January 6, 2025

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 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 fourth quarter of 2024, covering the reporting period from October 1, 2024 to December 31, 2024. Table 1 presents data for the last four quarters.

Groundwater samples were collected on October 30, 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 October 31, 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 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 October 30, 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.

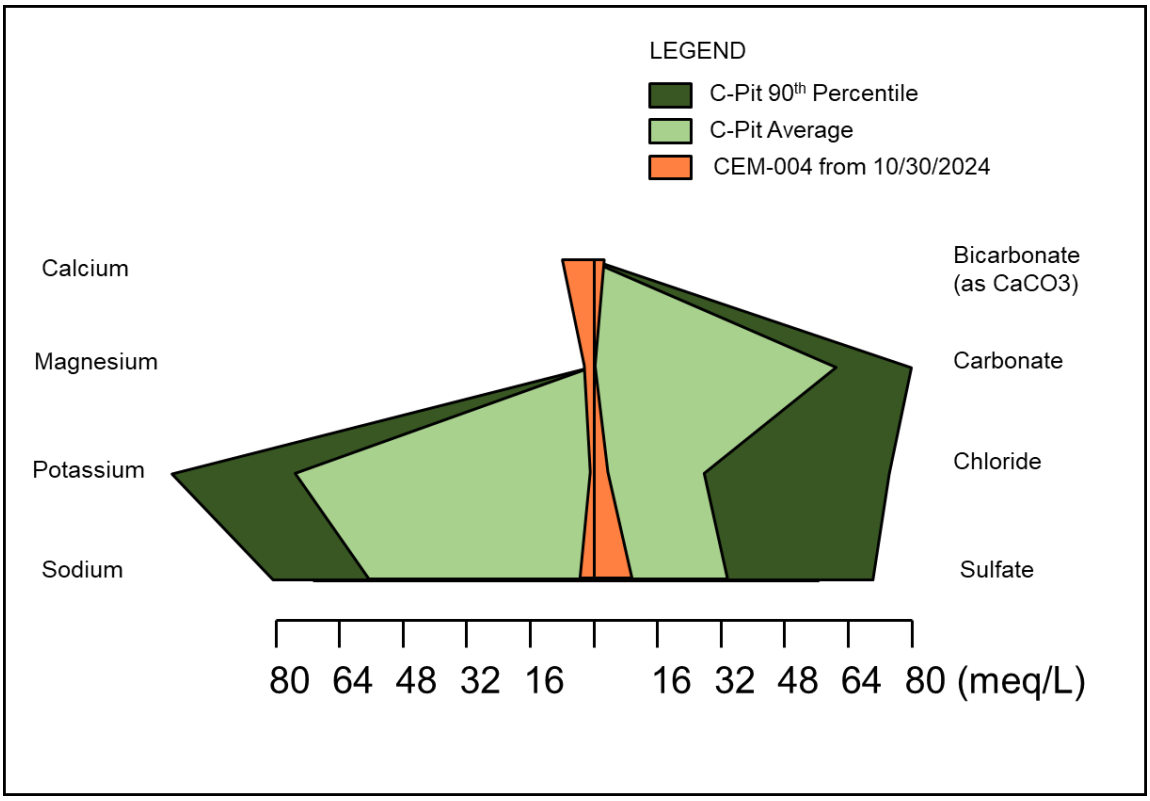


Figure 1: Fourth quarter 2024 cation/anion data for CEM-004 compared to C-Pit

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 G. Simons
Environmental Manager

Encs. Y24Q4C-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

Parameter	Units	C-Pit				CEM-001				CEM-004				CEM-005				CEM-004, CEM-005 Triggers (TR-12)
		2024 Q1	2024 Q2	2024 Q3	2024 Q4	2024 Q1	2024 Q2	2024 Q3	2024 Q4	2024 Q1	2024 Q2	2024 Q3	2024 Q4	2024 Q1	2024 Q2	2024 Q3	2024 Q4	
		3/11/2024	6/7/2024	8/8/2024	10/30/2024	3/11/2024	6/7/2024	8/8/2024	10/30/2024	3/11/2024	6/7/2024	8/8/2024	10/30/2024	[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	10.54	10.71	10.79	7.82	7.26	7.82	7.99	7.98	7.11	7.21	7.71	7.59	insufficient water to sample	insufficient water to sample	insufficient water to sample	insufficient water to sample	6.5-8.5
Chloride	mg/L	1901	2120	2420	2760	1500	1450	150	1510	316	6.3	3.4	120					1,053
Sulfate	mg/L	2230	2370	2870	3630	64.1	93.0	88.7	91.8	836	11.0	9.2	456					2,641
Total Dissolved Solids	mg/L	9430	3170	11000	10200	3720	3840	3320	3960	1780	139	83	976					501-10,000 or 1.25 times background
Dissolved Selenium	mg/L	0.443	0.482	0.533	0.575	<0.0004	<0.0004	<0.0004	<0.0004	0.00056	<0.0004	<0.0004	0.001					0.05
Dissolved Thallium	mg/L	0.0019	0.0023	0.0035	0.0037	<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 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
a CEM 005 Y24 Q4 Well Sounding: 10/30/2024

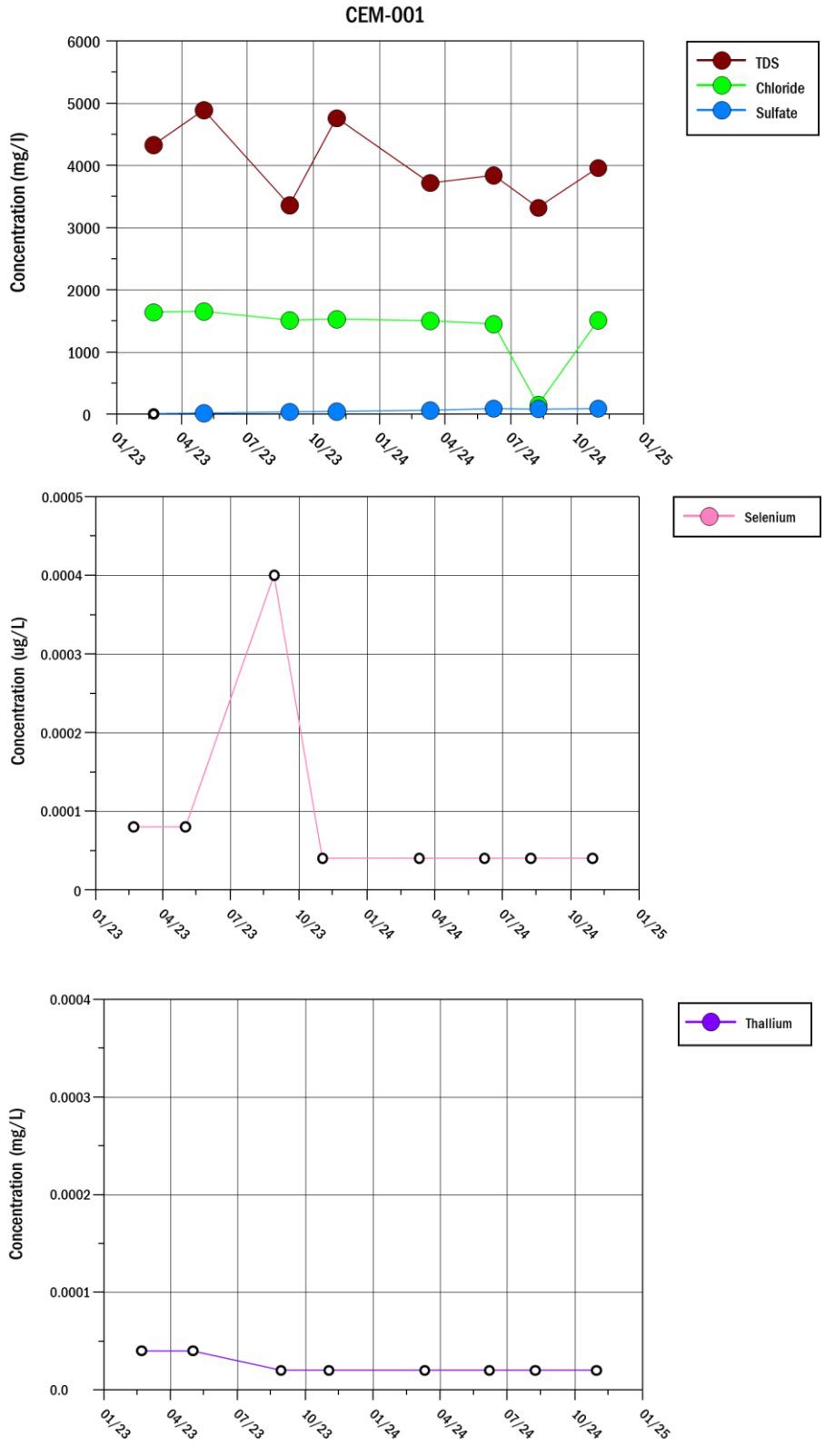
CEMEX Lyons Quarterly Groundwater Monitoring

Field Data Sheet

Date: 10/30/24 Project Number: 194410

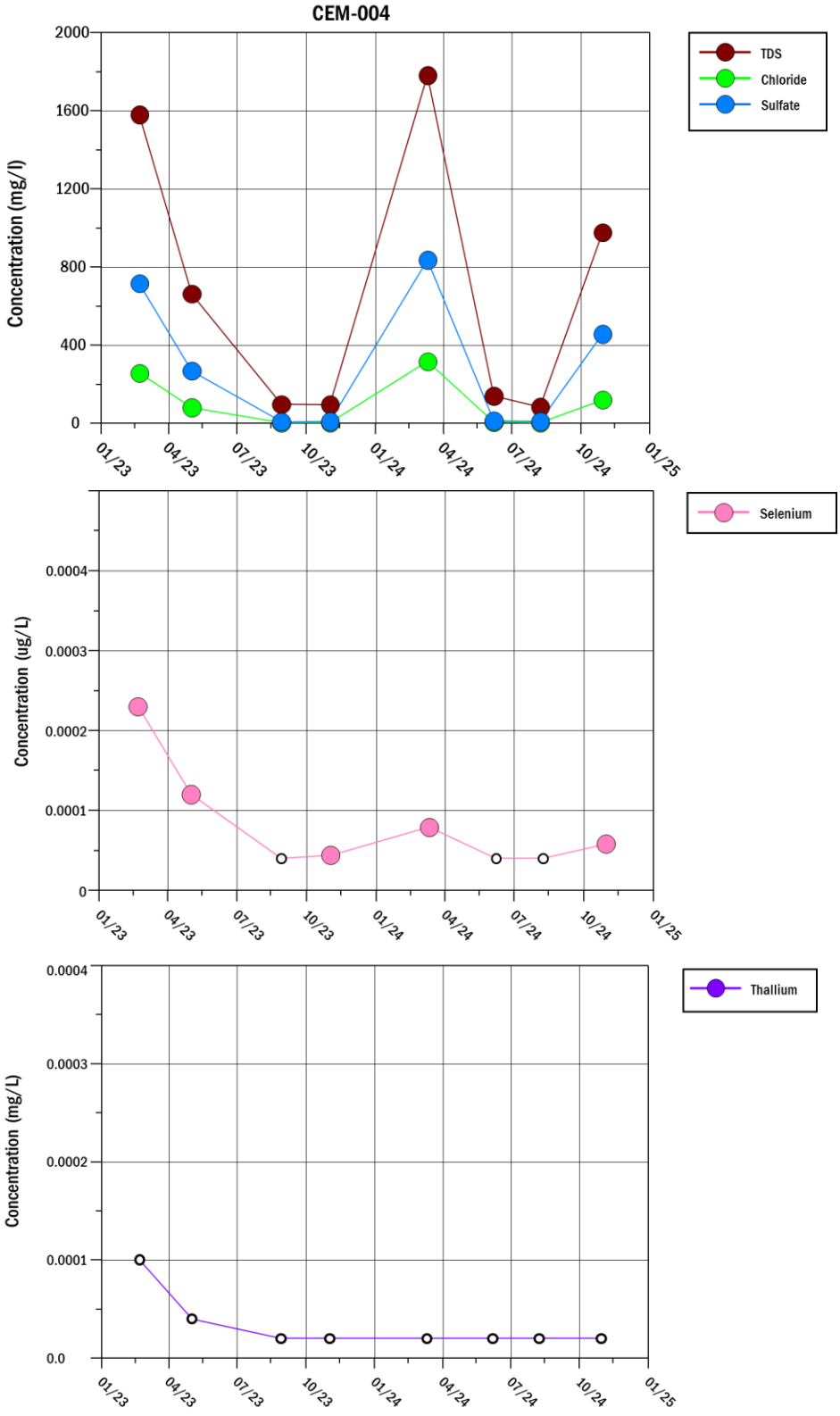
Personnel: ~~SB~~ Steffan Becker & Devon Gibson

Location	Date	Time	pH	Temp (°C)	Cond (mS/cm)	DO (mg/L)	Total Depth (fbtoc)	Depth to Water (ft)	Notes
CEM-001	10/30/24	1135	7.50	12.4	6.51	4.13	143 (3.5' from top of casing to ground)	0.00	
	10/30/24	1240	7.98	12.9	6.10	0.3		—	
CEM-004	10/30/24	1310	8.08	13.7	1.578	0.31	23.5	13.79	—
	10/30/24	1312	7.99	14.3	1.505	1.25		13.8	1.5 gal purged
	10/30/24	1314	7.75	14.3	1.452	0.81		13.74	4.0 gal purged
	10/30/24	1315	7.59	14.4	1.429	0.95		13.54	4.7 gal purged
CEM-005	10/30/24	10.20	7.29	16.21	10.91	1.78	400 (2.62' from top of casing to ground)	397.28	399.90-2.62
	10/30/24	1035	7.36	17.1	10.77	1.26		397.81	400.43-2.62
	10/30/24	1032						397.66	400.28-2.62
A - Pit	10/30/24	11.00	8.28	12.4	1.818	7.31	N/A	—	
C - Pit	10/30/24	1115	10.79	9.6	17.95	7.82	N/A	—	



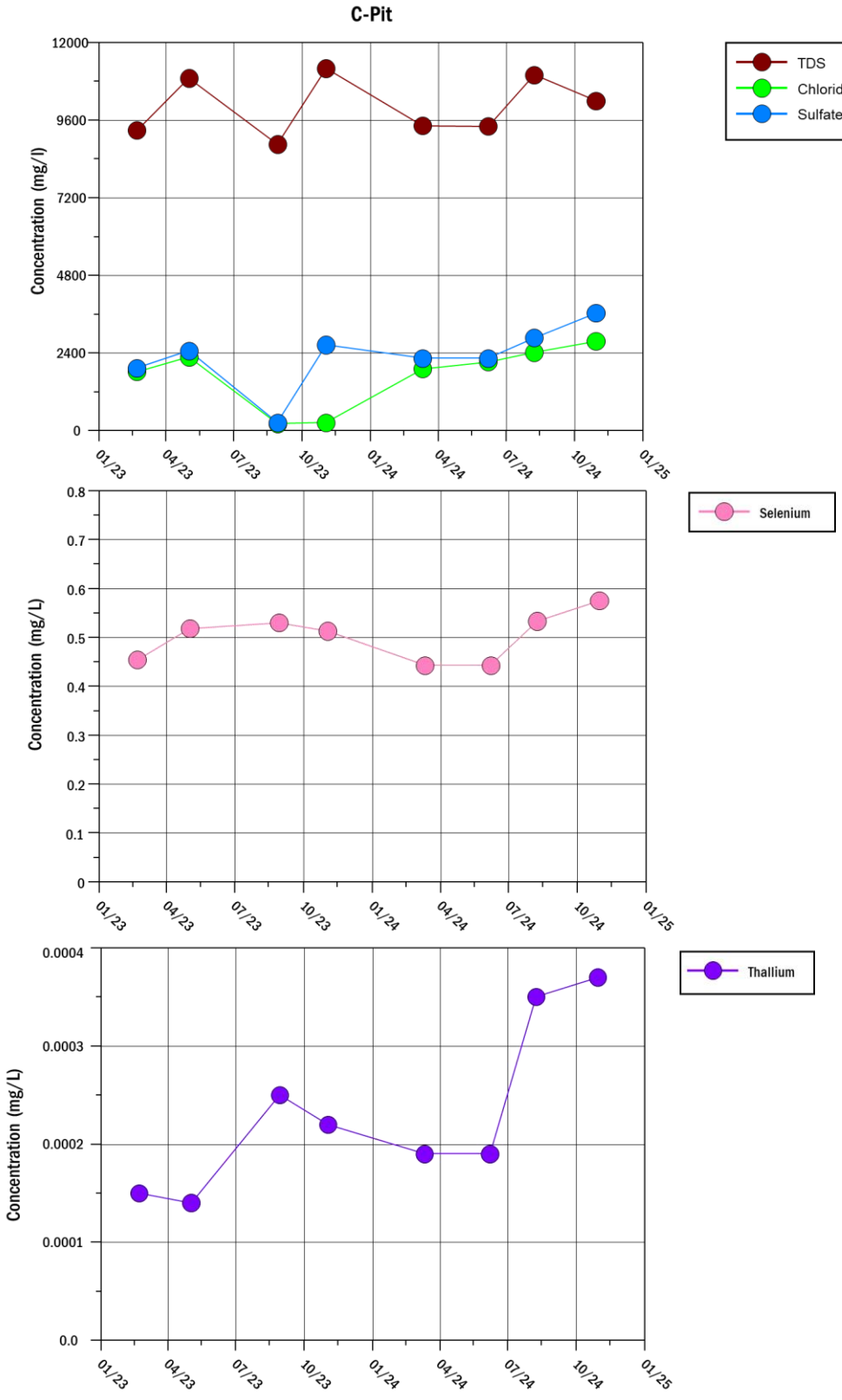
Note: Concentrations reported below the detection limit are plotted as open symbols

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

SGS North America Inc. - Wheat Ridge
4036 Youngfield Street, Wheat Ridge, CO 80033
TEL: 303-425-6021 FAX: 303-425-6854
www.sgs.com/ehsusa

Bottle Order Control #	FED-EX Tracking #
SGS Quote #	**SGS Job #**

Client / Reporting Information

Company: Cemex
Street: 5134 State Hwy
City, State ZIP: Lyons, CO
Project Contact: Jackson Jones
Phone: 270-627-4070
Email:
Sampler(s) Name(s):

Project Information

Project Name: C-2 - Rolling
Street:
City, State ZIP:
Project #:
Client Purchase Order #:
Project Manager:

Billing Information (if different from Report to)

Company:
Street Address:
City, State ZIP:
Attention:

Requested Analysis (see TEST CODE sheet)

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
SED - Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB - Field Blank
EB - Equipment Blank
RB - Rinse Blank
TB - Trip Blank

D=dissolved metals
PD=Potentially dissolved
TR=Total recoverable

LAB USE ONLY

Field ID / Point of Collection	Collection: Date	Collection: Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles: NONE	HCl	NaOH	HNO3	H2SO4	DI Water	MeOH	ENCORE	Na2S2O3	Na2SO3	Soil Chl	%Comb. Calc	TDS	Metals Se, Tl, Ca, Mg, Na	Metals (Diss) Se, Tl	LAB USE ONLY
A-p-	12/3/24	1100	SB	W	5				2							1	x	1	x	1	
C-p-T		1115																			
CEM-001		1240																			
CEM-004		1315 ~~1245~~																			

Turnaround Time (Business days)

- [x] Standard 10 Business Days
- [ ] 5 Business Days RUSH
- [ ] 3 Business Days RUSH
- [ ] 2 Business Days RUSH
- [ ] 1 Business Day EMERGENCY

Special Reporting Instructions
- [ ] Report in PPB
- [ ] Report in PPM
- [ ] Report MDLs

Emergency & Rush T/A data available via Email or LabLink. RUSH TAT approval needed

Data Deliverable Information

- [ ] Commercial "A" (Level 1, Results Only)
- [ ] Commercial "B" (Level 2, Results + QC Summary)
- [ ] COMMBN (Results/QC/Narrative)
- [ ] COMMBN+ [Results/QC/Narrative (+ chromatograms)]
- [ ] REDT2 (Results/QC Summary/partial raw data)
- [ ] FULT1
- [ ] EDD Format _____

Comments / Special Instructions

***Metals: specify metal(s), method, and type (D, PD, TR)**

C-p-T pH 12.79

Dissolved Metals Field Filtered

Sample Custody must be documented below each time samples change possession, including courier, Fed Ex, USP, USPS delivery.

Relinquished by Sampler/Affiliation:	Date/Time:	Received By/Affiliation:	Relinquished By/Affiliation:	Date/Time:	Received By/Affiliation:
1	12/3/24 1450	1	2		2
Relinquished by/Affiliation:	Date/Time:	Received By/Affiliation:	Relinquished By/Affiliation:	Date/Time:	Received By/Affiliation:
3		3	4		4

Custody Seal #: Intact ☐ Not intact ☐ Absent ☐

Preserved where applicable ☐ Cooler Temp. °C (corrected): _____ Therm. ID: _____ On Ice ☐

http://www.sgs.com/en/terms-and-conditions