



CEMEX Lyons - Q2 2023 C-Pit Monitoring Report

1 message

Greg M Bridge <gregm.bridge@cemex.com>
To: "Lennberg - DNR, Patrick" <patrick.lennberg@state.co.us>
Cc: Natalie Thompson <natalie.thompson@cemex.com>

Thu, Jul 27, 2023 at 11:41 AM

Patrick ,

Please find the attached Lyons Quarry, C-pit monitoring report for 2nd Quarter of 2023.

A hard copy will not be mailed unless specifically requested.

Please let me know if you have any questions.

Regards,

Greg



Greg Bridge

Environmental Cement - USA

Corporate Environmental Manager

352-442-5375

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Houston, TX 77043

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 **2023.07.27 2023 2nd Qtr Monitoring Data Report - CEMEX Lyons Mine Permit M-1977-208.pdf**
739K

July 27th, 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
Second Quarter 2023 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 2023, covering the reporting period from April 1, 2023 to June 30, 2023. Table 1 presents data for the last four quarters.

Groundwater samples were collected on May 2, 2023 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 May 2, 2023 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 May 2, 2023 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.

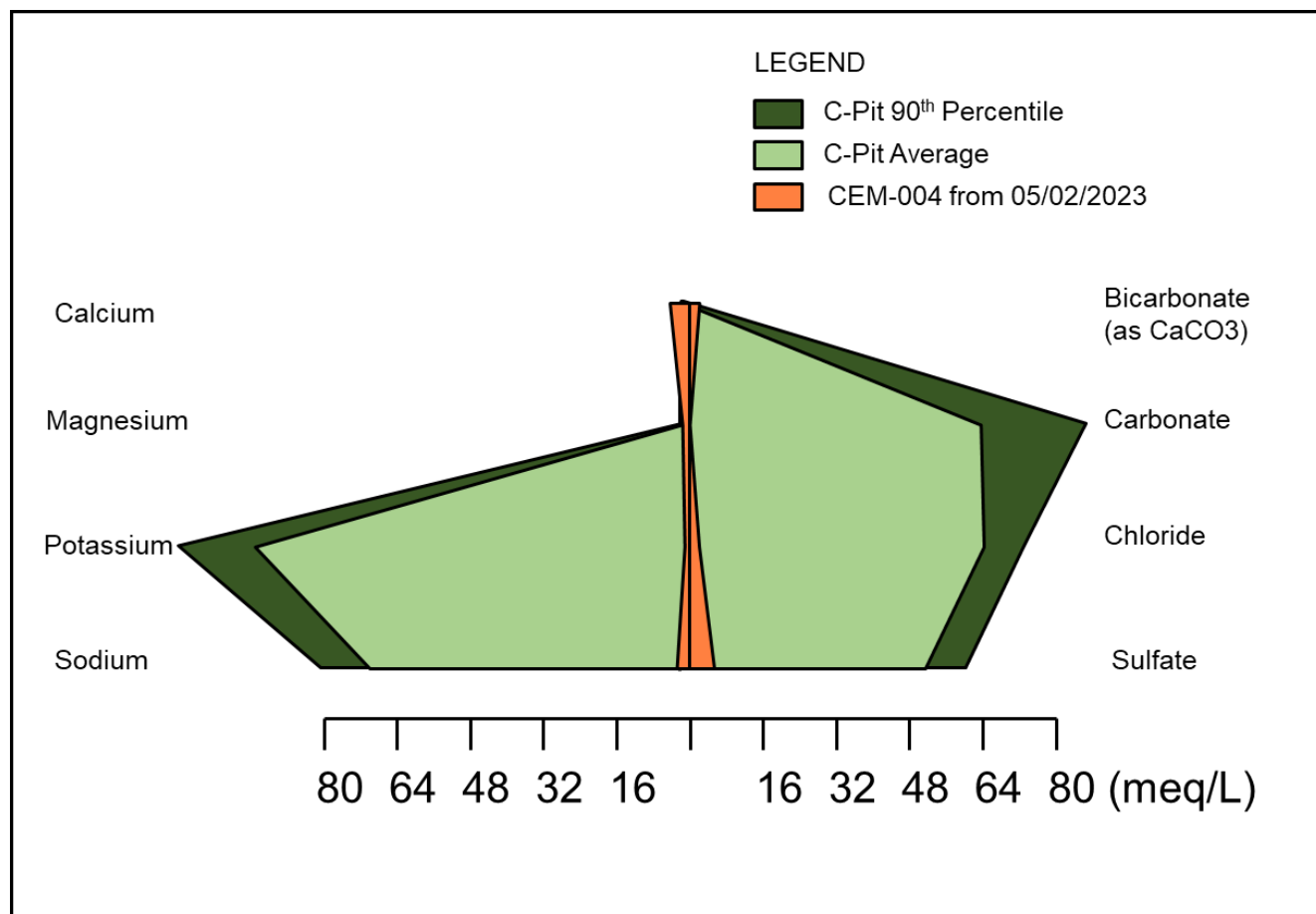


Figure 1: Second quarter 2023 cation/anion data for CEM-004 compared to C-Pit

Please contact me at 352-442-5375 or by email at gregm.bridge@cemex.com for any questions or concerns regarding this submittal.

Sincerely,

Greg M. Bridge
Environmental Manager

Table 1
Summary of Analytical Results

Parameter	Units	C-Pit				CEM-001				CEM-004				CEM-005				CEM-004, CEM-005 Triggers (TR-12)
		2022 Q3	2022 Q4	2023 Q1	2023 Q2	2022 Q3	2022 Q4	2023 Q1	2023 Q2	2022 Q3	2022 Q4	2023 Q1	2023 Q2	2022 Q3	2022 Q4	2023 Q1	2023 Q2	
		9/6/2022	11/2/2022	2/21/2023	5/2/2023	9/6/2022	11/2/2022	2/21/2023	5/2/2023	9/6/2022	11/2/2022	2/21/2023	5/2/2023	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	10.3	12.31	10.47	7.86	7.44	8.01	7.46	6.97	6.88	7.26	7.45	insufficient water to sample	insufficient water to sample	insufficient water to sample	insufficient water to sample	6.5-8.5
Chloride	mg/L	2660	2580	1820	2270	1700	1630	1640	1650	234	61.9	257	79.9					1,053
Sulfate	mg/L	3060	2710	1930	2460	18.5	33.9	<13	19.9	744	334	715	268					2,641
Total Dissolved Solids	mg/L	11000	10700	9290	10900	3730	3490	4330	4890	1560	701	1580	662					501-10,000 or 1.25 times background
Dissolved Selenium	mg/L	0.793	0.692	0.454	0.518	<0.004	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	0.0023	0.0012					0.05
Dissolved Thallium	mg/L	0.0048	0.0037	0.0015	0.0014	<0.002	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.001	<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

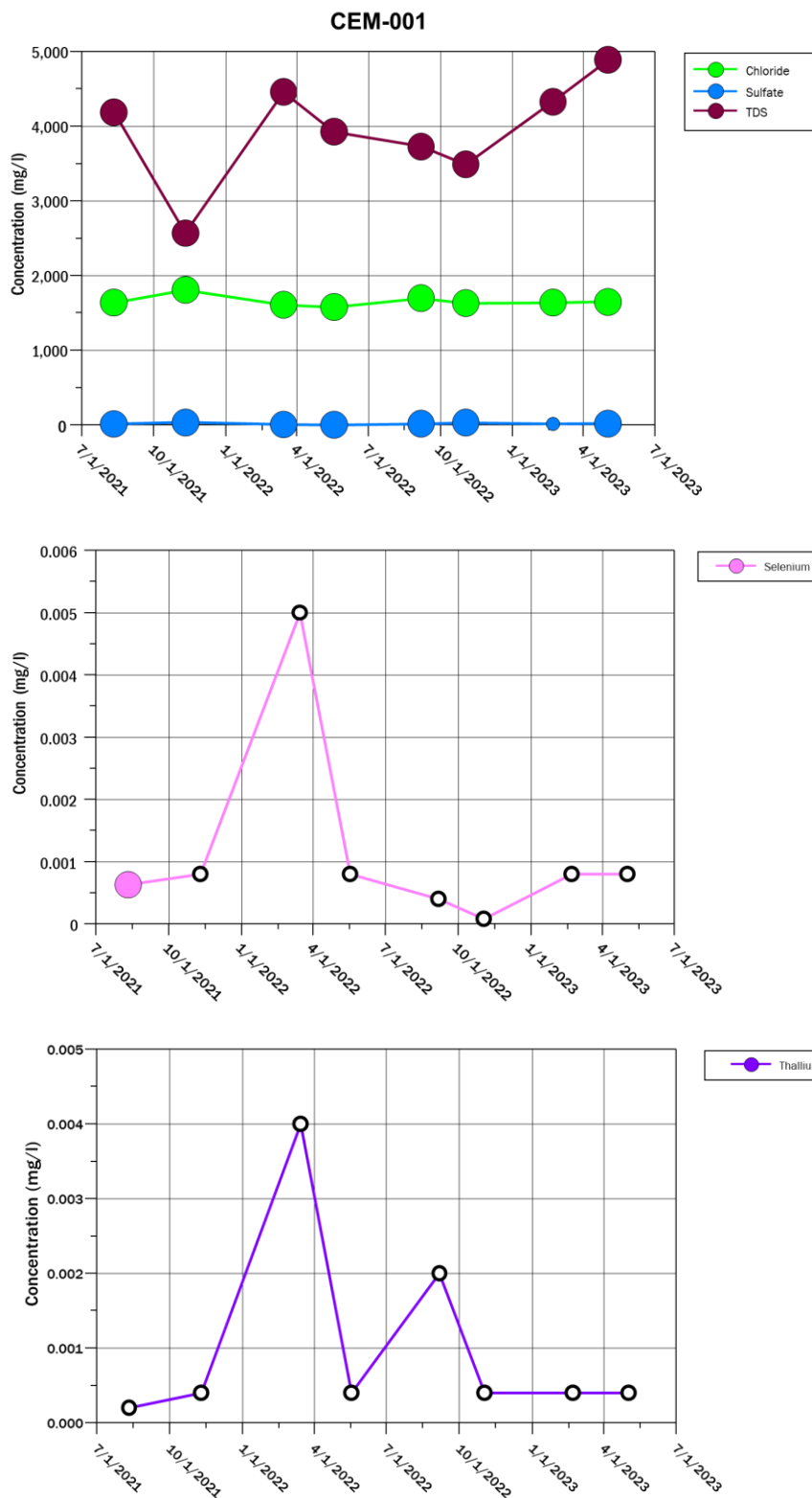
a CEM 005 Y22 Q3 Well Sounding: 9/6/2022
a CEM 005 Y22 Q4 Well Sounding: 11/3/2022
a CEM 005 Y23 Q1 Well Sounding: 2/21/2023
a CEM 005 Y23 Q1 Well Sounding: 5/2/2023

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

Date: 5/2/2023 Project Number: 153263
 Personnel: Steffan Becker & Campbell Hamel-Davis

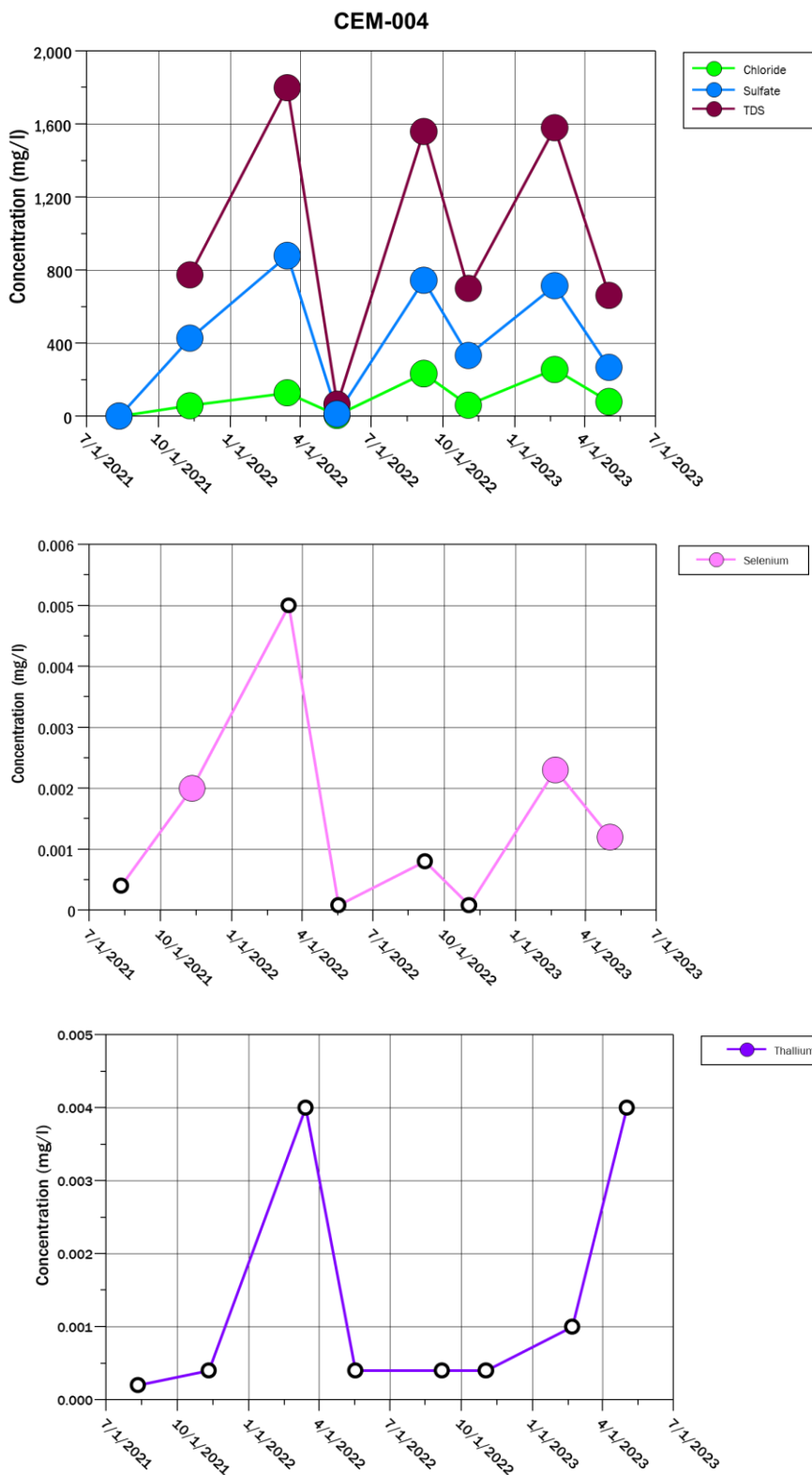
Location	Time	pH	Temp (°C)	Cond. (uS/cm)	DO (mg/L)	Total Depth (ft below top of casing)	Depth to Water (ft)	Notes
004 CEM-004 (@ conveyor)	13:05	7.45	13.5	0.97		143	6.50	Start purge @ 12:55 End purge @ 13:04 Purge volume ~ 8-gal Sample time 13:05
						(3.5' from top of casing to ground)		
001 CEM-001	10:11 12:26	7.46	20.6	5.74	Not available		@ casing	Start purge 11:22 End purge 11:37 → no more water Sample time 10:31 12:26
						23.5		
CEM-005	10:11	NA	NA	NA			398.68	Bailed ~ 2" water. Sulfur like smell. 10:11 = purge start time → no sample
						400		
						(2.62' from top of casing to ground)		
A-Pit	10:39	7.4	17.4	2.34	Not available	N/A	—	Probe: SN E0067506
C-Pit	11:46	10.47	23.2	13.74	Not available	N/A	—	11

Hanna Meter HI 991302; SN = E0067506



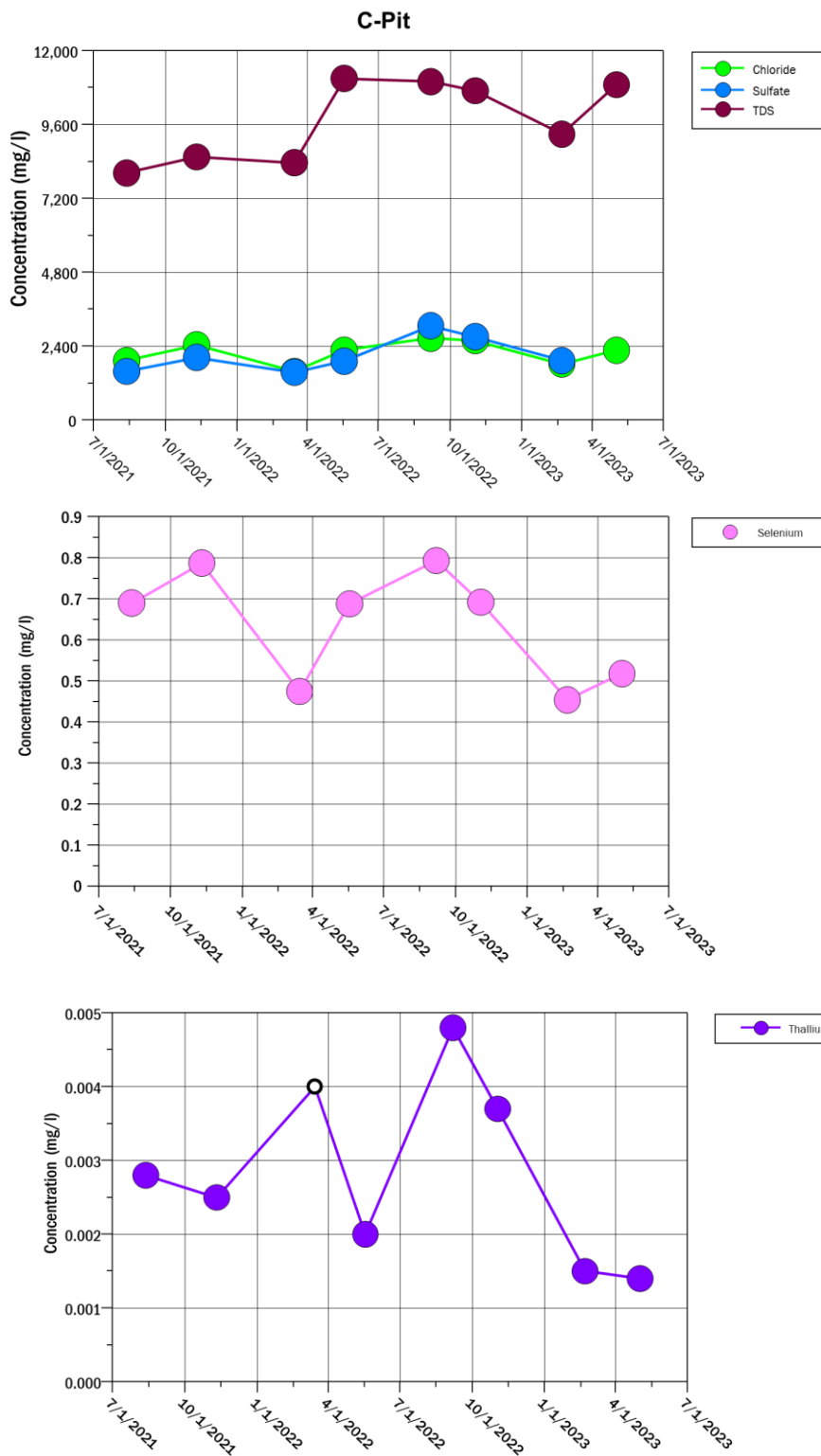
Note: Concentrations reported below the detection limit are plotted as open symbols

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