



CEMEX Lyons - Q2 2022 C-pit monitoring report

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

Tue, Oct 4, 2022 at 3:44 PM

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

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

Hello Mr. Lennberg –

Thank you for accommodating the time extension on this Q2 2022 response.

Please find the CEMEX Response Letter attached with noted enclosures also attached to this email.

Let me know if you have further questions.

Regards,

Scott



Scott A. Harcus

Lyons Cement Plant

Environmental Manager

Office : +1(303)823-2124

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Address: 5134 Ute Highway, Longmont, CO 80503

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

Sent: Tuesday, August 2, 2022 10:00 AM

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

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

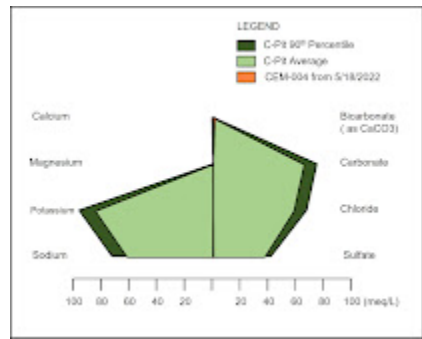
Subject: Re: CEMEX Lyons - Q2 2022 C-pit monitoring report

CAUTION: External Email | PRECAUCIÓN: Correo electrónico externo | VORSICHT: Externe E-Mail | ATTENTION: Courriel externe





Good Morning Scott,

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5 attachments



2022 Q2_stiff.jpg
243K

-  **CMX Lyons_C-pit GW Y22Q2_RE-DRMS Addl Questions_2022.10.04_Fnl-signed.pdf**
263K
-  **2022 Q2 CEMEX plots_8-qrtr history.pdf**
787K
-  **2022 Q2_C-Pit_Sampling_Results.pdf**
83K
-  **2022 Q2_FieldForms.pdf**
306K



October 4, 2022

Mr. Patrick Lennberg
Environmental Protection Specialist
Department of Natural Resources
Division of Reclamation, Mining and Safety
Room 215
1313 Sherman Street
Denver, CO 80203

Via Email

RE: Additional Information Request
Lyons Quarry, Permit No. M-1977-208
Y22Q2 Groundwater Monitoring Report, C-Pit

Dear Mr. Lennberg:

On August 2, 2022, CEMEX received a letter from Division of Reclamation, Mining and Safety (DRMS) titled "AdditionalInfoNeeded_M1977208_2Q2022.pdf" related to our 2022 2nd Quarter Groundwater Monitoring Report. Below are CEMEX's response in *italic font* to items #1-4 in that letter:

The resubmit.

1. The Stiff Diagram appears to be missing data for CEM-004. If so, please revise the diagram with the new information and resubmit.

CEMEX Response:

CEM-004 is plotted on the stiff diagram shown in Figure 1. The concentrations of the water sample collected from CEM-004 are much lower than those in C-Pit resulting in a thinner plot area for CEM-004. An image file "2022Q2_stiff.jpg" of the stiff diagram has been attached to allow the image to be enlarged for detailed viewing.

2. Are the reported analytical concentrations total or dissolved values? For future reports this table should clearly state whether the constituents being reported are total or dissolved.

CEMEX Response:

CEMEX has attached a revised table where results are reported as total concentrations (see attached "2022 Q2_C-Pit_Sampling_Results.pdf"). CEMEX performed field filtration on samples beginning with the 2022 Q3 event per DRMS request in the 6/6//2022 Additional Information Request No. 2 Letter. CEMEX subsequently acknowledged dissolved analytical and results reporting to start during the 2022 Q3 sampling event (see CEMEX's Response Letter dated 7/6/2022).

3. For CEM-005 the table states there was insufficient volume to sample, however the table is not updated with the 2022 Q2 results. Please update and resubmit the table with



current reporting quarter. Additionally, please provide initial water level measurement along with the date and time of reading, the water level after purging along with date and time, and the final water level, date and time used to determine the well had not recovered sufficiently to sample.

CEMEX Response:

CEMEX acknowledges the header on the table was incorrect and the "2022 Q1" cell should have read "2022 Q2". The footnote at the bottom of the table does correctly list the date the well was evaluated as 5/18/2022. The table header has been corrected is resubmitted as an attachment herein as "2022 Q2_C-Pit_Sampling_Results.pdf".

The additional information on water levels and times during the well evaluation of CEM-005 is also provided as an attachment titled "2022 Q2_Field Forms.pdf"

4. Please provide graphs for analyte concentrations for each location that depict trends over the last eight (8) quarters. Please included these graphs as part of future reports.

CEMEX Response:

CEMEX has attached the requested graphs and will continue to submit the data for the last 8 quarters in future submittals. This attachment is titled "2022 Q2_CEMEX plots_8-qrtr history.pdf"

If there are any questions regarding this Response Letter, please feel free to contact me at scotta.harcus@cemex.com or via phone at 303-823-2124.

Best Regards,

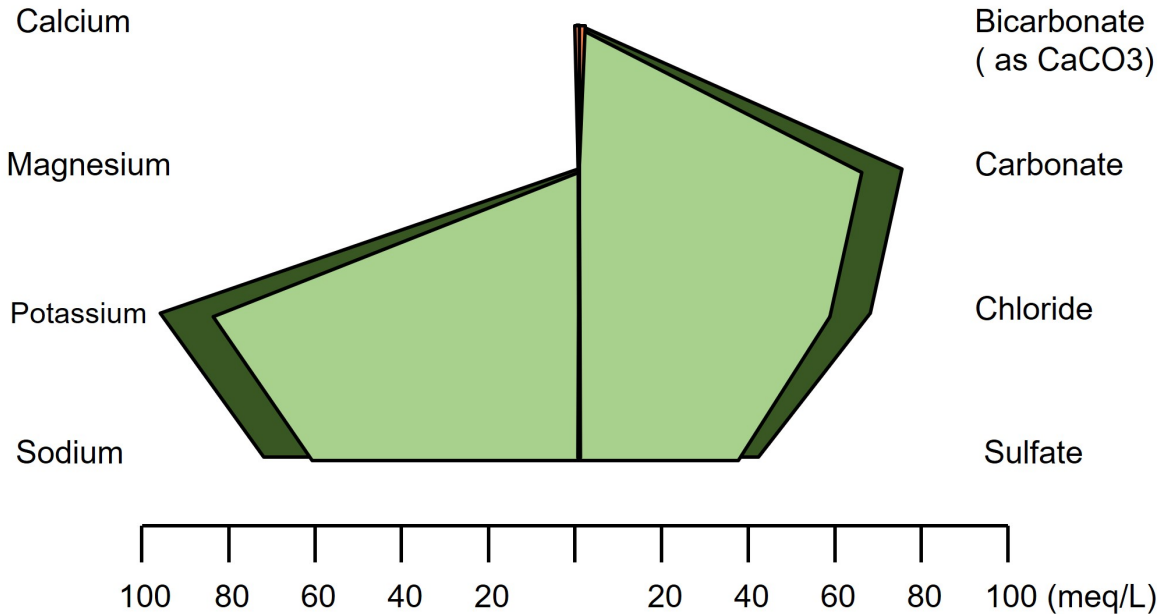
Scott A. Harcus
Lyons Plant Environmental Manager

ENCLOSURES:

- 2022 Q2 Stiff Diagram image file
 - File "2022 Q2_stiff.jpg"
- 2022 Q2 C-Pit Sample Results Table
 - File "2022 Q2_C-Pit_Sampling_Results.pdf"
- 2022 Q2 Field Data Sheets
 - File "2022 Q2_FieldForms.pdf"
- Graph of GW concentrations across last eight (8) quarters
 - File "2022 Q2 CEMEX plots_8-qrtr history.pdf"

LEGEND

- C-Pit 90th Percentile
- C-Pit Average
- CEM-004 from 5/18/2022



Parameter	Units	C-Pit				CEM-001				CEM-004				CEM-005				CEM-004, CEM-005 Triggers (TR-12)
		2021 Q3	2021 Q4	2022 Q1	2022 Q2	2021 Q3	2021 Q4	2022 Q1	2022 Q2	2021 Q3	2021 Q4	2022 Q1	2022 Q2	2021 Q3	2021 Q4	2022 Q1	2022 Q2	
		8/12/2021	11/10/2021	3/15/2022	5/18/2022	8/12/2021	11/10/2021	3/15/2022	5/18/2022	8/11/2021	11/10/2021	3/15/2022	5/18/2022	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	11.9	12.4	11.41	11.81	8.3	8.24	8.24	7.85	7.51	8.8	7.48	7.72	insufficient water to sample	insufficient water to sample	insufficient water to sample	insufficient water to sample	6.5-8.5
Chloride	mg/L	1930	2440	1580	2270	1810	1610	1610	1580	0.58	58.1	129	5.6					1,053
Sulfate	mg/L	1580	2030	1550	1910	34.3	7	7	3.2	1.2	428	880	12.4					2,641
Total Dissolved Solids	mg/L	8030	8550	8360	11100	2570	4460	4460	3930	83	776	1800	66					501-10,000 or 1.25 times background
Selenium	mg/L	0.690	0.787	0.475	0.688	<0.0008	<0.005	<0.005	<0.0008	<0.0004	0.0020	<0.005	<0.0008					0.05
Thallium	mg/L	0.0028	0.0025	<0.004	0.0020	<0.0004	<0.004	<0.004	<0.0004	<0.0002	<0.0004	<0.004	<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 Y21 Q3Well Sounding: 8/12/2021
aCEM 005 Y21 Q4Well Sounding: 11/10/2021
^a CEM 005 Y22 Q1 Well Sounding: 3/15/2022
^a CEM 005 Y22 Q2Well Sounding: 5/18/2022

* always take samples from tube
Groundwater Well CEM-001

meter

C-Pit and Wells Monitoring

CEMEX Lyons Plant
Field Notes

Date: 5/18/22

Location		Date	Time of Sample	pH		
C-Pit		5/18/22	11:55 11:10	11.81		
A-Pit		5/18/22	12:10	8.01		
Well Number	TD (ft. below casing)	Date	Depth to Water (Decimal feet)	Time of Measurement	Time of Sample	pH
CEM-001	144	5/18/22	0.0	10:40	11:40	7.85
CEM-004	23.03	5/18/22	16.7	12:30	12:40	7.72
CEM-005	400	5/18/22	397.18	10:10	NA	NA

CEM 005 399.8 = Measured depth

Adjusted Water Level = $399.8 - 2.62 = 397.18$

⇒ purge 0.0 gallons

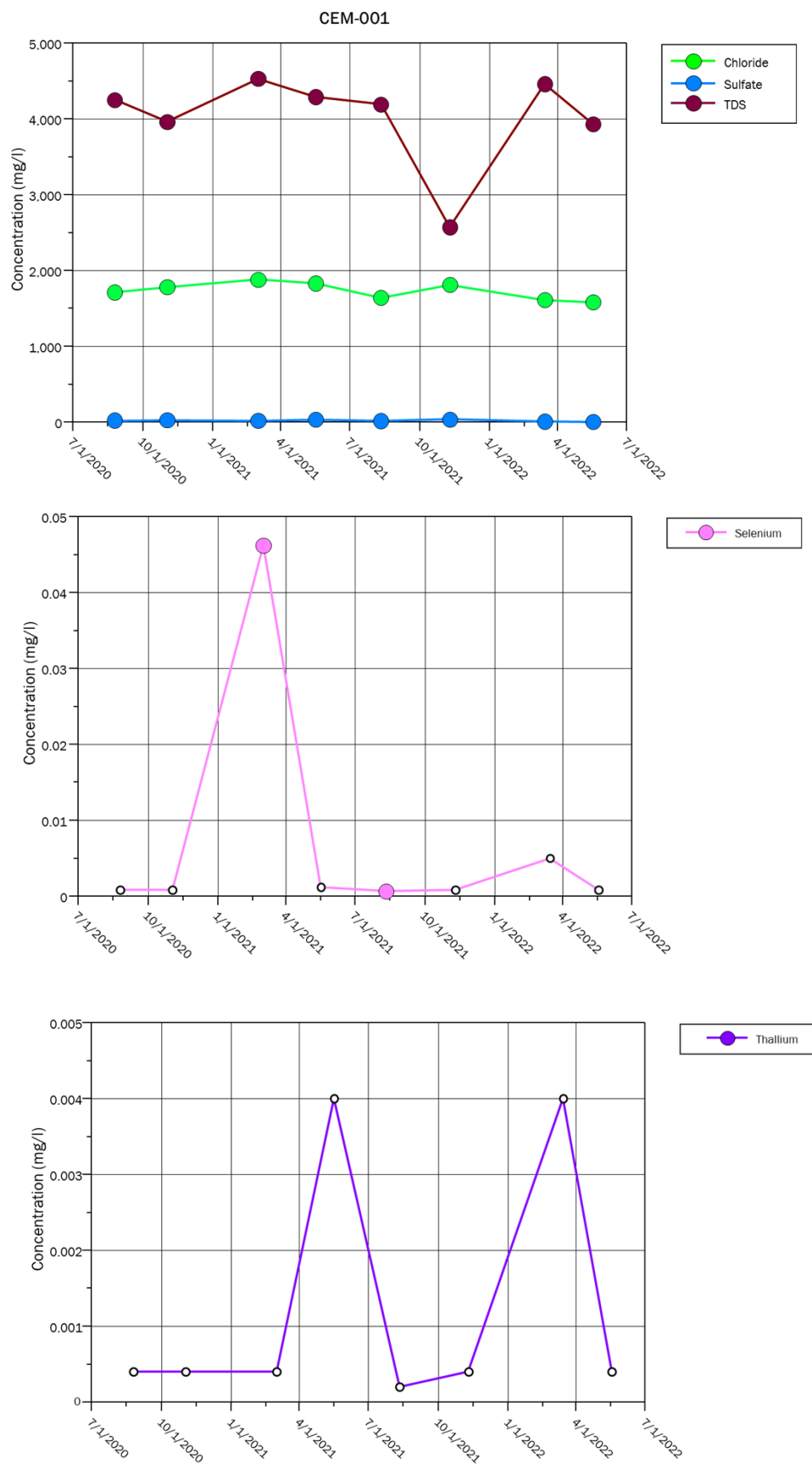
CEM-005 was not purged because the TD of the well is approximately 397 feet below ground surface.

CEM 001

Start Purge @ 1042 End purg @ 1057

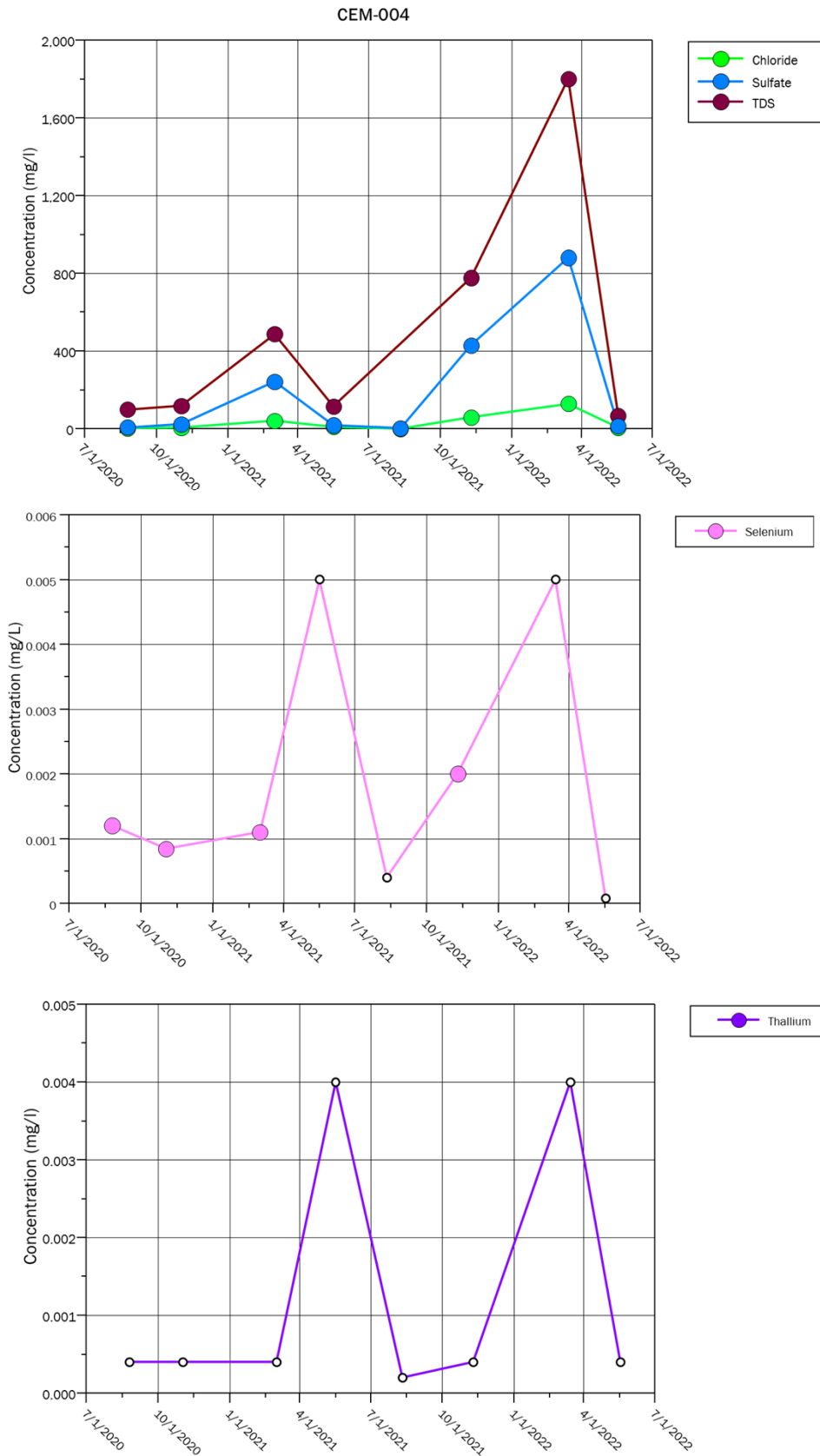
CEM 004

$23.5 - 16.7 = 6.8 = 8.4$ gallons



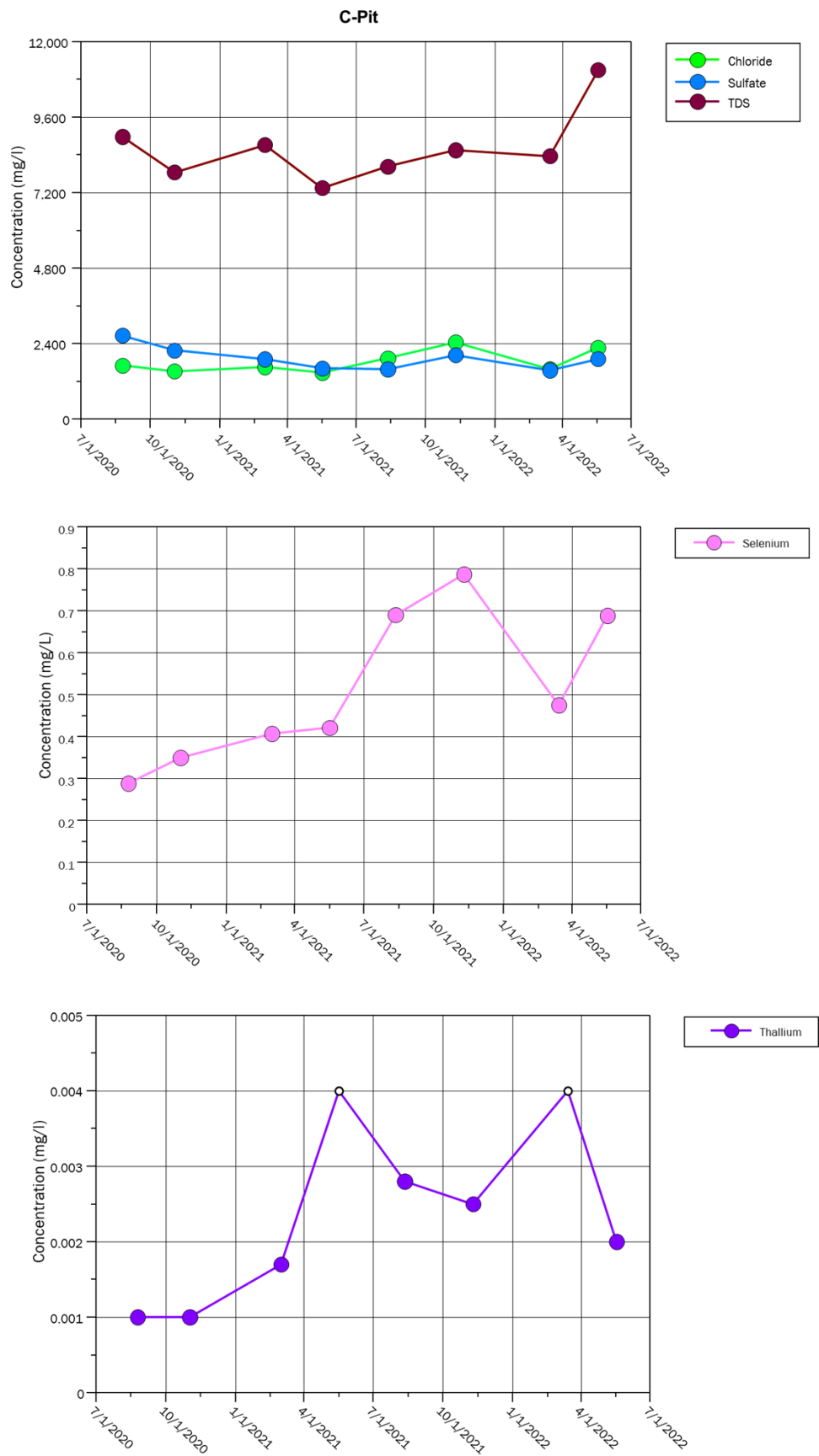
Note: Concentrations reported below the detection limit are plotted as open symbols

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