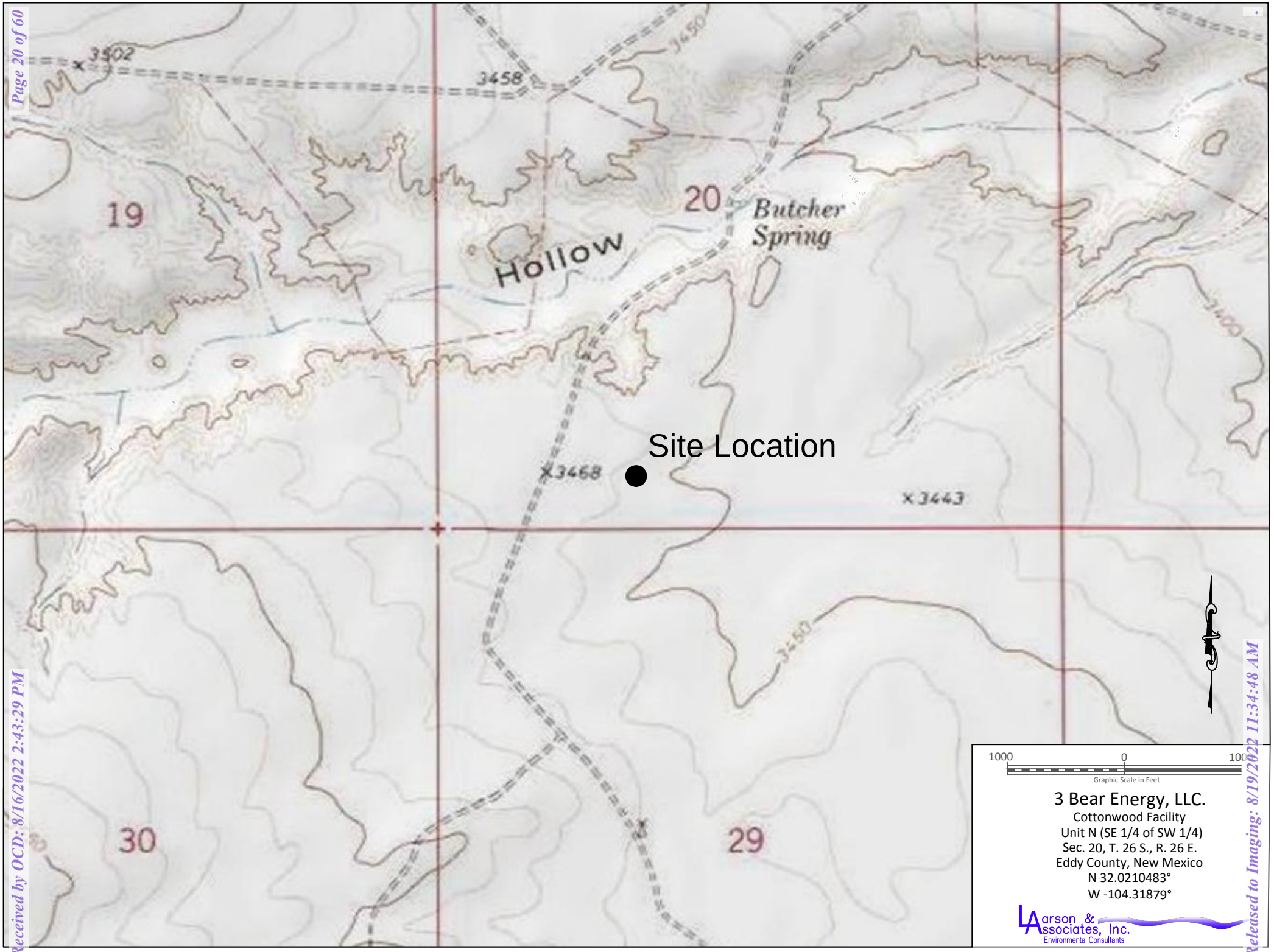


Figure 1 - Topographic Map

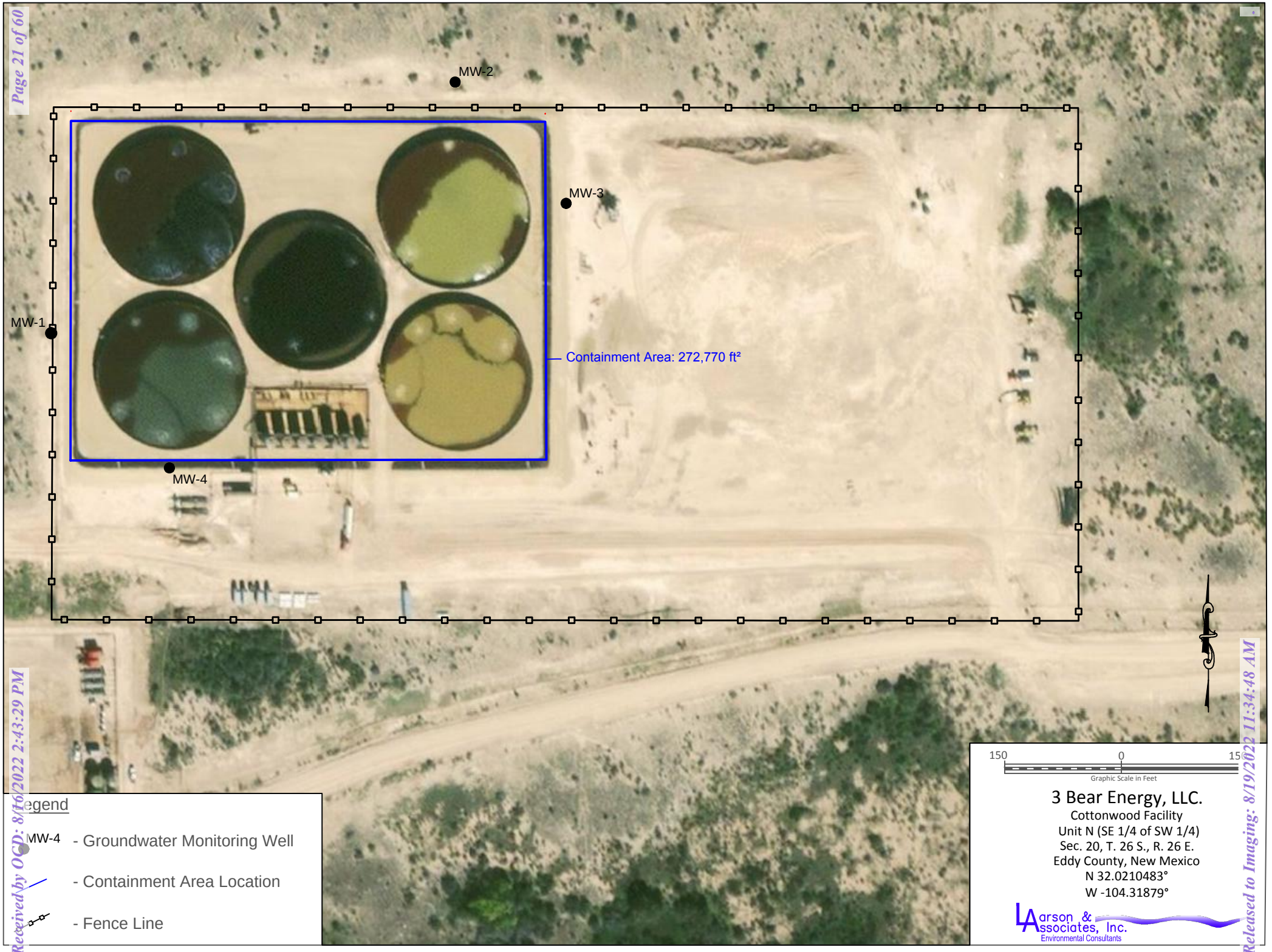
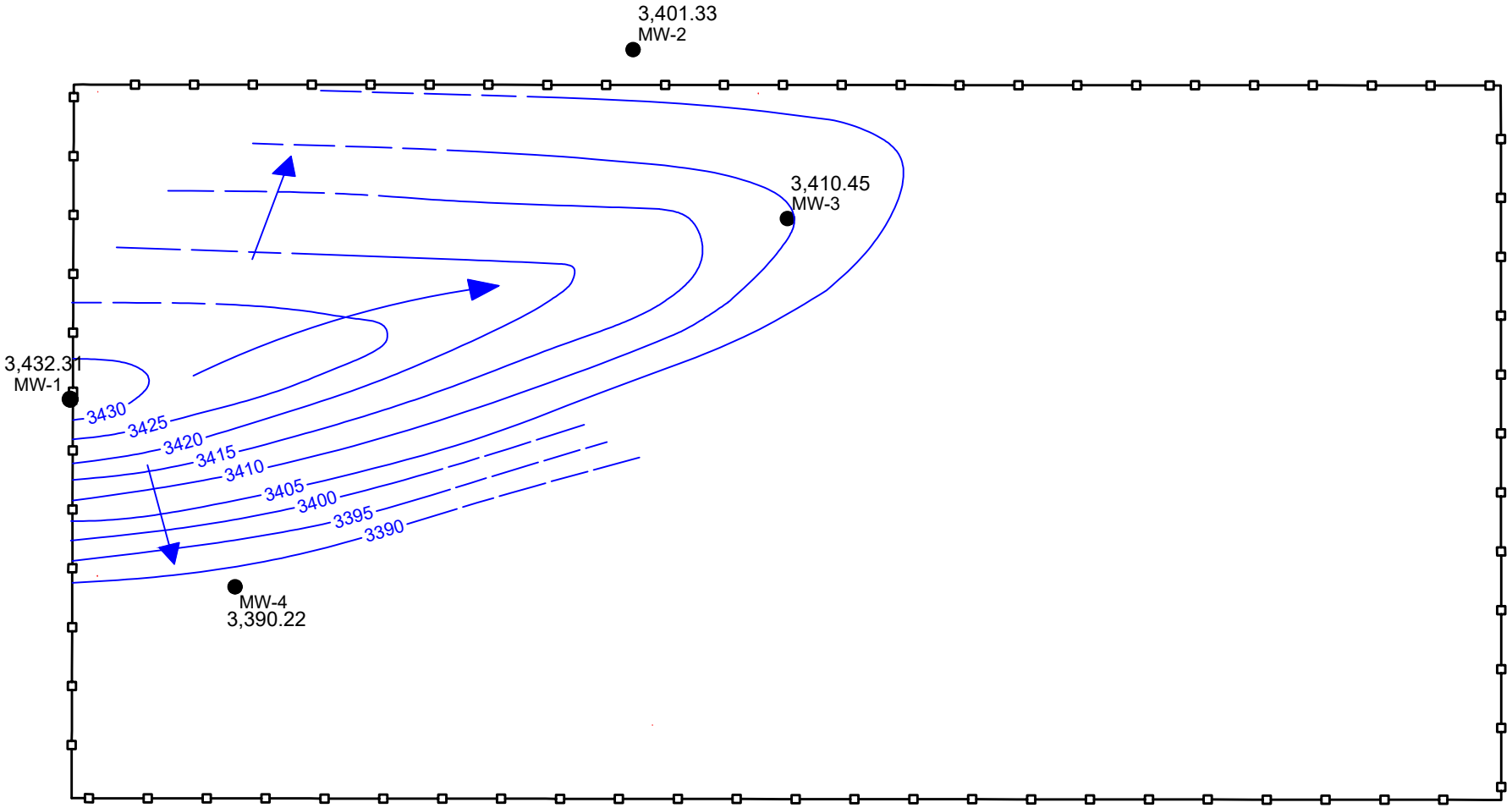


Figure 2 - Aerial Map



Legend

MW-4 - Monitoring Well Location and Groundwater Potentiometric Surface Elevation, Feet AMSL, May 19, 2022

3425 - Contour of Groundwater Potentiometric Surface Elevation, Feet AMSL, May 19, 2022

- Groundwater Flow Direction

- Fence

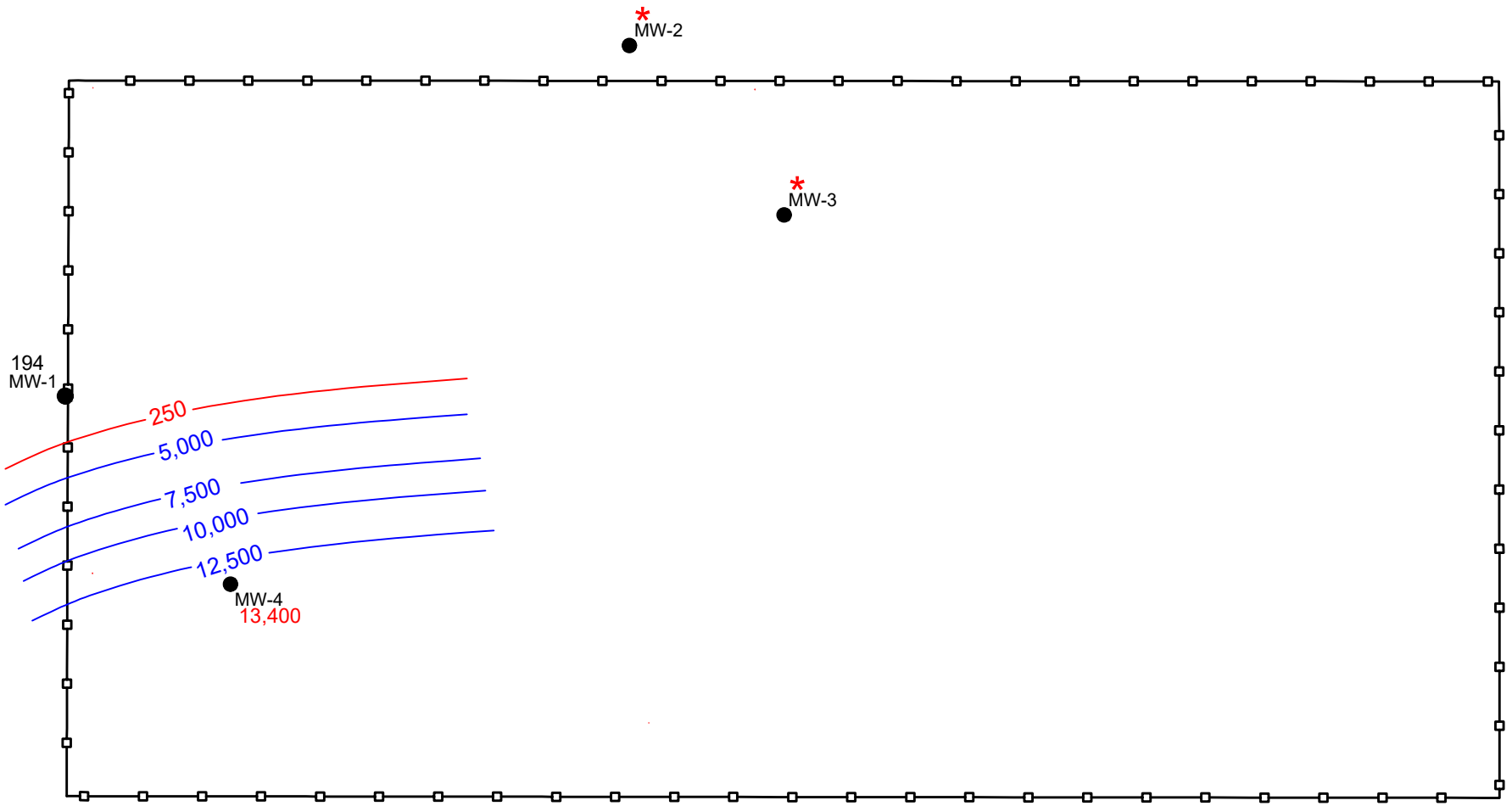
150 0 150

Graphic Scale in Feet

3 Bear Energy LLC.,
Cottonwood Facility
Unit N (SE 1/4 of SW 1/4)
Sec. 20, T. 26 S., R. 26 E.
Eddy County, New Mexico
N 32.0210483°
W -104.31879°

Larson & Associates, Inc.
Environmental Consultants

Figure 3 - Groundwater Potentiometric Map, May 19, 2022



Legend

- 6400 MW-4 - Monitoring Well Location and Chloride Concentration in Groundwater, mg/L, May 19, 2022
- 500 - Contour of Chloride Concentration Elevation, mg/L, May 19, 2022
- Fence
- Insufficient Water for Sample

150 0 150
Graphic Scale in Feet

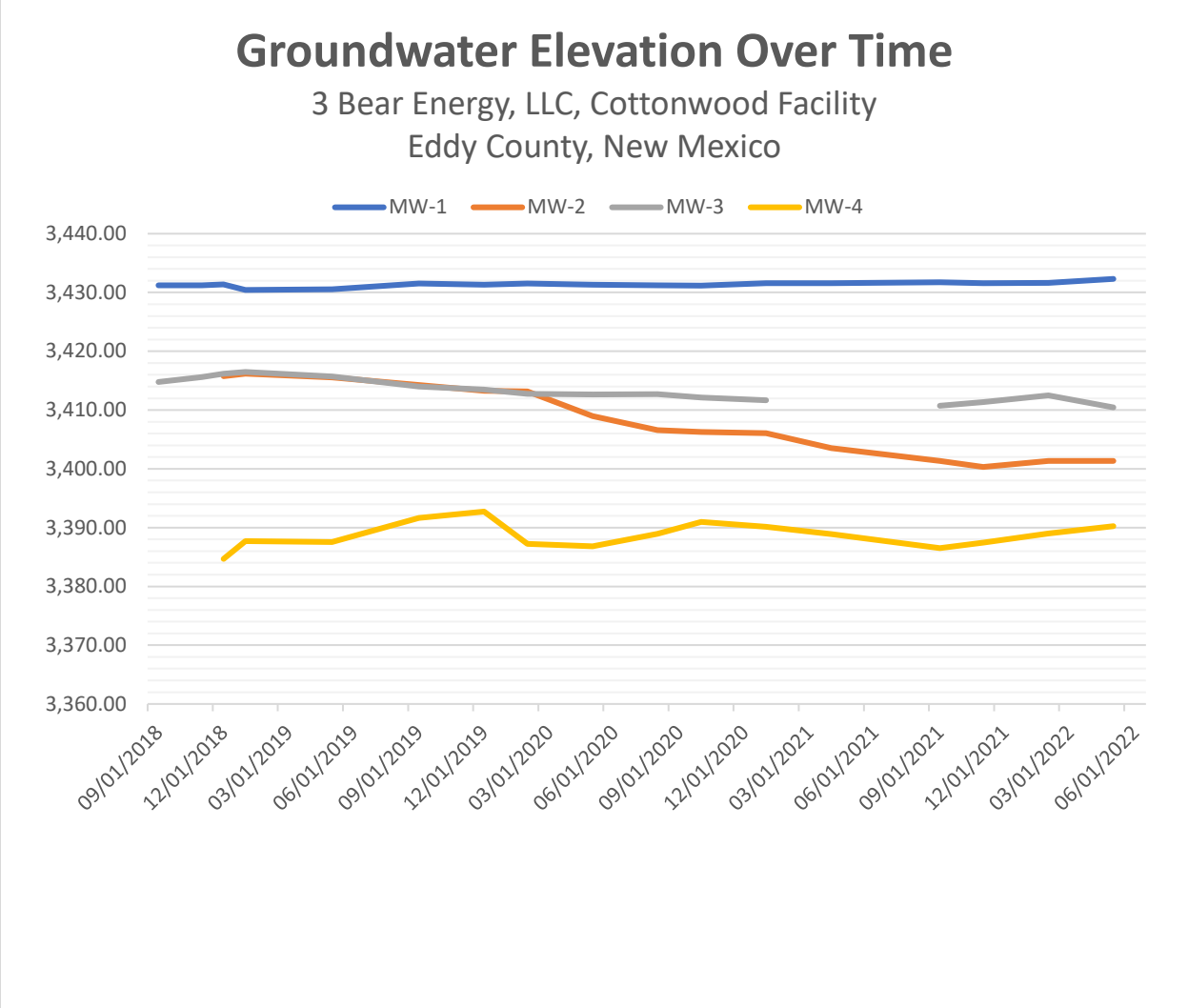
3 Bear Energy LLC.,
Cottonwood Facility
Unit N (SE 1/4 of SW 1/4)
Sec. 20, T. 26 S., R. 26 E.
Eddy County, New Mexico
N 32.0210483°
W -104.31879°

Larson & Associates, Inc.
Environmental Consultants

Figure 4 - Chloride Concentration in Groundwater, May 19, 2022

Appendix A

Groundwater Elevation Over Time Control Chart


Groundwater Elevation Over Time
3 Bear Energy, LLC, Cottonwood Facility
Eddy County, New Mexico
MW-1
MW-2
MW-3
MW-4
3,440.00
3,430.00
3,420.00
3,410.00
3,400.00
3,390.00
3,380.00
3,370.00
3,360.00
09/01/2018
12/01/2018
03/01/2019
06/01/2019
09/01/2019
12/01/2019
03/01/2020
06/01/2020
09/01/2020
12/01/2020
03/01/2021
06/01/2021
09/01/2021
12/01/2021
03/01/2022
06/01/2022

Appendix B

Laboratory Analytical Reports

June 02, 2022

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

Order No.: 2205241

RE: LMPSU Trash Pit

Dear Mark Larson:

DHL Analytical, Inc. received 5 sample(s) on 5/24/2022 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,

John DuPont
General Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification Number: T104704211-21-27

Table of Contents

№ 1896

CHAIN-OF-CUSTODY

Larson & Associates, Inc.
Environmental Consultants

507 N. Marienfeld, Ste. 202
Midland, TX 79701
432-687-0901

Data Reported to:

DATE: 5/15/2022 PAGE 1 OF 1

PO#: LAB WORK ORDER#: 2205241

PROJECT LOCATION OR NAME: LMPSU Trash Pit

LAI PROJECT #: 14-0107-01 COLLECTOR: DSC / TP

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 x 3	HNO3	H_2SO_4 ☐ NaOH ☐	ICE x 2	UNPRESSERVED	BTEX ☒ MTBE ☐	TRPH 418.1 ☐ TPH 1005 ☐ TPH 1006 ☐	GASOLINE MOD 8015 ☐	DIESEL - MOD 8015 ☐	OIL - MOD 8015 ☐	VOC 8260 ☐	SVOC 8270 ☐ PAH 8270 ☐ HOLDPAH ☐	8081 PESTICIDES ☐ 8151 HERBICIDES ☐	8082 PCBS ☐	TCLP - METALS (RCRA) ☐ TCLP VOC ☐	TCLP - PEST ☐ HERB ☐ Semi-VOC ☐	TOTAL METALS (RCRA) ☐ OTHER LIST ☐	LEAD - TOTAL ☐ D.W. 200.8 ☐ TCLP ☐	RCI ☐ TOX ☐ FLASHPOINT ☐	TDS ☒ TSS ☐ % MOISTURE ☐ CYANIDE ☐	pH ☐ HEXAVALENT CHROMIUM ☐	EXPLOSIVES ☐ PECHLORATE ☐	CHLORIDE ☒ ANIONS ☐ ALKALINITY ☒	Sulfate	Dissolved Cations	FIELD NOTES
MW-2	01	5/15/22	1020	W	5	3			X		X														X			X	X	X	
MW-4	02		1120								X														X			X	X	X	
MW-3	03		1200								X														X			X	X	X	
MW-1	04		1240								X														X			X	X	X	
Dup-1	05										X														X			X	X	X	

TOTAL ~~4~~ 5

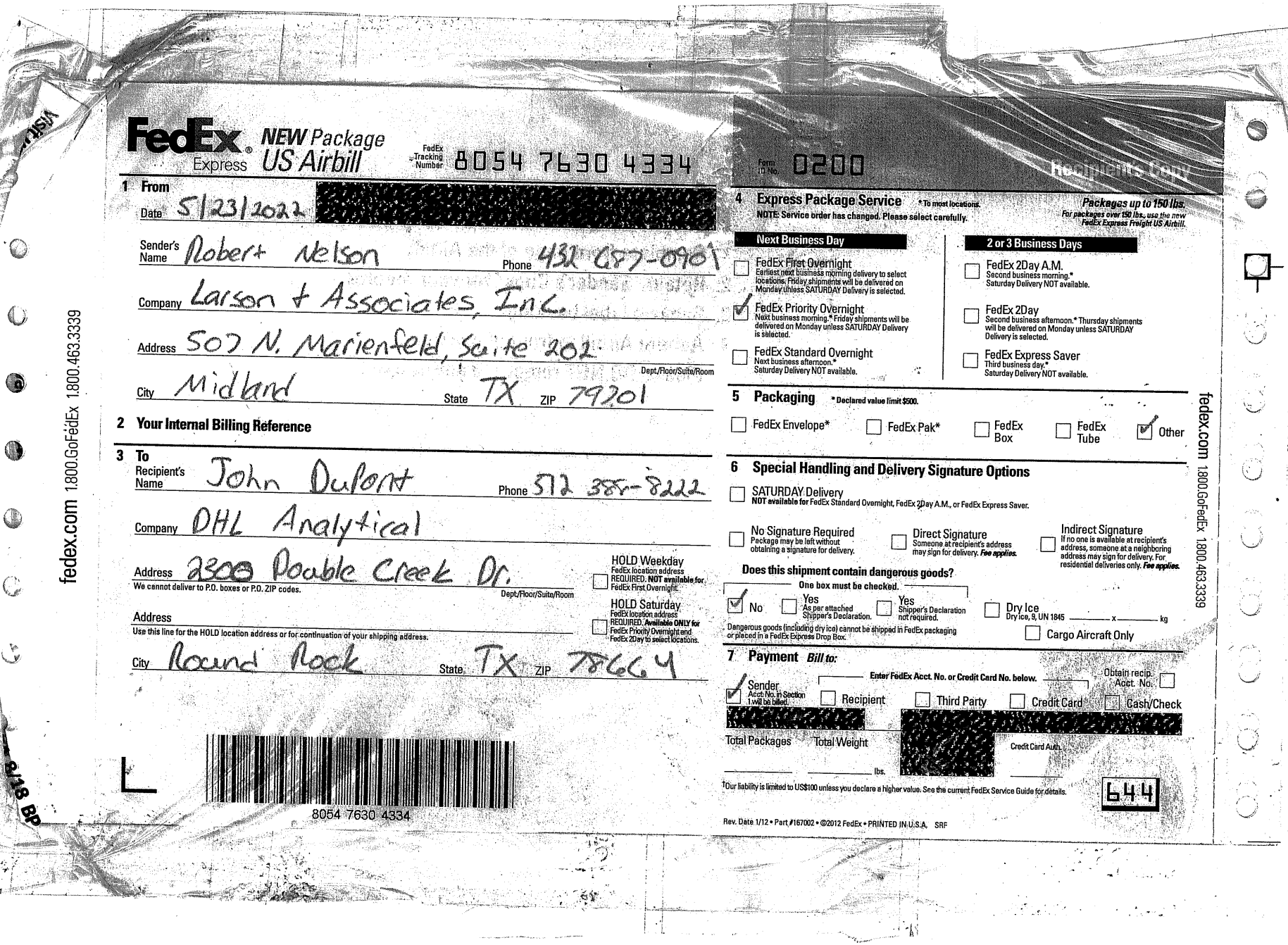
RELINQUISHED BY:(Signature)	DATE/TIME	RECEIVED BY: (Signature)
[signature]	5/23/22 1615	[signature] Fedex
Fedex	5/24/22 0850	[signature]

LABORATORY: DHL

3

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

LABORATORY USE ONLY:
RECEIVING TEMP: 4.1°C THERM#: 78
CUSTODY SEALS - ☐ BROKEN ☐ INTACT ☑ NOT USED
☐ CARRIER BILL # Via Fedex
☐ HAND DELIVERED



FedEx Express **NEW Package US Airbill**

FedEx Tracking Number 8054 7630 4334

Form ID No. 0200

Recipient's Copy

1 From

Date 5/23/2022

Sender's Name Robert Nelson Phone 432 687-0901

Company Larson & Associates, Inc.

Address 507 N. Marienfeld, Suite 202

Dept/Floor/Suite/Room

City Midland State TX ZIP 79701

2 Your Internal Billing Reference

3 To

Recipient's Name John DuPont Phone 512 388-8222

Company DHL Analytical

Address 2300 Double Creek Dr.

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Dept/Floor/Suite/Room

Address

Use this line for the HOLD location address or for continuation of your shipping address.

City Round Rock State TX ZIP 78664

HOLD Weekday
FedEx location address REQUIRED. NOT available for FedEx First Overnight.

HOLD Saturday
FedEx location address REQUIRED. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

8054 7630 4334

4 Express Package Service * To most locations.

NOTE: Service order has changed. Please select carefully.

Packages up to 150 lbs.
For packages over 150 lbs., use the new FedEx Express Freight US Airbill.

Next Business Day

- ☐ FedEx First Overnight — Earliest next business morning delivery to select locations. Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- ☑ FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- ☐ FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.

2 or 3 Business Days

- ☐ FedEx 2Day A.M. — Second business morning.* Saturday Delivery NOT available.
- ☐ FedEx 2Day — Second business afternoon.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- ☐ FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

5 Packaging * Declared value limit $500.

☐ FedEx Envelope* ☐ FedEx Pak* ☐ FedEx Box ☐ FedEx Tube ☑ Other

6 Special Handling and Delivery Signature Options

☐ SATURDAY Delivery
NOT available for FedEx Standard Overnight, FedEx 2Day A.M., or FedEx Express Saver.

☐ No Signature Required — Package may be left without obtaining a signature for delivery.

☐ Direct Signature — Someone at recipient's address may sign for delivery. Fee applies.

☐ Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. Fee applies.

Does this shipment contain dangerous goods?

One box must be checked.

☑ No ☐ Yes As per attached Shipper's Declaration. ☐ Yes Shipper's Declaration not required. ☐ Dry Ice Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box. ☐ Cargo Aircraft Only

7 Payment *Bill to:*

Enter FedEx Acct. No. or Credit Card No. below.

☑ Sender Acct. No. in Section 1 will be billed. ☐ Recipient ☐ Third Party ☐ Credit Card ☐ Cash/Check

Obtain recip. Acct. No. ☐

Total Packages [redacted] Total Weight [redacted] lbs. Credit Card Auth. [redacted]

†Our liability is limited to US$100 unless you declare a higher value. See the current FedEx Service Guide for details.

644

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8/18 BP

DHL Analytical, Inc.

Sample Receipt Checklist

Client Name **Larson & Associates** Date Received: **5/24/2022**

Work Order Number **2205241** Received by: **KAO**

Checklist completed by: Signature 5/24/2022 Date Reviewed by Initials 5/24/2022 Date

Carrier name: FedEx 1day

Shipping container/cooler in good condition?	Yes ✓	No	Not Present
Custody seals intact on shipping container/cooler?	Yes	No	Not Present ✓
Custody seals intact on sample bottles?	Yes	No	Not Present ✓
Chain of custody present?	Yes ✓	No	
Chain of custody signed when relinquished and received?	Yes ✓	No	
Chain of custody agrees with sample labels?	Yes ✓	No	
Samples in proper container/bottle?	Yes ✓	No	
Sample containers intact?	Yes ✓	No	
Sufficient sample volume for indicated test?	Yes ✓	No	
All samples received within holding time?	Yes ✓	No	
Container/Temp Blank temperature in compliance?	Yes ✓	No	4.1 °C
Water - VOA vials have zero headspace?	Yes ✓	No	No VOA vials submitted
Water - pH<2 acceptable upon receipt?	Yes ✓	No	NA LOT # 13171
	Adjusted? no		Checked by EL
Water - ph>9 (S) or ph>10 (CN) acceptable upon receipt?	Yes	No	NA ✓ LOT #
	Adjusted?		Checked by

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

Client contacted: Date contacted: Person contacted

Contacted by: Regarding:

Comments:

Corrective Action:

Page 1 of 1

DHL Analytical, Inc. **Date:** *02-Jun-22*

CLIENT: Larson & Associates
Project: LMPSU Trash Pit
Lab Order: 2205241

CASE NARRATIVE

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

Method SW8260D - Volatile Organics Analysis
Method SW6020B - Metals Analysis
Method E300 - Anions Analysis
Method M2320 B - Alkalinity Analysis
Method M2540C - TDS Analysis

LOG IN

The samples were received and log-in performed on 5/24/22. A total of 5 samples were received. The samples arrived in good condition and were properly packaged.

METALS ANALYSIS

For Metals analysis performed on 5/31/22 and 6/1/22 the matrix spike and matrix spike duplicate recoveries were out of control limits for Calcium and Sodium. These are flagged accordingly in the QC summary report. The reference sample selected for the matrix spike and matrix spike duplicate was not from this work order. The LCS was within control limits for these analytes. No further corrective actions were taken.

For Metals analysis performed on 5/31/22 the PDS recovery was out of control limits for three analytes. These are flagged accordingly. The serial dilution was within control limits for these analytes. No further corrective actions were taken.

ANIONS ANALYSIS

For Anions analysis performed on 5/25/22 the matrix spike and matrix spike duplicate recoveries (2205241-04 MS/MSD) were slightly below control limits for Chloride. This was due to matrix effect. These are flagged accordingly in the QC summary report. The reference sample selected for the matrix spike and matrix spike duplicate (2205241-04 MS/MSD) was from this work order. The LCS was within control limits for this analyte. No further corrective actions were taken.

DHL Analytical, Inc.

Date: *02-Jun-22*

CLIENT: Larson & Associates
Project: LMPSU Trash Pit
Lab Order: 2205241

Work Order Sample Summary

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
2205241-01	MW-2		05/18/22 10:20 AM	5/24/2022
2205241-02	MW-4		05/18/22 11:20 AM	5/24/2022
2205241-03	MW-3		05/18/22 12:00 PM	5/24/2022
2205241-04	MW-1		05/18/22 12:40 PM	5/24/2022
2205241-05	Dup-1		05/18/22	5/24/2022

DHL Analytical, Inc.

02-Jun-22

Lab Order: 2205241
Client: Larson & Associates
Project: LMPSU Trash Pit

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
2205241-01A	MW-2	05/18/22 10:20 AM	Aqueous	SW5030C	Purge and Trap Water GC/MS	05/24/22 01:09 PM	105492
2205241-01B	MW-2	05/18/22 10:20 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/31/22 08:16 AM	105581
	MW-2	05/18/22 10:20 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/31/22 08:16 AM	105581
2205241-01D	MW-2	05/18/22 10:20 AM	Aqueous	M2320 B	Alkalinity Preparation	05/26/22 08:26 AM	105522
	MW-2	05/18/22 10:20 AM	Aqueous	E300	Anion Preparation	05/25/22 10:30 AM	105511
	MW-2	05/18/22 10:20 AM	Aqueous	M2540C	TDS Preparation	05/24/22 11:38 AM	105488
2205241-02A	MW-4	05/18/22 11:20 AM	Aqueous	SW5030C	Purge and Trap Water GC/MS	05/24/22 01:09 PM	105492
2205241-02B	MW-4	05/18/22 11:20 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/31/22 08:16 AM	105581
	MW-4	05/18/22 11:20 AM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/31/22 08:16 AM	105581
2205241-02D	MW-4	05/18/22 11:20 AM	Aqueous	M2320 B	Alkalinity Preparation	05/26/22 08:26 AM	105522
	MW-4	05/18/22 11:20 AM	Aqueous	E300	Anion Preparation	05/25/22 10:30 AM	105511
	MW-4	05/18/22 11:20 AM	Aqueous	E300	Anion Preparation	05/25/22 10:30 AM	105511
	MW-4	05/18/22 11:20 AM	Aqueous	M2540C	TDS Preparation	05/24/22 11:38 AM	105488
2205241-03A	MW-3	05/18/22 12:00 PM	Aqueous	SW5030C	Purge and Trap Water GC/MS	05/24/22 01:09 PM	105492
2205241-03B	MW-3	05/18/22 12:00 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/31/22 08:16 AM	105581
	MW-3	05/18/22 12:00 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/31/22 08:16 AM	105581
2205241-03D	MW-3	05/18/22 12:00 PM	Aqueous	M2320 B	Alkalinity Preparation	05/26/22 08:26 AM	105522
	MW-3	05/18/22 12:00 PM	Aqueous	E300	Anion Preparation	05/25/22 10:30 AM	105511
	MW-3	05/18/22 12:00 PM	Aqueous	M2540C	TDS Preparation	05/24/22 11:38 AM	105488
2205241-04A	MW-1	05/18/22 12:40 PM	Aqueous	SW5030C	Purge and Trap Water GC/MS	05/24/22 01:09 PM	105492
2205241-04B	MW-1	05/18/22 12:40 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/31/22 08:16 AM	105581
	MW-1	05/18/22 12:40 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/31/22 08:16 AM	105581
2205241-04D	MW-1	05/18/22 12:40 PM	Aqueous	M2320 B	Alkalinity Preparation	05/26/22 08:26 AM	105522
	MW-1	05/18/22 12:40 PM	Aqueous	E300	Anion Preparation	05/25/22 10:30 AM	105511
	MW-1	05/18/22 12:40 PM	Aqueous	E300	Anion Preparation	05/25/22 10:30 AM	105511
	MW-1	05/18/22 12:40 PM	Aqueous	M2540C	TDS Preparation	05/24/22 11:38 AM	105488
2205241-05A	Dup-1	05/18/22	Aqueous	SW5030C	Purge and Trap Water GC/MS	05/24/22 01:09 PM	105492
2205241-05B	Dup-1	05/18/22	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/31/22 08:16 AM	105581

DHL Analytical, Inc.

02-Jun-22

Lab Order: 2205241
Client: Larson & Associates
Project: LMPSU Trash Pit

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
2205241-05B	Dup-1	05/18/22	Aqueous	SW3005A	Aq Prep Metals: Dissolved	05/31/22 08:16 AM	105581
2205241-05D	Dup-1	05/18/22	Aqueous	M2320 B	Alkalinity Preparation	05/26/22 08:26 AM	105522
	Dup-1	05/18/22	Aqueous	E300	Anion Preparation	05/25/22 10:30 AM	105511
	Dup-1	05/18/22	Aqueous	M2540C	TDS Preparation	05/24/22 11:38 AM	105488

Lab Order: 2205241
Client: Larson & Associates
Project: LMPSU Trash Pit

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
2205241-01A	MW-2	Aqueous	SW8260D	Volatile Aromatics by GC/MS	105492	1	05/24/22 03:33 PM	GCMS3_220524A
2205241-01B	MW-2	Aqueous	SW6020B	Metals-ICPMS (0.45µ filtered)	105581	10	06/01/22 11:44 AM	ICP-MS4_220601A
	MW-2	Aqueous	SW6020B	Metals-ICPMS (0.45µ filtered)	105581	1	05/31/22 03:03 PM	ICP-MS5_220531A
2205241-01D	MW-2	Aqueous	M2320 B	Alkalinity	105522	1	05/26/22 12:00 PM	TITRATOR_220526A
	MW-2	Aqueous	E300	Anions by IC method - Water	105511	10	05/26/22 02:49 AM	IC4_220525A
	MW-2	Aqueous	M2540C	Total Dissolved Solids	105488	1	05/24/22 04:40 PM	WC_220524A
2205241-02A	MW-4	Aqueous	SW8260D	Volatile Aromatics by GC/MS	105492	1	05/24/22 04:00 PM	GCMS3_220524A
2205241-02B	MW-4	Aqueous	SW6020B	Metals-ICPMS (0.45µ filtered)	105581	10	06/01/22 11:46 AM	ICP-MS4_220601A
	MW-4	Aqueous	SW6020B	Metals-ICPMS (0.45µ filtered)	105581	1	05/31/22 03:06 PM	ICP-MS5_220531A
2205241-02D	MW-4	Aqueous	M2320 B	Alkalinity	105522	1	05/26/22 12:11 PM	TITRATOR_220526A
	MW-4	Aqueous	E300	Anions by IC method - Water	105511	100	05/25/22 08:10 PM	IC4_220525A
	MW-4	Aqueous	E300	Anions by IC method - Water	105511	10	05/26/22 03:08 AM	IC4_220525A
	MW-4	Aqueous	M2540C	Total Dissolved Solids	105488	1	05/24/22 04:40 PM	WC_220524A
2205241-03A	MW-3	Aqueous	SW8260D	Volatile Aromatics by GC/MS	105492	1	05/24/22 04:26 PM	GCMS3_220524A
2205241-03B	MW-3	Aqueous	SW6020B	Metals-ICPMS (0.45µ filtered)	105581	20	06/01/22 11:48 AM	ICP-MS4_220601A
	MW-3	Aqueous	SW6020B	Metals-ICPMS (0.45µ filtered)	105581	1	05/31/22 03:08 PM	ICP-MS5_220531A
2205241-03D	MW-3	Aqueous	M2320 B	Alkalinity	105522	1	05/26/22 12:20 PM	TITRATOR_220526A
	MW-3	Aqueous	E300	Anions by IC method - Water	105511	10	05/26/22 03:27 AM	IC4_220525A
	MW-3	Aqueous	M2540C	Total Dissolved Solids	105488	1	05/24/22 04:40 PM	WC_220524A
2205241-04A	MW-1	Aqueous	SW8260D	Volatile Aromatics by GC/MS	105492	1	05/24/22 04:53 PM	GCMS3_220524A
2205241-04B	MW-1	Aqueous	SW6020B	Metals-ICPMS (0.45µ filtered)	105581	50	06/01/22 11:50 AM	ICP-MS4_220601A
	MW-1	Aqueous	SW6020B	Metals-ICPMS (0.45µ filtered)	105581	1	05/31/22 03:11 PM	ICP-MS5_220531A
2205241-04D	MW-1	Aqueous	M2320 B	Alkalinity	105522	1	05/26/22 12:46 PM	TITRATOR_220526A
	MW-1	Aqueous	E300	Anions by IC method - Water	105511	100	05/25/22 09:07 PM	IC4_220525A
	MW-1	Aqueous	E300	Anions by IC method - Water	105511	10	05/26/22 03:46 AM	IC4_220525A
	MW-1	Aqueous	M2540C	Total Dissolved Solids	105488	1	05/24/22 04:40 PM	WC_220524A
2205241-05A	Dup-1	Aqueous	SW8260D	Volatile Aromatics by GC/MS	105492	1	05/24/22 05:18 PM	GCMS3_220524A
2205241-05B	Dup-1	Aqueous	SW6020B	Metals-ICPMS (0.45µ filtered)	105581	10	06/01/22 11:52 AM	ICP-MS4_220601A

Lab Order: 2205241
Client: Larson & Associates
Project: LMPSU Trash Pit

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
2205241-05B	Dup-1	Aqueous	SW6020B	Metals-ICPMS (0.45µ filtered)	105581	1	05/31/22 03:13 PM	ICP-MS5_220531A
2205241-05D	Dup-1	Aqueous	M2320 B	Alkalinity	105522	1	05/26/22 12:58 PM	TITRATOR_220526A
	Dup-1	Aqueous	E300	Anions by IC method - Water	105511	10	05/26/22 04:05 AM	IC4_220525A
	Dup-1	Aqueous	M2540C	Total Dissolved Solids	105488	1	05/24/22 04:40 PM	WC_220524A

DHL Analytical, Inc.

Date: *02-Jun-22*

CLIENT:	Larson & Associates	**Client Sample ID:**	MW-2
Project:	LMPSU Trash Pit	**Lab ID:**	2205241-01
Project No:	14-0107-01	**Collection Date:**	05/18/22 10:20 AM
Lab Order:	2205241	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE AROMATICS BY GC/MS		**SW8260D**					Analyst: **BTJ**
Benzene	<0.000800	0.000800	0.00200		mg/L	1	05/24/22 03:33 PM
Ethylbenzene	<0.00200	0.00200	0.00600		mg/L	1	05/24/22 03:33 PM
Toluene	<0.00200	0.00200	0.00600		mg/L	1	05/24/22 03:33 PM
Total Xylenes	<0.00200	0.00200	0.00600		mg/L	1	05/24/22 03:33 PM
Surr: 1,2-Dichloroethane-d4	105	0	72-119		%REC	1	05/24/22 03:33 PM
Surr: 4-Bromofluorobenzene	101	0	76-119		%REC	1	05/24/22 03:33 PM
Surr: Dibromofluoromethane	98.9	0	85-115		%REC	1	05/24/22 03:33 PM
Surr: Toluene-d8	99.8	0	81-120		%REC	1	05/24/22 03:33 PM
METALS-ICPMS (0.45µ FILTERED)		**SW6020B**					Analyst: **SP**
Dissolved Calcium	53.1	1.00	3.00		mg/L	10	06/01/22 11:44 AM
Dissolved Magnesium	28.1	1.00	3.00		mg/L	10	06/01/22 11:44 AM
Dissolved Potassium	5.31	0.100	0.300		mg/L	1	05/31/22 03:03 PM
Dissolved Sodium	109	1.00	3.00		mg/L	10	06/01/22 11:44 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **BM**
Chloride	78.5	3.00	10.0		mg/L	10	05/26/22 02:49 AM
Sulfate	131	10.0	30.0		mg/L	10	05/26/22 02:49 AM
ALKALINITY		**M2320 B**					Analyst: **MFW**
Alkalinity, Bicarbonate (As CaCO3)	270	10.0	20.0		mg/L @ pH 4.54	1	05/26/22 12:00 PM
Alkalinity, Carbonate (As CaCO3)	<10.0	10.0	20.0		mg/L @ pH 4.54	1	05/26/22 12:00 PM
Alkalinity, Hydroxide (As CaCO3)	<10.0	10.0	20.0		mg/L @ pH 4.54	1	05/26/22 12:00 PM
Alkalinity, Total (As CaCO3)	270	20.0	20.0		mg/L @ pH 4.54	1	05/26/22 12:00 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	650	10.0	10.0		mg/L	1	05/24/22 04:40 PM

Qualifiers:	*	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: *02-Jun-22*

CLIENT:	Larson & Associates	**Client Sample ID:**	MW-4
Project:	LMPSU Trash Pit	**Lab ID:**	2205241-02
Project No:	14-0107-01	**Collection Date:**	05/18/22 11:20 AM
Lab Order:	2205241	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE AROMATICS BY GC/MS		**SW8260D**					Analyst: **BTJ**
Benzene	<0.000800	0.000800	0.00200		mg/L	1	05/24/22 04:00 PM
Ethylbenzene	<0.00200	0.00200	0.00600		mg/L	1	05/24/22 04:00 PM
Toluene	<0.00200	0.00200	0.00600		mg/L	1	05/24/22 04:00 PM
Total Xylenes	<0.00200	0.00200	0.00600		mg/L	1	05/24/22 04:00 PM
Surr: 1,2-Dichloroethane-d4	104	0	72-119		%REC	1	05/24/22 04:00 PM
Surr: 4-Bromofluorobenzene	101	0	76-119		%REC	1	05/24/22 04:00 PM
Surr: Dibromofluoromethane	100	0	85-115		%REC	1	05/24/22 04:00 PM
Surr: Toluene-d8	100	0	81-120		%REC	1	05/24/22 04:00 PM
METALS-ICPMS (0.45µ FILTERED)		**SW6020B**					Analyst: **SP**
Dissolved Calcium	67.0	1.00	3.00		mg/L	10	06/01/22 11:46 AM
Dissolved Magnesium	40.8	1.00	3.00		mg/L	10	06/01/22 11:46 AM
Dissolved Potassium	7.85	0.100	0.300		mg/L	1	05/31/22 03:06 PM
Dissolved Sodium	156	1.00	3.00		mg/L	10	06/01/22 11:46 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **BM**
Chloride	175	3.00	10.0		mg/L	10	05/26/22 03:08 AM
Sulfate	194	10.0	30.0		mg/L	10	05/26/22 03:08 AM
ALKALINITY		**M2320 B**					Analyst: **MFW**
Alkalinity, Bicarbonate (As CaCO3)	247	10.0	20.0		mg/L @ pH 4.54	1	05/26/22 12:11 PM
Alkalinity, Carbonate (As CaCO3)	<10.0	10.0	20.0		mg/L @ pH 4.54	1	05/26/22 12:11 PM
Alkalinity, Hydroxide (As CaCO3)	<10.0	10.0	20.0		mg/L @ pH 4.54	1	05/26/22 12:11 PM
Alkalinity, Total (As CaCO3)	247	20.0	20.0		mg/L @ pH 4.54	1	05/26/22 12:11 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	880	10.0	10.0		mg/L	1	05/24/22 04:40 PM

Qualifiers:	*	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: *02-Jun-22*

CLIENT:	Larson & Associates	**Client Sample ID:**	MW-3
Project:	LMPSU Trash Pit	**Lab ID:**	2205241-03
Project No:	14-0107-01	**Collection Date:**	05/18/22 12:00 PM
Lab Order:	2205241	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE AROMATICS BY GC/MS		**SW8260D**					Analyst: **BTJ**
Benzene	<0.000800	0.000800	0.00200		mg/L	1	05/24/22 04:26 PM
Ethylbenzene	<0.00200	0.00200	0.00600		mg/L	1	05/24/22 04:26 PM
Toluene	<0.00200	0.00200	0.00600		mg/L	1	05/24/22 04:26 PM
Total Xylenes	<0.00200	0.00200	0.00600		mg/L	1	05/24/22 04:26 PM
Surr: 1,2-Dichloroethane-d4	104	0	72-119		%REC	1	05/24/22 04:26 PM
Surr: 4-Bromofluorobenzene	101	0	76-119		%REC	1	05/24/22 04:26 PM
Surr: Dibromofluoromethane	100	0	85-115		%REC	1	05/24/22 04:26 PM
Surr: Toluene-d8	99.9	0	81-120		%REC	1	05/24/22 04:26 PM
METALS-ICPMS (0.45µ FILTERED)		**SW6020B**					Analyst: **SP**
Dissolved Calcium	75.7	2.00	6.00		mg/L	20	06/01/22 11:48 AM
Dissolved Magnesium	73.2	2.00	6.00		mg/L	20	06/01/22 11:48 AM
Dissolved Potassium	9.85	0.100	0.300		mg/L	1	05/31/22 03:08 PM
Dissolved Sodium	278	2.00	6.00		mg/L	20	06/01/22 11:48 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **BM**
Chloride	470	3.00	10.0		mg/L	10	05/26/22 03:27 AM
Sulfate	277	10.0	30.0		mg/L	10	05/26/22 03:27 AM
ALKALINITY		**M2320 B**					Analyst: **MFW**
Alkalinity, Bicarbonate (As CaCO3)	194	10.0	20.0		mg/L @ pH 4.54	1	05/26/22 12:20 PM
Alkalinity, Carbonate (As CaCO3)	<10.0	10.0	20.0		mg/L @ pH 4.54	1	05/26/22 12:20 PM
Alkalinity, Hydroxide (As CaCO3)	<10.0	10.0	20.0		mg/L @ pH 4.54	1	05/26/22 12:20 PM
Alkalinity, Total (As CaCO3)	194	20.0	20.0		mg/L @ pH 4.54	1	05/26/22 12:20 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	1370	50.0	50.0		mg/L	1	05/24/22 04:40 PM

Qualifiers:	*	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: *02-Jun-22*

CLIENT:	Larson & Associates	**Client Sample ID:**	MW-1
Project:	LMPSU Trash Pit	**Lab ID:**	2205241-04
Project No:	14-0107-01	**Collection Date:**	05/18/22 12:40 PM
Lab Order:	2205241	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE AROMATICS BY GC/MS		**SW8260D**					Analyst: **BTJ**
Benzene	<0.000800	0.000800	0.00200		mg/L	1	05/24/22 04:53 PM
Ethylbenzene	<0.00200	0.00200	0.00600		mg/L	1	05/24/22 04:53 PM
Toluene	<0.00200	0.00200	0.00600		mg/L	1	05/24/22 04:53 PM
Total Xylenes	<0.00200	0.00200	0.00600		mg/L	1	05/24/22 04:53 PM
Surr: 1,2-Dichloroethane-d4	105	0	72-119		%REC	1	05/24/22 04:53 PM
Surr: 4-Bromofluorobenzene	102	0	76-119		%REC	1	05/24/22 04:53 PM
Surr: Dibromofluoromethane	100	0	85-115		%REC	1	05/24/22 04:53 PM
Surr: Toluene-d8	99.8	0	81-120		%REC	1	05/24/22 04:53 PM
METALS-ICPMS (0.45µ FILTERED)		**SW6020B**					Analyst: **SP**
Dissolved Calcium	183	5.00	15.0		mg/L	50	06/01/22 11:50 AM
Dissolved Magnesium	269	5.00	15.0		mg/L	50	06/01/22 11:50 AM
Dissolved Potassium	17.8	0.100	0.300		mg/L	1	05/31/22 03:11 PM
Dissolved Sodium	1000	5.00	15.0		mg/L	50	06/01/22 11:50 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **BM**
Chloride	1980	30.0	100		mg/L	100	05/25/22 09:07 PM
Sulfate	703	10.0	30.0		mg/L	10	05/26/22 03:46 AM
ALKALINITY		**M2320 B**					Analyst: **MFW**
Alkalinity, Bicarbonate (As CaCO3)	566	10.0	20.0		mg/L @ pH 4.54	1	05/26/22 12:46 PM
Alkalinity, Carbonate (As CaCO3)	<10.0	10.0	20.0		mg/L @ pH 4.54	1	05/26/22 12:46 PM
Alkalinity, Hydroxide (As CaCO3)	<10.0	10.0	20.0		mg/L @ pH 4.54	1	05/26/22 12:46 PM
Alkalinity, Total (As CaCO3)	566	20.0	20.0		mg/L @ pH 4.54	1	05/26/22 12:46 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	4550	50.0	50.0		mg/L	1	05/24/22 04:40 PM

Qualifiers:	*	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: *02-Jun-22*

CLIENT:	Larson & Associates	**Client Sample ID:**	Dup-1
Project:	LMPSU Trash Pit	**Lab ID:**	2205241-05
Project No:	14-0107-01	**Collection Date:**	05/18/22
Lab Order:	2205241	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILE AROMATICS BY GC/MS		**SW8260D**					Analyst: **BTJ**
Benzene	<0.000800	0.000800	0.00200		mg/L	1	05/24/22 05:18 PM
Ethylbenzene	<0.00200	0.00200	0.00600		mg/L	1	05/24/22 05:18 PM
Toluene	<0.00200	0.00200	0.00600		mg/L	1	05/24/22 05:18 PM
Total Xylenes	<0.00200	0.00200	0.00600		mg/L	1	05/24/22 05:18 PM
Surr: 1,2-Dichloroethane-d4	103	0	72-119		%REC	1	05/24/22 05:18 PM
Surr: 4-Bromofluorobenzene	102	0	76-119		%REC	1	05/24/22 05:18 PM
Surr: Dibromofluoromethane	99.6	0	85-115		%REC	1	05/24/22 05:18 PM
Surr: Toluene-d8	99.3	0	81-120		%REC	1	05/24/22 05:18 PM
METALS-ICPMS (0.45µ FILTERED)		**SW6020B**					Analyst: **SP**
Dissolved Calcium	53.9	1.00	3.00		mg/L	10	06/01/22 11:52 AM
Dissolved Magnesium	28.9	1.00	3.00		mg/L	10	06/01/22 11:52 AM
Dissolved Potassium	5.09	0.100	0.300		mg/L	1	05/31/22 03:13 PM
Dissolved Sodium	111	1.00	3.00		mg/L	10	06/01/22 11:52 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **BM**
Chloride	78.0	3.00	10.0		mg/L	10	05/26/22 04:05 AM
Sulfate	129	10.0	30.0		mg/L	10	05/26/22 04:05 AM
ALKALINITY		**M2320 B**					Analyst: **MFW**
Alkalinity, Bicarbonate (As CaCO3)	265	10.0	20.0		mg/L @ pH 4.54	1	05/26/22 12:58 PM
Alkalinity, Carbonate (As CaCO3)	<10.0	10.0	20.0		mg/L @ pH 4.54	1	05/26/22 12:58 PM
Alkalinity, Hydroxide (As CaCO3)	<10.0	10.0	20.0		mg/L @ pH 4.54	1	05/26/22 12:58 PM
Alkalinity, Total (As CaCO3)	265	20.0	20.0		mg/L @ pH 4.54	1	05/26/22 12:58 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **JS**
Total Dissolved Solids (Residue, Filterable)	650	10.0	10.0		mg/L	1	05/24/22 04:40 PM

Qualifiers:	*	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:** *02-Jun-22*

CLIENT: Larson & Associates
Work Order: 2205241
Project: LMPSU Trash Pit

ANALYTICAL QC SUMMARY REPORT

RunID: GCMS3_220524A

The QC data in batch 105492 applies to the following samples: 2205241-01A, 2205241-02A, 2205241-03A, 2205241-04A, 2205241-05A

Sample ID: **LCS-105492** Batch ID: **105492** TestNo: **SW8260D** Units: **mg/L**
SampType: **LCS** Run ID: **GCMS3_220524A** Analysis Date: **5/24/2022 2:39:00 PM** Prep Date: **5/24/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0218	0.00200	0.0232	0	93.9	81	122			
Ethylbenzene	0.0219	0.00600	0.0232	0	94.6	73	127			
Toluene	0.0217	0.00600	0.0232	0	93.7	77	122			
Total Xylenes	0.0655	0.00600	0.0696	0	94.2	80	121			
Surr: 1,2-Dichloroethane-d4	207		200.0		103	72	119			
Surr: 4-Bromofluorobenzene	205		200.0		102	76	119			
Surr: Dibromofluoromethane	196		200.0		98.0	85	115			
Surr: Toluene-d8	199		200.0		99.5	81	120			

Sample ID: **MB-105492** Batch ID: **105492** TestNo: **SW8260D** Units: **mg/L**
SampType: **MBLK** Run ID: **GCMS3_220524A** Analysis Date: **5/24/2022 3:06:00 PM** Prep Date: **5/24/2022**

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	209		200.0		105	72	119			
Surr: 4-Bromofluorobenzene	203		200.0		101	76	119			
Surr: Dibromofluoromethane	200		200.0		100	85	115			
Surr: Toluene-d8	200		200.0		99.8	81	120			

Sample ID: **2205242-02AMS** Batch ID: **105492** TestNo: **SW8260D** Units: **mg/L**
SampType: **MS** Run ID: **GCMS3_220524A** Analysis Date: **5/24/2022 7:07:00 PM** Prep Date: **5/24/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.267	0.0200	0.232	0	115	81	122			
Ethylbenzene	0.271	0.0600	0.232	0	117	73	127			
Toluene	0.269	0.0600	0.232	0	116	77	122			
Total Xylenes	0.821	0.0600	0.696	0	118	80	121			
Surr: 1,2-Dichloroethane-d4	2090		2000		104	72	119			
Surr: 4-Bromofluorobenzene	2020		2000		101	76	119			
Surr: Dibromofluoromethane	1960		2000		98.1	85	115			
Surr: Toluene-d8	2000		2000		99.9	81	120			

Sample ID: **2205242-02AMSD** Batch ID: **105492** TestNo: **SW8260D** Units: **mg/L**
SampType: **MSD** Run ID: **GCMS3_220524A** Analysis Date: **5/24/2022 7:34:00 PM** Prep Date: **5/24/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: Larson & Associates
Work Order: 2205241
Project: LMPSU Trash Pit

ANALYTICAL QC SUMMARY REPORT

RunID: GCMS3_220524A

Sample ID: **2205242-02AMSD** Batch ID: **105492** TestNo: **SW8260D** Units: **mg/L**
SampType: **MSD** Run ID: **GCMS3_220524A** Analysis Date: **5/24/2022 7:34:00 PM** Prep Date: **5/24/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.225	0.0200	0.232	0	97.0	81	122	17.1	20	
Ethylbenzene	0.229	0.0600	0.232	0	98.6	73	127	17.1	20	
Toluene	0.226	0.0600	0.232	0	97.5	77	122	17.3	20	
Total Xylenes	0.686	0.0600	0.696	0	98.5	80	121	17.9	20	
Surr: 1,2-Dichloroethane-d4	2100		2000		105	72	119	0	0	
Surr: 4-Bromofluorobenzene	2010		2000		100	76	119	0	0	
Surr: Dibromofluoromethane	1990		2000		99.6	85	115	0	0	
Surr: Toluene-d8	2010		2000		101	81	120	0	0	

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: Larson & Associates
Work Order: 2205241
Project: LMPSU Trash Pit

ANALYTICAL QC SUMMARY REPORT

RunID: GCMS3_220524A

Sample ID: **ICV-220524** Batch ID: **R121229** TestNo: **SW8260D** Units: **mg/L**
SampType: **ICV** Run ID: **GCMS3_220524A** Analysis Date: **5/24/2022 2:12:00 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.0442	0.00200	0.0464	0	95.2	70	130			
Ethylbenzene	0.0443	0.00600	0.0464	0	95.4	70	130			
Toluene	0.0439	0.00600	0.0464	0	94.7	70	130			
Total Xylenes	0.131	0.00600	0.139	0	94.4	70	130			
Surr: 1,2-Dichloroethane-d4	205		200.0		102	72	119			
Surr: 4-Bromofluorobenzene	204		200.0		102	76	119			
Surr: Dibromofluoromethane	198		200.0		99.2	85	115			
Surr: Toluene-d8	199		200.0		99.7	81	120			

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: Larson & Associates
Work Order: 2205241
Project: LMPSU Trash Pit

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_220601A

The QC data in batch 105581 applies to the following samples: 2205241-01B, 2205241-02B, 2205241-03B, 2205241-04B, 2205241-05B

Sample ID: **MB-105581**	Batch ID: **105581**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **MBLK**	Run ID: **ICP-MS4_220601A**	Analysis Date: **6/1/2022 11:30:00 AM**	Prep Date: **5/31/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dissolved Sodium	<0.100	0.300								

Sample ID: **MB-105481-FILTER**	Batch ID: **105581**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **MBLK**	Run ID: **ICP-MS4_220601A**	Analysis Date: **6/1/2022 11:32:00 AM**	Prep Date: **5/31/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dissolved Sodium	<0.100	0.300	0							

Sample ID: **LCS-105581**	Batch ID: **105581**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **LCS**	Run ID: **ICP-MS4_220601A**	Analysis Date: **6/1/2022 11:34:00 AM**	Prep Date: **5/31/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dissolved Sodium	4.87	0.300	5.00	0	97.5	80	120			

Sample ID: **LCSD-105581**	Batch ID: **105581**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **LCSD**	Run ID: **ICP-MS4_220601A**	Analysis Date: **6/1/2022 11:36:00 AM**	Prep Date: **5/31/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dissolved Sodium	5.02	0.300	5.00	0	100	80	120	2.96	15	

Sample ID: **2205264-16D SD**	Batch ID: **105581**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **SD**	Run ID: **ICP-MS4_220601A**	Analysis Date: **6/1/2022 11:42:00 AM**	Prep Date: **5/31/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dissolved Sodium	521	75.0	0	530				1.64	20	

Sample ID: **2205264-16D PDS**	Batch ID: **105581**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **PDS**	Run ID: **ICP-MS4_220601A**	Analysis Date: **6/1/2022 11:54:00 AM**	Prep Date: **5/31/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dissolved Sodium	758	15.0	250	530	91.3	75	125			

Sample ID: **2205264-16D MS**	Batch ID: **105581**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **MS**	Run ID: **ICP-MS4_220601A**	Analysis Date: **6/1/2022 11:59:00 AM**	Prep Date: **5/31/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dissolved Sodium	507	15.0	5.00	530	-456	75	125			S

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: Larson & Associates
Work Order: 2205241
Project: LMPSU Trash Pit

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_220601A

Sample ID: **2205264-16D MSD** Batch ID: **105581** TestNo: **SW6020B** Units: **mg/L**
SampType: **MSD** Run ID: **ICP-MS4_220601A** Analysis Date: **6/1/2022 12:01:00 PM** Prep Date: **5/31/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dissolved Sodium	518	15.0	5.00	530	-241	75	125	2.11	15	S

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: Larson & Associates
Work Order: 2205241
Project: LMPSU Trash Pit

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_220601A

Sample ID: **ICV-220601**	Batch ID: **R121364**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **ICV**	Run ID: **ICP-MS4_220601A**	Analysis Date: **6/1/2022 10:29:00 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dissolved Calcium	2.52	0.300	2.50	0	101	90	110			
Dissolved Magnesium	2.44	0.300	2.50	0	97.5	90	110			
Dissolved Sodium	2.55	0.300	2.50	0	102	90	110			

Sample ID: **LCVL-220601**	Batch ID: **R121364**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **LCVL**	Run ID: **ICP-MS4_220601A**	Analysis Date: **6/1/2022 10:34:00 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dissolved Calcium	0.105	0.300	0.100	0	105	80	120			
Dissolved Magnesium	0.0994	0.300	0.100	0	99.4	80	120			
Dissolved Sodium	0.100	0.300	0.100	0	100	80	120			

Sample ID: **CCV1-220601**	Batch ID: **R121364**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS4_220601A**	Analysis Date: **6/1/2022 11:26:00 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dissolved Calcium	5.43	0.300	5.00	0	109	90	110			
Dissolved Magnesium	5.05	0.300	5.00	0	101	90	110			
Dissolved Sodium	5.13	0.300	5.00	0	103	90	110			

Sample ID: **CCV2-220601**	Batch ID: **R121364**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS4_220601A**	Analysis Date: **6/1/2022 12:03:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dissolved Calcium	5.28	0.300	5.00	0	106	90	110			
Dissolved Magnesium	4.92	0.300	5.00	0	98.5	90	110			
Dissolved Sodium	4.95	0.300	5.00	0	98.9	90	110			

Qualifiers:			
B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: Larson & Associates
Work Order: 2205241
Project: LMPSU Trash Pit

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_220531A

The QC data in batch 105581 applies to the following samples: 2205241-01B, 2205241-02B, 2205241-03B, 2205241-04B, 2205241-05B

Sample ID: **MB-105581** Batch ID: **105581** TestNo: **SW6020B** Units: **mg/L**
SampType: **MBLK** Run ID: **ICP-MS5_220531A** Analysis Date: **5/31/2022 2:43:00 PM** Prep Date: **5/31/2022**

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								

Sample ID: **MB-105481-FILTER** Batch ID: **105581** TestNo: **SW6020B** Units: **mg/L**
SampType: **MBLK** Run ID: **ICP-MS5_220531A** Analysis Date: **5/31/2022 2:45:00 PM** Prep Date: **5/31/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dissolved Calcium	<0.100	0.300	0							
Dissolved Magnesium	<0.100	0.300	0							
Dissolved Potassium	<0.100	0.300	0							

Sample ID: **LCS-105581** Batch ID: **105581** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCS** Run ID: **ICP-MS5_220531A** Analysis Date: **5/31/2022 2:50:00 PM** Prep Date: **5/31/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dissolved Calcium	5.06	0.300	5.00	0	101	80	120			
Dissolved Magnesium	5.01	0.300	5.00	0	100	80	120			
Dissolved Potassium	4.97	0.300	5.00	0	99.3	80	120			

Sample ID: **LCSD-105581** Batch ID: **105581** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCSD** Run ID: **ICP-MS5_220531A** Analysis Date: **5/31/2022 2:53:00 PM** Prep Date: **5/31/2022**

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	0.722	15	
Dissolved Magnesium	5.01	0.300	5.00	0	100	80	120	0.039	15	
Dissolved Potassium	4.98	0.300	5.00	0	99.5	80	120	0.176	15	

Sample ID: **2205264-16D SD** Batch ID: **105581** TestNo: **SW6020B** Units: **mg/L**
SampType: **SD** Run ID: **ICP-MS5_220531A** Analysis Date: **5/31/2022 3:01:00 PM** Prep Date: **5/31/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dissolved Calcium	319	1.50	0	316				0.947	20	
Dissolved Magnesium	25.7	1.50	0	25.7				0.123	20	
Dissolved Potassium	44.6	1.50	0	45.6				2.34	20	

Sample ID: **2205264-16D PDS** Batch ID: **105581** TestNo: **SW6020B** Units: **mg/L**
SampType: **PDS** Run ID: **ICP-MS5_220531A** Analysis Date: **5/31/2022 3:26:00 PM** Prep Date: **5/31/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: Larson & Associates
Work Order: 2205241
Project: LMPSU Trash Pit

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_220531A

Sample ID: **2205264-16D PDS** Batch ID: **105581** TestNo: **SW6020B** Units: **mg/L**
SampType: **PDS** Run ID: **ICP-MS5_220531A** Analysis Date: **5/31/2022 3:26:00 PM** Prep Date: **5/31/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dissolved Calcium	303	0.300	5.00	316	-271	75	125			S
Dissolved Magnesium	29.0	0.300	5.00	25.7	67.1	75	125			S
Dissolved Potassium	48.8	0.300	5.00	45.6	63.2	75	125			S

Sample ID: **2205264-16D MS** Batch ID: **105581** TestNo: **SW6020B** Units: **mg/L**
SampType: **MS** Run ID: **ICP-MS5_220531A** Analysis Date: **5/31/2022 3:29:00 PM** Prep Date: **5/31/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dissolved Calcium	317	0.300	5.00	316	14.4	75	125			S
Dissolved Magnesium	30.6	0.300	5.00	25.7	98.8	75	125			
Dissolved Potassium	51.3	0.300	5.00	45.6	112	75	125			

Sample ID: **2205264-16D MSD** Batch ID: **105581** TestNo: **SW6020B** Units: **mg/L**
SampType: **MSD** Run ID: **ICP-MS5_220531A** Analysis Date: **5/31/2022 3:31:00 PM** Prep Date: **5/31/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dissolved Calcium	319	0.300	5.00	316	51.9	75	125	0.591	15	S
Dissolved Magnesium	30.8	0.300	5.00	25.7	101	75	125	0.418	15	
Dissolved Potassium	50.9	0.300	5.00	45.6	105	75	125	0.683	15	

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: Larson & Associates
Work Order: 2205241
Project: LMPSU Trash Pit

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_220531A

Sample ID: **ICV-220531**	Batch ID: **R121344**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **ICV**	Run ID: **ICP-MS5_220531A**	Analysis Date: **5/31/2022 11:17:00 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dissolved Calcium	2.53	0.300	2.50	0	101	90	110			
Dissolved Magnesium	2.46	0.300	2.50	0	98.5	90	110			
Dissolved Potassium	2.54	0.300	2.50	0	102	90	110			

Sample ID: **LCVL-220531**	Batch ID: **R121344**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **LCVL**	Run ID: **ICP-MS5_220531A**	Analysis Date: **5/31/2022 11:30:00 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dissolved Calcium	0.101	0.300	0.100	0	101	80	120			
Dissolved Magnesium	0.101	0.300	0.100	0	101	80	120			
Dissolved Potassium	0.112	0.300	0.100	0	112	80	120			

Sample ID: **CCV5-220531**	Batch ID: **R121344**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS5_220531A**	Analysis Date: **5/31/2022 2:37:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dissolved Calcium	5.15	0.300	5.00	0	103	90	110			
Dissolved Magnesium	5.15	0.300	5.00	0	103	90	110			
Dissolved Potassium	5.14	0.300	5.00	0	103	90	110			

Sample ID: **CCV6-220531**	Batch ID: **R121344**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS5_220531A**	Analysis Date: **5/31/2022 3:34:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dissolved Calcium	5.15	0.300	5.00	0	103	90	110			
Dissolved Magnesium	5.15	0.300	5.00	0	103	90	110			
Dissolved Potassium	5.13	0.300	5.00	0	103	90	110			

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: Larson & Associates
Work Order: 2205241
Project: LMPSU Trash Pit

ANALYTICAL QC SUMMARY REPORT

RunID: IC4_220525A

The QC data in batch 105511 applies to the following samples: 2205241-01D, 2205241-02D, 2205241-03D, 2205241-04D, 2205241-05D

Sample ID: **MB-105511** Batch ID: **105511** TestNo: **E300** Units: **mg/L**
SampType: **MBLK** Run ID: **IC4_220525A** Analysis Date: **5/25/2022 5:38:29 PM** Prep Date: **5/25/2022**

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-105511** Batch ID: **105511** TestNo: **E300** Units: **mg/L**
SampType: **LCS** Run ID: **IC4_220525A** Analysis Date: **5/25/2022 5:57:29 PM** Prep Date: **5/25/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.0	1.00	10.00	0	100	90	110			
Sulfate	30.4	3.00	30.00	0	101	90	110			

Sample ID: **LCSD-105511** Batch ID: **105511** TestNo: **E300** Units: **mg/L**
SampType: **LCSD** Run ID: **IC4_220525A** Analysis Date: **5/25/2022 6:16:29 PM** Prep Date: **5/25/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.97	1.00	10.00	0	99.7	90	110	0.784	20	
Sulfate	30.2	3.00	30.00	0	101	90	110	0.597	20	

Sample ID: **2205241-02DMS** Batch ID: **105511** TestNo: **E300** Units: **mg/L**
SampType: **MS** Run ID: **IC4_220525A** Analysis Date: **5/25/2022 8:29:29 PM** Prep Date: **5/25/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	2140	100	2000	198.5	96.8	90	110			
Sulfate	2150	300	2000	184.1	98.3	90	110			

Sample ID: **2205241-02DMSD** Batch ID: **105511** TestNo: **E300** Units: **mg/L**
SampType: **MSD** Run ID: **IC4_220525A** Analysis Date: **5/25/2022 8:48:29 PM** Prep Date: **5/25/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	2140	100	2000	198.5	97.0	90	110	0.158	20	
Sulfate	2170	300	2000	184.1	99.3	90	110	0.919	20	

Sample ID: **2205241-04DMS** Batch ID: **105511** TestNo: **E300** Units: **mg/L**
SampType: **MS** Run ID: **IC4_220525A** Analysis Date: **5/25/2022 9:26:28 PM** Prep Date: **5/25/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	3650	100	2000	1976	83.7	90	110			S
Sulfate	2630	300	2000	696.9	96.7	90	110			

Qualifiers:			
B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: Larson & Associates
Work Order: 2205241
Project: LMPSU Trash Pit

ANALYTICAL QC SUMMARY REPORT

RunID: IC4_220525A

Sample ID: **2205241-04DMSD** Batch ID: **105511** TestNo: **E300** Units: **mg/L**
SampType: **MSD** Run ID: **IC4_220525A** Analysis Date: **5/25/2022 9:45:28 PM** Prep Date: **5/25/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	3660	100	2000	1976	84.1	90	110	0.206	20	S
Sulfate	2620	300	2000	696.9	96.3	90	110	0.260	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: Larson & Associates
Work Order: 2205241
Project: LMPSU Trash Pit

ANALYTICAL QC SUMMARY REPORT

RunID: IC4_220525A

Sample ID: **ICV-220525**	Batch ID: **R121242**	TestNo: **E300**	Units: **mg/L**
SampType: **ICV**	Run ID: **IC4_220525A**	Analysis Date: **5/25/2022 5:00:29 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	25.2	1.00	25.00	0	101	90	110			
Sulfate	76.9	3.00	75.00	0	103	90	110			

Sample ID: **CCV1-220525**	Batch ID: **R121242**	TestNo: **E300**	Units: **mg/L**
SampType: **CCV**	Run ID: **IC4_220525A**	Analysis Date: **5/26/2022 12:55:29 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.1	1.00	10.00	0	101	90	110			
Sulfate	30.6	3.00	30.00	0	102	90	110			

Sample ID: **CCV2-220525**	Batch ID: **R121242**	TestNo: **E300**	Units: **mg/L**
SampType: **CCV**	Run ID: **IC4_220525A**	Analysis Date: **5/26/2022 5:21:28 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.1	1.00	10.00	0	101	90	110			
Sulfate	30.6	3.00	30.00	0	102	90	110			

Qualifiers:				
	B	Analyte detected in the associated Method Blank	DF	Dilution Factor
	J	Analyte detected between MDL and RL	MDL	Method Detection Limit
	ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
	RL	Reporting Limit	S	Spike Recovery outside control limits
	J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: Larson & Associates
Work Order: 2205241
Project: LMPSU Trash Pit

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_220526A

The QC data in batch 105522 applies to the following samples: 2205241-01D, 2205241-02D, 2205241-03D, 2205241-04D, 2205241-05D

Sample ID: **MB-105522** Batch ID: **105522** TestNo: **M2320 B** Units: **mg/L @ pH 4.44**
SampType: **MBLK** Run ID: **TITRATOR_220526A** Analysis Date: **5/26/2022 9:04:00 AM** Prep Date: **5/26/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	<10.0	20.0	0							
Alkalinity, Carbonate (As CaCO3)	<10.0	20.0	0							
Alkalinity, Hydroxide (As CaCO3)	<10.0	20.0	0							
Alkalinity, Total (As CaCO3)	<20.0	20.0	0							

Sample ID: **LCS-105522** Batch ID: **105522** TestNo: **M2320 B** Units: **mg/L @ pH 4.5**
SampType: **LCS** Run ID: **TITRATOR_220526A** Analysis Date: **5/26/2022 9:09:00 AM** Prep Date: **5/26/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	50.7	20.0	50.00	0	101	74	129			

Sample ID: **LCSD-105522** Batch ID: **105522** TestNo: **M2320 B** Units: **mg/L @ pH 4.51**
SampType: **LCSD** Run ID: **TITRATOR_220526A** Analysis Date: **5/26/2022 9:13:00 AM** Prep Date: **5/26/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	50.1	20.0	50.00	0	100	74	129	1.27	20	

Sample ID: **2205234-01E-DUP** Batch ID: **105522** TestNo: **M2320 B** Units: **mg/L @ pH 4.55**
SampType: **DUP** Run ID: **TITRATOR_220526A** Analysis Date: **5/26/2022 9:39:00 AM** Prep Date: **5/26/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	<10.0	20.0	0	0				0	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)	<20.0	20.0	0	0				0	20	

Sample ID: **2205252-01B-DUP** Batch ID: **105522** TestNo: **M2320 B** Units: **mg/L @ pH 4.52**
SampType: **DUP** Run ID: **TITRATOR_220526A** Analysis Date: **5/26/2022 1:26:00 PM** Prep Date: **5/26/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	122	20.0	0	120.0				1.24	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)	122	20.0	0	120.0				1.24	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: Larson & Associates
Work Order: 2205241
Project: LMPSU Trash Pit

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_220526A

Sample ID: **ICV-220526**	Batch ID: **R121333**	TestNo: **M2320 B**	Units: **mg/L @ pH 4.53**
SampType: **ICV**	Run ID: **TITRATOR_220526A**	Analysis Date: **5/26/2022 9:01:00 AM**	Prep Date: **5/26/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	2.88	20.0	0							
Alkalinity, Carbonate (As CaCO3)	98.6	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: **CCV-220526**	Batch ID: **R121333**	TestNo: **M2320 B**	Units: **mg/L @ pH 4.52**
SampType: **CCV**	Run ID: **TITRATOR_220526A**	Analysis Date: **5/26/2022 10:43:00 AM**	Prep Date: **5/26/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	14.8	20.0	0							
Alkalinity, Carbonate (As CaCO3)	80.6	20.0	0							
Alkalinity, Hydroxide (As CaCO3)	<10.0	20.0	0							
Alkalinity, Total (As CaCO3)	95.4	20.0	100.0	0	95.4	90	110			

Sample ID: **CCV1-220526**	Batch ID: **R121333**	TestNo: **M2320 B**	Units: **mg/L @ pH 4.52**
SampType: **CCV**	Run ID: **TITRATOR_220526A**	Analysis Date: **5/26/2022 1:33:00 PM**	Prep Date: **5/26/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	21.1	20.0	0							
Alkalinity, Carbonate (As CaCO3)	76.8	20.0	0							
Alkalinity, Hydroxide (As CaCO3)	<10.0	20.0	0							
Alkalinity, Total (As CaCO3)	97.9	20.0	100.0	0	97.9	90	110			

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: Larson & Associates
Work Order: 2205241
Project: LMPSU Trash Pit

ANALYTICAL QC SUMMARY REPORT

RunID: WC_220524A

The QC data in batch 105488 applies to the following samples: 2205241-01D, 2205241-02D, 2205241-03D, 2205241-04D, 2205241-05D

Sample ID: **MB-105488**	Batch ID: **105488**	TestNo: **M2540C**	Units: **mg/L**
SampType: **MBLK**	Run ID: **WC_220524A**	Analysis Date: **5/24/2022 4:40:00 PM**	Prep Date: **5/24/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	<10.0	10.0								

Sample ID: **LCS-105488**	Batch ID: **105488**	TestNo: **M2540C**	Units: **mg/L**
SampType: **LCS**	Run ID: **WC_220524A**	Analysis Date: **5/24/2022 4:40:00 PM**	Prep Date: **5/24/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	753	10.0	745.6	0	101	90	113			

Sample ID: **2205241-03D-DUP**	Batch ID: **105488**	TestNo: **M2540C**	Units: **mg/L**
SampType: **DUP**	Run ID: **WC_220524A**	Analysis Date: **5/24/2022 4:40:00 PM**	Prep Date: **5/24/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	1380	50.0	0	1370				0.727	5	

Sample ID: **2205241-04D-DUP**	Batch ID: **105488**	TestNo: **M2540C**	Units: **mg/L**
SampType: **DUP**	Run ID: **WC_220524A**	Analysis Date: **5/24/2022 4:40:00 PM**	Prep Date: **5/24/2022**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	4520	50.0	0	4545				0.662	5	

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

Appendix C

Groundwater Sampling Notice

From: Billings, Bradford, EMNRD
To: Robert Nelson
Cc: Liz Klein; Mark Larson
Subject: RE: [EXTERNAL] 3Bear Energy Cottonwood Facility (2RF-128) Groundwater Sampling Notice
Date: Thursday, May 12, 2022 1:11:22 PM
Attachments: image001.png

Hello,

Thank you for the notification. Please include this communication in associated report(s).

Bradford Billings
EMNRD/OCD

From: Robert Nelson <rnelson@laenvironmental.com>
Sent: Thursday, May 12, 2022 11:40 AM
To: Billings, Bradford, EMNRD <Bradford.Billings@state.nm.us>
Cc: Liz Klein <lklein@3bearllc.com>; Mark Larson <Mark@laenvironmental.com>
Subject: [EXTERNAL] 3Bear Energy Cottonwood Facility (2RF-128) Groundwater Sampling Notice

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

Hello Bradford,

This message is submitted to the New Mexico Oil Conservation Division (OCD) on behalf of 3Bear Energy, LLC (3 Bear) to provide notification that personnel from Larson & Associates, Inc. (LAI) will be at the Cottonwood Facility (2RF-128) on May 19, 2022 at approximately 10:00am MST for the purpose of collecting groundwater samples from four (4) monitoring wells. Please feel free to contact Liz Klein with 3 Bear at (303)882-4404 or lklein@3bearllc.com, Mark Larson at (432)687-0901 or mark@laenvironmental.com or me if you have any questions.

Thank you,

Robert Nelson
Sr. Geologist
Office – 432-687-0901
Cell – 432-664-4804
rnelson@laenvironmental.com

Larson & Associates, Inc.
Environmental Consultants

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
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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 134711

CONDITIONS

Operator: 3BEAR FIELD SERVICES, LLC 7102 Commerce Way Brentwood, TN 37027	OGRID: 372603
	Action Number: 134711
	Action Type: [C-147] Water Recycle Short (C-147S)

CONDITIONS

Created By	Condition	Condition Date
vvenegas	None	8/19/2022