



April 26, 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
First 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 first quarter of 2024, covering the reporting period from January 1, 2024 to March 31, 2024. Table 1 presents data for the last four quarters.

Groundwater samples were collected on March 11, 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 March 12, 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 are 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 March 11, 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 90th 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.

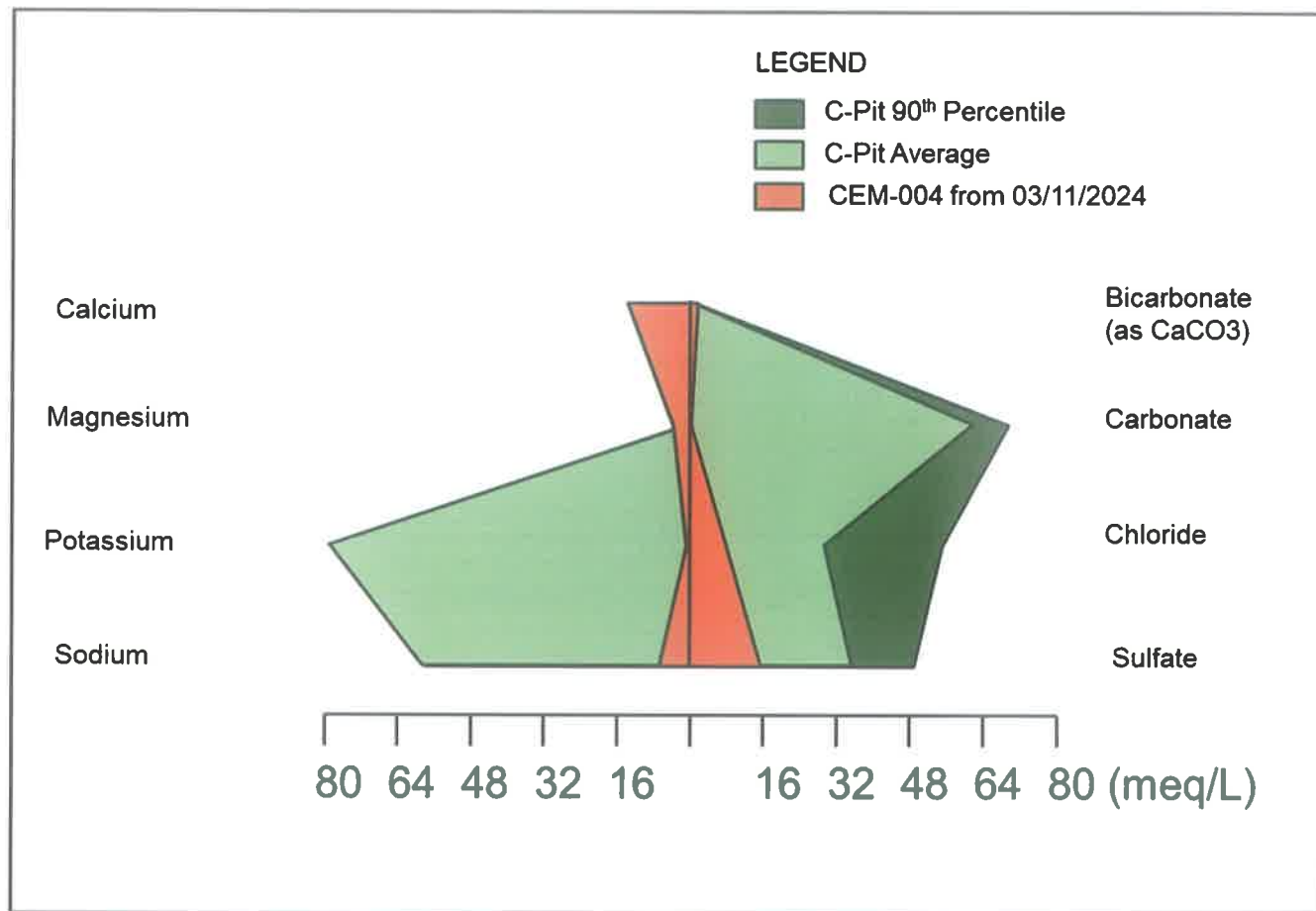


Figure 1: First quarter 2024 cation/anion data for CEM-004 compared to C-Pit

Please contact me at 708-571-9148 or by email at natalie.thompson@cemex.com for any questions or concerns regarding this submittal.

Sincerely,

N. B. Thompson

Natalie Thompson
Environmental Manager

Encs. Y24Q1C-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)

Parameter	Units	C-Pit				CEM-001				CEM-004				CEM-005				CEM-004, CEM-005 Triggers (TR-12)
		2023 Q2	2023 Q3	2023 Q4	2024 Q1	2023 Q2	2023 Q3	2023 Q4	2024 Q1	2023 Q2	2023 Q3	2023 Q4	2024 Q1	2023 Q2	2023 Q3	2023 Q4	2024 Q1	
		5/2/2023	8/29/2023	11/2/2023	3/11/2024	5/2/2023	8/29/2023	11/2/2023	3/11/2024	5/2/2023	8/29/2023	11/2/2023	3/11/2024	^a See dates below	^a See dates below	^a See dates below	^a See dates below	
		value	value	value	value	value	value	value	value	value	value	value	value	value	value	value	value	
pH (On-site)	su	10.47	10.65	10.89	10.54	7.46	7.96	7.88	7.26	7.45	7.77	7.19	7.11	insufficient water to sample	insufficient water to sample	insufficient water to sample	insufficient water to sample	6.5-8.5
Chloride	mg/L	2270	214	244	1901	1650	1510	1530	1500	79.9	2.9	3.2	316					1,053
Sulfate	mg/L	2460	241	2650	2230	19.9	38.3	41.9	64.1	268	7.4	9.8	836					2,641
Total Dissolved Solids	mg/L	10900	8850	11200	9430	4890	3360	4760	3720	662	96	95	1780					501-10,000 or 1.25 times background
Dissolved Selenium	mg/L	0.518	0.530	0.513	0.443	<0.0008	<0.0004	<0.0004	<0.0004	0.0012	<0.0004	0.00044	0.00056					0.05
Dissolved Thallium	mg/L	0.0014	<0.0025	0.0022	0.0019	<0.0004	<0.0002	<0.0002	<0.0002	<0.0004	<0.0002	<0.0002	<0.0002					0.002

Notes and Qualifiers:

H

U

UJ

X

NA

value

Sample analyzed beyond recommended hold time

Detection limit is estimated

Estimated low

Data may not be representative due to nonstandard field sampling protocol

Not analyzed.

Exceeds trigger

a CEM 005 Y23 Q2 Well Sounding: 5/2/2023

a CEM 005 Y23 Q3 Well Sounding: 8/29/2023

a CEM 005 Y23 Q4 Well Sounding: 11/2/2023

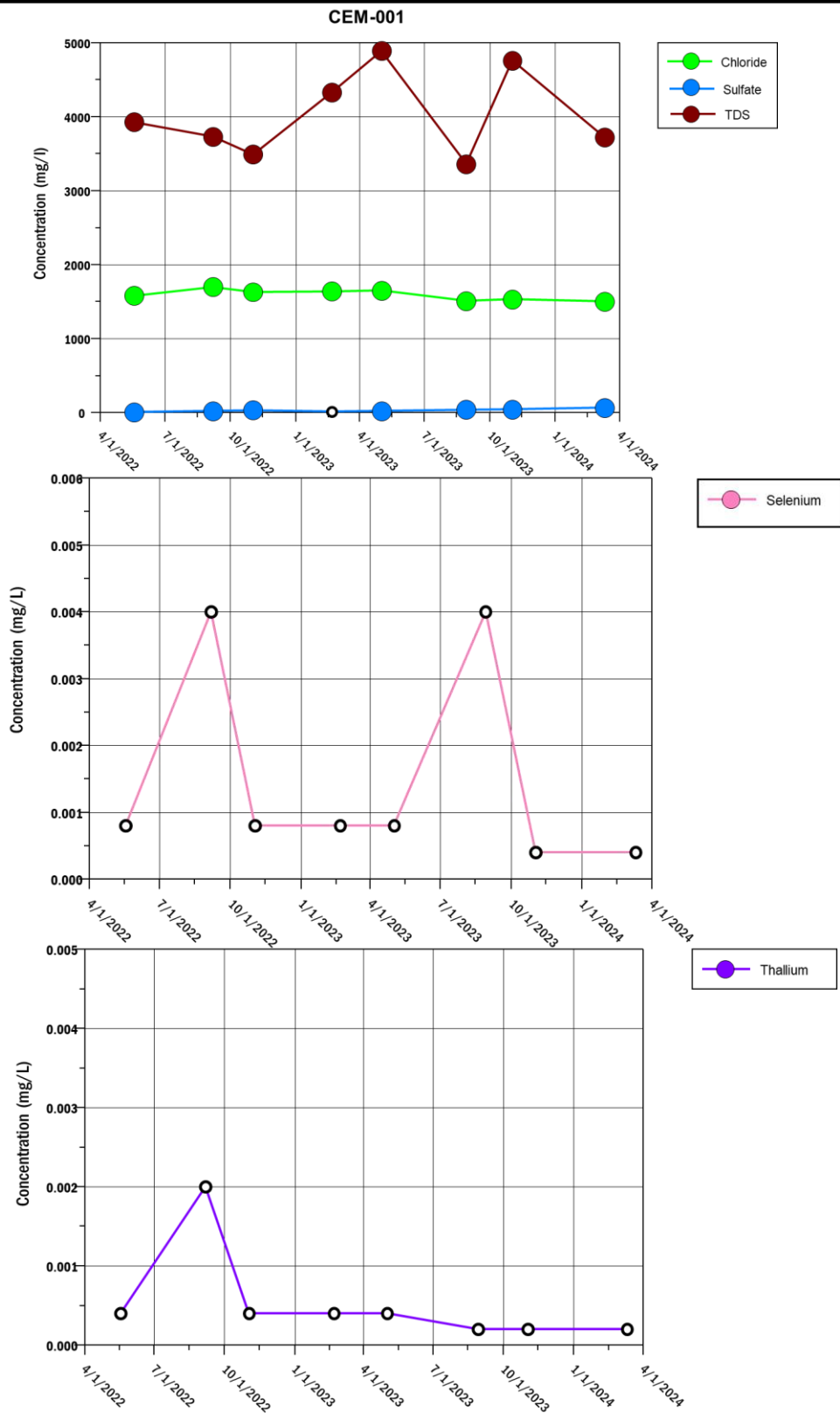
a CEM 005 Y24 Q1 Well Sounding: 3/11/2024

CEMEX Lyons Quarterly Groundwater Monitoring

Field Data Sheet

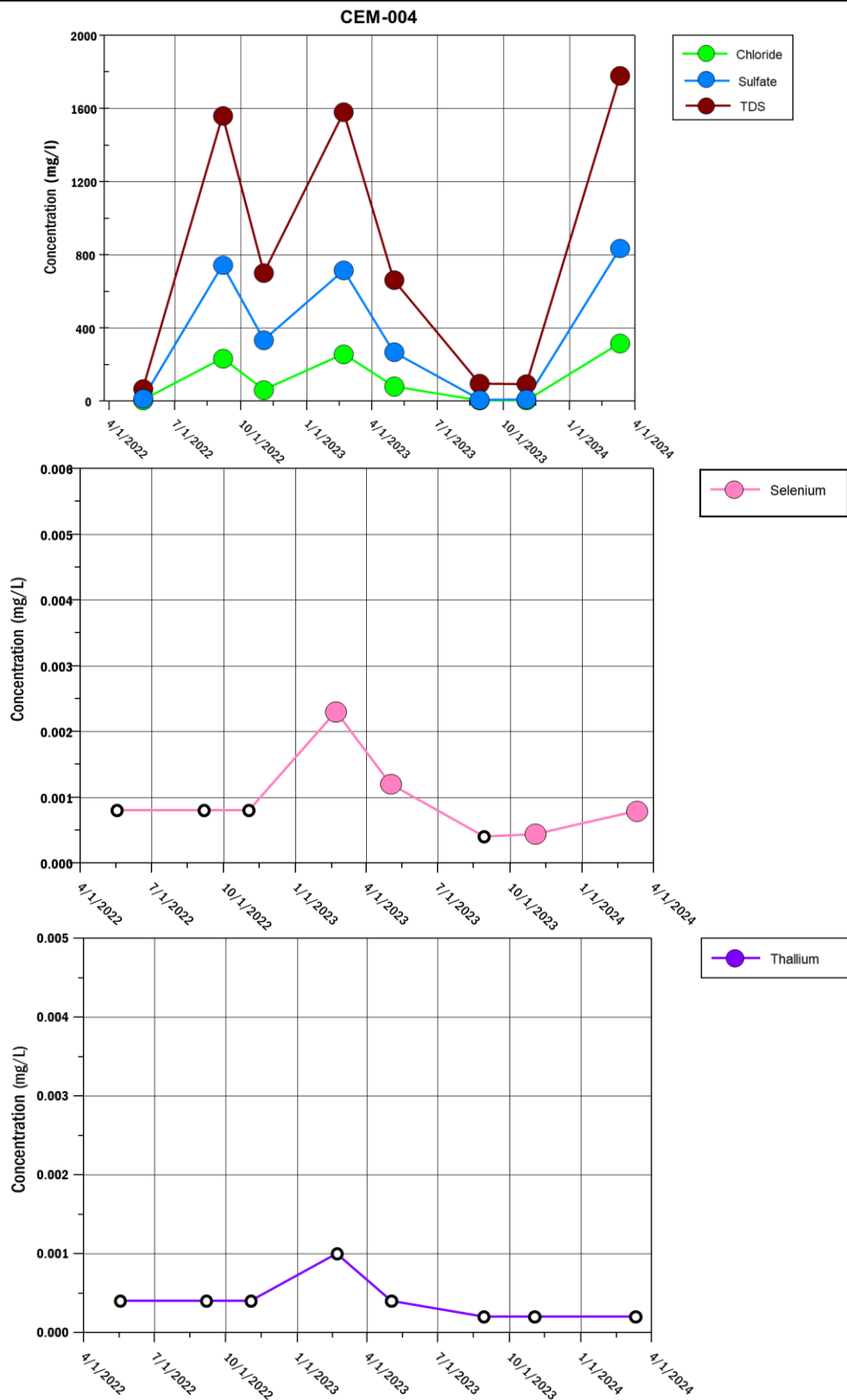
Date: 3/11/24Project Number: 159440Personnel: Steffan Becker & Devon Gribson

Location	Date	Time	pH	Temp (°C)	Cond (mS/cm)	DO (mg/L)	Total Depth (fbtoc)	Depth to Water (ft)	Notes
CEM-001	3/11/24	13:00	7.93	14.25	6.469	3.97	143 (3.5' from top of casing to ground)	0'	Beginning of purge.
		13:42	7.26	11.90	6.557	2.03			After recharge
CEM-004	3/11/24	14:10					23.5	13.12	Begin Purge
		14:15	7.81	8.05	2.481	12.43		11.12 11.12	OWL rose
		14:20	7.11	5.71	2.471	7.93		10.42	sample during purge.
CEM-005	3/11/24	10:49	6.92	17.5	10.76	2.10	400 (2.62' from top of casing to ground)	395.92	398.54 -2.62
		11:27	7.35	16.57	9.97	2.00		396.83	399.45 -2.62
		12:06	6.55	16.96	9.245	2.17		397.71	400.33 ~ 2 gal -2.62 purged
	3/12/24	11:02	—	—	—	—		397.65	Not enough to sample
A - Pit	3/11/24	12:35	7.77	5.97	1.888	14.06	N/A	—	
C - Pit	3/11/24	13:30	10.54	7.52	14.28	13.60	N/A	—	



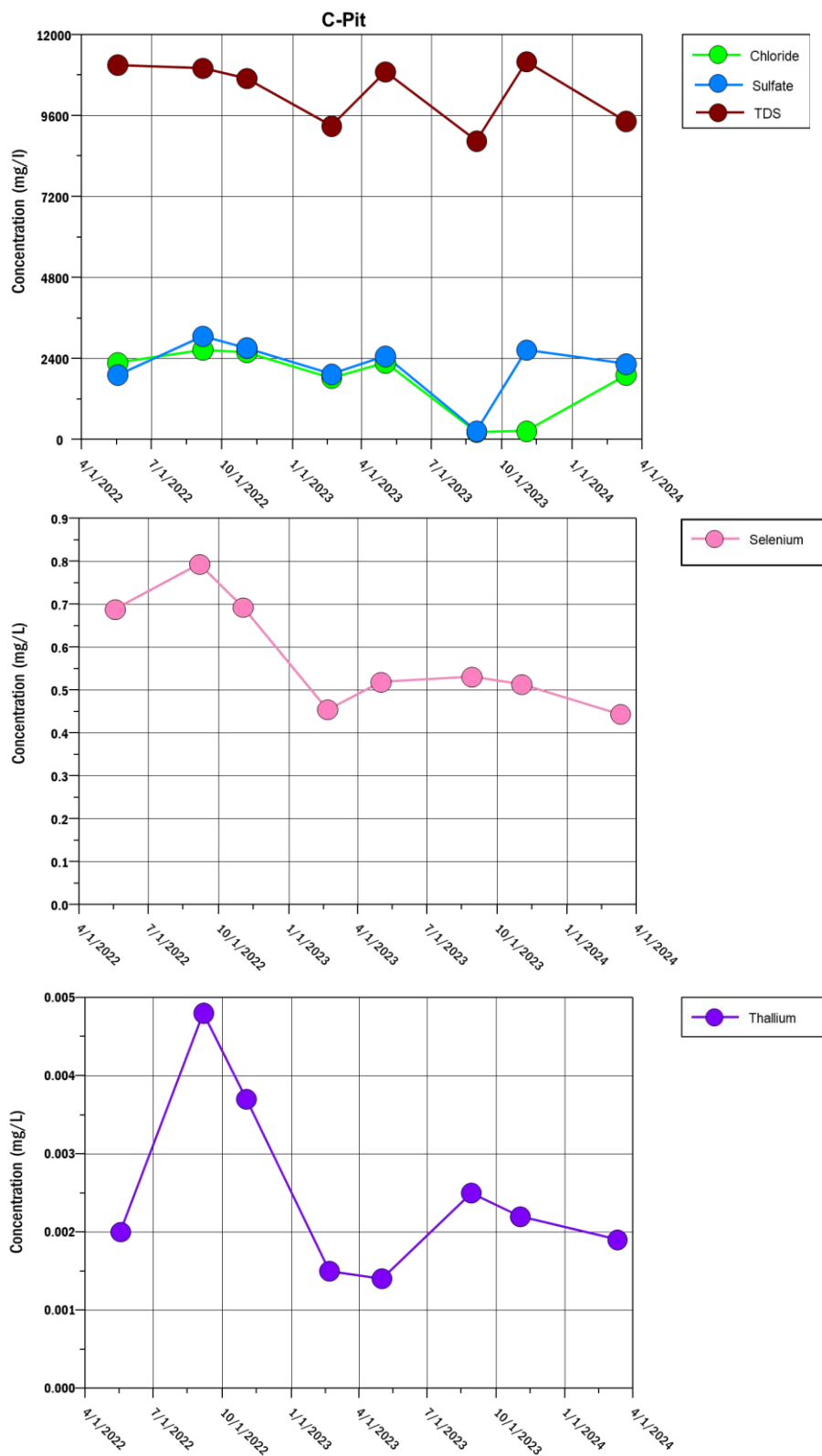
Note: Concentrations reported below the detection limit are plotted as open symbols

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