

STATE OF
COLORADO

Lennberg - DNR, Patrick <patrick.lennberg@state.co.us>

Cemex Lyons M-1977-208 Q2 2024 Groundwater Monitoring

1 message

Robin G Simons <robing.simons@cemex.com>

Tue, Jul 23, 2024 at 11:37 AM

To: "patrick.lennberg@state.co.us" <patrick.lennberg@state.co.us>

Cc: Kirill Smirnov <kirill.smirnov@cemex.com>, Greg M Bridge <gregm.bridge@cemex.com>, Jackson Jones <jackson.jones@cemex.com>, Lillian F Deprimo <lillianf.deprimo@cemex.com>

Good morning, Patrick,

Please find attached Q2 of 2024 monitoring for C-Pit at the Cemex Lyons plant. Please let me know if you have any questions.

Regards,



Robin Simons

Environmental Cement - USA

Corporate Environmental Manager- Permitting

863-602-8024

10100 Katy Freeway #300

Houston, TX 77043

[cemex.com](https://www.cemex.com)

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Water Report 2nd Quarter Monitoring Report CEMEX Lyons Mine Permit M-1922-208_signed_submitted.pdf
615K



July 23, 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
Second 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 second quarter of 2024, covering the reporting period from April 1, 2024 to June 30, 2024. Table 1 presents data for the last four quarters.

Groundwater samples were collected on June 7, 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 June 8, 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 June 7, 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.

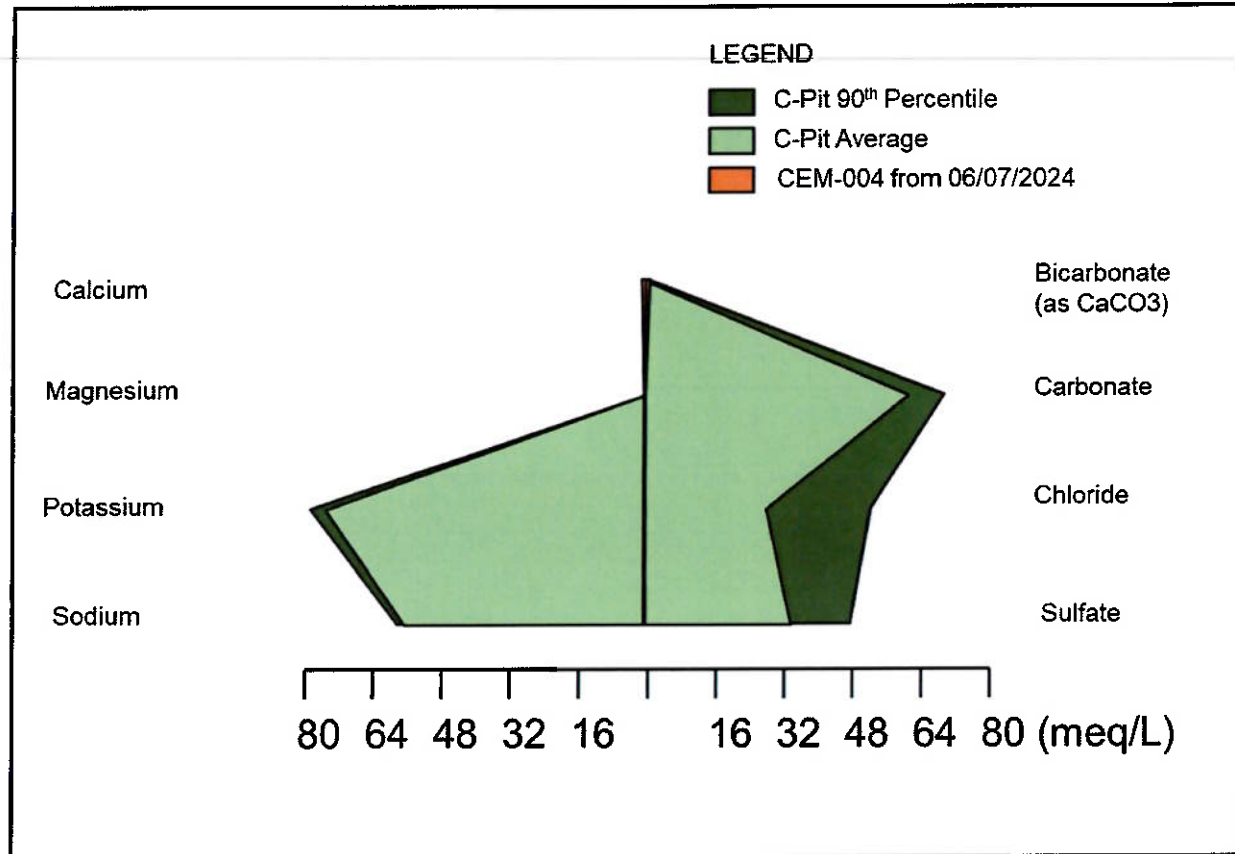


Figure 1: Second quarter 2024 cation/anion data for CEM-004 compared to C-Pit

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

Sincerely,

Robin Simons
Environmental Manager

Encs. Y24Q2C-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 Q3	2023 Q4	2024 Q1	2024 Q2	2023 Q3	2023 Q4	2024 Q1	2024 Q2	2023 Q3	2023 Q4	2024 Q1	2024 Q2	2023 Q2	2023 Q3	2023 Q4	2024 Q1	
		8/29/2023	11/2/2023	3/11/2024	6/7/2024	8/29/2023	11/2/2023	3/11/2024	6/7/2024	8/29/2023	11/2/2023	3/11/2024	6/7/2024	^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	10.65	10.89	10.54	10.71	7.96	7.88	7.26	7.82	7.77	7.19	7.11	7.21	insufficient water to sample	insufficient water to sample	insufficient water to sample	insufficient water to sample	6.5-8.5
Chloride	mg/L	214	244	1901	2120	1510	1530	1500	1450	2.9	3.2	316	6.3					1,053
Sulfate	mg/L	241	2650	2230	2370	38.3	41.9	64.1	93.0	7.4	9.8	836	11.0					2,641
Total Dissolved Solids	mg/L	8850	11200	9430	3170	3360	4760	3720	3840	96	95	1780	139					501-10,000 or 1.25 times background
Dissolved Selenium	mg/L	0.530	0.513	0.443	0.482	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	0.00044	0.00056	<0.0004					0.05
Dissolved Thallium	mg/L	<0.0025	0.0022	0.0019	0.0023	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002					0.002

Notes and Qualifiers:

- HSample analyzed beyond recommended hold time
- UDetection limit is estimated
- UJEstimated low
- XData may not be representative due to nonstandard field sampling protocol
- NANot analyzed.
- valueExceeds trigger

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
a CEM 005 Y24 Q2 Well Sounding: 6/7/2024

CEMEX Lyons Quarterly Groundwater Monitoring

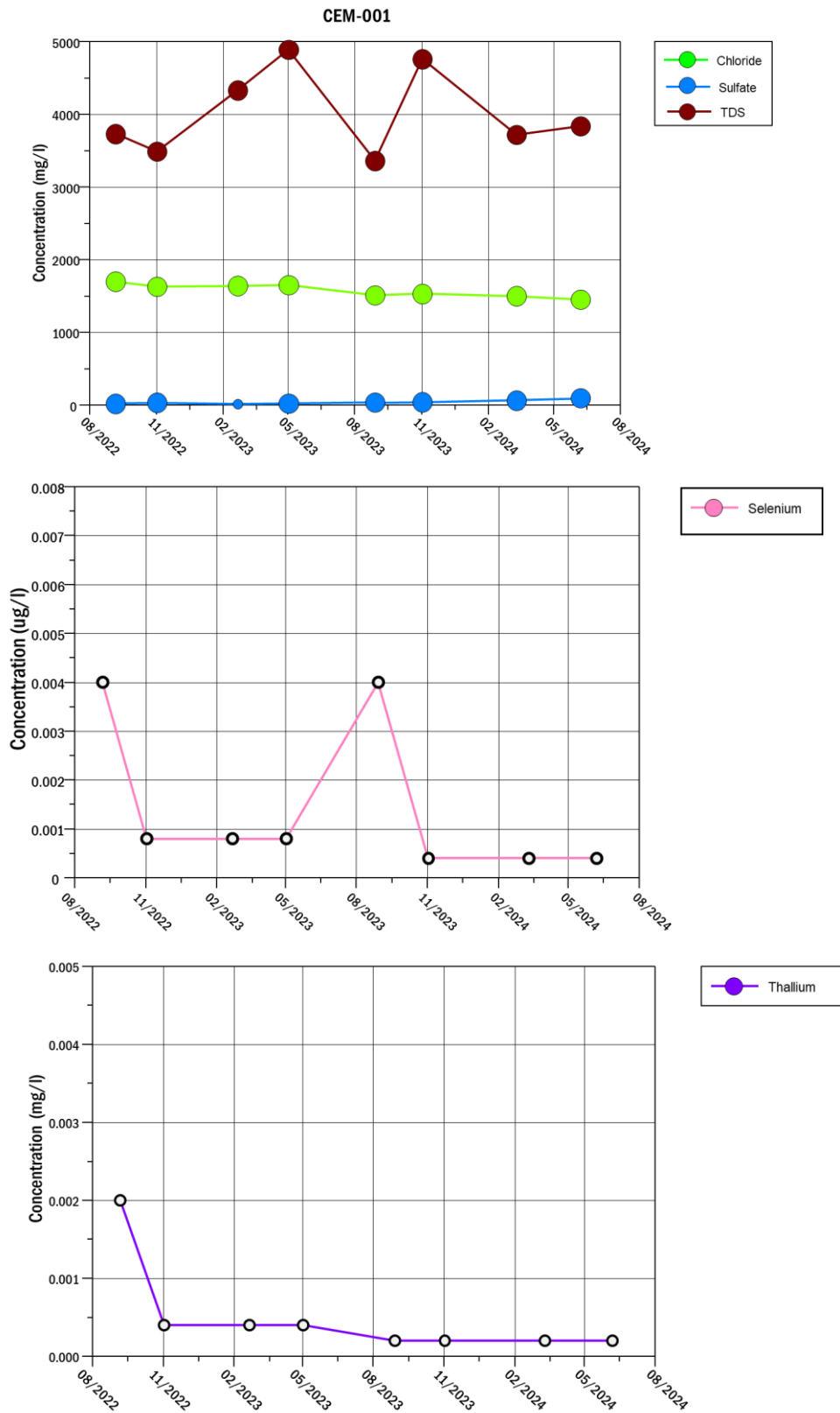
Field Data Sheet

Date: 6/7/24

Project Number: 15499.0

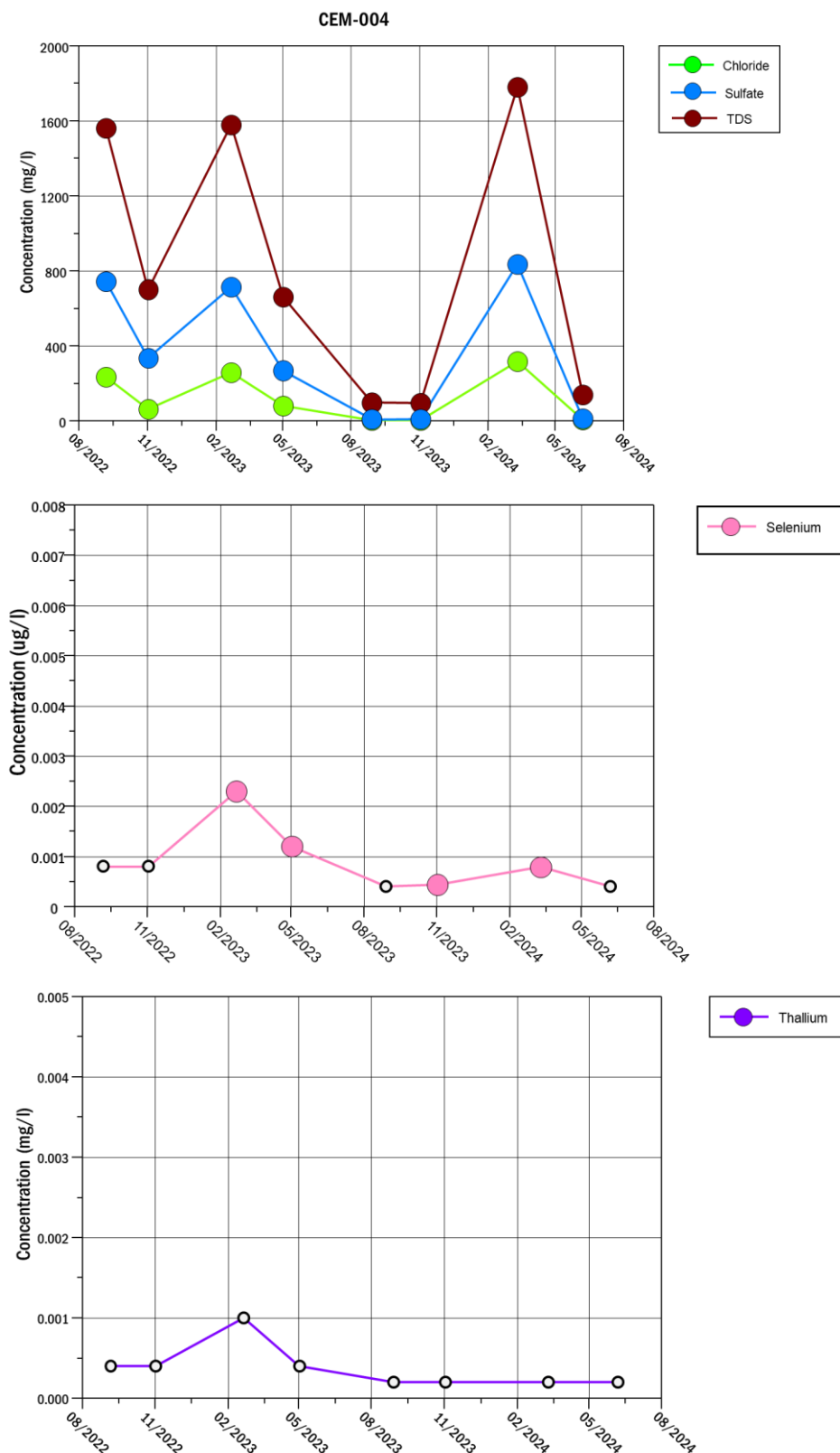
Personnel: K Donahue D Gibson

Location	Date	Time	pH	Temp (°C)	Cond (mS/cm)	DO (mg/L)	Total Depth (ft)	Depth to Water (ft)	Notes
CEM-001	6/7/24	1135	begin pumping					TOL	
		1141	pumped dry				143 (3.5' from top of casing to ground)		
		1210	7.82	13.5	667.2 $\frac{\mu S}{cm}$	0.96			
CEM-004	6/7/24	1305						4.65'	
		1315	7.37	15.3	627.6	1.09			1 gallon purged
		1318	7.16	14.1	627.7	1.02	23.5		5 gallons purged
		1325	7.21	13.1	627.7	1.03			10 gallons purge collect sample
CEM-005	6/7/24	1010 940	7.13	19.5	1047.7 $\frac{\mu S}{cm}$	2.21		398.61 395.99	398.61 - 2.62 = 395.99
		1030	7.21	19.2	1051.1 $\frac{\mu S}{cm}$	1.23	400 (2.62' from top of casing to ground)	397.8	395.99
		1054	7.23	19.7	1042.2 $\frac{\mu S}{cm}$	1.39		397.98	400.42 - 2.62 = 397.8
A - Pit	6/7/24	1240 1240	8.06	24.2	1952 $\frac{\mu S}{cm}$	6.96	N/A	N/A	
C - Pit	6/7/24	1230	10.71	25.1	1440.5 $\frac{\mu S}{cm}$	6.77	N/A	N/A	



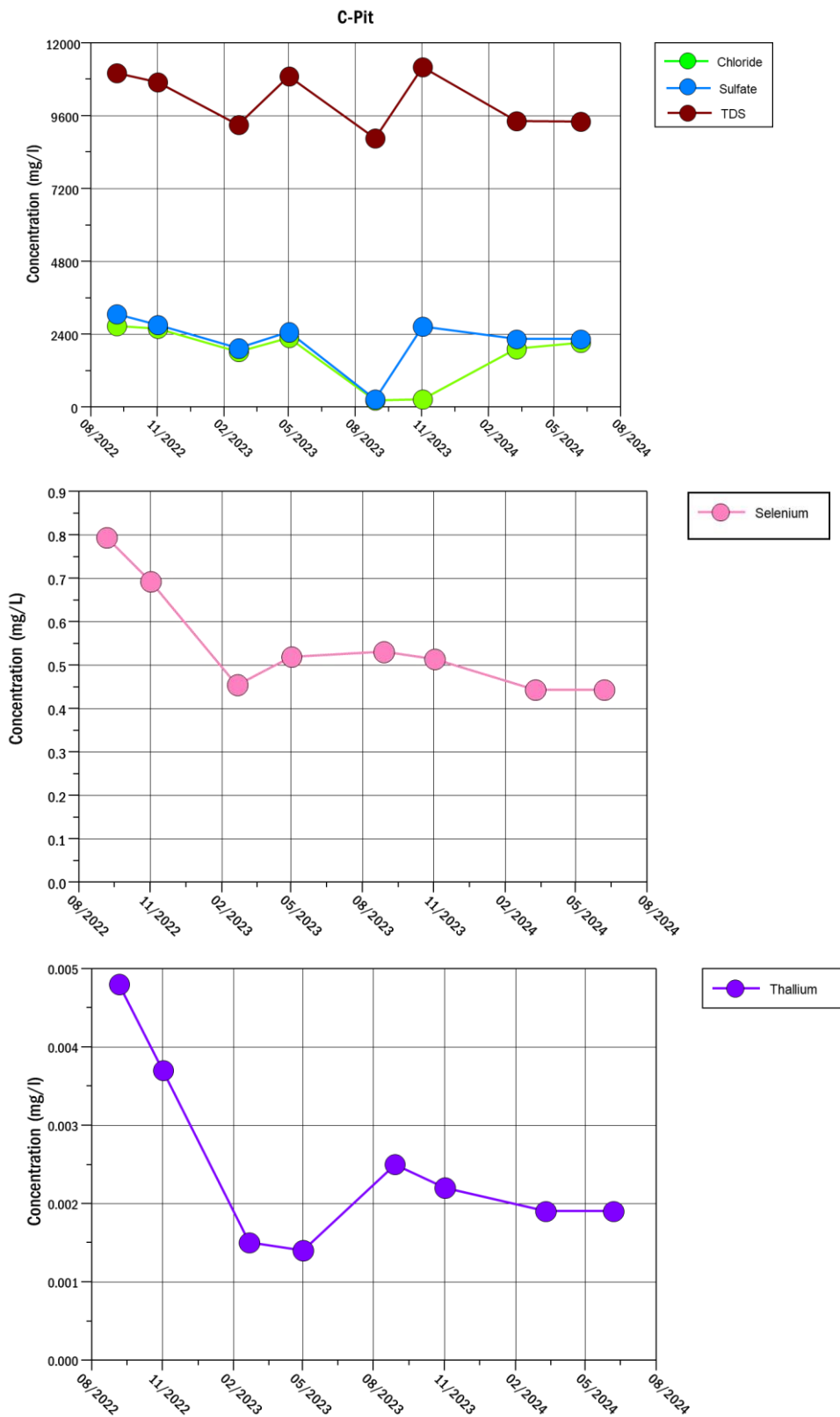
Note: Concentrations reported below the detection limit are plotted as open symbols

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