



CEMEX Lyons - Q4 2022 C-Pit Monitoring Report

1 message

Scott A Harcus <scotta.harcus@cemex.com>

Thu, Jan 26, 2023 at 6:20 PM

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

Cc: Maribel B Aguilos <maribelb.aguilos@cemex.com>

Hello Patrick Lennberg –

Please find the attached Lyons Quarry, C-pit monitoring report for 4th Quarter of 2022.

A hard copy will not be mailed unless specifically requested.

Let me know if you have any questions.

Regards,

Scott



Scott A. Harcus

Environmental Manager - Environmental - United States of America

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 **CMX Lyons_C-Pit GW Report Y22Q4_Fnl-signed_2023.01.26.pdf**
3389K



January 26, 2023

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
Fourth Quarter 2022 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 fourth quarter of 2022, covering the reporting period from October 1, 2022 to December 31, 2022. Table 1 presents data for the last four quarters.

Groundwater samples were collected on November 2, 2022 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 November 3, 2022 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 November 2, 2022 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.

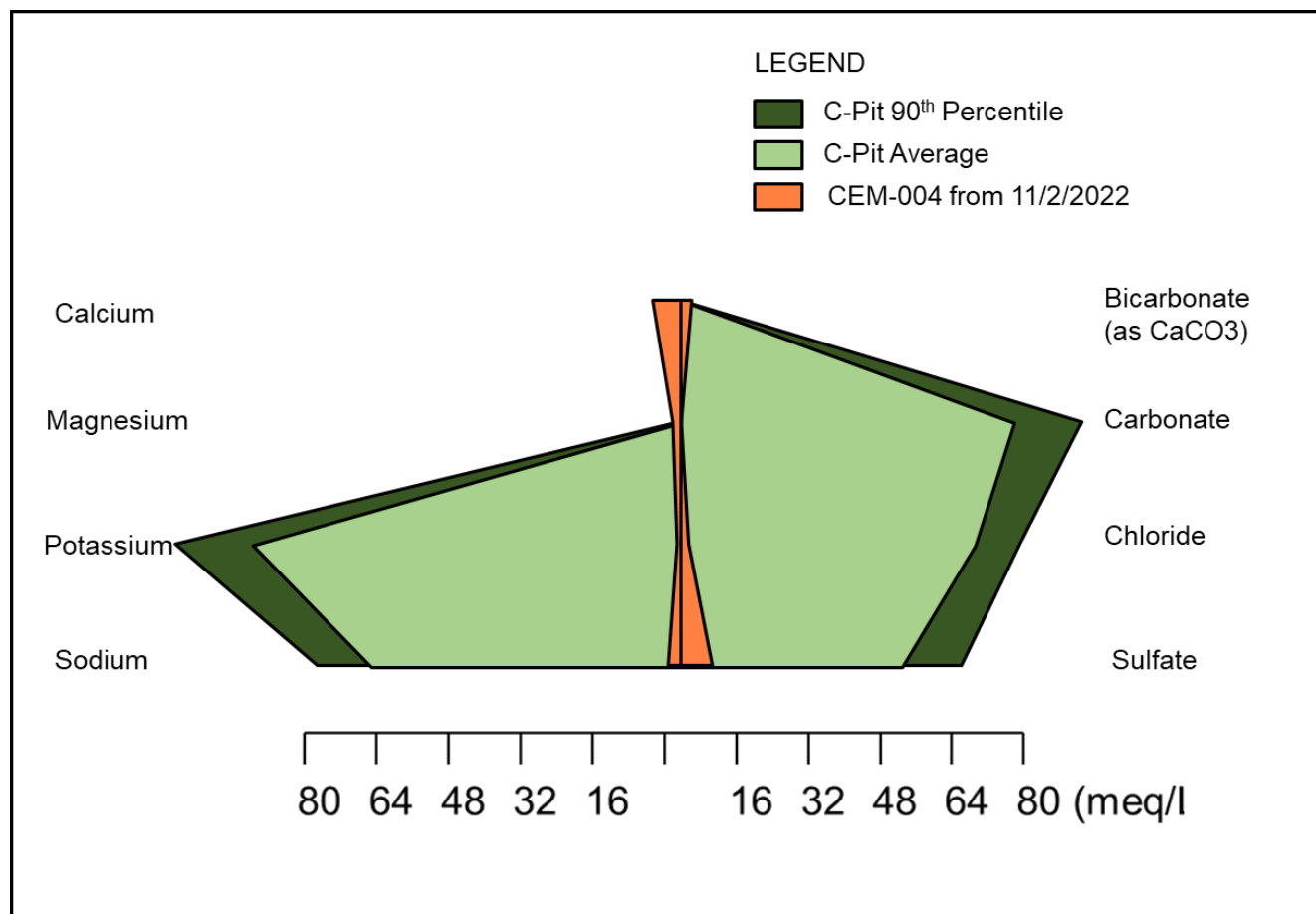


Figure 1: Fourth quarter 2022 cation/anion data for CEM-004 compared to C-Pit

Please contact me at 303-823-2124 or by email at scotta.harcus@cemex.com for any questions or concerns regarding this submittal.

Sincerely,

Scott A. Harcus
Environmental Manager

Encs. Y22Q4C-Pit Monitoring Report and associated Stiff Plot (Fig.1), 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)
		2022 Q1	2022 Q2	2022 Q3	2022 Q4	2022 Q1	2022 Q2	2022 Q3	2022 Q4	2022 Q1	2022 Q2	2022 Q3	2022 Q4	2022 Q1	2022 Q2	2022 Q3	2022 Q4	
		3/15/2022	5/18/2022	9/6/2022	11/2/2022	3/15/2022	5/18/2022	9/6/2022	11/2/2022	3/15/2022	5/18/2022	9/6/2022	11/2/2022	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	11.41	11.81	11	10.3	8.24	7.85	7.86	7.44	7.48	7.72	6.97	6.88	insufficient water to sample	insufficient water to sample	insufficient water to sample	insufficient water to sample	6.5-8.5
Chloride	mg/L	1580	2270	2660	2580	1610	1580	1700	1630	129	5.6	234	61.9					1,053
Sulfate	mg/L	1550	1910	3060	2710	7	3.2	18.5	33.9	880	12.4	744	334					2,641
Total Dissolved Solids	mg/L	8360	11100	11000	10700	4460	3930	3730	3490	1800	66	1560	701					501-10,000 or 1.25 times background
Dissolved Selenium	mg/L	0.475	0.688	0.793	0.692	<0.005	<0.0008	<0.004	<0.0008	<0.005	<0.0008	<0.0008	<0.0008					0.05
Dissolved Thallium	mg/L	<0.004	0.0020	0.0048	0.0037	<0.004	<0.0004	<0.002	<0.0004	<0.004	<0.0004	<0.0004	<0.0004					0.002

Notes and Qualifiers:

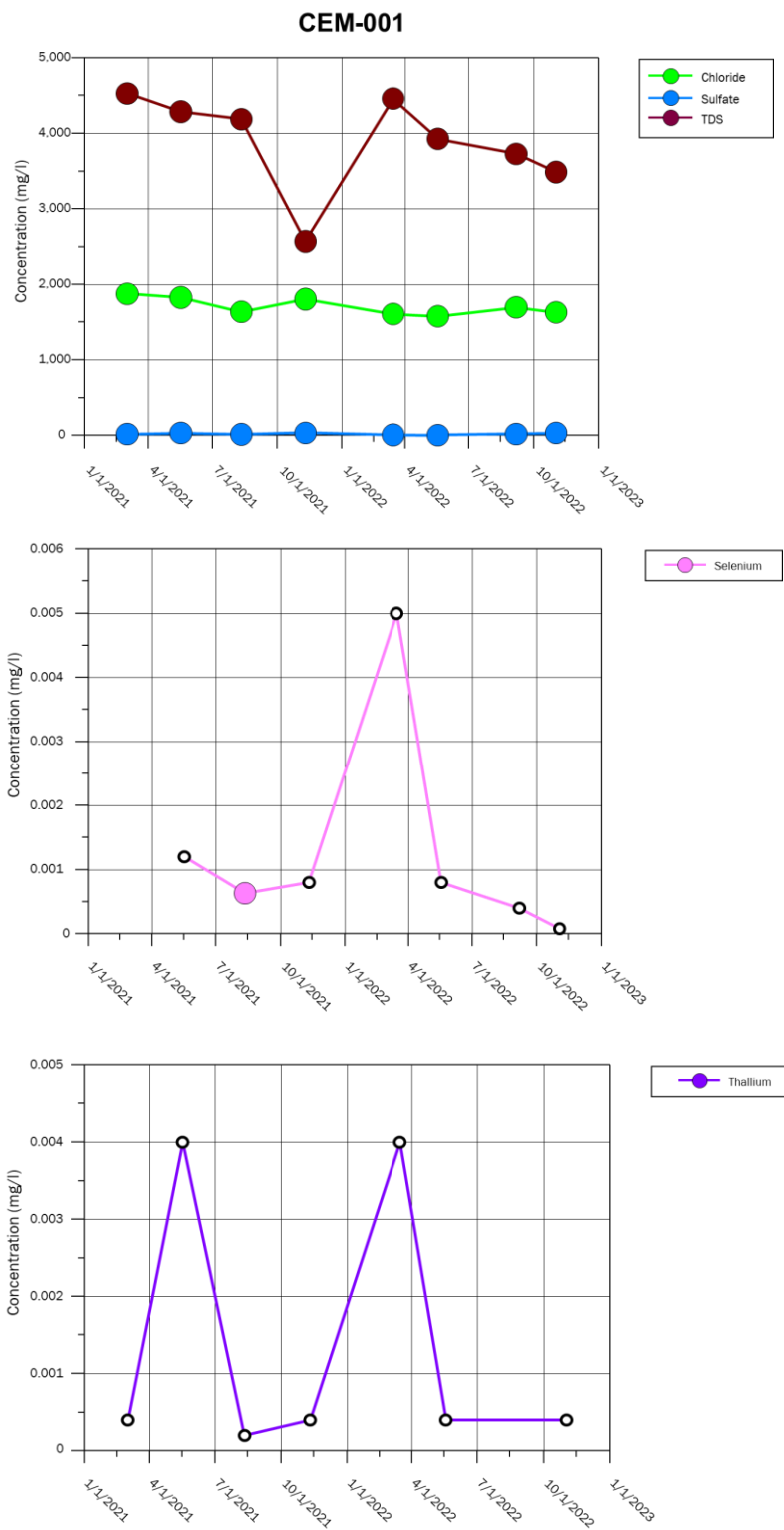
H	Sample analyzed beyond recommended hold time
U	Detection limit is estimated
UJ	Estimated low
X	Data may not be representative due to nonstandard field sampling protocol
NA	Not analyzed.
value	Exceeds trigger

aCEM 005 Y22 Q1 Well Sounding: 3/15/2022
aCEM 005 Y22 Q2 Well Sounding: 5/18/2022
a CEM 005 Y22 Q3 Well Sounding: 9/6/2022
a CEM 005 Y22 Q4 Well Sounding: 11/3/2022

**CEMEX Lyons Quarterly Groundwater Monitoring
Field Data Sheet**

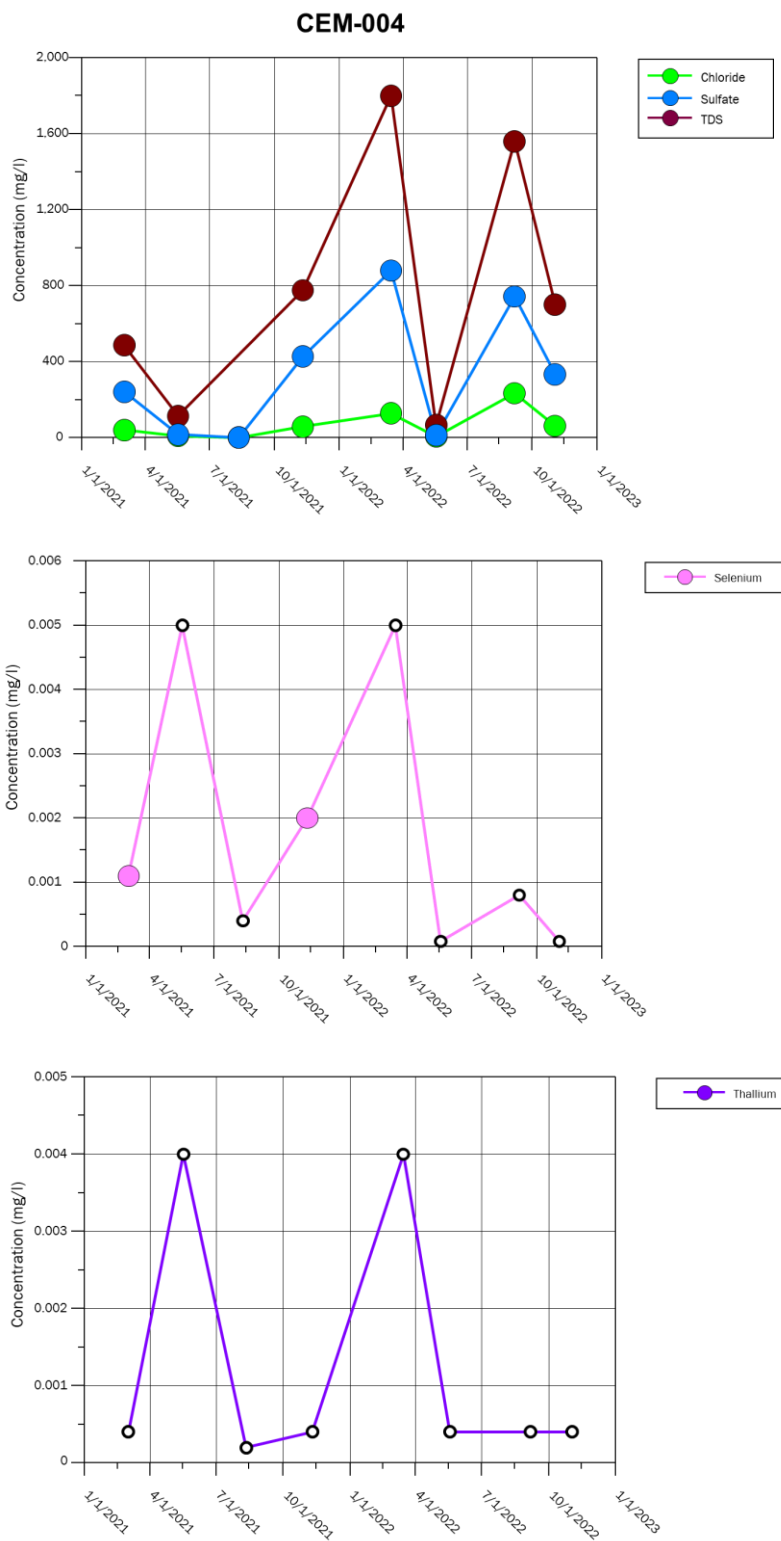
Date: 11/2/22 Project Number: CEMEX
 Personnel: Steffan Becker + Danielle Snyder

Location	Time	pH	Temp (°C)	Cond. (uS/cm)	DO (mg/L)	Total Depth (ft below top of casing)	Depth to Water (ft)	Notes
CEM-001	11/2/22 12:45	6.8	13.9	5956	0.59	143	0.00	← sample
	13:35	7.44	14.0	5813	—	(3.5' from top of casing to ground)	0.00	
CEM-004	11/2/22 13:55	7.03 7.03	15.1	979	0.87	23.5	9.4	Purge 4.7 gallons ← sample
	14:05	6.98	14.4	894	2.15			
CEM-005	11/2/22 10:52					400 (2.62' from top of casing to ground)	397.18	= 399.8 - 2.62 • smells like gasoline = 400.97 - 2.62 400.9 - 2.62 = 398.3 - only regenerated • 0.7 - not enough H ₂ O to sample!
	11:30	7.4	18.8°C	4660	1.2			
	11:55	7.4	18.9°C	8600	1.7		398.35	
	11/3/22 10:00						398.28	
A-Pit 11/2/22	12:19	8.17	13.5	1590	8.71	N/A	—	sample
C-Pit 11/2/22	13:10	10.3	11.16	15637 15637	86.3	N/A	—	sample



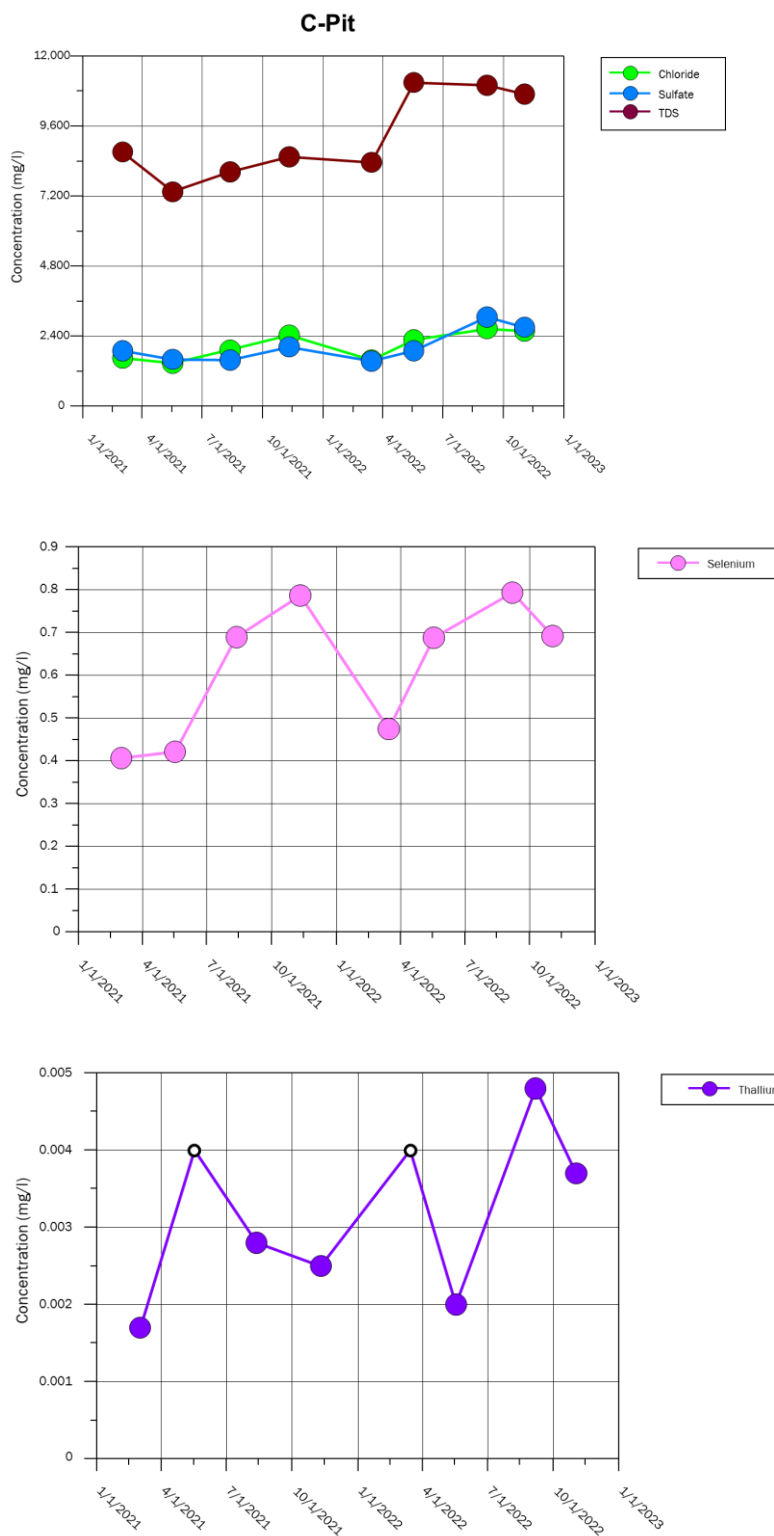
Note: Concentrations reported below the detection limit are plotted as open symbols

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