

October 28, 2024

Patrick Lennberg  
Division of Reclamation, Mining and Safety  
Environmental Protection Specialist  
1313 Sherman Street, Room 215  
Denver, Colorado 80203

Via Email

Re: CEMEX Lyons Mine Permit M-1977-208  
Technical Revision No. 12, Revised Groundwater Monitoring Plan  
Third Quarter 2024 Monitoring Data

Dear Patrick Lennberg:

This letter transmits the surface water and groundwater data associated with the sampling of the cement kiln dust disposal area (C-Pit). This report includes data from the C-Pit ponded water and related groundwater monitoring for the third quarter of 2024, covering the reporting period from July 1, 2024 to September 30, 2024. Table 1 presents data for the last four quarters.

Groundwater samples were collected on August 8, 2024 from the CEM-001 and CEM-004 groundwater monitoring wells and from the C-Pit ponded water. The inspection of groundwater monitoring well CEM-005 on August 9, 2024 indicated that there was not enough water volume to collect a representative sample.

The samples collected from C-Pit ponded water and the groundwater monitoring wells were analyzed for pH, chloride, sulfate, total dissolved solids, selenium, and thallium. The reported pH data is based on the pH analyses performed at the time of sample collection in the field (Table 1). The measured pH at groundwater monitoring well CEM-004 and analytical results for chloride, sulfate, total dissolved solids (TDS), selenium and thallium from the August 8, 2024 groundwater sample were within the target levels prescribed by TR-12, as shown in Table 1.

In addition, a Stiff Diagram of the groundwater cation/anion data from CEM-004 compared to the average and 90<sup>th</sup> percentile of the cation/anion concentrations from the last four quarterly samples of C-Pit data is provided in Figure 1 for reference. As shown in Figure 1 and consistent with past reports, the signature for CEM-004 continues to be significantly different from that of C-Pit.

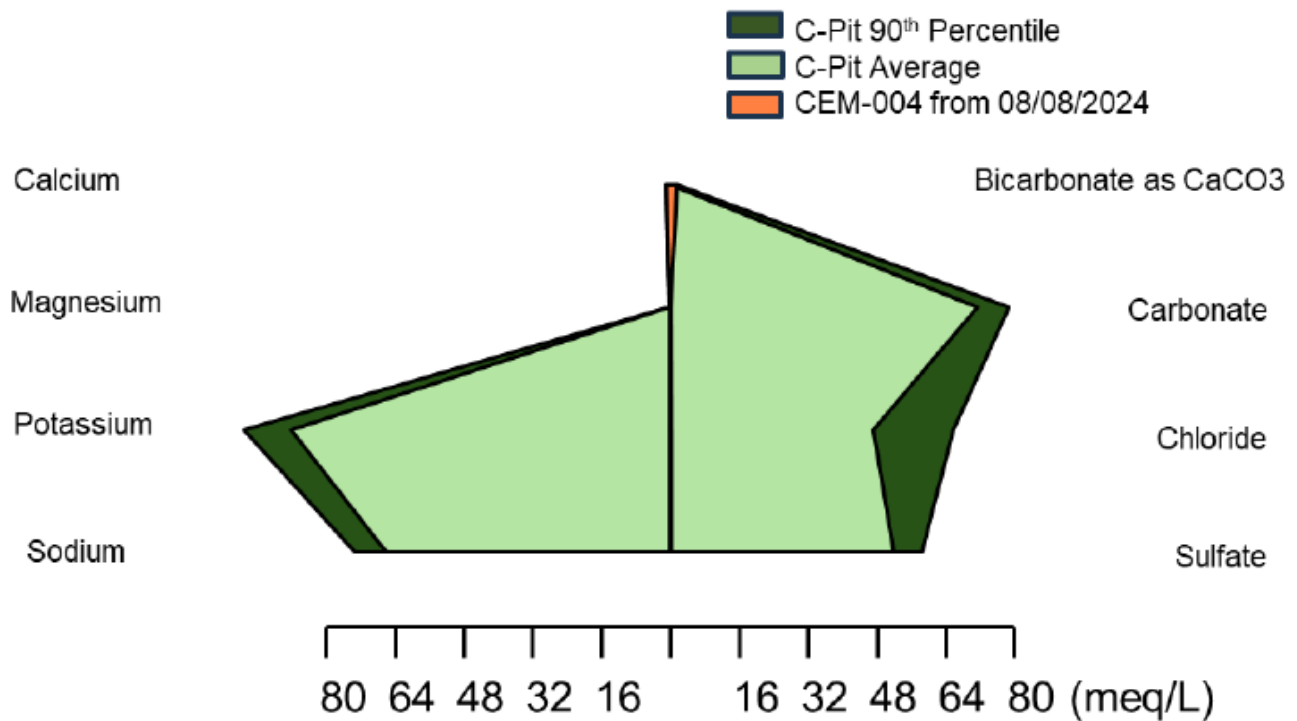


Figure 1: Second quarter 2024 cation/anion data for CEM-004 compared to C-Pit

Please contact me at 863-602-8024 or by email at [robing.simons@cemex.com](mailto:robing.simons@cemex.com) for any questions or concerns regarding this submittal.

Sincerely,

Robin Simons  
Environmental Manager

Encs. Y24Q3C-Pit Monitoring Report and associated Stiff Plot (Fig.1), and Summary of Analytical Results (Table 1), Field Notes, and Time Trend Plots (Figs. A, B, C)

Table 1  
Summary of Analytical Results

Parameter	Units	C-Pit				CEM-001				CEM-004				CEM-005				CEM-004, CEM-005 Triggers (TR-12)
		2023 Q4	2024 Q1	2024 Q2	2024 Q3	2023 Q4	2024 Q1	2024 Q2	2024 Q3	2023 Q4	2024 Q1	2024 Q2	2024 Q3	2023 Q4	2024 Q1	2024 Q2	2024 Q3	
		11/2/2023	3/11/2024	6/7/2024	8/8/2024	11/2/2023	3/11/2024	6/7/2024	8/8/2024	11/2/2023	3/11/2024	6/7/2024	8/8/2024	<sup>a</sup> See dates below	<sup>a</sup> See dates below	<sup>a</sup> See dates below	<sup>a</sup> See dates below	
		value	value	value	value	value	value	value	value	value	value	value	value	value	value	value	value	
pH (On-site)	su	10.89	10.54	10.71	10.79	7.88	7.26	7.82	7.99	7.19	7.11	7.21	7.71	insufficient water to sample	insufficient water to sample	insufficient water to sample	insufficient water to sample	6.5-8.5
Chloride	mg/L	244	1901	2120	2420	1530	1500	1450	150	3.2	316	6.3	3.4					1,053
Sulfate	mg/L	2650	2230	2370	2870	41.9	64.1	93.0	88.7	9.8	836	11.0	9.2					2,641
Total Dissolved Solids	mg/L	11200	9430	3170	11000	4760	3720	3840	3320	95	1780	139	83					501-10,000 or 1.25 times background
Dissolved Selenium	mg/L	0.513	0.443	0.482	0.533	<0.0004	<0.0004	<0.0004	<0.0004	0.00044	0.00056	<0.0004	<0.0004					0.05
Dissolved Thallium	mg/L	0.0022	0.0019	0.0023	0.0035	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002					0.002

Notes and Qualifiers:

- H
- Sample analyzed beyond recommended hold time
- U
- Detection limit is estimated
- UJ
- Estimated low
- X
- Data may not be representative due to nonstandard field sampling protocol
- NA
- Not analyzed.
- value
- Exceeds trigger

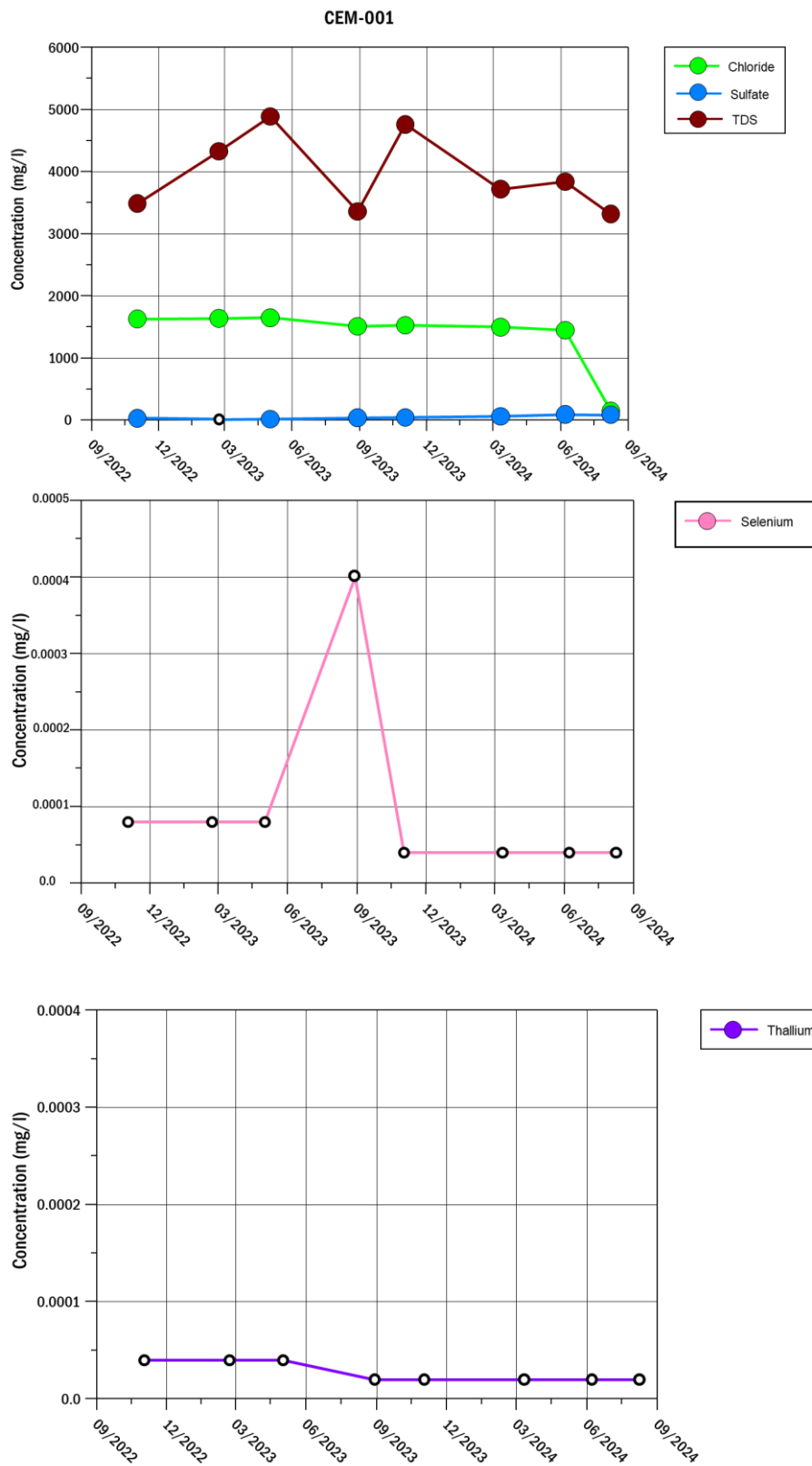
a CEM 005 Y23 Q4 Well Sounding: 11/2/2023
a CEM 005 Y24 Q1 Well Sounding: 3/11/2024
a CEM 005 Y24 Q2 Well Sounding: 6/7/2024
a CEM 005 Y24 Q3 Well Sounding: 8/8/2024

## CEMEX Lyons Quarterly Groundwater Monitoring

## Field Data Sheet

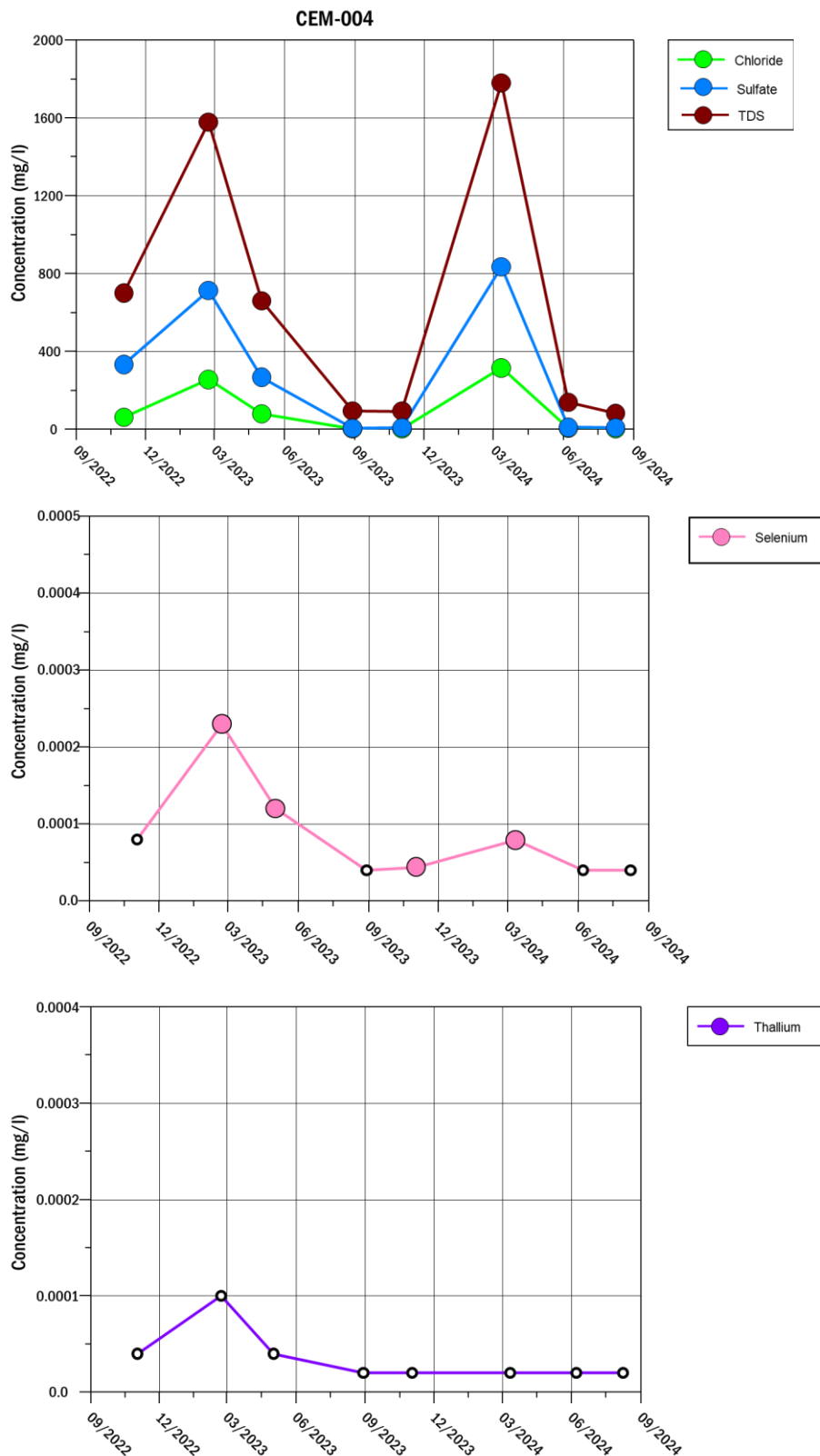
Date: 8/8/24Project Number: 159440Personnel: DG. AJ

Location	Date	Time	pH	Temp (°C)	Cond (mS/cm)	DO (mg/L)	Total Depth (fbtoc)	Depth to Water (ft)	Notes
CEM-001	8/8/24	1440							
		1453							
		1515	7.91	13.2	4.77	1.64	143 (3.5' from top of casing to ground)		
		1517	7.99	13.4	4.82	1.08			
CEM-004	8/8/24	1320						3.73	
		1326	8.88	17.4	0.486	0.97	23.5		2.5 gal purged
		1331	7.86	17.2	0.148	0.01			8 gal purged
		1336	7.71	17.1	0.135	0.01		3.77	11 gal purged
CEM-005	8/8/24	1020						397.02	397.02 - 2.62 =
		1103	7.30	18.3	9.24	0.89	400 (2.62' from top of casing to ground)	397.69	400.31
		1131	7.48	17.9	9.07	1.37		398.0	400.62
		8/7/24 0956						397.43	400.55
A - Pit	8/8/24	1458	8.10	22.8	1.26	5.58	N/A		
C - Pit	8/8/24	1239	10.79	21.4	15.42	0.2	N/A		



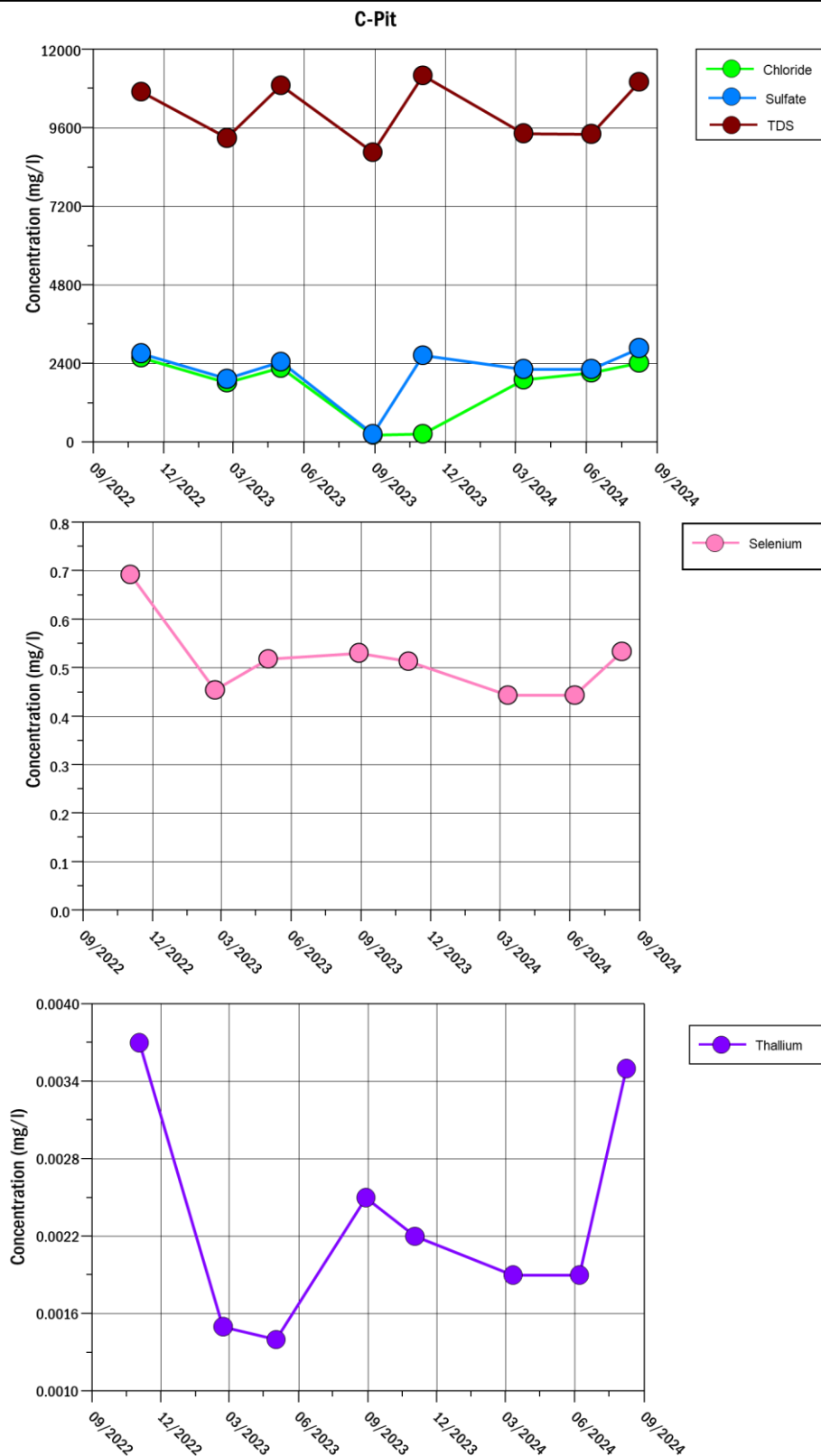
Note: Concentrations reported below the detection limit are plotted as open symbols

**Figure A** Time trend plots for CEM-001



Note: Concentrations reported below the detection limit are plotted as open symbols

**Figure B** Time trend plots for CEM-004



Note: Concentrations reported below the detection limit are plotted as open symbols

**Figure C** Time trend plots for C-Pit

**PAGE**

FED-EX Tracking #	Bottle Order Control #
Accutest Quote #	Accutest Job #

[illegible]