

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-oo4 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-oo4 continues to be significantly different from that of C-Pit.

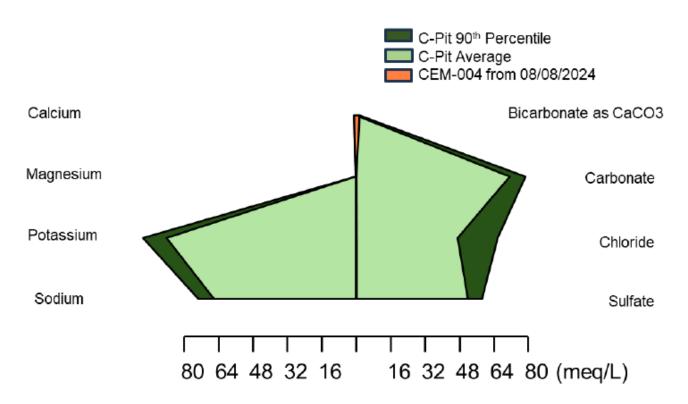


Figure 1: Second quarter 2024 cation/anion data for CEM-004 compared to C-Pit

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. 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

			C-Pit				CEM	-001			CEM-C	004			CEM-004, CEM-005 Triggers (TR-12)			
Parameter	Units	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	^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	10.89	10.54	10.71	10.79	7.88	7.26	7.82	7.99	7.19	7.11	7.21	7.71					6.5-8.5
Chloride	mg/L	244	1901	2120	2420	1530	1500	1450	150	3.2	316	6.3	3.4	1				1,053
Sulfate	mg/L	2650	2230	2370	2870	41.9	64.1	93.0	88.7	9.8	836	11.0	9.2				insufficient	2,641
Total Dissolved Solids	mg/L	11200	9430	3170	11000	4760	3720	3840	3320	95	1780	139	83	insufficient water to sample		insufficient water to sample	water to sample	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

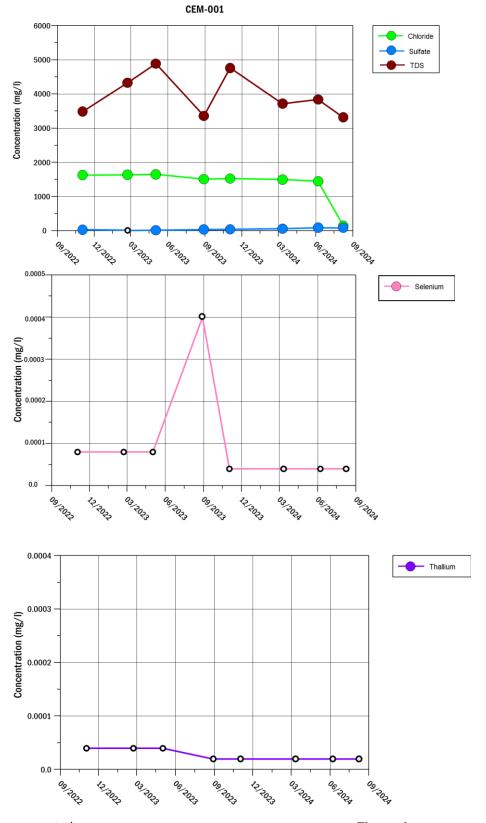
CEMEX Lyons Quarterly Groundwater Monitoring

Field Data Sheet

Date:	8/8/24	 Project Number:	159440

Personnel: Dr. AJ

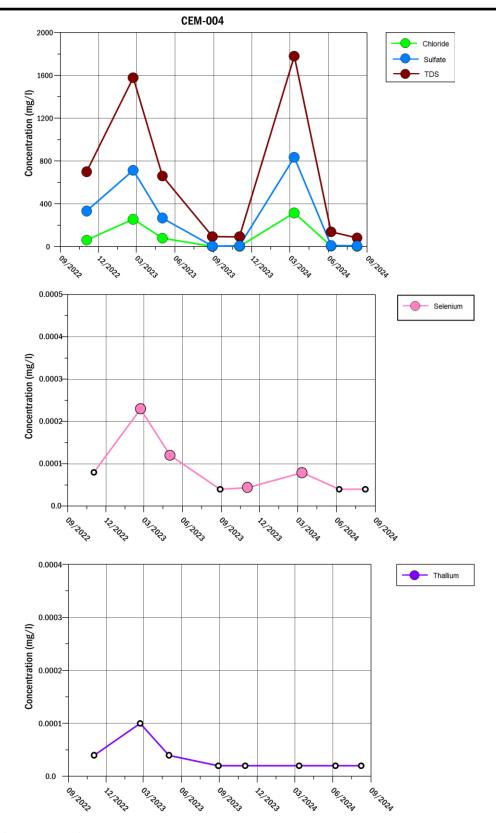
Locatio n	Dat e	Tim e	pН	Tem p (°C)	Cond (mS/cm)	DO (mg/L)	Total Depth (fbtoc)	Depth to Water (ft)	Notes
	313/2	1440	be	Am a	lmom		143	Ta	
CEM-		1453	dn	14	lmping		(3.5' from top		
001		1515		113-2	4.71	1.64	of casing to ground)		
		15:17	7.99	13.4	4.82	1.08	ground	+	
	31324	1320					1 mg	3.73	
CEM-		1372	8.88	17.4	7.4 0.486 0.97		2,5 gal purg		
004		13:3	3.86	17.2	0.148	0.01	23.5		2,5 gal purged 8 gal purged 11 gal purged
		13:36	7.71	17.1	0.135	0.01		3,77	Il gal purged
	4500 6/8/m	1020					400	397.02	399.84.2.62 "
CEM-		1103	7.30	18.3	9.24	0.89	(2.62' from top	390.69	400 31
005		1131	7.48	ПЭ	9.07	1.37	of casing to	3980	400.62
	8/7/24	0956			¥	7	ground)	397.43	400,55
A - Pit	8 8 2	14:53 4	8,10	22.8	1.26	5.58	N/A		
C - Pit	2/4/24	12:39	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

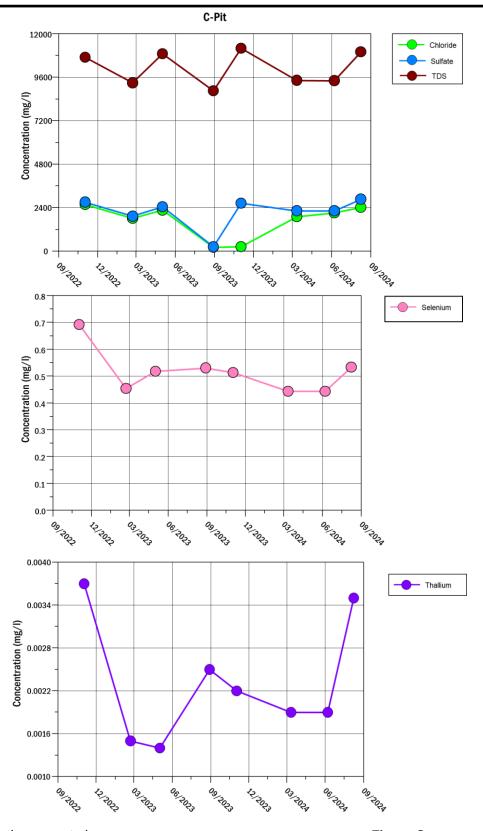




Note: Concentrations reported below the detection limit are plotted as open symbols

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



CHAIN OF CUSTODY

PAGE 1

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Compar	ny Name CEMEX	Project Name:	C-pit Quarterly	у										0		and							=	DW - Drinking Water GW - Ground Water
Street A	ddress	Street	Street													¥		SM						WW - Water
	5134 State Hwy 66		City State Project #				n (if differ	rent In	om Re	port to	0)			and Mg		Na, K	_	Ô		- 8				SW - Surface Water SO - Soil
City		City												¥		6	Ę	arp		300.0)		e		SL- Sludge SED-Sediment
	ns, CO	Orniget #					Street Address							2	F	ပ	Š	O	8	8	H			OI - Oil
Project (Projectiv												Ca, Na,	Se,	<u>6</u>	9.0	ar	1 22	ĕ.				LIQ - Other Liquid AIR - Air
Phone #	ksons Jones	Client Purchase	Order #		City				_		_	_			80	22	32	8	3	<u></u>				SOL - Other Solid WP - Wipe
270	-627-4070													200.7	200.8	12	ig.	<u>=</u>	ပ္လ	ate				F8-Field Blank EB-Equipment Blank
	r(s) Name(s)	Project Manager			Attention	N.								Total metals 2	Total metals 2	Dissolved metals 200.7 Ma	Dissolved metals 200.8 Se,	Alkalinity (total, Bicarb, Carbo) 2320B	TDS (SM 2540C/SM2540D	e, Sulfate (EPA				RB- Rinse Blank TB-Trip Blank
				Collection		$\overline{}$		H	Numb	er of pr	eserved	_	_	Ě	Ĕ	ě	흠	<u> </u>	S	Ę				
Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Date	Time	Sampled by	Matrix	# of bottles	豆	NaOH HNO3	H2SO4	NONE Di Water	меон	ENCORE	Tota	Tota	Diss	Diss	Alka 2320	TDS	Chloride,	0.000			LAB USE ONLY
	A-pit		8/8/24	15:05	06	Sw	5	П	1	l l	4	П		X	x	7	X	×	x	X				
	C-pit		8/8/24	12:40	06	Sui	5	П	1	\Box	1	П	+	V	X	-	×	X	×	×				
	CEM-001		8/8/29	15:17	+-	GW	5	Н	ti	1	1	Н	+	×	7	×	7	×	X	X			\Box	
	CEM-004		8/8/24	1340	-	GW	5	Н	+	$\overline{}$	ų l	Н	+	×	+	1 X	-	X	X	X				
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