ENERGY • WATER • COMMUNITY SERVICES

COAL COMBUSTION RESIDUAL LANDFILL

ANNUAL GROUNDWATER MONITORING REPORT

Calendar Year 2025

LOWER COLORADO RIVER AUTHORITY (LCRA)

FAYETTE POWER PROJECT, LA GRANGE, TEXAS

JANUARY 31, 2026

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EXECUTIVE SUMMARY

The LCRA Fayette Power Project (FPP) is a coal-fired power plant located east of La Grange in Fayette County, Texas. Coal Combustion Residuals (CCRs) generated at the facility are disposed of in the Combustion Byproducts Landfill (CBL) which is an existing landfill CCR Unit regulated under the U.S. Environmental Protection Agency's Coal Combustion Residuals (CCR) Rules as codified in Title 40 of the Code of Federal Regulations (CFR), Chapter 257, Subpart D and the Texas Commission of Environmental Quality 30 Texas Administrative Code Chapter 352, Subchapter H. On July 10, 2025 the Texas Commission on Environmental Quality (TCEQ) issued CCR Registration No. CCR101 to FPP.

During the calendar year 2025, the CBL was operating under detection monitoring. All groundwater sampling was conducted in accordance with 40 CFR §257.93/30 TAC Chapter 352, Subchapter H - Groundwater sampling and analysis requirements and 40 CFR §257.94. - Detection Monitoring. The CBL will remain in detection monitoring for 2026.

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2025 Groundwater Monitoring Report
Fayette Power Project
La Grange, TX

1.0 BACKGROUND

The LCRA Fayette Power Project (FPP) is a coal-fired power plant located east of La Grange in Fayette County, Texas. Coal Combustion Residuals (CCRs) generated at the facility are disposed of in the Combustion Byproducts Landfill (CBL) located south of the power plant and north of the railroad that borders the FPP site (Figure 1). The existing CBL consists of Cell 1 and Sub-cell 2D. Cell 1 was constructed in 1988 and sub-cell 2D in 2015; therefore, both active cells are considered existing landfill units under the U.S. Environmental Protection Agency's Coal Combustion Residuals (CCR) Rules as codified in Title 40 of the Code of Federal Regulations (CFR), Chapter 257, Subpart D.

2.0 PURPOSE

This report was prepared pursuant to 40 CFR §257.90(e), as amended on Aug. 28, 2020, and 30 Texas Administrative Code Chapter 352, Subchapter H which requires the owner or operator of an existing CCR landfill to prepare an annual groundwater monitoring report for the preceding calendar year.

3.0 GROUNDWATER MONITORING SYSTEM

The groundwater monitoring well network for 2025 consisted of six wells as described below and additionally in Table 1:

- Background – CBL-340I
- Down-gradient - CBL-301I, CBL-302I, CBL-306I, CBL-308I and CBL-341I

No groundwater monitoring wells were installed or decommissioned in 2025.

In accordance with 40 CFR §257.93(c) and 30 Tex. Admin. Code §352.931, groundwater elevations were measured in each monitoring well prior to purging and sampling for each semi-annual sampling event. Consistent with prior CBL potentiometric surface elevation maps, the inferred groundwater flow direction is towards the south-southwest. Groundwater flow rates were estimated along two transects for each groundwater sampling event. The western area transect has an approximate flow rate of 20-22 feet per year and the eastern area transect has an approximate flow rate of 65-67 feet per year. Detailed information is contained in the Technical Memorandums dated August 15, 2025, and December 15, 2025, prepared by Bullock, Bennett & Associates, LLC (BBA), which are included in Appendix A.

4.0 STATUS OF THE GROUNDWATER MONITORING PROGRAM

At the beginning of calendar year 2025, the CBL was operating under detection monitoring. All groundwater sampling was conducted in accordance with 40 CFR §257.93 – Groundwater sampling and analysis requirements and §257.94. – Detection Monitoring. Table 2 summarizes the sampling events. At the end of calendar year 2025, the CBL was operating under detection monitoring. As discussed in Section 5, the CBL will remain in detection monitoring for 2026. Table 3 contains a summary of the analytical data collected in 2025. In accordance with 30 TAC §352.901, Table 3 also contains a summary of all groundwater monitoring data collected since October 19, 2015.

5.0 BACKGROUND GROUNDWATER UPDATE AND STATISTICAL EVALUATIONS

5.1 Background Groundwater Monitoring Update (2016-2024 Data)

In July 2025, BBA completed a technical memorandum (*Background Groundwater Monitoring Update (2016-2014 Data*) dated July 31, 2025; see Appendix B) to document the 2025 update of statistically determined background analyte concentration Control Limits for use in data evaluation of groundwater conditions associated with operation of the CBL. In the absence of indications of a release of chemicals of concern from a regulated unit, cumulative analytical data collected by the sampling and analysis of groundwater can be utilized to update background conditions every two years, as described in both the TCEQ-approved *Statistical Analysis Plan* and the *Background Evaluation Report* (both prepared by BBA and dated October 1, 2024) and as discussed in the U.S. Environmental Protection Agency “Unified Guidance” document (EPA, 2009). The July 2025 technical memorandum includes detailed information and the additional semiannual data collected in 2023 and 2024.

5.2 Statistical Analysis of First Quarter 2025 Data

In April 2025, Otter Creek Environmental Services, LLC (Otter Creek) completed the statistical analysis of the first quarter detection monitoring Appendix III constituent data utilizing the prediction limit intrawell method. Samples were collected on January 27-28, 2025.

The field parameters and analytical results were consistent with historic analytical results. The results indicated that there were no statistically significant increases (SSIs) for any constituents in any well. Detailed information is contained in the *Results of the Groundwater Statistics for the Lower Colorado River Authority, First Semi-annual Monitoring Event in 2025* prepared by Otter Creek which is included in Appendix C.

5.3 Statistical Analysis of Third Quarter 2025 Data

Otter Creek completed the statistical analysis of the third quarter detection monitoring Appendix III constituent data utilizing the prediction limit intrawell method. Third quarter samples were collected between July 28-29, 2025.

Based the July 2025 sampling data, there was an initial control limit (ICL) exceedance for boron in CBL-306I. Because this was an initial exceedance in a 1 of 2 resampling method, CBL-306I was resampled on September 9, 2025. The resample analytical results for boron were below the ICL for CBL-306I. The results indicated that there were no SSIs for any constituents in any well. Detailed information is contained in the *Results of the Groundwater Statistics for the Lower Colorado River Authority, Second Semi-annual Monitoring Event in 2025* prepared by Otter Creek which is included in Appendix D.

6.0 PLANNED ACTIVITIES

Planned activities for 2026 include continued semi-annual detection monitoring with associated statistical analysis in accordance with the CCR rules.

TABLES

TABLE 1
MONITOR WELL DETAILS

Well ID	CBL-340I (Background Well)	CBL-301I	CBL-302I	CBL-306I	CBL-308I	CBL -341I
Installation Date	12/17/2015	5/23/2011	5/24/2011	6/3/2011	12/20/2011	11/14/2016
Hydrogeologic Unit Monitored	Intermediate Sand	Intermediate Sand	Intermediate Sand	Intermediate Sand	Intermediate Sand	Intermediate Sand
Casing Type	2" PVC	2" PVC	2" PVC	2" PVC	2" PVC	2" PVC
Total Well Depth (ft bgs)	37	51	24	14	32	43
Screened Interval (ft bgs)	22-37	41-51	14-24	9-14	22-32	33-43
Ground Surface Elevation (ft MSL)	374.69	369.75	355.99	337.93	364.93	364.03
TOC Elevation (ft MSL)	376.98	372.11	358.99	339.96	368.67	366.65
Northing	9949069.45	9946563.44	9947806.017	9946445.582	9947619.46	9947139.86
Easting	3428311.38	3429862.181	3429260.844	3428730.533	3428574.38	3429525.31
Survey Datum	Horizontal Datum: NAD83/2011-EPOCH 2012 Vertical Datum: NAVD88-GEOIDIZA	Horizontal Datum: NAD83/NSRS 2007 Vertical Datum: NAVD88	Horizontal Datum: NAD83/NSRS 2007 Vertical Datum: NAVD88	Horizontal Datum: NAD83/NSRS 2007 Vertical Datum: NAVD88	Horizontal Datum: NAD83/NSRS 2007 Vertical Datum: NAVD88	Horizontal Datum: NAD83/2011-EPOCH 2012 Vertical Datum: NAVD88-GEOIDIZA

TABLE 2

2025 CCR GROUNDWATER MONITORING EVENTS

Well #	Date of sample collection	# Samples collected for analysis	Monitoring program
CBL 340I	1/28/2025	1	Detection monitoring
	7/29/2025	1	Detection monitoring
CBL 301I	1/27/2025	1	Detection monitoring
	7/28/2025	1	Detection monitoring
CBL 302I	1/27/2025	1	Detection monitoring
	7/28/2025	1	Detection monitoring
CBL 306I	1/27/2025	1	Detection monitoring
	7/28/2025	1	Detection monitoring
	9/9/2025	1	Resample
CBL 308I	1/27/2025	1	Detection monitoring
	7/29/2025	1	Detection monitoring
CBL 341I	1/28/2025	1	Detection monitoring
	7/28/2025	1	Detection monitoring

TABLE 3
GROUNDWATER MONITORING RESULTS SUMMARY

Monitoring Well	Sample Date	Regulatory Phase	Boron	Calcium	Chloride	Fluoride	Sulfate	Total Dissolved Solids (Residue Filterable)	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium	Radium 226	Radium 228	Radium Combined	Temp C	pH	DO mg/L	Specific Conductivity
		MCL including EPA Phase 1	**NE**	**NE**	**NE**	**4**	**NE**	**NE**	**0.006**	**0.01**	**2**	**0.004**	**0.005**	**0.1**	**0.006**	**0.015**	**0.04**	**0.002**	**0.1**	**0.05**	**0.002**	**--**	**--**	**5 pCi/l**	**NE**	**NE**	**NE**	**NE**
		Analytical Method	**SW3010A**	**SW3010A**	**E300.0**	**E300.0**	**E300.0**	**DM2450C**	**SW6020**	**SW6020**	**SW6010B**	**SW6010B**	**SW6020**	**SW6020**	**SW6020**	**SW6020**	**SW6020**	**SM2540C**	**SW6020**	**SW6020**	**SW6020**	**E903.0**	**E904.0**		**--**	**SM4500H+B**	**--**	**--**
		Method Detection Limit	**0.02**	**0.35**	**20**	**0.2**	**20**	**250**	**0.0004**	**0.0007**	**0.004**	**0.001**	**0.0004**	**0.0004**	**0.0004**	**0.0004**	**0.0004**	**0.07 ug/L**	**0.0004**	**0.0017**	**0.0004**	**1**	**1**		**--**	**--**	**--**	**--**
		Practical Quantitation Limit	**0.05**	**1**	**50**	**0.5**	**50**	**250**	**0.001**	**0.002**	**0.01**	**0.004**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.2 ug/L**	**0.001**	**0.005**	**0.001**	**1**	**1**		**--**	**--**	**--**	**--**
CBL Background/Up-gradient Well																												
CBL-340I	1/21/2016	B	<0.0500	564	2370	1.09	652	4990	<0.001	<0.002	0.0267	<0.004	<0.001	0.00116	<0.001	<0.001	0.0885	<0.0002	0.00304	<0.005	<0.001	<1.0	1.45	1.45	22.47	6.52	4.42	8121
CBL-340I	5/4/2016	B	0.0832	560	2260	1.92	616	5230	<0.001	<0.002	0.0235	<0.004	<0.001	0.00114	<0.001	<0.001	0.085	<0.0002	0.00309	<0.005	<0.001	<1.0	1.22	1.22	22.96	6.13	4.12	8159
CBL-340I	7/27/2016	B	0.081	575	2350	1.06	668	6250	<0.001	<0.002	0.0271	<0.004	<0.001	0.00146	<0.001	<0.001	0.0711	<0.0002	0.00301	<0.005	<0.001	1.89	1.16	3.05	24.72	6.95	6.99	1272
CBL-340I	10/24/2016	B	0.158	607	2380	1.26	675	5670	<0.001	<0.002	0.0303	<0.004	<0.001	0.00176	<0.001	<0.001	0.0843	<0.0002	0.00334	0.00725	<0.001	1.47	1.39	2.86	22.76	6.19	3.34	8427
CBL-340I	1/23/2017	B	<0.050	627	2070	0.84	571	6230	<0.001	<0.002	0.0275	<0.004	<0.001	0.00179	<0.001	<0.001	0.0887	<0.0002	0.00284	<0.005	<0.001	<1.00	<1.00	<1.00	22.79	5.46	NA	8259
CBL-340I	3/22/2017	B	0.174	581	2280	8.44	635	5480	<0.001	<0.002	0.0259	<0.004	<0.001	<0.0001	<0.001	<0.001	0.0684	<0.0002	0.00229	<0.005	<0.001	<1.00	2.71	2.71	22.37	6.49	NA	7900
CBL-340I	5/16/2017	B	0.104	584	2520	1.01	715	5470	<0.001	<0.002	0.027	<0.004	<0.001	0.001	<0.001	<0.001	0.101	<0.0002	0.00248	<0.005	<0.001	<1.00	<1.00	<1.00	22.51	5.77	NA	8286
CBL-340I	7/27/2017	B	0.0816	571	2380	0.85	685	4880	<0.001	<0.002	0.0272	<0.004	<0.001	<0.001	<0.001	<0.001	0.0875	<0.0002	0.00261	<0.005	<0.001	NA	NA	NA	22.73	6.42	NA	8292
CBL-340I	2/8/2018	B	0.0638	555	2730	1.00	752	5290	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21.61	6.41	NA	NA
CBL-340I	7/27/2018	B	<0.0500	544	2450	1.3	711	5100	NA	NA	NA	NA	NA	NA	NA	NA	0.0968	NA	NA	NA	NA	NA	NA	NA	23.2	6.25	NA	8131
CBL-340I	1/22/2019	B	<0.0500	518	2250	0.83	639	4720	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.59	NA	NA
CBL-340I	7/31/2019	B	0.124	518	2280	0.88	684	5560	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.45	NA	NA
CBL-340I	1/30/2020	B	0.0562	539	2240	0.87	637	5080	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.49	NA	NA
CBL-340I	9/18/2020	B	0.146	547	2130	0.725	608	5430	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.32	NA	NA
CBL-340I	1/28/2021	B	<0.0500	607	2260	0.835	634	5520	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.32	NA	NA
CBL-340I	7/22/2021	B	0.384	532	2200	0.865	618	4990	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.24	NA	NA
CBL-340I	1/28/2022	B	0.160	597	2200	1.06	619	4870	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.42	NA	NA
CBL-340I	7/28/2022	B	0.285	538	2160	0.865	614	5490	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.35	NA	NA
CBL-340I	1/30/2023	B	0.167	635	2230	0.85	643	5010	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.37	NA	NA
CBL-340I	7/19/2023	B	0.276	631	2130	1.07	599	5290	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.41	NA	NA
CBL-340I	1/31/2024	B	0.178	607	2210	0.605	705	5090	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	24.73	6.12	4.07	8.67
CBL-340I	7/23/2024	B	0.181	560	2480	0.521	780	5320	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	24.62	6.12	4.77	8.51
CBL-340I	1/28/2025	B	0.183	556	2310	0.724	717	4730	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	24.64	6.29	3.92	8.32
CBL-340I	7/29/2025	B	0.191	579	2650	0.741	785	5120	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	24.73	6.38	3.63	8.27
CBL Down-gradient Wells																												
CBL-301I	1/21/2016	DM	<0.05	905	2300	<0.250	336	4380	<0.001	<0.002	0.0436	<0.004	<0.001	0.00371	<0.001	0.00105	0.0949	<0.0002	0.00124	<0.005	<0.001	<1.0	<1.0	<1.0	24.12	6.33	0.41	7133
CBL-301I	5/4/2016	DM	<0.0500	949	2160	<0.500	311	5050	<0.001	<0.002	0.0423	<0.004	<0.001	0.00867	<0.001	0.00153	0.0847	<0.0002	0.00189	<0.005	<0.001	<1.0	<1.0	<1.0	25.02	6.26	1.21	7202
CBL-301I	7/27/2016	DM	<0.05	925	2290	<0.01	336	6020	<0.001	<0.002	0.0661	<0.004	<0.001	0.0101	<0.001	0.00171	0.0869	<0.0002	0.00156	<0.005	<0.001	<1.0	<1.0	<1.0	23.47	5.95	3.08	9807
CBL-301I	10/24/2016	DM	<0.05	978	2250	<0.250	326	4570	<0.001	<0.002	0.0907	<0.004	<0.001	0.0142	<0.001	0.00168	0.0932	<0.0002	0.00252	<0.005	<0.001	<1.0	1.15	1.15	25.09	6.23	0.77	7261
CBL-301I	1/23/2017	DM	<0.05	1000	3200	0.312	488	6140	<0.001	<0.002	0.0497	<0.004	<0.001	<0.001	<0.001	<0.001	0.091	<0.0002	<0.001	<0.005	<0.001	<1.0	<1.0	<1.0	23.83	6.26	NA	7532
CBL-301I	3/22/2017	DM	<0.05	1030	2390	<0.500	337	6570	<0.001	<0.002	0.0662	<0.004	<0.001	0.00546	<0.001	<0.001	0.095	<0.0002	0.00137	<0.005	<0.001	<1.0	<1.0	<1.0	24.93	6.31	NA	7495
CBL-301I	5/18/2017	DM	0.0707	1060	2420	<0.500	342	6430	<0.001	<0.002	0.0774	<0.004	<0.001	0.0165	0.00133	0.00186	0.116	<0.0002	0.0024	<0.005	<0.001	<1.0	<1.0	<1.0	25.92	5.95	NA	7532
CBL-301I	7/26/2017	DM	<0.05	961	2500	<0.01	381	4290	<0.001	<0.002	0.0467	<0.004	<0.001	0.0022	<0.001	<0.001	0.0941	<0.0002	0.00109	<0.005	<0.001	NA	NA	NA	24.95	6.02	NA	7365
CBL-301I	2/8/2018	DM	<0.05	873	2480	<0.01	344	5120	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	23.37	6.17	NA	NA
CBL-301I	7/25/2018	DM	<0.05	993	1330	<0.500	196	5390	NA	NA	NA	NA	NA	NA	NA	NA	0.0971	NA	NA	NA	NA	NA	NA	NA	24.46	6.04	NA	7446
CBL-301I	1/17/2019	DM	<0.05	156	619	0.219	104	1460	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	7.16	NA	NA
CBL-301I	5/2/2019	DM	<0.05	762	1910	0.112	398	5650	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.14	NA	NA
CBL-301I	7/31/2019	DM	<0.05	783	2240	0.051	332	6040	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.19	NA	NA
CBL-301I	1/28/2020	DM	<0.05	851	2360	0.13	349	4790	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.26	NA	NA
CBL-301I	9/17/2020	DM	0.0801	1060	2270	<.25	350	6340	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.13	NA	NA
CBL-301I	1/26/2021	DM	<0.0500	1130	2420	<0.500	374	6060	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.06	NA	NA
CBL-301I	7/20/2021	DM	0.0826	1100	25910	2.68	419	5870	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.13	NA	NA
CBL-301I	9/7/2021	DM	<0.0500	NA	NA	<0.500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CBL-301I	1/26/2022	DM	<0.0500	999	2440	<0.500	406	4700	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.27	NA	NA
CBL-301I	7/27/2022	DM	0.085	1010	1840	0.156	285	4590	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.08	NA	NA
CBL-301I	8/30/2022	DM	0.107	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.14	NA	NA
CBL-301I	10/25/2022	DM	0.0645	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.21	NA	NA
CBL-301I (split sample)	10/25/2022	DM	0.0769	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CBL-301I	1/25/2023	DM	0.108	977	1960	1.72	1370	5160	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.34	NA	NA
CBL-301I	3/7/2023	DM	0.102	NA	NA	<0.0500	207	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CBL-301I	8/2/2023	DM	<0.0500	1260	2220	0.054	383	5360	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	24.23	6.21	NA	7.94
CBL-301I	1/29/2024	DM	0.107	1050	2270	<0.100	475	4820	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	22.85	6.35	0	7.33
CBL-301I	7/23/2024	DM	0.082	912	2350	<0.100	454	4580	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	22.72	6.45	0.14	7.32
CBL-301I	1/27/2025	DM	0.106	907	2270	<0.100	467	3810	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	22.73	6.54	0.28	7.49
CBL-301I	7/28/2025	DM	0.108	145	499	0.351 J	149	1420	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	22.43	6.62	0.36	7.38

TABLE 3
GROUNDWATER MONITORING RESULTS SUMMARY

Monitoring Well	Sample Date	Regulatory Phase	Boron	Calcium	Chloride	Fluoride	Sulfate	Total Dissolved Solids (Residue Filterable)	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium	Radium 226	Radium 228	Radium Combined	Temp C	pH	DO mg/L	Specific Conductivity
MCL including EPA Phase 1			NE	NE	NE	4	NE	NE	0.006	0.01	2	0.004	0.005	0.1	0.006	0.015	0.04	0.002	0.1	0.05	0.002	--	--	5 pCi/l	NE	NE	NE	NE
Analytical Method			SW3010A	SW3010A	E300.0	E300.0	E300.0	DM2450C	SW6020	SW6020	SW6010B	SW6010B	SW6020	SW6020	SW6020	SW6020	SW6020	SM2540C	SW6020	SW6020	SW6020	E903.0	E904.0		--	SM4500H+B	--	--
Method Detection Limit			0.02	0.35	20	0.2	20	250	0.0004	0.0007	0.004	0.001	0.0004	0.0004	0.0004	0.0004	0.0004	0.07 ug/L	0.0004	0.0017	0.0004	1	1		--	--	--	--
Practical Quantitation Limit			0.05	1	50	0.5	50	250	0.001	0.002	0.01	0.004	0.001	0.001	0.001	0.001	0.001	0.2 ug/L	0.001	0.005	0.001	1	1		--	--	--	--
CBL-302I	1/22/2016	DM	<0.05	1030	2190	<0.250	1020	5500	<0.001	<0.002	0.0226	<0.004	<0.001	<0.001	<0.001	<0.001	0.0487	<0.0002	<0.001	<0.005	<0.001	<1.0	1.98	1.98	20.93	6.29	1.42	7835
CBL-302I	5/4/2016	DM	<0.05	1010	2130	<0.500	993	5390	<0.001	<0.002	0.0218	<0.004	<0.001	<0.001	<0.001	<0.001	0.042	<0.0002	<0.001	<0.005	<0.001	<1.0	<1.0	<1.0	20.84	6.01	1.51	7911
CBL-302I	7/27/2016	DM	<0.05	1030	2210	<0.500	1090	6850	<0.001	<0.002	0.0251	<0.004	<0.001	<0.001	<0.001	<0.001	0.0411	<0.0002	<0.001	<0.005	<0.001	<1.0	<1.0	<1.0	21.98	5.17	1.13	7906
CBL-302I	10/24/2016	DM	0.156	1070	2170	<0.250	1180	4210	<0.001	<0.002	0.0269	<0.004	<0.001	<0.001	<0.001	<0.001	0.0483	<0.0002	<0.001	<0.005	<0.001	<1.0	1.13	1.13	22	7.75	8.71	11017
CBL-302I	1/23/2017	DM	<0.05	1100	2080	0.332	1150	6430	<0.001	<0.002	0.0269	<0.004	<0.001	<0.001	<0.001	<0.001	0.0402	<0.0002	0.00286	<0.005	<0.001	<1.0	<1.0	<1.0	22.13	5.36	NA	7723
CBL-302I	3/22/2017	DM	0.297	1090	2050	<0.500	1120	6460	<0.001	<0.002	0.0277	<0.004	<0.001	<0.001	<0.001	<0.001	0.0558	<0.0002	<0.001	<0.005	<0.001	<1.0	<1.0	<1.0	21.79	5.4	NA	7753
CBL-302I	5/16/2017	DM	<0.05	1100	2230	<0.500	1230	5860	<0.001	<0.002	0.0275	<0.004	<0.001	<0.001	<0.001	<0.001	0.0611	<0.0002	<0.001	<0.005	<0.001	<1.0	<1.0	<1.0	21.52	4.94	NA	7777
CBL-302I	7/27/2017	DM	<0.05	1040	2040	<0.02	1180	5120	<0.001	<0.002	0.026	<0.004	<0.001	<0.001	<0.001	<0.001	0.0534	<0.0002	<0.001	<0.005	<0.001	NA	NA	NA	22.1	6.2	NA	7753
CBL-302I	2/8/2018	DM	<0.05	934	2080	0.112	1240	6010	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	20.47	6.21	NA	NA
CBL-302I	7/27/2018	DM	<0.05	995	1980	<0.500	1390	5510	NA	NA	NA	NA	NA	NA	NA	NA	0.0489	NA	NA	NA	NA	NA	NA	NA	22.2	5.77	NA	NA
CBL-302I	1/22/2019	DM	<0.05	855	1960	0.0402	1250	5060	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.44	NA	NA
CBL-302I	7/31/2019	DM	<0.05	914	1540	0.0605	1260	4190	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.15	NA	NA
CBL-302I	1/30/2020	DM	<0.05	838	1540	0.193	1350	4790	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.34	NA	NA
CBL-302I	9/17/2020	DM	<0.05	853	1410	<0.25	1280	4990	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.2	NA	NA
CBL-302I	1/28/2021	DM	<0.0500	1020	1370	<0.500	1290	4800	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.21	NA	NA
CBL-302I	7/21/2021	DM	0.0743	844	1380	2.25	1350	4810	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.06	NA	NA
CBL-302I	9/7/2021	DM	NA	NA	NA	<0.250	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CBL-302I	1/27/2022	DM	<0.0500	754	1310	<0.500	1340	4510	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.32	NA	NA
CBL-302I	7/28/2022	DM	<0.0500	750	1300	0.165	1300	5120	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.21	NA	NA
CBL-302I	1/26/2023	DM	0.116	889	1460	<0.0500	1390	4930	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.33	NA	NA
CBL-302I	7/18/2023	DM	<0.0500	981	1330	1.76	1230	5150	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.2	NA	NA
CBL-302I	1/29/2024	DM	0.16	937	1440	<0.100	1330	4950	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	22.6	6.28	0.61	6.83
CBL-302I	4/5/2024	DM	0.163	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	23.96	6.46	NA	6.36
CBL-302I	7/22/2024	DM	0.137	845	1650	0.101 J	1370	4840	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	22.29	6.41	0.61	6.72
CBL-302I	1/27/2025	DM	0.210	878	1730	0.171 J	1490	4710	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	22.38	6.43	0.56	6.83
CBL-302I	7/28/2025	DM	0.240	959	1630	0.194 J	1270	5000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	22.46	6.35	0.68	6.74
CBL-306I	1/21/2016	DM	<0.0500	137	155	2.5	266	1280	<0.001	<0.002	0.0512	<0.004	<0.001	<0.001	<0.001	<0.001	0.0239	<0.0002	0.00532	<0.005	<0.001	<1.0	<1.0	<1.0	20.4	7.09	6.6	1854
CBL-306I	5/4/2016	DM	0.0717	47.2	20.0	1.00	29.5	431	<0.001	<0.002	0.0313	<0.004	<0.001	<0.001	<0.001	<0.001	0.006	<0.0002	0.00305	<0.005	<0.001	<1.0	<1.0	<1.0	21.13	6.69	6.14	672
CBL-306I	7/26/2016	DM	0.0998	105	114	1.37	139	790	<0.001	<0.002	0.0976	<0.004	<0.001	<0.001	0.00123	<0.001	0.0127	<0.0002	0.00234	<0.005	<0.001	<1.0	<1.0	<1.0	24.72	6.95	6.99	1272
CBL-306I	10/24/2016	DM	0.0556	198	330	2.38	432	1150	<0.001	<0.002	0.0841	<0.004	<0.001	<0.001	0.00287	<0.001	0.0265	<0.0002	0.00327	<0.005	<0.001	<1.0	1.05	1.05	26.13	6.72	7.93	2423
CBL-306I	1/19/2017	DM	<0.05	174	197	1.85	270	1320	<0.001	<0.002	0.0706	<0.004	<0.001	<0.001	<0.001	<0.001	0.0281	<0.0002	<0.001	0.00652	<0.001	<1.0	<1.0	<1.0	20.83	7.29	NA	1422
CBL-306I	3/22/2017	DM	0.124	204	231	12.6	340	1460	<0.001	<0.002	0.0688	<0.004	<0.001	<0.001	<0.001	<0.001	0.0229	<0.0002	0.00266	<0.005	<0.001	<1.0	<1.0	<1.0	22.38	4.41	NA	2176
CBL-306I	5/18/2017	DM	0.0832	205	289	2.2	412	1440	<0.001	<0.002	0.0577	<0.004	<0.001	<0.001	<0.001	<0.001	0.0325	<0.0002	0.00195	<0.005	<0.001	<1.0	<1.0	<1.0	23.6	5.61	NA	2151
CBL-306I	7/27/2017	DM	0.0531	234	350	2.91	513	1280	<0.001	<0.002	0.0648	<0.004	<0.001	<0.001	<0.001	<0.001	0.0332	<0.0002	0.00352	<0.005	<0.001	NA	NA	NA	23.89	6.94	NA	2687
CBL-306I	2/8/2018	DM	<0.0500	230	385	2.81	493	1760	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	19.32	6.67	NA	NA
CBL-306I	7/27/2018	DM	<0.0500	275	283	2.95	406	1450	NA	NA	NA	NA	NA	NA	NA	NA	0.0298	NA	NA	NA	NA	NA	NA	NA	24.05	6.86	NA	1996
CBL-306I	1/16/2019	DM	<0.0500	180	215	1.98	292	1220	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.78	NA	NA
CBL-306I	7/31/2019	DM	0.0824	106	538	9.26	816	676	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.92	NA	NA
CBL-306I	8/23/2019	DM	0.05	226	318	2.66	387	1710	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	27.48	6.83	NA	2478
CBL-306I	1/29/2020	DM	<0.0500	247	445	2.83	561	1830	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.7	NA	NA
CBL-306I	9/19/2020	DM	0.0773	260	420	2.72	506	1730	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	7.16	NA	NA
CBL-306I	1/28/2021	DM	<0.0500	257	292	2.9	388	1420	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.84	NA	NA
CBL-306I	7/21/2021	DM	0.0927	216	255	2.42	336	1320	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.55	NA	NA
CBL-306I	1/27/2022	DM	0.0548	212	384	2.99	510	1730	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.87	NA	NA
CBL-306I	7/28/2022	DM	0.11	182	261	2.26	348	1540	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.7	NA	NA
CBL-306I	1/26/2023	DM	0.0973	149	148	1.92	205	1000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	7.3	NA	NA
CBL-306I	7/18/2023	DM	0.0659	260	336	2.66	454	1910	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.49	NA	NA
CBL-306I	1/29/2024	DM	0.133	186	153	1.49	266	1170	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21.18	6.55	2.84	1.79
CBL-306I	7/23/2024	DM	0.134	115	10.2	0.823	70.7	691	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21.56	6.54	2.86	1.59
CBL-306I	1/27/2025	DM	0.160	206	286	2.20	433	1480	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21.79	6.44	2.21	1.62
CBL-306I	7/28/2025	DM	0.173	120	39.7	1.99	139	841	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21.92	6.53	2.12	1.63
CBL-306I	9/9/2025	DM	0.138	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	22.82	6.54	1.87	1.71

TABLE 3
GROUNDWATER MONITORING RESULTS SUMMARY

Monitoring Well	Sample Date	Regulatory Phase	Boron	Calcium	Chloride	Fluoride	Sulfate	Total Dissolved Solids (Residue Filterable)	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium	Radium 226	Radium 228	Radium Combined	Temp C	pH	DO mg/L	Specific Conductivity
MCL including EPA Phase 1			NE	NE	NE	4	NE	NE	0.006	0.01	2	0.004	0.005	0.1	0.006	0.015	0.04	0.002	0.1	0.05	0.002	--	--	5 pCi/l	NE	NE	NE	NE
Analytical Method			SW3010A	SW3010A	E300.0	E300.0	E300.0	DM2450C	SW6020	SW6020	SW6010B	SW6010B	SW6020	SW6020	SW6020	SW6020	SW6020	SM2540C	SW6020	SW6020	SW6020	E903.0	E904.0		--	SM4500H+B	--	--
Method Detection Limit			0.02	0.35	20	0.2	20	250	0.0004	0.0007	0.004	0.001	0.0004	0.0004	0.0004	0.0004	0.0004	0.07 ug/L	0.0004	0.0017	0.0004	1	1		--	--	--	--
Practical Quantitation Limit			0.05	1	50	0.5	50	250	0.001	0.002	0.01	0.004	0.001	0.001	0.001	0.001	0.001	0.2 ug/L	0.001	0.005	0.001	1	1		--	--	--	--
CBL-308I	1/22/2016	DM	<0.0500	903	2760	1.49	1490	6820	<0.001	<0.002	0.0413	<0.004	<0.001	<0.001	<0.001	<0.001	0.116	<0.0002	0.00106	0.00693	<0.001	<1.0	1.11	1.11	21.45	6.36	2.82	9772
CBL-308I	5/4/2016	DM	0.121	870	2580	2.3	1410	6120	<0.001	<0.002	0.0395	<0.004	<0.001	<0.001	<0.001	<0.001	0.134	<0.0002	0.00113	0.00823	<0.001	<1.0	<1.0	<1.0	22.87	6.13	2.81	9726
CBL-308I	7/26/2016	DM	0.186	911	2680	1.64	1490	7890	<0.001	<0.002	0.0462	<0.004	<0.001	<0.001	<0.001	<0.001	0.0854	<0.0002	<0.001	0.00793	<0.001	<1.0	1.21	1.21	23.47	5.95	3.08	9807
CBL-308I	10/24/2016	DM	0.256	939	2870	1.59	1550	10200	<0.001	<0.002	<0.05	<0.004	<0.001	<0.001	<0.001	<0.001	0.106	<0.0002	0.00104	0.00887	<0.001	<1.0	1.66	1.66	23.06	6.27	1.6	10000
CBL-308I	1/19/2017	DM	<0.05	919	2360	1.33	1320	9620	<0.001	<0.002	0.0458	<0.004	<0.001	<0.001	<0.001	<0.001	0.106	<0.0002	0.0013	0.00995	<0.001	<1.0	1.41	1.41	22.11	6.83	NA	9681
CBL-308I	3/22/2017	DM	0.545	947	2530	9.05	1470	7260	<0.001	<0.002	0.0495	<0.004	<0.001	<0.001	<0.001	<0.001	0.123	<0.0002	0.00105	0.00761	<0.001	<1.0	1.37	1.37	22.67	6.27	NA	9659
CBL-308I	5/16/2017	DM	0.109	954	2740	1.7	1580	6590	<0.001	<0.002	0.0494	<0.004	<0.001	<0.001	<0.001	<0.001	0.13	<0.0002	0.001	0.00779	<0.001	<1.0	1.15	1.15	23.1	5.54	NA	9697
CBL-308I	7/26/2017	DM	0.0799	878	2760	1.9	1550	6480	<0.001	<0.002	0.0436	<0.004	<0.001	<0.001	<0.001	<0.001	0.125	<0.0002	0.00106	0.00769	<0.001	NA	NA	NA	24.75	6.27	NA	9929
CBL-308I	2/6/2018	DM	<0.0500	859	2750	1.76	1570	6200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21.73	6.26	NA	NA
CBL-308I	7/25/2018	DM	<0.0500	863	2680	2.1	1540	6320	NA	NA	NA	NA	NA	NA	NA	NA	0.109	NA	NA	NA	NA	NA	NA	NA	23.43	6.07	NA	9313
CBL-308I	1/18/2019	DM	<0.0500	760	2240	1.68	1520	4760	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.39	NA	NA
CBL-308I	7/31/2019	DM	<0.0500	840	2290	1.62	1420	5820	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.25	NA	NA
CBL-308I	1/29/2020	DM	<0.0500	745	2110	1.6	1340	5980	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.37	NA	NA
CBL-308I	9/18/2020	DM	0.103	838	2410	1.33	1310	6860	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.22	NA	NA
CBL-308I	1/28/2021	DM	<0.0500	830	2200	1.44	1340	6190	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.26	NA	NA
CBL-308I	7/21/2021	DM	0.130	684	1780	1.74	1240	5270	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.16	NA	NA
CBL-308I	1/27/2022	DM	<0.0500	974	2020	1.75	1310	5320	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.36	NA	NA
CBL-308I	7/27/2022	DM	0.0790	736	2470	1.43	1190	6840	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.23	NA	NA
CBL-308I	1/26/2023	DM	0.1430	732	2570	<0.500	445	5810	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.41	NA	NA
CBL-308I	7/18/2023	DM	<0.0500	642	1840	1.86	1290	5680	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.26	NA	NA
CBL-308I	1/30/2024	DM	0.1500	714	1790	1.26	1360	5410	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	23.89	6.57	0	7.48
CBL-308I	7/22/2024	DM	0.1390	683	2250	0.864	1430	5810	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	23.38	6.53	0.09	7.41
CBL-308I	1/27/2025	DM	0.163	698	2190	1.20	1360	5290	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	22.94	6.64	0.32	7.29
CBL-308I	7/29/2025	DM	0.180	676	1930	1.26	1400	5530	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	22.63	6.68	0.42	7.22
CBL-341I	1/23/2017	DM	<0.05	854	1600	0.53	307	5000	<0.001	<0.002	0.0703	<0.004	<0.001	<0.001	<0.001	<0.001	0.0858	<0.0002	0.00112	<0.005	<0.001	<1.0	1.23	1.23	21.95	5.74	NA	6053
CBL-341I	2/23/2017	DM	<0.05	870	2000	<0.50	404	4520	<0.001	<0.002	0.0733	<0.004	<0.001	<0.001	<0.001	<0.001	0.084	<0.0002	<0.001	<0.005	<0.001	1.53	2.19	3.72	22.14	5.23	NA	6030
CBL-341I	3/22/2017	DM	<0.05	906	1780	<0.50	346	5110	<0.001	<0.002	0.0739	<0.004	<0.001	<0.001	<0.001	<0.001	0.0895	<0.0002	<0.001	<0.005	<0.001	<1.00	2.62	2.62	22.08	5.72	NA	6014
CBL-341I	4/20/2017	DM	0.0587	898	1770	<0.50	336	4240	<0.001	<0.002	0.0747	<0.004	<0.001	<0.001	<0.001	<0.001	0.0856	<0.0002	0.00116	<0.005	<0.001	2.21	1.9	4.11	21.88	5.73	NA	6038
CBL-341I	5/16/2017	DM	0.0896	860	1900	<0.50	369	4840	<0.001	<0.002	0.0706	<0.004	<0.001	<0.001	<0.001	<0.001	0.0835	<0.0002	<0.001	<0.005	<0.001	<1.00	1.29	1.29	22.18	5.54	NA	6108
CBL-341I	6/20/2017	DM	0.0668	950	1820	0.335	363	5940	<0.001	<0.002	0.0693	<0.004	<0.001	<0.001	0.00163	<0.001	0.0825	<0.0002	0.00328	0.00692	<0.001	NA	NA	NA	22.86	6.19	NA	5931
CBL-341I	7/27/2017	DM	0.0507	829	1970	0.055	419	4150	<0.001	<0.002	0.0685	<0.004	<0.001	<0.001	<0.001	<0.001	0.0912	<0.0002	<0.001	<0.005	<0.001	NA	NA	NA	23.17	6.21	NA	6036
CBL-341I	9/11/2017	DM	<0.05	848	1710	0.367	354	4860	<0.001	<0.002	0.0662	<0.004	<0.001	<0.001	<0.001	<0.001	0.851	<0.0002	<0.001	<0.005	<0.001	NA	NA	NA	22.7	6.1	NA	6102
CBL-341I	2/8/2018	DM	<0.05	810	2110	0.106	383	4320	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21.52	6.18	NA	4320
CBL-341I	8/24/2018	DM	<0.05	824	1910	0.114	376	4800	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	23.85	5.82	NA	6076
CBL-341I	1/22/2019	DM	<0.05	782	1790	0.0546	358	3870	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.38	NA	NA
CBL-341I	7/31/2019	DM	<0.05	714	1650	0.1	329	5370	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.23	NA	NA
CBL-341I	1/30/2020	DM	<0.05	767	1780	0.153	351	4900	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.27	NA	NA
CBL-341I	9/17/2020	DM	0.102	814	1700	<0.25	336	4930	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.14	NA	NA
CBL-341I	1/27/2021	DM	<0.0500	874	1800	<0.500	324	3940	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.06	NA	NA
CBL-341I	7/22/2021	DM	0.111	852	1750	1.16	316	4520	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.98	NA	NA
CBL-341I	9/7/2021	DM	NA	NA	NA	<0.250	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CBL-341I	1/27/2022	DM	<0.0500	1040	1810	<0.500	320	3800	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.26	NA	NA
CBL-341I	7/28/2022	DM	0.115	704	1690	0.141	296	4910	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.16	NA	NA
CBL-341I	1/26/2023	DM	0.134	797	1660	<0.250	309	4390	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.28	NA	NA
CBL-341I	7/19/2023	DM	0.076	710	1530	1.12	259	4190	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.22	NA	NA
CBL-341I	1/29/2024	DM	0.133	875	1700	<0.100	346	3990	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21.33	6.38	0	5.89
CBL-341I	7/23/2024	DM	0.119	801	1960	<0.100	367	3700	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21.72	6.39	0.15	5.68
CBL-341I	10/1/2024	DM	0.136	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21.42	6.50	0.22	5.34
CBL-341I	1/28/2025	DM	0.138	778	1780	0.128	4020	4020	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21.74	6.46	0.22	5.72
CBL-341I	7/28/2025	DM	0.151	781	1850	0.306	344	3700	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	22.56	6.56	0.42	7.13

Notes:

Regulatory Phase: Background (B), Detection Monitoring (DM), Assessment Monitoring (AM), Corrective Action (CA)

All concentrations reported in mg/L (milligrams per liter)

NE = Not established, EPA considers these compounds are not a concern from a human health standpoint

All concentrations reported in mg/L (milligrams per liter)

NA = Not analyzed in accordance with 40 CFR 257.94

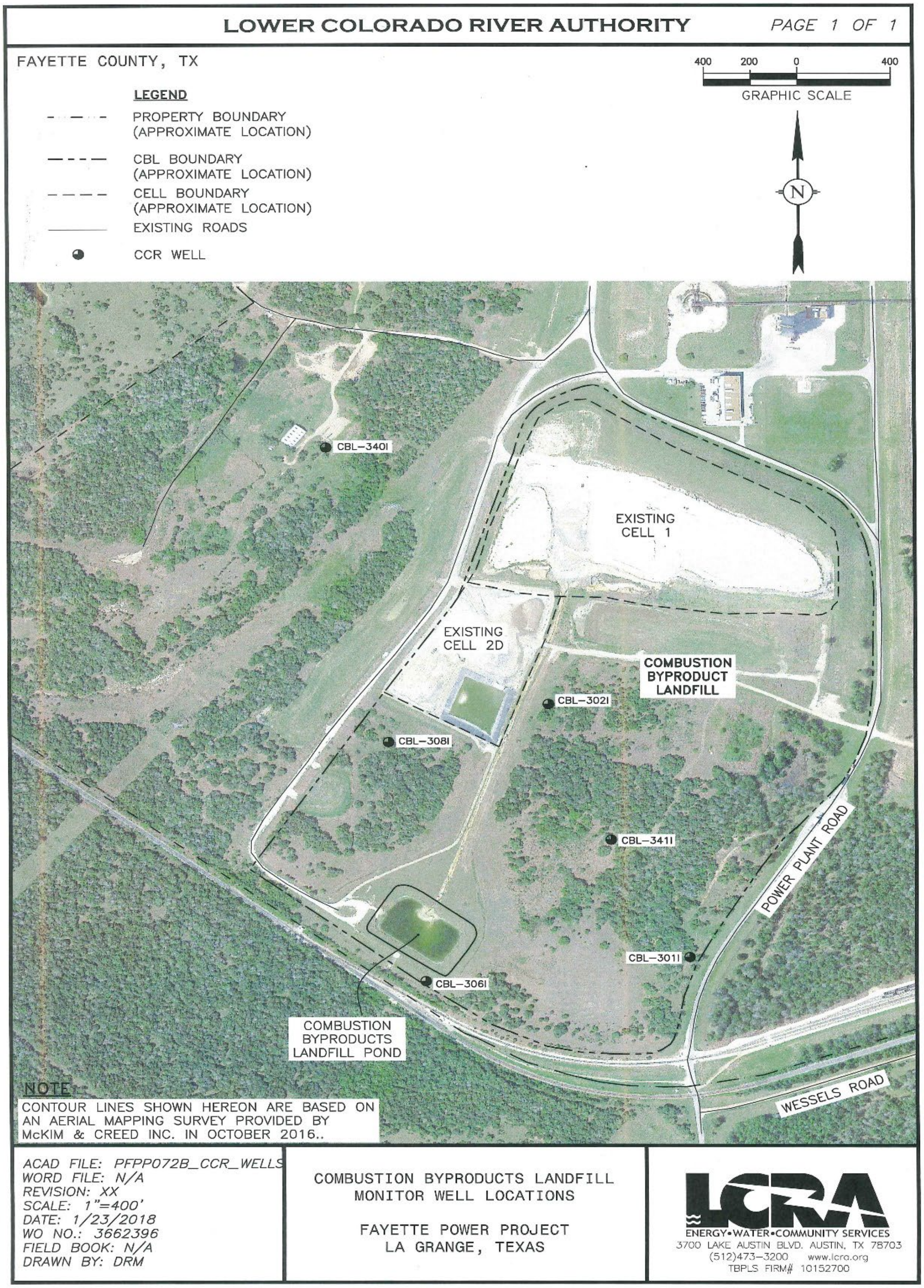
Appendix III to Part 257 Constituents for Detection Monitoring

Appendix IV to Part 257 Constituents for Assessment Monitoring

FIGURES

FIGURE 1

MONITOR WELL LOCATION MAP



APPENDICES

Appendix A

CCR Groundwater Detection Monitoring Program
Evaluation of First Quarter 2025
Potentiometric Surface Data Collected from the CBL
Bullock, Bennett & Associates, LLC
August 15, 2025

CCR Groundwater Detection Monitoring Program
Evaluation of Third Quarter 2025
Potentiometric Surface Data Collected from the CBL
Bullock, Bennett & Associates, LLC
December 15, 2025

Bullock, Bennett & Associates, LLC

www.bbaengineering.com
165 N. Lampasas St. • Bertram, Texas 78605 • (512) 355-9198

Technical Memorandum

To: Kate McCarthy, P.G. Project No. 24823-2-1
Corporate Environmental
Lower Colorado River Authority (LCRA)

From: Charlie Macon, P.G.

Date: August 15, 2025

Subject: CCR GROUNDWATER DETECTION MONITORING PROGRAM EVALUATION OF FIRST QUARTER 2025 POTENTIOMETRIC SURFACE DATA COLLECTED FROM THE CBL

1.0 INTRODUCTION

This Technical Memorandum (Tech Memo) has been prepared by Bullock, Bennett & Associates, LLC (BBA) on behalf of the Lower Colorado River Authority (LCRA), and documents the evaluation of the Intermediate Sand groundwater bearing unit potentiometric surface data obtained during the First Quarter-2025 Combustion Byproducts Landfill (CBL) Groundwater Monitoring Event. The groundwater monitoring is being performed as part of the CBL Groundwater Monitoring Program (GMP) in accordance with the Coal Combustion Residuals (CCR) regulations as codified in 40 Code of Federal Regulations (CFR) 257.93 and Title 30 of the Texas Administrative Code §352.931 (30 TAC §352.931). The CBL is located at the Lower Colorado River Authority's (LCRA's) Fayette Power Project (FPP) facility near La Grange, Texas. This measurement of the potentiometric surface and determination of groundwater flow direction and flow rate is conducted for each groundwater monitoring event pursuant to the GMP requirements of 40 CFR §257.93(c) and 30 Texas Administrative Code §352.931.

2.0 POTENTIOMETRIC SURFACE DATA COLLECTION, MAPPING, AND GRADIENT DETERMINATION

All groundwater monitoring and sampling activities were performed by a BBA Environmental Scientist. Prior to conducting well purging and collection of groundwater samples for chemical analysis, the Scientist used an electronic well probe to determine depth to the Intermediate Sand groundwater surface below the surveyed top of monitoring well casing elevation. Table 1 presents the summary of groundwater measurements obtained from the CBL Groundwater Monitoring network in the First Quarter–2025 event.

Based on the measured groundwater elevations, a potentiometric surface map was prepared to document the First Quarter-2025 monitoring event (Figure 1). The map shows a groundwater potentiometric surface that is relatively consistent with those presented for all prior CBL GMP monitoring events. As illustrated by the map shown in Figure 1, the groundwater flow direction is to the south-southwest. The calculated gradient for the western portion of the CBL is 0.010 ft/ft. For the eastern portion of the CBL, the calculated gradient is 0.030 ft/ft.

3.0 GROUNDWATER FLOW RATE CALCULATION

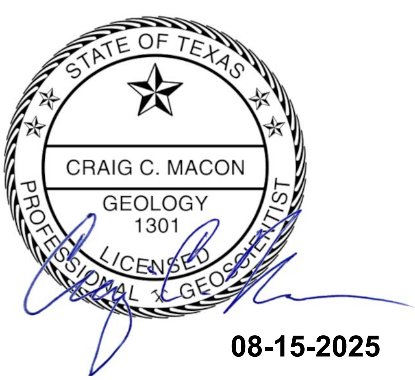
Groundwater flow rate was calculated along two transects, one along the western area having the lower gradient, and one along the eastern area having the higher gradient. As documented in the CBL Hydrogeology Report (Amec, 2013), a hydraulic conductivity value (K) of 6.3×10^{-4} centimeters per second (cm/sec) has been estimated for the Intermediate Sand. The hydraulic conductivity value is based on the rising-head slug test data obtained from monitoring well CBL-302I. Consistent with past evaluations of the Intermediate Sand, this hydraulic conductivity value was utilized for the First Quarter-2025 event to calculate the groundwater flow rate. Also consistent with past evaluations, an assumed porosity value of 0.30 was utilized based on the dominant aquifer lithology (clayey sands and silty sands).

Given the constants $K = 6.3 \times 10^{-4}$ cm/sec (= 648.9 feet/year) and Porosity = 0.30, the following groundwater flow velocities are calculated:

Eastern Transect (gradient of 0.030 ft/ft): 65 ft/yr (rounded)
Western Transect (gradient of 0.010 ft/ft): 22 ft/yr (rounded)

4.0 REFERENCES

Amec Environment & Infrastructure, Inc. (Amec), 2013: *Hydrogeologic Evaluation of Combustion Byproducts Landfill (CBL) Area Report, Fayette Power Project,* December 2013.

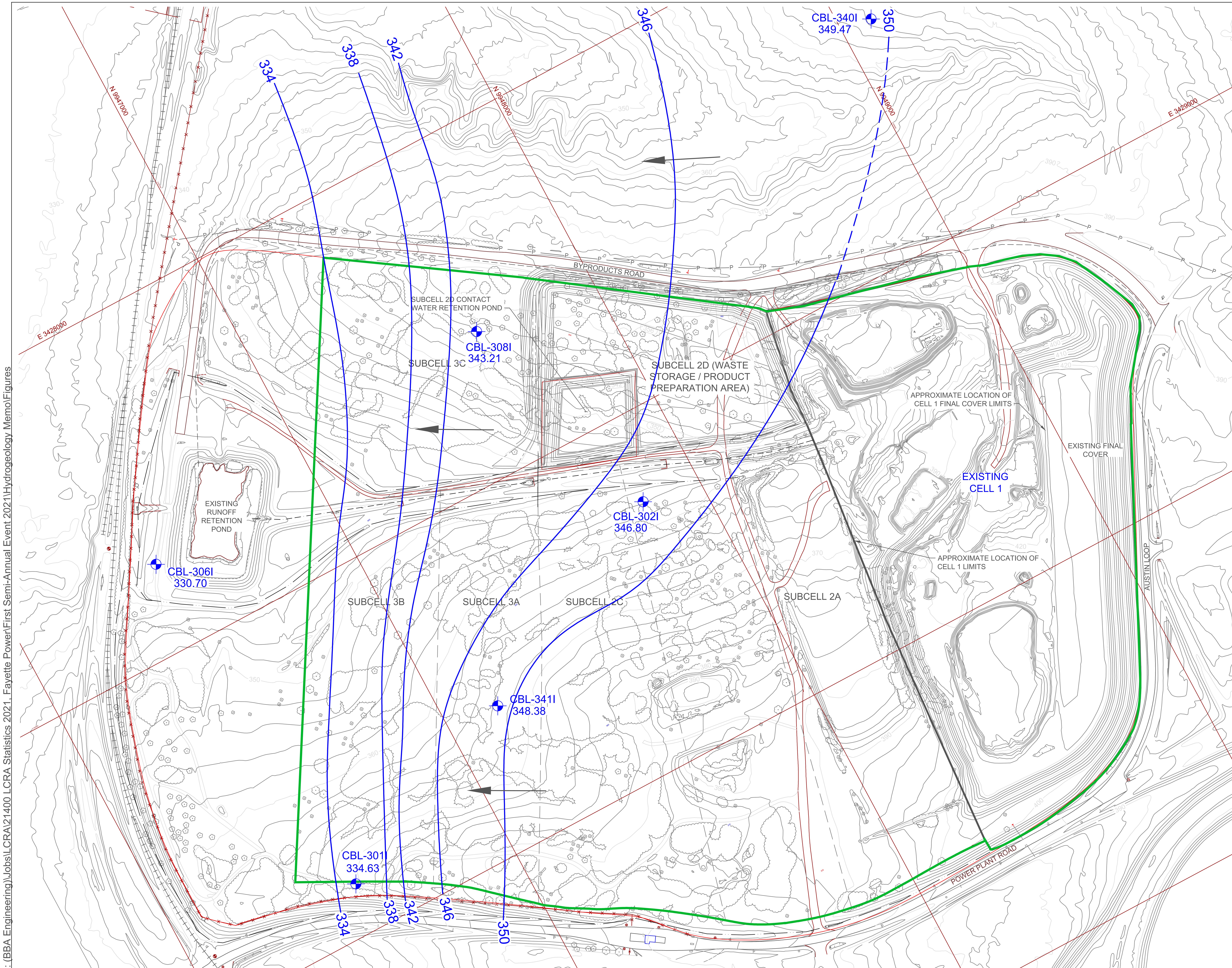


08-15-2025

TABLE 1
Combustion Byproducts Landfill
Groundwater Monitoring Well System
January 2025 Potentiometric Surface Data
Fayette Power Project
La Grange, Texas

Well ID	CBL-340I		CBL-301I		CBL-302I		CBL-306I		CBL-308I		CBL-341I	
Well Top of Casing Elevation	376.98		372.11		358.99		339.96		368.67		366.65	
Date	DTW (ft btoc)	Elevation (ft NAVD)	DTW (ft btoc)	Elevation (ft NAVD)	DTW (ft btoc)	Elevation (ft NAVD)	DTW (ft btoc)	Elevation (ft NAVD)	DTW (ft btoc)	Elevation (ft NAVD)	DTW (ft btoc)	Elevation (ft NAVD)
1/27/2025	27.51	349.47	37.48	334.63	12.19	346.80	9.26	330.70	25.46	343.21	18.27	348.38

Notes:
NM = Not Measured
ft btoc = feet below top of casing
ft NAVD = feet above North American Vertical Datum (1988)



LEGEND

- CBL UNIT BOUNDARY
- 350 — EXISTING GROUND ELEVATION (FT,MSL) (NOTES 1,2)
- (350) — EXISTING TOP OF CLAY LINER ELEVATION (FT,MSL) (NOTE 2)
- EXISTING ROAD
- EXISTING BUILDING
- EXISTING RAILROAD
- N 9949000 / E 3428000 — COORDINATE GRID (NOTE 2)
- EXISTING FENCE
- PROPOSED PHASE BOUNDARY
- PROPOSED LIMIT OF WASTE
- P — P — P — POWER LINE
- WELLS
- CBL-302I 347.25 — CBL GROUNDWATER MONITORING WELL WITH POTENTIOMETRIC SURFACE ELEVATION INDICATED IN FEET ABOVE NAVD 1988.
- 348 — POTENTIOMETRIC SURFACE CONTOUR LINE
- INFERRED GROUNDWATER FLOW DIRECTION

NOTES:

1. THE EXISTING CONTOUR BASE MAP SHOWN ON THIS DRAWING WAS COMPILED USING AN AERIAL SURVEY BASED ON PHOTOGRAPHY PERFORMED ON 23 OCTOBER 2013 BY SURDEX CORPORATION AND LIDAR DATA PUBLISHED DECEMBER 2008 AND PROVIDED BY LCRA SURVEYING, MAPPING, AND GIS.
2. ELEVATIONS ARE IN FEET (FT) AS DEFINED BY THE NORTH AMERICAN VERTICAL DATUM (NAVD) OF 1988. STATE PLANE COORDINATE GRID CORRESPONDS TO TEXAS STATE PLANE COORDINATE SYSTEM, TEXAS CENTRAL ZONE (4203), NORTH AMERICAN DATUM 83 (NAD-83) 1983.

ALL MONITORING WELLS WERE GAUGED ON JANUARY 27, 2025

STATE OF TEXAS
CRAIG C. MACON
GEOLOGY
1301
LICENSED
PROFESSIONAL GEOSCIENTIST

6-30-2025

0 140 280
SCALE IN FEET

LOWER COLORADO RIVER AUTHORITY

Figure 2
Potentiometric Surface Map
of the Intermediate Sand
January 2025

PROJECT: 22482-23	BY: SLB	REVISIONS
DATE: 7/16/2025	CHECKED: CCM	

Bullock, Bennet & Associates, LLC
Engineering and Geoscience
Texas Registrations: Engineering F-8542, Geoscience 50127

C: (BBA Engineering)\Jobs\LCRA\21400 LCRA Statistics 2021. Fayette Power\First Semi-Annual Event 2021\Hydrogeology Memo\Figures

Bullock, Bennett & Associates, LLC

www.bbaengineering.com
165 N. Lampasas St. • Bertram, Texas 78605 • (512) 355-9198

Technical Memorandum

To: Kate McCarthy, P.G. Project No. 24823-3-1
Corporate Environmental
Lower Colorado River Authority (LCRA)

From: Charlie Macon, P.G.

Date: December 15, 2025

Subject: CCR GROUNDWATER DETECTION MONITORING PROGRAM EVALUATION OF THIRD QUARTER 2025 POTENTIOMETRIC SURFACE DATA COLLECTED FROM THE CBL

1.0 INTRODUCTION

This Technical Memorandum (Tech Memo) has been prepared by Bullock, Bennett & Associates, LLC (BBA) on behalf of the Lower Colorado River Authority (LCRA), and documents the evaluation of the Intermediate Sand groundwater bearing unit potentiometric surface data obtained during the Third Quarter-2025 Combustion Byproducts Landfill (CBL) Groundwater Monitoring Event. The groundwater monitoring is being performed as part of the CBL Groundwater Monitoring Program (GMP) in accordance with the Coal Combustion Residuals (CCR) regulations as codified in 40 Code of Federal Regulations (CFR) 257.93 and Title 30 of the Texas Administrative Code §352.931 (30 TAC §352.931). The CBL is located at the Lower Colorado River Authority's (LCRA's) Fayette Power Project (FPP) facility near La Grange, Texas. This measurement of the potentiometric surface and determination of groundwater flow direction and flow rate is conducted for each groundwater monitoring event pursuant to the GMP requirements of 40 CFR §257.93(c) and 30 Texas Administrative Code §352.931.

2.0 POTENTIOMETRIC SURFACE DATA COLLECTION, MAPPING, AND GRADIENT DETERMINATION

All groundwater monitoring and sampling activities were performed by a BBA Environmental Scientist. Prior to conducting well purging and collection of groundwater samples for chemical analysis, the Scientist used an electronic well probe to determine depth to the Intermediate Sand groundwater surface below the surveyed top of monitoring well casing elevation. Table 1 presents the summary of groundwater measurements obtained from the CBL Groundwater Monitoring network in the Third Quarter–2025 event.

Based on the measured groundwater elevations, a potentiometric surface map was prepared to document the Third Quarter-2025 monitoring event (Figure 1). The map shows a groundwater potentiometric surface that is relatively consistent with those presented for all prior CBL GMP monitoring events. As illustrated by the map shown in Figure 1, the groundwater flow direction is to the south-southwest. The calculated gradient for the western portion of the CBL is 0.009 ft/ft. For the eastern portion of the CBL, the calculated gradient is 0.031 ft/ft.

3.0 GROUNDWATER FLOW RATE CALCULATION

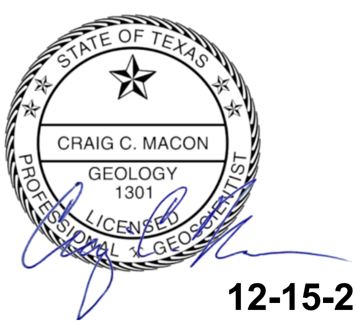
Groundwater flow rate was calculated along two transects, one along the western area having the lower gradient, and one along the eastern area having the higher gradient. As documented in the CBL Hydrogeology Report (Amec, 2013), a hydraulic conductivity value (K) of 6.3×10^{-4} centimeters per second (cm/sec) has been estimated for the Intermediate Sand. The hydraulic conductivity value is based on the rising-head slug test data obtained from monitoring well CBL-302I. Consistent with past evaluations of the Intermediate Sand, this hydraulic conductivity value was utilized for the Third Quarter-2025 event to calculate the groundwater flow rate. Also consistent with past evaluations, an assumed porosity value of 0.30 was utilized based on the dominant aquifer lithology (clayey sands and silty sands).

Given the constants $K = 6.3 \times 10^{-4}$ cm/sec (= 648.9 feet/year) and Porosity = 0.30, the following groundwater flow velocities are calculated:

Eastern Transect (gradient of 0.031 ft/ft): 67 ft/yr (rounded)
Western Transect (gradient of 0.009 ft/ft): 20 ft/yr (rounded)

4.0 REFERENCES

Amec Environment & Infrastructure, Inc. (Amec), 2013: *Hydrogeologic Evaluation of Combustion Byproducts Landfill (CBL) Area Report, Fayette Power Project,* December 2013.

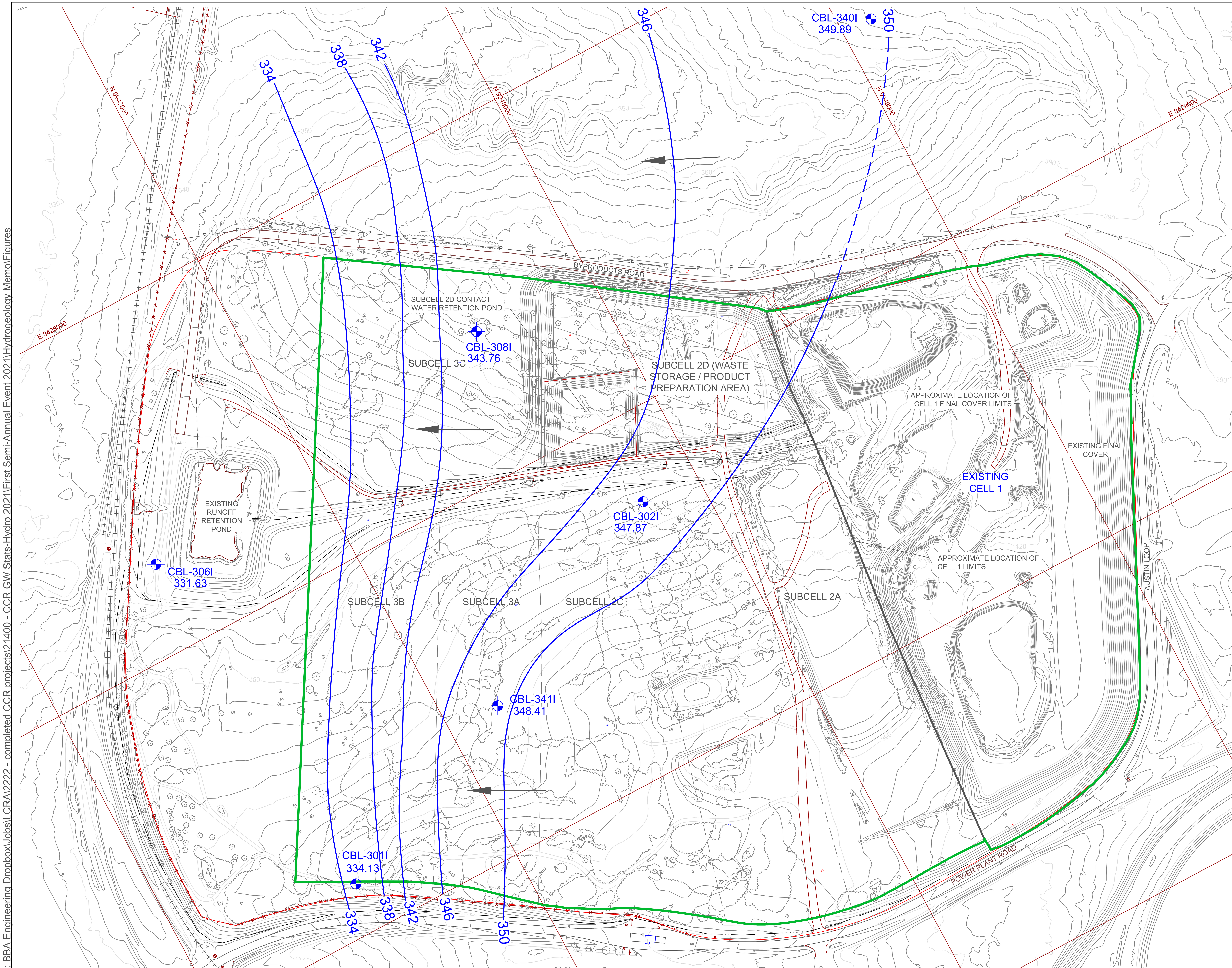


12-15-2025

TABLE 1
Combustion Byproducts Landfill
Groundwater Monitoring Well System
July 2025 Potentiometric Surface Data
Fayette Power Project
La Grange, Texas

Well ID	CBL-340I		CBL-301I		CBL-302I		CBL-306I		CBL-308I		CBL-341I	
Well Top of Casing Elevation	376.98		372.11		358.99		339.96		368.67		366.65	
Date	DTW (ft btoc)	Elevation (ft NAVD)	DTW (ft btoc)	Elevation (ft NAVD)	DTW (ft btoc)	Elevation (ft NAVD)	DTW (ft btoc)	Elevation (ft NAVD)	DTW (ft btoc)	Elevation (ft NAVD)	DTW (ft btoc)	Elevation (ft NAVD)
7/28/2025	27.09	349.89	37.98	334.13	11.12	347.87	8.33	331.63	24.91	343.76	18.24	348.41

Notes:
NM = Not Measured
ft btoc = feet below top of casing
ft NAVD = feet above North American Vertical Datum (1988)



LEGEND

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- (350) — EXISTING TOP OF CLAY LINER ELEVATION (FT,MSL) (NOTE 2)
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- EXISTING BUILDING
- EXISTING RAILROAD
- N 9949000 / E 3428000 — COORDINATE GRID (NOTE 2)
- EXISTING FENCE
- PROPOSED PHASE BOUNDARY
- PROPOSED LIMIT OF WASTE
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- CBL-302I 347.25 — CBL GROUNDWATER MONITORING WELL WITH POTENTIOMETRIC SURFACE ELEVATION INDICATED IN FEET ABOVE NAVD 1988.
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1. THE EXISTING CONTOUR BASE MAP SHOWN ON THIS DRAWING WAS COMPILED USING AN AERIAL SURVEY BASED ON PHOTOGRAPHY PERFORMED ON 23 OCTOBER 2013 BY SURDEX CORPORATION AND LIDAR DATA PUBLISHED DECEMBER 2008 AND PROVIDED BY LCRA SURVEYING, MAPPING, AND GIS.
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ALL MONITORING WELLS WERE GAUGED ON JULY 28, 2025

STATE OF TEXAS
CRAIG C. MACON
GEOLOGY
1301
LICENSED
PROFESSIONAL GEOSCIENTIST

12-15-2025

0 140 280
SCALE IN FEET

LOWER COLORADO RIVER AUTHORITY

Figure 2
Potentiometric Surface Map of the Intermediate Sand
July 2025

PROJECT: 22482-23	BY: SLB	REVISIONS
DATE: 8/21/2025	CHECKED: CCM	

Bullock, Bennet & Associates, LLC
Engineering and Geoscience
Texas Registrations: Engineering F-8542, Geoscience 50127

C: BBA Engineering Dropbox\Jobs\LCRA\2222 - completed CCR projects\21400 - CCR GW Stats-Hydro 2021\First Semi-Annual Event 2021\Hydrogeology Memo\Figures

Appendix B

Acceptance of Updates of the Background Groundwater Evaluation Report -ID No. 31956064,
Texas Commission on Environmental Quality,
December 12, 2025

Background Groundwater Statistics Update, Lower Colorado River Authority Fayette Power Project – La Grange, Fayette County,
Coal Combustion Residuals (CCR) Registration No. CCR101,
Lower Colorado River Authority,
September 10, 2025

Background Groundwater Monitoring Update (2016-2024 Data)
CCR Groundwater Detection Monitoring Program Combustion Byproducts Landfill,
Bullock, Bennett & Associates, LLC,
July 31, 2025

From: Daniela Ortiz De Montellano
To: Kate McCarthy
Cc: Patti Hershey; Charles Brown; Isabel Newman
Subject: Acceptance of Updates of the Background Groundwater Evaluation Report -ID No. 31956064
Date: Friday, December 12, 2025 1:23:03 PM
Attachments: image001.png

Lower Colorado River Authority (LCRA) – La Grange, Fayette County
Coal Combustion Residuals (CCR) Registration No. CCR101
Industrial Solid Waste Registration No. 31575
EPA Identification No. TXD083566547
Communication ID No. 31956064; RN100226844/CN600253637

Dear Ms. McCarthy:

The Industrial and Hazardous Waste (IHW) Permits Section of the Texas Commission on Environmental Quality (TCEQ) reviewed the updates of the background groundwater evaluation report (BER) dated September 10, 2025, and received on September 11, 2025.

Based on the information provided in the updated BER, the IHW Permits Section concludes that the registrant has fulfilled the requirements of the registration, and the report is satisfactory.

Please note that you will be required to update the background groundwater limits with the most current limits when you submit a registration amendment.

If you have any questions, please contact me by phone at (512) 239-2210 or by email.

Sincerely,

Daniela Ortiz de Montellano | **Team Leader**
Industrial and Hazardous Waste Permits Section | **Waste Permits Division** | **TCEQ**
12100 Park 35 Circle, Bldg. F | Austin, Texas 78753 | (512) 239-2210
: daniela.ortiz-demontellano@tceq.texas.gov

TEXAS COMMISSION ON
ENVIRONMENTAL QUALITY

September 10, 2025

Daniela Ortiz de Montellano, Project Manager
Industrial and Hazardous Waste Permits Section
Waste Permits Division
Texas Commission on Environmental Quality

RE: Background Groundwater Statistics Update
Lower Colorado River Authority Fayette Power Project – La Grange, Fayette County Coal Combustion Residuals (CCR) Registration No. CCR101
Industrial Solid Waste Registration No. 31575
RN100226844/CN600253637

Dear Ms. Ortiz de Montellano,

Please find attached the 2025 update of the statistically determined background Control Limits for the use in data evaluation of groundwater conditions associated with the Combustion Byproducts Landfill (CBL) for the Fayette Power Project (FPP) located in La Grange, Fayette County, Texas.

In the absence of indications of a release of chemicals of concern from a regulated unit, cumulative analytical data collected by the sampling and analysis of groundwater can be utilized to update background conditions every two years, as described in both the TCEQ-approved *Statistical Analysis Plan* and the *Background Evaluation Report* (both prepared by BBA and dated October 1, 2024) and as discussed in the U.S. Environmental Protection Agency "Unified Guidance" document (EPA, 2009). The *Background Evaluation Report* (BBA, 2024) was developed based on the groundwater data collected during the 2016-2022 timeframe. That document is being updated with the attached Background Groundwater Monitoring Update (July 31, 2025) that develops new background Control Limits which FPP will use in subsequent semiannual event groundwater data analysis. The Background Groundwater Monitoring Update includes the additional semiannual data collected in 2023 and 2024.

If you have any questions or would like additional information, please feel free to contact me at 512-578-3205.

Sincerely,

Kate McCarthy

Kate McCarthy, P.G.
Senior Environmental Coordinator

Enclosures: Correspondence Cover Sheet
Background Groundwater Monitoring Update (2016-2024 Data)

Bullock, Bennett & Associates, LLC
www.bbaengineering.com
165 N. Lampasas St. • Bertram, Texas 78605 • (512) 355-9198

Technical Memorandum

To: Kate McCarthy, P.G. Project No. 24823-4-1
Corporate Environmental
Lower Colorado River Authority (LCRA)

From: Charlie Macon, P.G.

Date: July 31, 2025

Subject: BACKGROUND GROUNDWATER MONITORING UPDATE (2016-2024 DATA) CCR GROUNDWATER DETECTION MONITORING PROGRAM COMBUSTION BYPRODUCTS LANDFILL (Registration No. CCR-101) FAYETTE POWER PROJECT, LA GRANGE, TEXAS

This Technical Memorandum has been prepared by Bullock, Bennett & Associates, LLC (BBA) on behalf of the Lower Colorado River Authority (LCRA), to document the 2025 update of statistically determined background analyte concentration Control Limits for use in data evaluation of groundwater conditions associated with operation of the Combustion Byproducts Landfill (CBL). The CBL is a Coal Combustion Residuals (CCR) landfill, Texas Commission on Environmental Quality (TCEQ) Registration No. CCR-101.

CBL compliance with the Federal and State CCR programs regarding groundwater quality is evaluated as part of the CBL Groundwater Monitoring Program (GMP) in accordance with the CCR regulations, as codified in 40 Code of Federal Regulations (CFR) 257.93 and Title 30 of the Texas Administrative Code §352.931 (30 TAC §352.931). LCRA's GMP follows the approved methods described by the TCEQ-approved *Statistical Analysis Plan* (BBA, 2024a), and the *Background Evaluation Report* (BBA, 2024b). As described in both documents, and as discussed in the U.S. Environmental Protection Agency "Unified Guidance" document (EPA, 2009), in the absence of indications of a release of chemicals of concern (COCs) from a regulated unit, cumulative analyte concentration data observed by sampling and analysis of groundwater can be utilized to update background conditions every two years. The 2024 *Background Evaluation Report* was developed based on the groundwater data collected during the 2016-2022 timeframe. The Background Groundwater Monitoring Update herein, develops new background Control Limits for use in comparison to subsequent semiannual event groundwater data, using the additional semiannual data collected in 2023 and 2024.

As described in the *Statistical Analysis Plan* and the *Background Evaluation Report*, the groundwater data is analyzed, and background Control Limit calculations are developed using the DUMPStat statistical analysis program (DUMPStat, 2003).

The DUMPStat report used in updating the background Control Limits, specific to each analyte and each well, is provided as Attachment 1. Attachment 1 includes the following:

- Table 1: Summary Statistics (lists the updated Control Limits)
- Intra-Well Control Charts/Prediction Limits and Worksheets
- Table 2: Analytical Data and CUSUM Summary
- Table 4: Dixon's Test results

Based on the updated background evaluation, the Control Limits (listed in milligrams per liter) to be utilized for Detection Monitoring data comparisons in semiannual events beginning in 2025 are as follows:

Analyte	**CBL-301I**	**CBL-302I**	**CBL-306I**	**CBL-308I**	**CBL-341I**
Boron	0.1497	0.3313	0.1933	0.5585	0.2082
Calcium	1431	1384	381	1228	1149
Chloride	3655	3197	644	3735	2350
Fluoride	2.7170	2.5382	4.8754	2.8660	1.4406
pH	5.31-7.13	3.91-8.31	4.22-9.10	5.30-7.24	5.14-7.06
Sulfate	696	1699	830	1881	490
TDS	8266	8062	2863	11758	6811

REFERENCES

Bullock, Bennett & Associates, LLC (BBA), 2024a: *Statistical Analysis Plan, Combustion Byproducts Landfill, Fayette Power Project, La Grange, Texas*, October 1, 2024.

Bullock, Bennett & Associates, LLC (BBA), 2024b: *Background Evaluation Report, Combustion Byproducts Landfill, Fayette Power Project, La Grange, Texas*, October 1, 2024.

DUMPStat, 2003: DUMPStat Statistical Guide, version 2.1.8., by Robert D. Gibbons Ltd., with DUMPStat 2.3 Release Notes.

EPA, 2009: *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance* (EPA 530/R-09-007).

STATE OF TEXAS
CRAIG C. MACON
GEOLOGY
1301
LICENSED
PROFESSIONAL GEOSCIENTIST

7-31-2025

ATTACHMENT 1

DUMPStat Background Control Limits Update

(2016-2024 Background Data)

Table 1

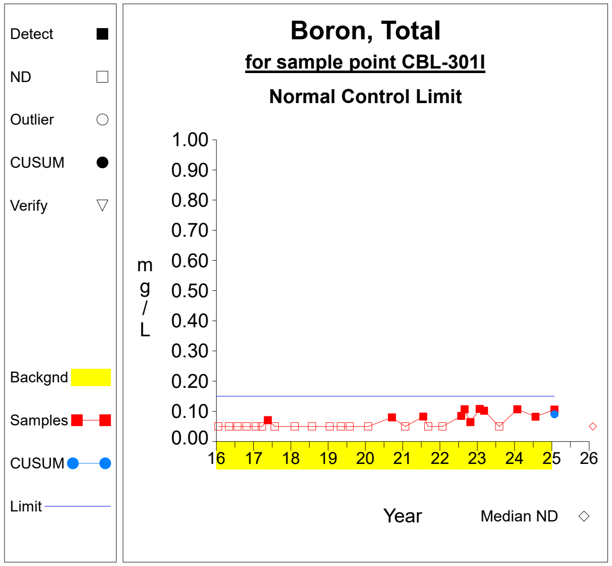
Summary Statistics and Intermediate Computations for Combined Shewhart-CUSUM Control Charts

Constituent	Units	Well	N(back)	N(mon)	N(tot)	Mean	SD	R(i-1)	R(i)	S(i-1)	S(i)	Limit	Type	Conf
Boron, Total	mg/L	CBL-301I	27	1	28	0.0644	0.0213	0.0820	0.1060		0.0900	0.1497	normal	
Boron, Total	mg/L	CBL-302I	23	1	24	0.0828	0.0621	0.1370	0.2100		0.1634	0.3313	normal	
Boron, Total	mg/L	CBL-306I	22	1	24	0.0751	0.0295	0.1340	0.1600		0.1378	0.1933	normal	
Boron, Total	mg/L	CBL-308I	22	1	23	0.1155	0.1108	0.1390	0.1630		0.1155	0.5585	normal	
Boron, Total	mg/L	CBL-341I	23	1	24	0.0757	0.0331	0.1360	0.1380		0.1132	0.2082	normal	
Calcium, Total	mg/L	CBL-301I	22	1	24	980.3636	112.6222	912.0000	907.0000		980.3636	1430.8525	normal	
Calcium, Total	mg/L	CBL-302I	22	1	23	949.0455	108.7730	845.0000	878.0000		949.0455	1384.1375	normal	
Calcium, Total	mg/L	CBL-306I	20	1	24	207.3500	43.3896	115.0000	206.0000		207.3500	380.9085	normal	
Calcium, Total	mg/L	CBL-308I	22	1	23	828.2273	99.9314	683.0000	698.0000		828.2273	1227.9528	normal	
Calcium, Total	mg/L	CBL-341I	22	1	23	835.4091	78.2941	801.0000	778.0000		835.4091	1148.5855	normal	
Chloride	mg/L	CBL-301I	22	1	24	2281.3636	343.3490	2350.0000	2270.0000		2281.3636	3654.7596	normal	
Chloride	mg/L	CBL-302I	22	1	23	1765.9091	357.7397	1650.0000	1730.0000		1765.9091	3196.8680	normal	
Chloride	mg/L	CBL-306I	19	1	24	286.6842	89.3526	10.2000	286.0000		286.6842	644.0948	normal	
Chloride	mg/L	CBL-308I	22	1	23	2394.5455	335.0867	2250.0000	2190.0000		2394.5455	3734.8924	normal	
Chloride	mg/L	CBL-341I	22	1	23	1790.4545	139.8461	1960.0000	1780.0000		1790.4545	2349.8389	normal	
Fluoride	mg/L	CBL-301I	25	1	26	0.5374	0.5449	0.5000	0.1000		0.5374	2.7170	normal	
Fluoride	mg/L	CBL-302I	23	1	24	0.5223	0.5040	0.1010	0.1710		0.5223	2.5382	normal	
Fluoride	mg/L	CBL-306I	21	1	24	2.2678	0.6519	0.8230	2.2000		2.2678	4.8754	normal	
Fluoride	mg/L	CBL-308I	20	1	23	1.6192	0.3117	0.8640	1.2000		1.6192	2.8660	normal	
Fluoride	mg/L	CBL-341I	23	1	24	0.3037	0.2842	0.2500	0.1280		0.3037	1.4406	normal	
pH	S.U.	CBL-301I	26	1	27	6.2223	0.2278	6.4500	6.5400		6.3691	5.31 - 7.13	normal	
pH	S.U.	CBL-302I	23	1	24	6.1100	0.5489	6.4100	6.4300		6.1100	3.91 - 8.31	normal	
pH	S.U.	CBL-306I	22	1	24	6.6609	0.6096	6.5400	6.4400		6.6609	4.22 - 9.10	normal	
pH	S.U.	CBL-308I	22	1	23	6.2709	0.2433	6.5300	6.6400		6.4575	5.30 - 7.24	normal	
pH	S.U.	CBL-341I	22	1	24	6.0982	0.2406	6.3900	6.4600		6.2795	5.14 - 7.06	normal	
Sulfate	mg/L	CBL-301I	23	1	25	344.9130	87.8288	454.0000	467.0000		401.1284	696.2283	normal	
Sulfate	mg/L	CBL-302I	22	1	23	1242.4091	114.2431	1370.0000	1490.0000		1404.3177	1699.3816	normal	
Sulfate	mg/L	CBL-306I	20	1	24	376.2000	113.5089	70.7000	433.0000		376.2000	830.2357	normal	
Sulfate	mg/L	CBL-308I	21	1	23	1415.2381	116.4311	1430.0000	1360.0000		1415.2381	1880.9623	normal	
Sulfate	mg/L	CBL-341I	22	1	23	344.0000	36.4326	367.0000	369.0000		344.0000	489.7303	normal	
Total Dissolved Solids	mg/L	CBL-301I	22	1	24	5360.0000	726.6164	4580.0000	3810.0000		5360.0000	8266.4657	normal	
Total Dissolved Solids	mg/L	CBL-302I	22	1	23	5249.0909	703.2029	4840.0000	4710.0000		5249.0909	8061.9027	normal	
Total Dissolved Solids	mg/L	CBL-306I	22	1	24	1346.9091	379.0547	691.0000	1480.0000		1346.9091	2863.1279	normal	
Total Dissolved Solids	mg/L	CBL-308I	22	1	23	6511.3636	1311.6449	5810.0000	5290.0000		6511.3636	11757.9432	normal	
Total Dissolved Solids	mg/L	CBL-341I	22	1	23	4558.6364	563.0385	3700.0000	4020.0000		4558.6364	6810.7903	normal	

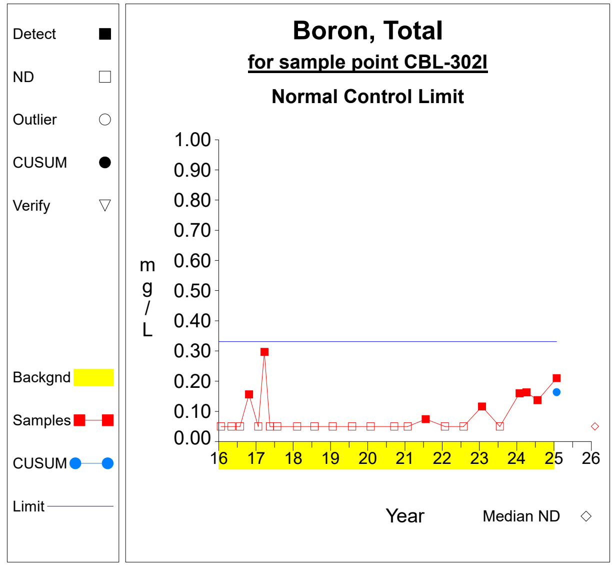
N(back) and N(mon) = Non-outlier measurements in the background and monitoring periods.
N(tot) = All independent measurements for that constituent and well.
For transformed data, mean and SD in transformed units and control limit in original units.
Conf = confidence level for passing initial test or one of two verification resamples (nonparametric test only).
* - Insufficient Data.
** - Detection Frequency < 25%.
*** - Zero Variance.

LCRA Fayette Power [GW] April 2025

Intra-Well Control Charts / Prediction Limits



Graph 1



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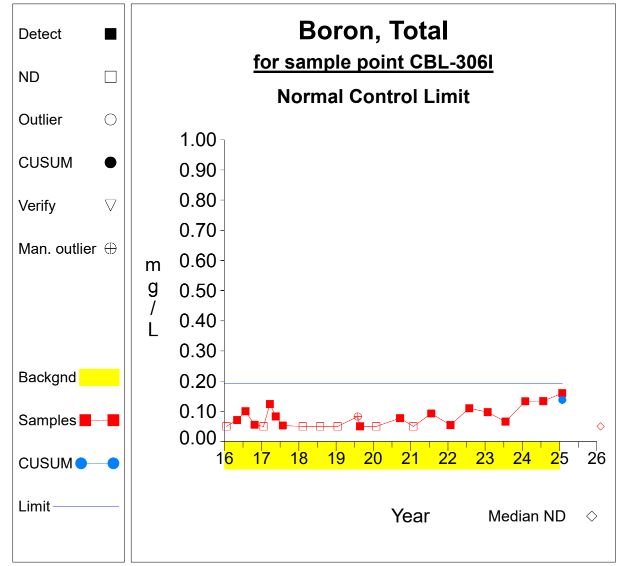

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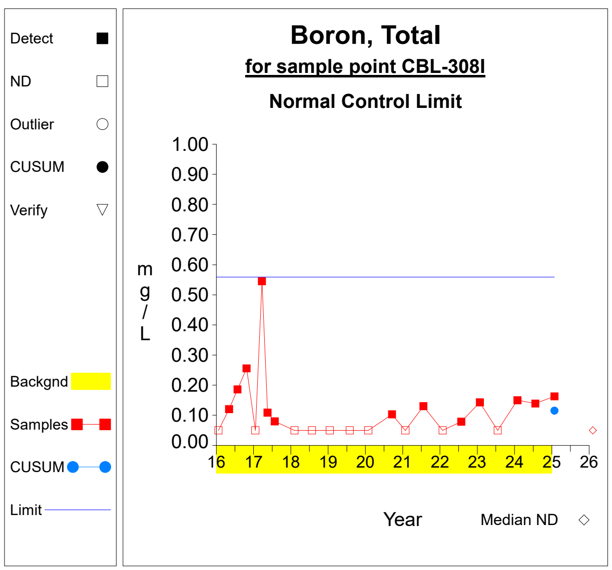

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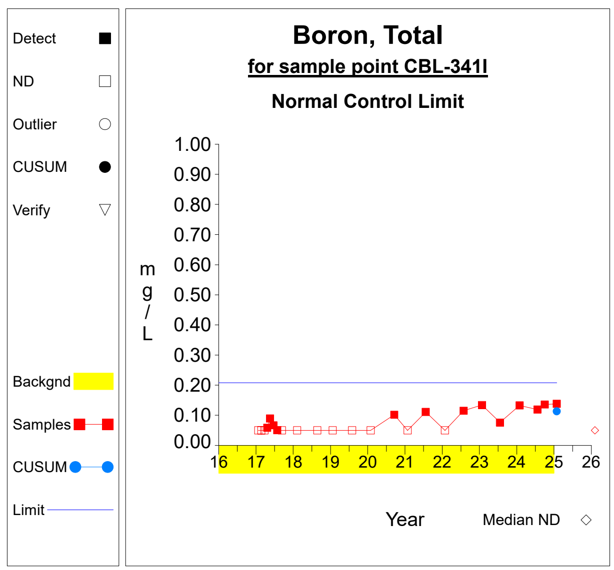
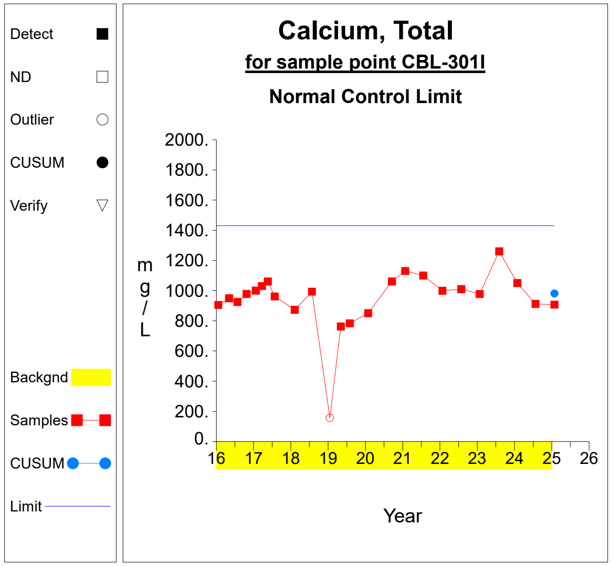


Graph 5

Prepared by: Otter Creek Environmental

Intra-Well Control Charts / Prediction Limits



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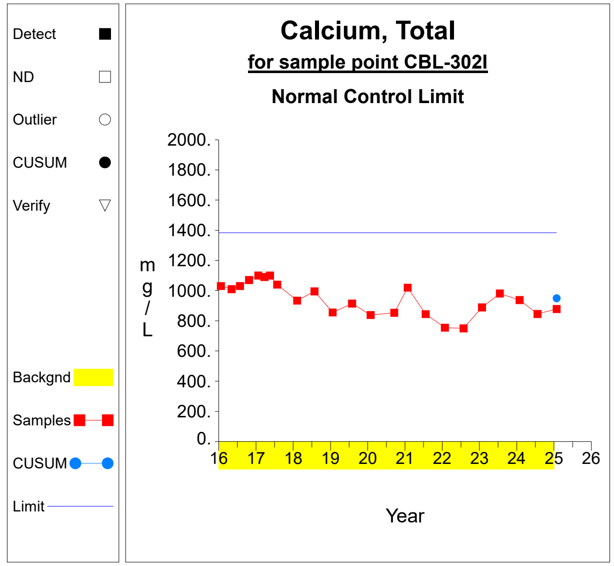

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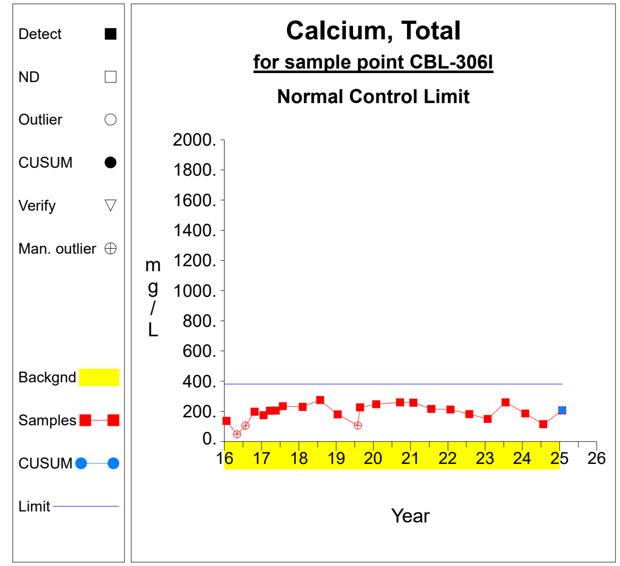

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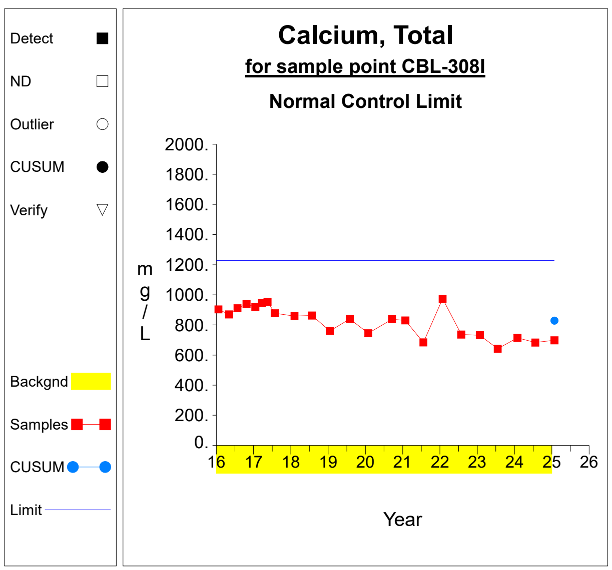

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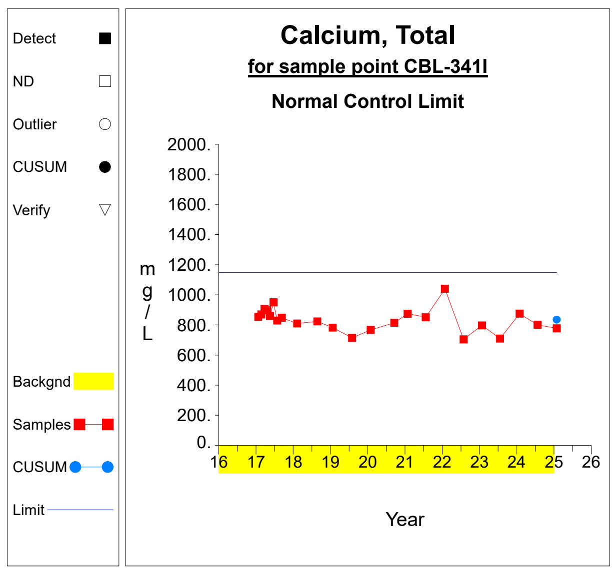
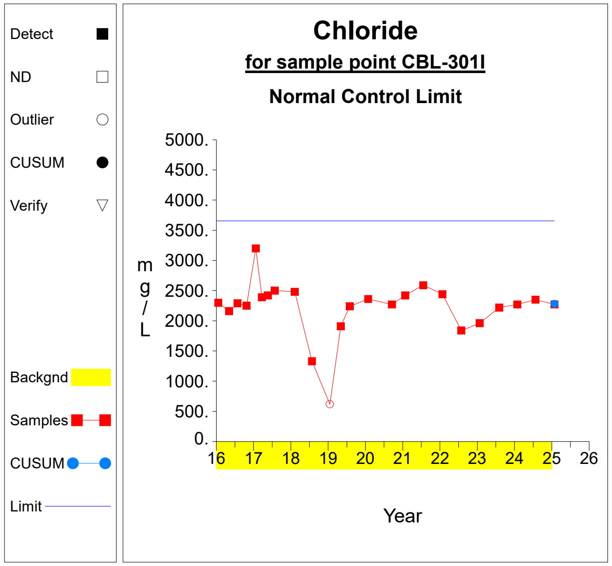


Graph 10

Intra-Well Control Charts / Prediction Limits



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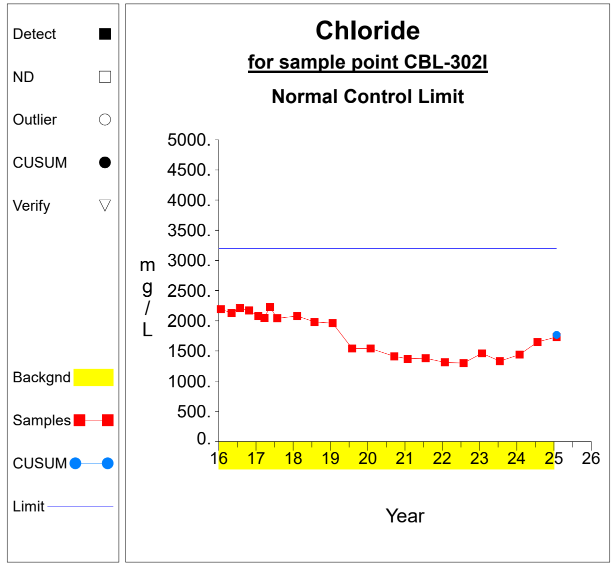

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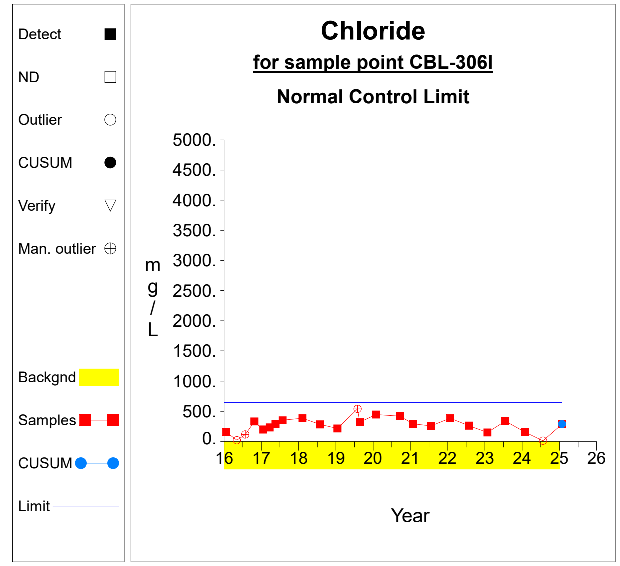

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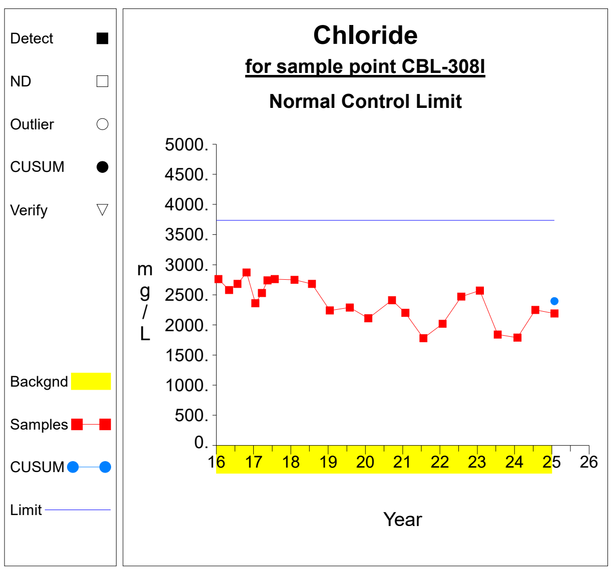

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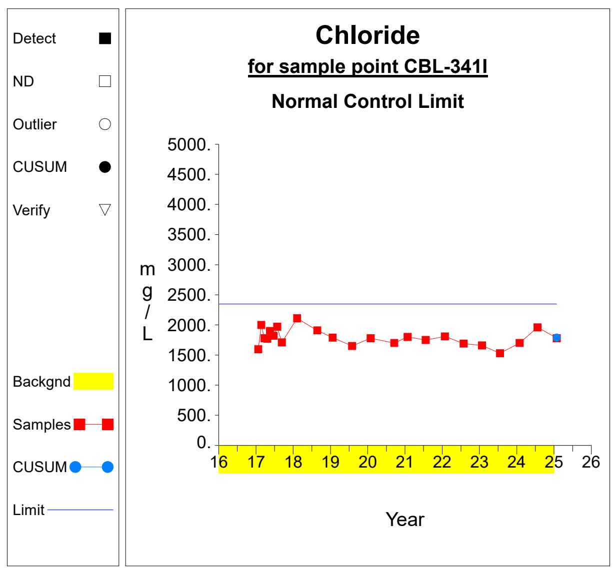

Graph 15

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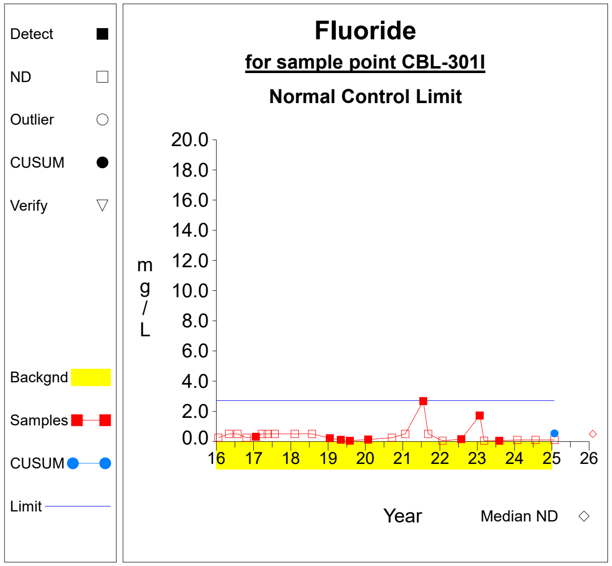
LCRA Fayette Power [GW] April 2025

Intra-Well Control Charts / Prediction Limits



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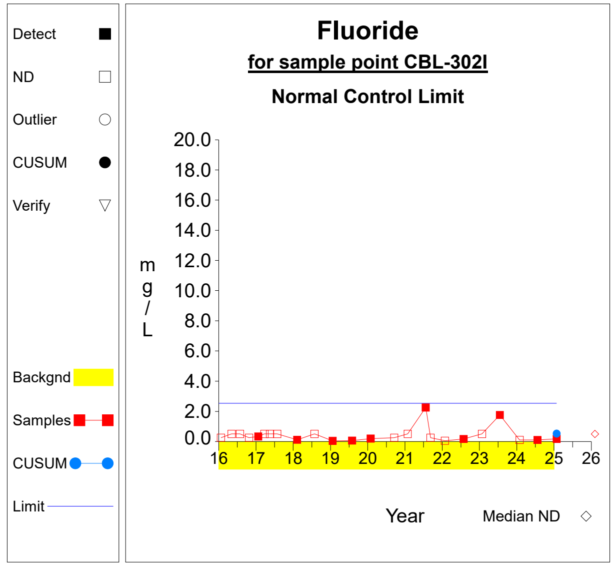

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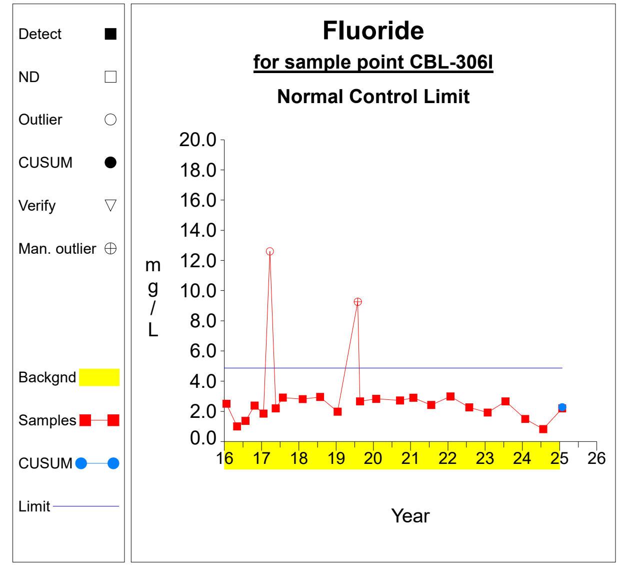

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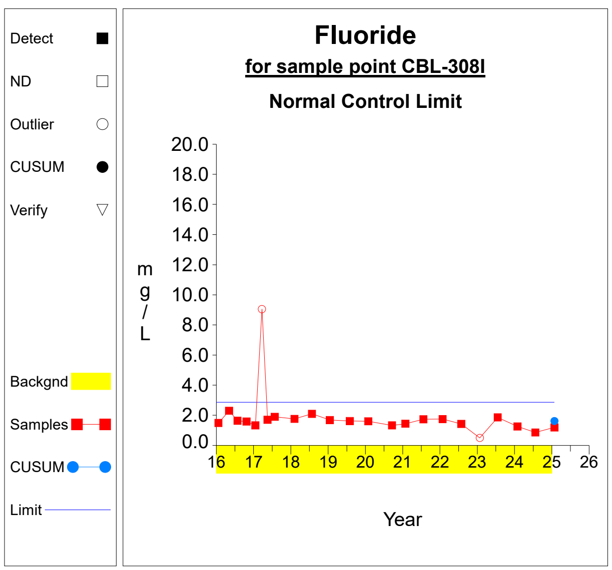

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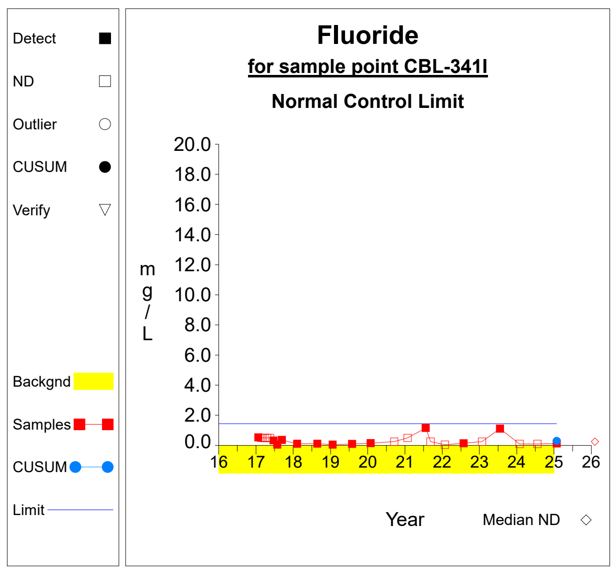

Graph 20

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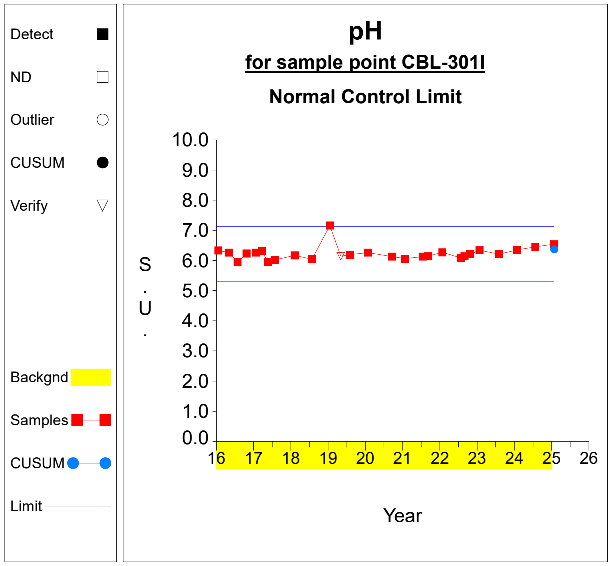
Intra-Well Control Charts / Prediction Limits



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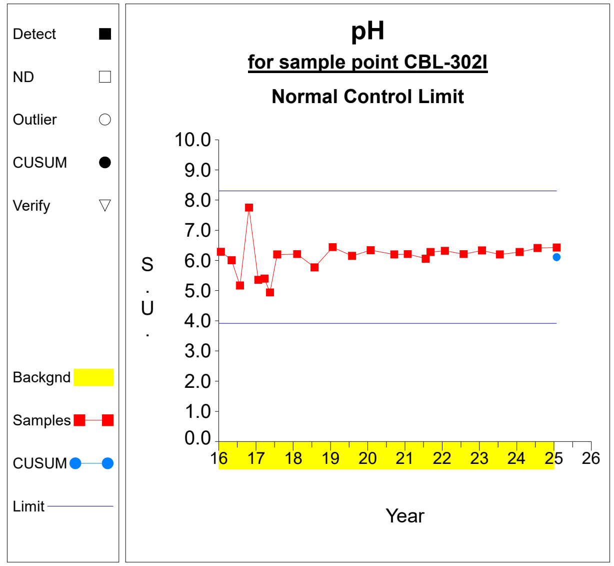

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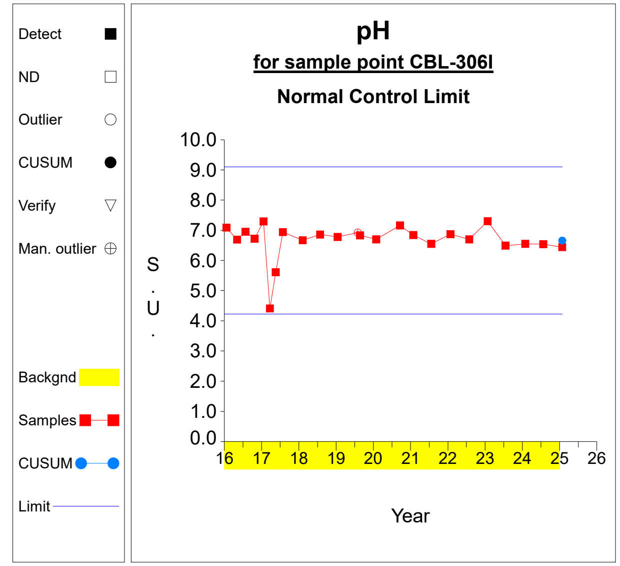

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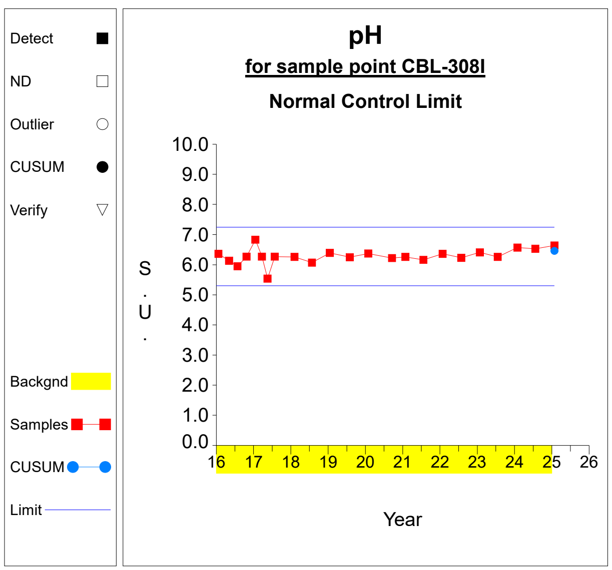

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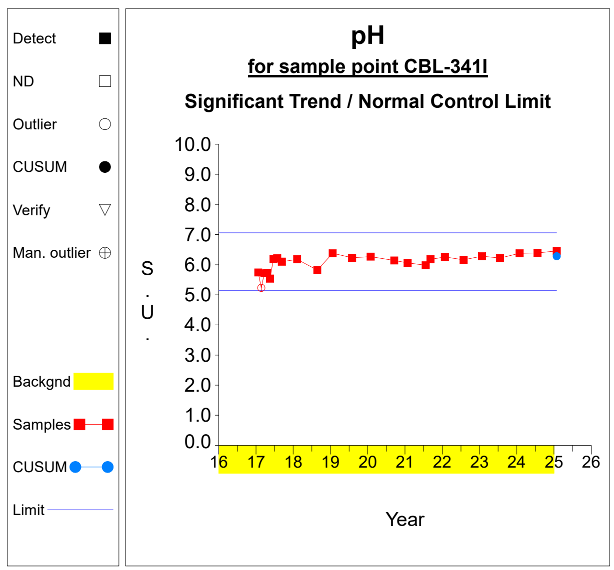
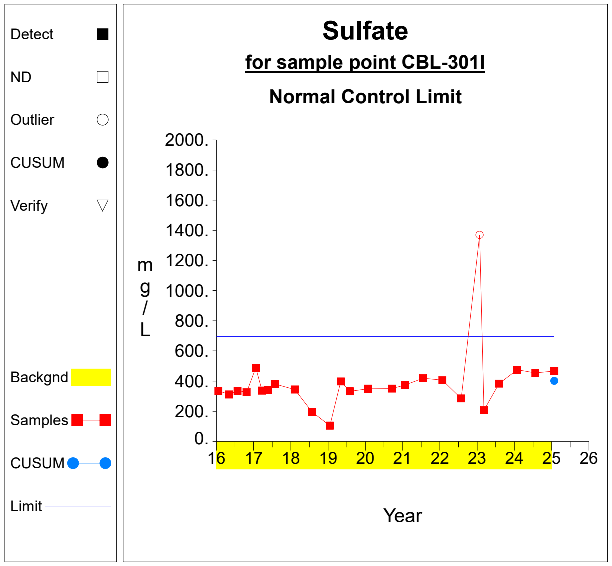


Graph 25

Intra-Well Control Charts / Prediction Limits



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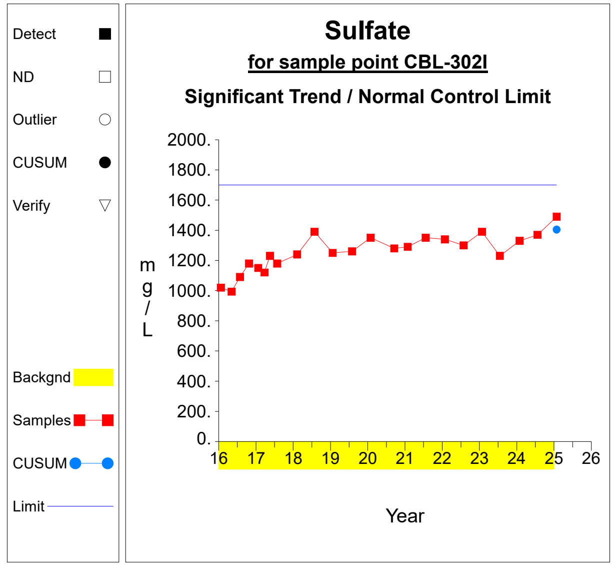

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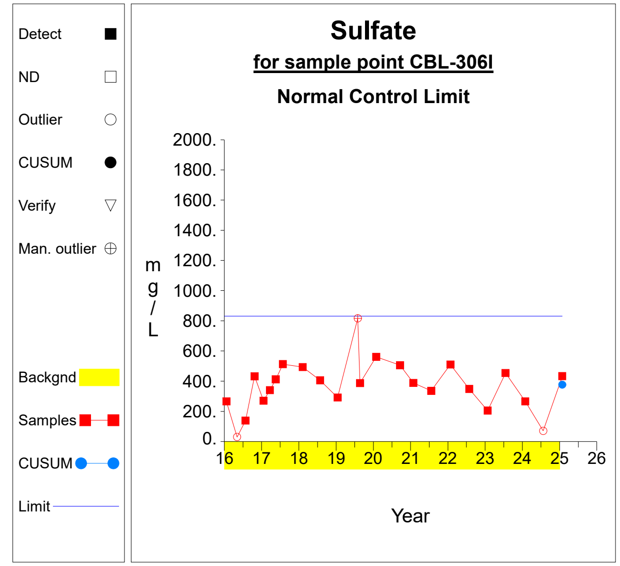
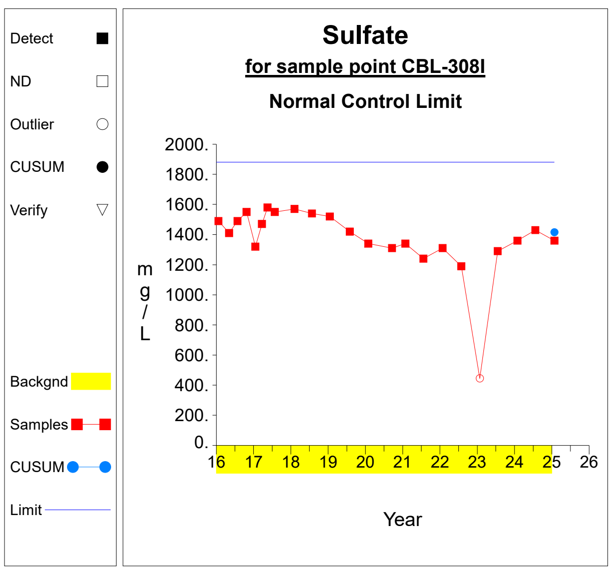


Graph 28



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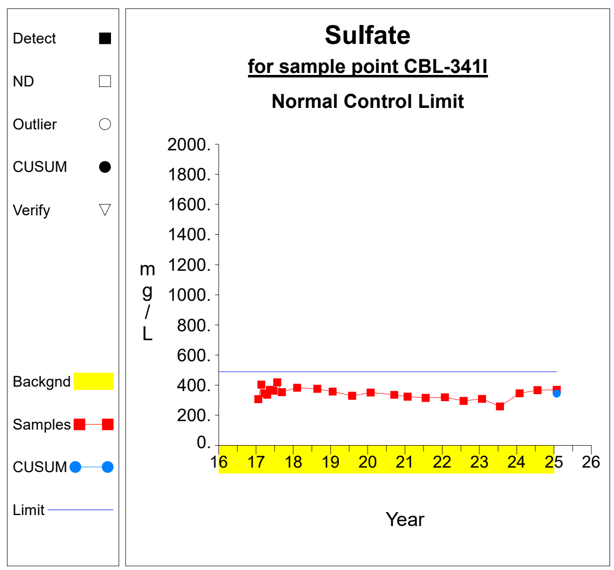
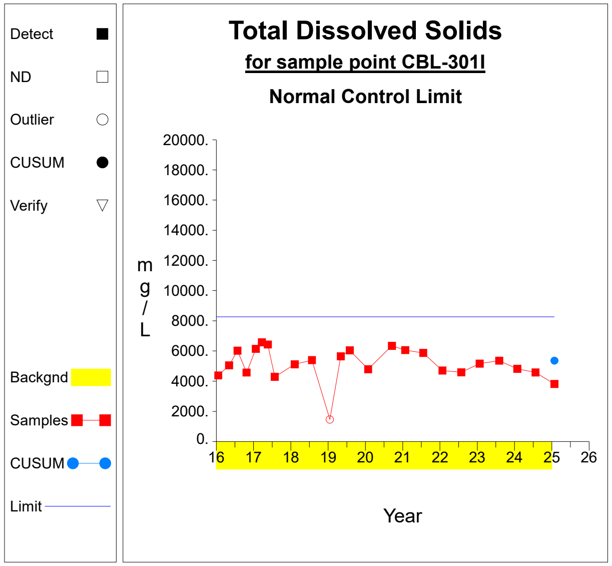


Graph 30

LCRA Fayette Power [GW]

April 2025

Intra-Well Control Charts / Prediction Limits



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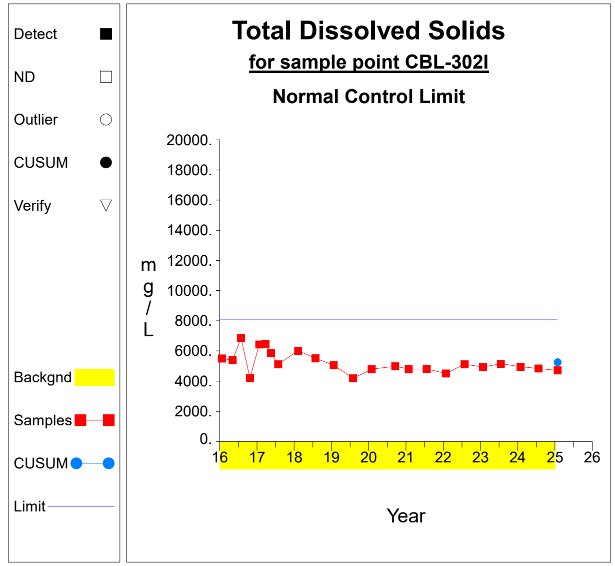
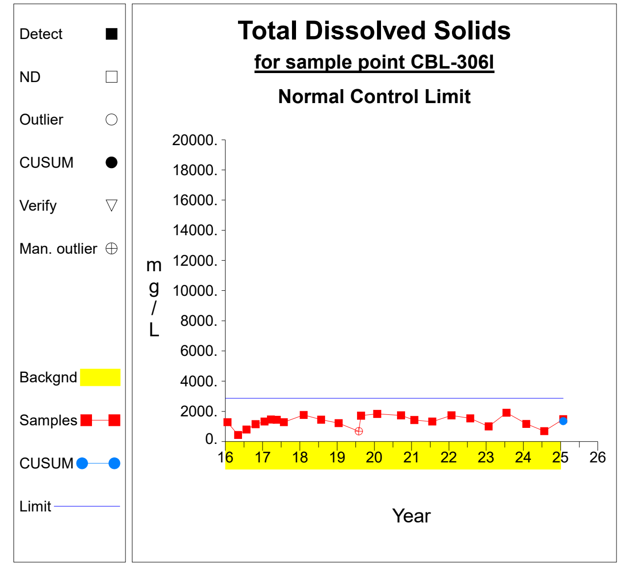


Graph 32



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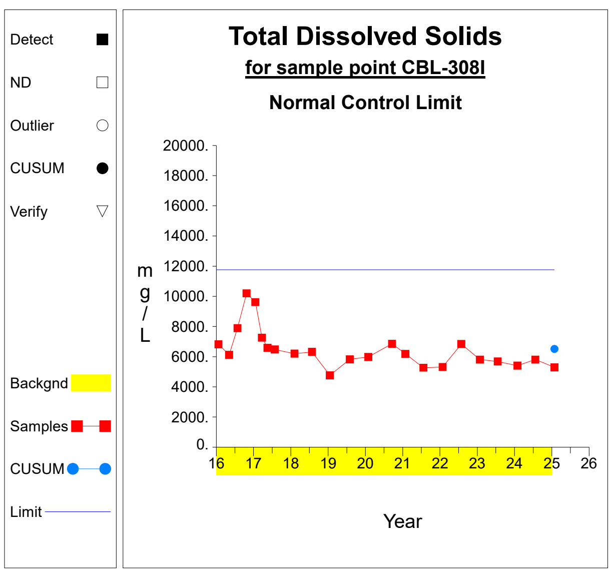

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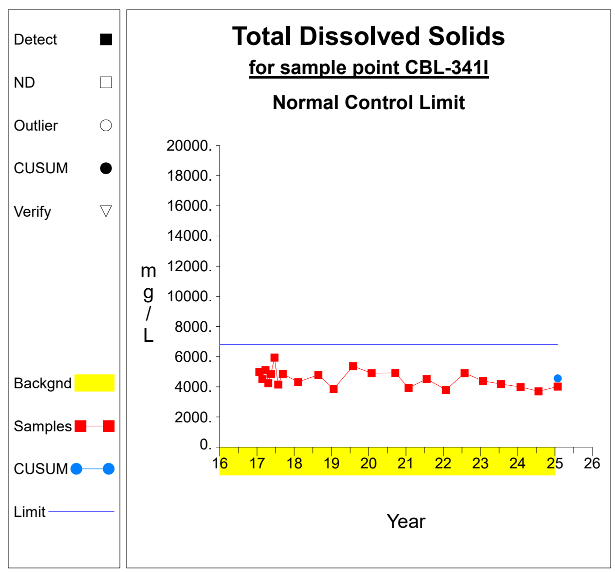
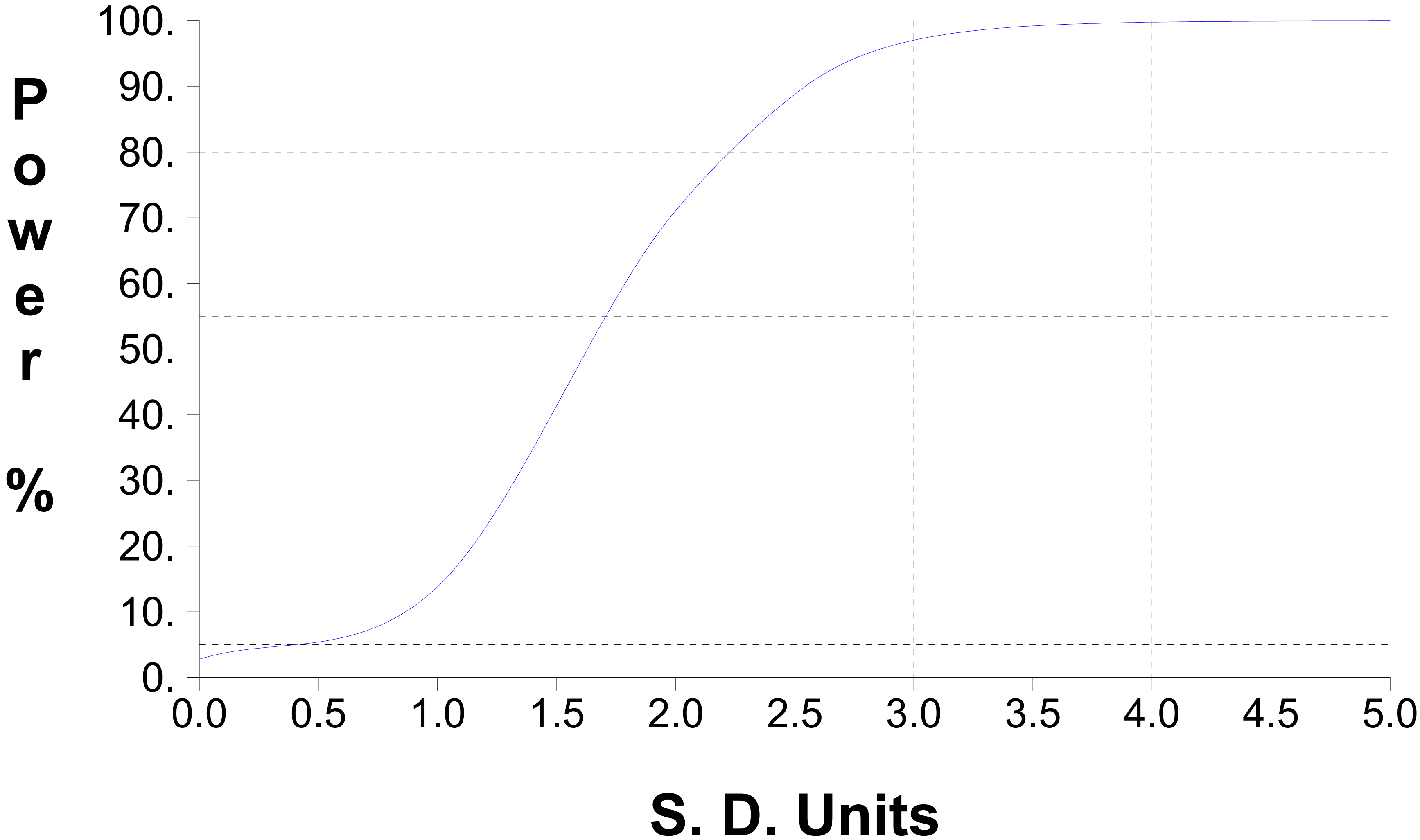


Graph 35

Prepared by: Otter Creek Environmental

False Positive and False Negative Rates for Current Intra-Well Control Charts Monitoring Program



Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Boron, Total (mg/L) at CBL-301I
Normal Control Limit

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$	Compute background mean.
	$= \mathbf{1.739} / \mathbf{27}$	
	$= \mathbf{0.064}$	
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$	Compute background sd.
	$= ((\mathbf{0.124} - \mathbf{3.024}/\mathbf{27}) / (\mathbf{27}-1))^{1/2}$	
	$= \mathbf{0.021}$	
3	$SCL = \mathbf{\bar{X}} + \mathbf{F} * \mathbf{S}$	Compute combined Shewhart-CUSUM normal control limit.
	$= \mathbf{0.064} + \mathbf{4.0} * \mathbf{0.021}$	
	$= \mathbf{0.15}$	
4	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$	Number of sample pairs during trend detection period.
	$= \mathbf{27} * (\mathbf{27}-1) / 2$	
	$= \mathbf{351}$	
5	$S = \mathbf{0.002}$	Sen's estimator of trend.
6	$var(S) = \mathbf{1710.667}$	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N'} - \mathbf{Z}_{.99} * \mathbf{var(S)}^{1/2}) / 2$	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
	$= (\mathbf{351} - \mathbf{2.326} * \mathbf{1710.667}^{1/2}) / 2$	
	$= \mathbf{127.398}$	
8	$LCL(S) = \mathbf{0.0}$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Boron, Total (mg/L) at CBL-302I
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N**	Compute background mean.
	= **1.903** / **23**	
	= **0.083**	
2	S = ((**sum[X^2] - sum[X]^2**/**N**) / (**N**-1))^{½}	Compute background sd.
	= ((**0.242 - 3.623**/**23**) / (**23**-1))^{½}	
	= **0.062**	
3	SCL = $\overline{\mathbf{X}}$ + **F** * **S**	Compute combined Shewhart-CUSUM normal control limit.
	= **0.083** + **4.0** * **0.062**	
	= **0.331**	
4	N' = **N** * (**N**-1) / 2	Number of sample pairs during trend detection period.
	= **23** * (**23**-1) / 2	
	= **253**	
5	S = **0.0**	Sen's estimator of trend.
6	var(S) = **940.333**	Variance estimate for slope.
7	M_1(S) = (**N' - Z$_{.99}$** * **var(S)**^{½}) / 2	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
	= (**253** - **2.326** * **940.333**^{½}) / 2	
	= **90.837**	
8	LCL(S) = **0.0**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Boron, Total (mg/L) at CBL-306I
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **1.652** / **22** = **0.075**	Compute background mean.
2	S = ((**sum[X^2] - sum[X]^2**/**N**) / (**N**-1))^{½} = ((**0.142** - **2.73**/**22**) / (**22**-1))^{½} = **0.03**	Compute background sd.
3	SCL = **$\bar{X}$** + **F** * **S** = **0.075** + **4.0** * **0.03** = **0.193**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **22** * (**22**-1) / 2 = **231**	Number of sample pairs during trend detection period.
5	S = **0.002**	Sen's estimator of trend.
6	var(S) = **1192.333**	Variance estimate for slope.
7	M_1(S) = (**N'** - **$Z_{.99}$** * **var(S)**^{½}) / 2 = (**231** - **2.326** * **1192.333**^{½}) / 2 = **75.341**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **0.0**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Boron, Total (mg/L) at CBL-308I
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **2.541** / **22** = **0.115**	Compute background mean.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))^{½} = ((**0.551** - **6.456/22**) / (**22**-1))^{½} = **0.111**	Compute background sd.
3	SCL = **$\bar{X}$** + **F** * **S** = **0.115** + **4.0** * **0.111** = **0.559**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **22** * (**22**-1) / 2 = **231**	Number of sample pairs during trend detection period.
5	S = **0.0**	Sen's estimator of trend.
6	var(S) = **1132.667**	Variance estimate for slope.
7	M_1(S) = (**N' - $Z_{.99}$** * **var(S)**^{½}) / 2 = (**231** - **2.326** * **1132.667**^{½}) / 2 = **76.359**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-0.012**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Boron, Total (mg/L) at CBL-341I
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **1.742** / **23** = **0.076**	Compute background mean.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))^{½} = ((**0.156 - 3.034/23**) / (**23**-1))^{½} = **0.033**	Compute background sd.
3	SCL = $\bar{\mathbf{X}}$ + **F** * **S** = **0.076** + **4.0** * **0.033** = **0.208**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **23** * (**23**-1) / 2 = **253**	Number of sample pairs during trend detection period.
5	S = **0.006**	Sen's estimator of trend.
6	var(S) = **1268.667**	Variance estimate for slope.
7	M_1(S) = (**N' - $Z_{.99}$** * **var(S)**^{½}) / 2 = (**253** - **2.326** * **1268.667**^{½}) / 2 = **85.076**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **0.0**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Calcium, Total (mg/L) at CBL-301I
Normal Control Limit

Step	Equation	Description
1	$\bar{X} = \textbf{sum[X]} / \textbf{N}$ $= \textbf{21568.0} / \textbf{22}$ $= \textbf{980.364}$	Compute background mean.
2	$S = ((\textbf{sum[X}^2\textbf{]} - \textbf{sum[X]}^2/\textbf{N}) / (\textbf{N}-1))^{1/2}$ $= ((\textbf{2.14}\times\textbf{10}^7 - \textbf{4.65}\times\textbf{10}^8/\textbf{22}) / (\textbf{22}-1))^{1/2}$ $= \textbf{112.622}$	Compute background sd.
3	$SCL = \bar{\textbf{X}} + \textbf{F} * \textbf{S}$ $= \textbf{980.364} + \textbf{4.0} * \textbf{112.622}$ $= \textbf{1430.853}$	Compute combined Shewhart-CUSUM normal control limit.
4	$N' = \textbf{N} * (\textbf{N}-1) / 2$ $= \textbf{22} * (\textbf{22}-1) / 2$ $= \textbf{231}$	Number of sample pairs during trend detection period.
5	$S = \textbf{13.605}$	Sen's estimator of trend.
6	$var(S) = \textbf{1256.667}$	Variance estimate for slope.
7	$M_1(S) = (\textbf{N'} - \textbf{Z}_{.99} * \textbf{var(S)}^{1/2}) / 2$ $= (\textbf{231} - \textbf{2.326} * \textbf{1256.667}^{1/2}) / 2$ $= \textbf{74.272}$	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	$LCL(S) = \textbf{-10.751}$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Calcium, Total (mg/L) at CBL-302I
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **20879.0** / **22** = **949.045**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))$^{1/2}$ = ((**2.01**x**10^7** - **4.36**x**10^8**/**22**) / (**22**-1))$^{1/2}$ = **108.773**	Compute background sd.
3	SCL = **$\bar{X}$** + **F** * **S** = **949.045** + **4.0** * **108.773** = **1384.138**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **22** * (**22**-1) / 2 = **231**	Number of sample pairs during trend detection period.
5	S = **-29.058**	Sen's estimator of trend.
6	var(S) = **1255.667**	Variance estimate for slope.
7	M_1(S) = (**N' - Z$_{.99}$** * **var(S)**$^{1/2}$) / 2 = (**231** - **2.326** * **1255.667**$^{1/2}$) / 2 = **74.289**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-50.515**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Calcium, Total (mg/L) at CBL-306I
Normal Control Limit

Step	Equation	Description
1	$\bar{X} = \textbf{sum[X]} / \textbf{N}$	Compute background mean.
	$= \textbf{4147.0} / \textbf{20}$	
	$= \textbf{207.35}$	
2	$S = ((\textbf{sum[X}^{\textbf{2}}\textbf{]} - \textbf{sum[X]}^2/\textbf{N}) / (\textbf{N}-1))^{1/2}$	Compute background sd.
	$= ((\textbf{895651.0} - \textbf{1.72}\times\textbf{10}^{\textbf{7}}/\textbf{20}) / (\textbf{20}-1))^{1/2}$	
	$= \textbf{43.39}$	
3	$SCL = \bar{\textbf{X}} + \textbf{F} * \textbf{S}$	Compute combined Shewhart-CUSUM normal control limit.
	$= \textbf{207.35} + \textbf{4.0} * \textbf{43.39}$	
	$= \textbf{380.909}$	
4	$N' = \textbf{N} * (\textbf{N}-1) / 2$	Number of sample pairs during trend detection period.
	$= \textbf{20} * (\textbf{20}-1) / 2$	
	$= \textbf{190}$	
5	$S = \textbf{1.47}$	Sen's estimator of trend.
6	$var(S) = \textbf{949.0}$	Variance estimate for slope.
7	$M_1(S) = (\textbf{N'} - \textbf{Z}_{.99} * \textbf{var(S)}^{1/2}) / 2$	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
	$= (\textbf{190} - \textbf{2.326} * \textbf{949.0}^{1/2}) / 2$	
	$= \textbf{59.173}$	
8	$LCL(S) = \textbf{-10.298}$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Calcium, Total (mg/L) at CBL-308I
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **18221.0** / **22** = **828.227**	Compute background mean.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))^{½} = ((**1.53x10^7** - **3.32x10^8/22**) / (**22**-1))^{½} = **99.931**	Compute background sd.
3	SCL = $\overline{X}$ + **F** * **S** = **828.227** + **4.0** * **99.931** = **1227.953**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **22** * (**22**-1) / 2 = **231**	Number of sample pairs during trend detection period.
5	S = **-28.539**	Sen's estimator of trend.
6	var(S) = **1257.667**	Variance estimate for slope.
7	M_1(S) = (**N' - $Z_{.99}$** * **var(S)**^{½}) / 2 = (**231** - **2.326** * **1257.667**^{½}) / 2 = **74.256**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-39.221**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Calcium, Total (mg/L) at CBL-341I
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N**	Compute background mean.
	= **18379.0** / **22**	
	= **835.409**	
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$	Compute background sd.
	$= ((\mathbf{1.55 \times 10^7} - \mathbf{3.38 \times 10^8}/\mathbf{22}) / (\mathbf{22}-1))^{1/2}$	
	= **78.294**	
3	SCL = $\bar{X}$ + **F** * **S**	Compute combined Shewhart-CUSUM normal control limit.
	= **835.409** + **4.0** * **78.294**	
	= **1148.586**	
4	N' = **N** * (**N**-1) / 2	Number of sample pairs during trend detection period.
	= **22** * (**22**-1) / 2	
	= **231**	
5	S = **-13.77**	Sen's estimator of trend.
6	var(S) = **1257.667**	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N' - Z_{.99}} * \mathbf{var(S)}^{1/2}) / 2$	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
	$= (\mathbf{231 - 2.326} * \mathbf{1257.667}^{1/2}) / 2$	
	= **74.256**	
8	LCL(S) = **-31.394**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Chloride (mg/L) at CBL-301I
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N**	Compute background mean.
	= **50190.0** / **22**	
	= **2281.364**	
2	S = ((**sum[X^2] - sum[X]^2**/**N**) / (**N**-1))$^{1/2}$	Compute background sd.
	= ((**1.17**x**10^8** - **2.52**x**10^9**/**22**) / (**22**-1))$^{1/2}$	
	= **343.349**	
3	SCL = $\overline{\mathbf{X}}$ + **F** * **S**	Compute combined Shewhart-CUSUM normal control limit.
	= **2281.364** + **4.0** * **343.349**	
	= **3654.76**	
4	N' = **N** * (**N**-1) / 2	Number of sample pairs during trend detection period.
	= **22** * (**22**-1) / 2	
	= **231**	
5	S = **-4.828**	Sen's estimator of trend.
6	var(S) = **1255.667**	Variance estimate for slope.
7	M_1(S) = (**N' - $Z_{.99}$** * **var(S)**$^{1/2}$) / 2	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
	= (**231** - **2.326** * **1255.667**$^{1/2}$) / 2	
	= **74.289**	
8	LCL(S) = **-59.442**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Chloride (mg/L) at CBL-302I
Normal Control Limit

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{38850.0} / \mathbf{22}$ $= \mathbf{1765.909}$	Compute background mean.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{7.13{\times}10^7} - \mathbf{1.51{\times}10^9/22}) / (\mathbf{22}-1))^{1/2}$ $= \mathbf{357.74}$	Compute background sd.
3	$SCL = \bar{\mathbf{X}} + \mathbf{F} * \mathbf{S}$ $= \mathbf{1765.909} + \mathbf{4.0} * \mathbf{357.74}$ $= \mathbf{3196.868}$	Compute combined Shewhart-CUSUM normal control limit.
4	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{22} * (\mathbf{22}-1) / 2$ $= \mathbf{231}$	Number of sample pairs during trend detection period.
5	$S = \mathbf{-113.865}$	Sen's estimator of trend.
6	$var(S) = \mathbf{1255.667}$	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N'} - \mathbf{Z_{.99}} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{231} - \mathbf{2.326} * \mathbf{1255.667}^{1/2}) / 2$ $= \mathbf{74.289}$	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
8	$LCL(S) = \mathbf{-163.058}$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Chloride (mg/L) at CBL-306I
Normal Control Limit

Step	Equation	Description
1	$\overline{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{5447.0} / \mathbf{19}$ $= \mathbf{286.684}$	Compute background mean.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{1.71{\times}10^6} - \mathbf{2.97{\times}10^7}/\mathbf{19}) / (\mathbf{19}-1))^{1/2}$ $= \mathbf{89.353}$	Compute background sd.
3	$SCL = \overline{\mathbf{X}} + \mathbf{F} * \mathbf{S}$ $= \mathbf{286.684} + \mathbf{4.0} * \mathbf{89.353}$ $= \mathbf{644.095}$	Compute combined Shewhart-CUSUM normal control limit.
4	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{19} * (\mathbf{19}-1) / 2$ $= \mathbf{171}$	Number of sample pairs during trend detection period.
5	$S = \mathbf{3.59}$	Sen's estimator of trend.
6	$var(S) = \mathbf{817.0}$	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N'} - \mathbf{Z}_{.99} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{171} - \mathbf{2.326} * \mathbf{817.0}^{1/2}) / 2$ $= \mathbf{52.258}$	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	$LCL(S) = \mathbf{-24.663}$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Chloride (mg/L) at CBL-308I
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **52680.0** / **22** = **2394.545**	Compute background mean.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))$^{1/2}$ = ((**1.29**x**10^8** - **2.78**x**10^9/22**) / (**22**-1))$^{1/2}$ = **335.087**	Compute background sd.
3	SCL = $\bar{X}$ + **F** * **S** = **2394.545** + **4.0** * **335.087** = **3734.892**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **22** * (**22**-1) / 2 = **231**	Number of sample pairs during trend detection period.
5	S = **-89.526**	Sen's estimator of trend.
6	var(S) = **1255.667**	Variance estimate for slope.
7	M_1(S) = (**N' - $Z_{.99}$** * **var(S)**$^{1/2}$) / 2 = (**231** - **2.326** * **1255.667**$^{1/2}$) / 2 = **74.289**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-146.734**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Chloride (mg/L) at CBL-341I
Normal Control Limit

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{39390.0} / \mathbf{22}$ $= \mathbf{1790.455}$	Compute background mean.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{7.09 \times 10^7} - \mathbf{1.55 \times 10^9/22}) / (\mathbf{22}-1))^{1/2}$ $= \mathbf{139.846}$	Compute background sd.
3	$SCL = \bar{\mathbf{X}} + \mathbf{F} * \mathbf{S}$ $= \mathbf{1790.455} + \mathbf{4.0} * \mathbf{139.846}$ $= \mathbf{2349.839}$	Compute combined Shewhart-CUSUM normal control limit.
4	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{22} * (\mathbf{22}-1) / 2$ $= \mathbf{231}$	Number of sample pairs during trend detection period.
5	$S = \mathbf{-19.065}$	Sen's estimator of trend.
6	$var(S) = \mathbf{1255.667}$	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N'} - \mathbf{Z_{.99}} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{231} - \mathbf{2.326} * \mathbf{1255.667}^{1/2}) / 2$ $= \mathbf{74.289}$	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	$LCL(S) = \mathbf{-55.076}$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Fluoride (mg/L) at CBL-301I
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **13.434** / **25** = **0.537**	Compute background mean.
2	S = ((**sum[X^2] - sum[X]^2**/**N**) / (**N**-1))^{½} = ((**14.345** - **180.472**/**25**) / (**25**-1))^{½} = **0.545**	Compute background sd.
3	SCL = $\bar{\mathbf{X}}$ + **F** * **S** = **0.537** + **4.0** * **0.545** = **2.717**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **25** * (**25**-1) / 2 = **300**	Number of sample pairs during trend detection period.
5	S = **0.0**	Sen's estimator of trend.
6	var(S) = **1340.0**	Variance estimate for slope.
7	M_1(S) = (**N' - $Z_{.99}$** * **var(S)**^{½}) / 2 = (**300** - **2.326** * **1340.0**^{½}) / 2 = **107.427**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **0.0**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Fluoride (mg/L) at CBL-302I
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **12.014** / **23** = **0.522**	Compute background mean.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))^{½} = ((**11.863** - **144.329/23**) / (**23**-1))^{½} = **0.504**	Compute background sd.
3	SCL = $\bar{X}$ + **F** * **S** = **0.522** + **4.0** * **0.504** = **2.538**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **23** * (**23**-1) / 2 = **253**	Number of sample pairs during trend detection period.
5	S = **0.0**	Sen's estimator of trend.
6	var(S) = **1100.0**	Variance estimate for slope.
7	M_1(S) = (**N' - $Z_{.99}$** * **var(S)**^{½}) / 2 = (**253** - **2.326** * **1100.0**^{½}) / 2 = **87.928**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **0.0**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Fluoride (mg/L) at CBL-306I
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **47.623** / **21** = **2.268**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**116.497** - **2267.95/21**) / (**21**-1))^{½} = **0.652**	Compute background sd.
3	SCL = $\bar{X}$ + **F** * **S** = **2.268** + **4.0** * **0.652** = **4.875**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **21** * (**21**-1) / 2 = **210**	Number of sample pairs during trend detection period.
5	S = **0.011**	Sen's estimator of trend.
6	var(S) = **1095.667**	Variance estimate for slope.
7	M_1(S) = (**N' - $Z_{.99}$** * **var(S)**^{½}) / 2 = (**210** - **2.326** * **1095.667**^{½}) / 2 = **66.504**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-0.137**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Fluoride (mg/L) at CBL-308I
Normal Control Limit

Step	Equation	Description
1	$\bar{X} = \textbf{sum[X]} / \textbf{N}$ $= \textbf{32.384} / \textbf{20}$ $= \textbf{1.619}$	Compute background mean.
2	$S = ((\textbf{sum[X}^{\textbf{2}}\textbf{]} - \textbf{sum[X]}^2/\textbf{N}) / (\textbf{N}-1))^{½}$ $= ((\textbf{54.282} - \textbf{1048.723/20}) / (\textbf{20}-1))^{½}$ $= \textbf{0.312}$	Compute background sd.
3	$SCL = \bar{\textbf{X}} + \textbf{F} * \textbf{S}$ $= \textbf{1.619} + \textbf{4.0} * \textbf{0.312}$ $= \textbf{2.866}$	Compute combined Shewhart-CUSUM normal control limit.
4	$N' = \textbf{N} * (\textbf{N}-1) / 2$ $= \textbf{20} * (\textbf{20}-1) / 2$ $= \textbf{190}$	Number of sample pairs during trend detection period.
5	$S = \textbf{-0.042}$	Sen's estimator of trend.
6	$var(S) = \textbf{949.0}$	Variance estimate for slope.
7	$M_1(S) = (\textbf{N'} - \textbf{Z}_{.99} * \textbf{var(S)}^{½}) / 2$ $= (\textbf{190} - \textbf{2.326} * \textbf{949.0}^{½}) / 2$ $= \textbf{59.173}$	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
8	$LCL(S) = \textbf{-0.113}$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Fluoride (mg/L) at CBL-341I
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **6.986** / **23** = **0.304**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))$^{1/2}$ = ((**3.899** - **48.799/23**) / (**23**-1))$^{1/2}$ = **0.284**	Compute background sd.
3	SCL = $\bar{\mathbf{X}}$ + **F** * **S** = **0.304** + **4.0** * **0.284** = **1.441**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **23** * (**23**-1) / 2 = **253**	Number of sample pairs during trend detection period.
5	S = **0.0**	Sen's estimator of trend.
6	var(S) = **1268.667**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z$_{.99}$** * **var(S)**$^{1/2}$) / 2 = (**253** - **2.326** * **1268.667**$^{1/2}$) / 2 = **85.076**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-0.018**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
pH (S.U.) at CBL-301I
Normal Control Limit

Step	Equation	Description
1	$\bar{X} = \textbf{sum[X]} / \textbf{N}$ $= \textbf{161.78} / \textbf{26}$ $= \textbf{6.222}$	Compute background mean.
2	$S = ((\textbf{sum[X}^{\textbf{2}}\textbf{]} - \textbf{sum[X]}^2/\textbf{N}) / (\textbf{N}-1))^{1/2}$ $= ((\textbf{1007.943} - \textbf{26172.768}/\textbf{26}) / (\textbf{26}-1))^{1/2}$ $= \textbf{0.228}$	Compute background sd.
3	$SCL = \bar{\textbf{X}} \pm \textbf{F} * \textbf{S}$ $= \textbf{6.222} \pm \textbf{4.0} * \textbf{0.228}$ $= \textbf{5.311}, \textbf{7.134}$	Compute combined Shewhart-CUSUM normal control interval.
4	$N' = \textbf{N} * (\textbf{N}-1) / 2$ $= \textbf{26} * (\textbf{26}-1) / 2$ $= \textbf{325}$	Number of sample pairs during trend detection period.
5	$S = \textbf{0.012}$	Sen's estimator of trend.
6	$var(S) = \textbf{2048.0}$	Variance estimate for slope.
7	$M_1(S) = (\textbf{N'} - \textbf{Z}_{.99} * \textbf{var(S)}^{1/2}) / 2$ $= (\textbf{325} - \textbf{2.326} * \textbf{2048.0}^{1/2}) / 2$ $= \textbf{109.869}$	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	$LCL(S) = \textbf{-0.017}$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
pH (S.U.) at CBL-302I
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N**	Compute background mean.
	= **140.53** / **23**	
	= **6.11**	
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))^{½}	Compute background sd.
	= ((**865.266** - **19748.681/23**) / (**23**-1))^{½}	
	= **0.549**	
3	SCL = $\bar{\mathbf{X}}$ ± **F** * **S**	Compute combined Shewhart-CUSUM normal control interval.
	= **6.11** ± **4.0** * **0.549**	
	= **3.915**, **8.305**	
4	N' = **N** * (**N**-1) / 2	Number of sample pairs during trend detection period.
	= **23** * (**23**-1) / 2	
	= **253**	
5	S = **0.043**	Sen's estimator of trend.
6	var(S) = **1425.333**	Variance estimate for slope.
7	M_1(S) = (**N' - Z$_{.99}$** * **var(S)**^{½}) / 2	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
	= (**253** - **2.326** * **1425.333**^{½}) / 2	
	= **82.593**	
8	LCL(S) = **-0.002**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
pH (S.U.) at CBL-306I
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N**	Compute background mean.
	= **146.54** / **22**	
	= **6.661**	
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½}	Compute background sd.
	= ((**983.894** - **21473.972**/**22**) / (**22**-1))^{½}	
	= **0.61**	
3	SCL = $\overline{\mathbf{X}}$ ± **F** * **S**	Compute combined Shewhart-CUSUM normal control interval.
	= **6.661** ± **4.0** * **0.61**	
	= **4.222**, **9.099**	
4	N' = **N** * (**N**-1) / 2	Number of sample pairs during trend detection period.
	= **22** * (**22**-1) / 2	
	= **231**	
5	S = **-0.024**	Sen's estimator of trend.
6	var(S) = **1255.667**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z**$_{.99}$ * **var(S)**^{½}) / 2	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
	= (**231** - **2.326** * **1255.667**^{½}) / 2	
	= **74.289**	
8	LCL(S) = **-0.074**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
pH (S.U.) at CBL-308I
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **137.96** / **22** = **6.271**	Compute background mean.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))^{½} = ((**866.378 - 19032.962/22**) / (**22**-1))^{½} = **0.243**	Compute background sd.
3	SCL = **$\bar{X}$** ± **F** * **S** = **6.271** ± **4.0** * **0.243** = **5.298**, **7.244**	Compute combined Shewhart-CUSUM normal control interval.
4	N' = **N** * (**N**-1) / 2 = **22** * (**22**-1) / 2 = **231**	Number of sample pairs during trend detection period.
5	S = **0.024**	Sen's estimator of trend.
6	var(S) = **1249.333**	Variance estimate for slope.
7	M_1(S) = (**N' - $Z_{.99}$** * **var(S)**^{½}) / 2 = (**231** - **2.326** * **1249.333**^{½}) / 2 = **74.393**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-0.009**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
pH (S.U.) at CBL-341I
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **134.16** / **22** = **6.098**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]^2**/**N**) / (**N**-1))^{½} = ((**819.348** - **17998.906**/**22**) / (**22**-1))^{½} = **0.241**	Compute background sd.
3	SCL = $\overline{\mathbf{X}}$ ± **F** * **S** = **6.098** ± **4.0** * **0.241** = **5.136**, **7.061**	Compute combined Shewhart-CUSUM normal control interval.
4	N' = **N** * (**N**-1) / 2 = **22** * (**22**-1) / 2 = **231**	Number of sample pairs during trend detection period.
5	S = **0.067**	Sen's estimator of trend.
6	var(S) = **1255.667**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z**$_{.99}$ * **var(S)**^{½}) / 2 = (**231** - **2.326** * **1255.667**^{½}) / 2 = **74.289**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **0.015**	One-sided lower confidence limit for slope.
9	LCL(S) > 0	**Significant increasing trend.**

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Sulfate (mg/L) at CBL-301I
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **7933.0** / **23** = **344.913**	Compute background mean.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{2.91 \times 10^6} - \mathbf{6.29 \times 10^7}/\mathbf{23}) / (\mathbf{23}-1))^{1/2}$ = **87.829**	Compute background sd.
3	SCL = $\bar{\mathbf{X}}$ + **F** * **S** = **344.913** + **4.0** * **87.829** = **696.228**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **23** * (**23**-1) / 2 = **253**	Number of sample pairs during trend detection period.
5	S = **8.921**	Sen's estimator of trend.
6	var(S) = **1432.667**	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N'} - \mathbf{Z_{.99}} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{253} - \mathbf{2.326} * \mathbf{1432.667}^{1/2}) / 2$ = **82.48**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-3.864**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Sulfate (mg/L) at CBL-302I
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **27333.0** / **22** = **1242.409**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**3.42×10^7** - **7.47×10^8**/**22**) / (**22**-1))^{½} = **114.243**	Compute background sd.
3	SCL = $\bar{\mathbf{X}}$ + **F** * **S** = **1242.409** + **4.0** * **114.243** = **1699.382**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **22** * (**22**-1) / 2 = **231**	Number of sample pairs during trend detection period.
5	S = **33.641**	Sen's estimator of trend.
6	var(S) = **1253.667**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z**$_{.99}$ * **var(S)**^{½}) / 2 = (**231** - **2.326** * **1253.667**^{½}) / 2 = **74.321**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **19.299**	One-sided lower confidence limit for slope.
9	LCL(S) > 0	**Significant increasing trend.**

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Sulfate (mg/L) at CBL-306I
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N**	Compute background mean.
	= **7524.0** / **20**	
	= **376.2**	
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$	Compute background sd.
	$= ((\mathbf{3.08{\times}10^6} - \mathbf{5.66{\times}10^7}/\mathbf{20}) / (\mathbf{20}-1))^{1/2}$	
	= **113.509**	
3	SCL = $\bar{\mathbf{X}}$ + **F** * **S**	Compute combined Shewhart-CUSUM normal control limit.
	= **376.2** + **4.0** * **113.509**	
	= **830.236**	
4	N' = **N** * (**N**-1) / 2	Number of sample pairs during trend detection period.
	= **20** * (**20**-1) / 2	
	= **190**	
5	S = **4.631**	Sen's estimator of trend.
6	var(S) = **949.0**	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N'} - \mathbf{Z_{.99}} * \mathbf{var(S)}^{1/2}) / 2$	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
	$= (\mathbf{190} - \mathbf{2.326} * \mathbf{949.0}^{1/2}) / 2$	
	= **59.173**	
8	LCL(S) = **-23.396**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Sulfate (mg/L) at CBL-308I
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **29720.0** / **21** = **1415.238**	Compute background mean.
2	S = ((**sum[X^2] - sum[X]^2**/**N**) / (**N**-1))$^{1/2}$ = ((**4.23**x**10^7** - **8.83**x**10^8**/**21**) / (**21**-1))$^{1/2}$ = **116.431**	Compute background sd.
3	SCL = $\overline{\mathbf{X}}$ + **F** * **S** = **1415.238** + **4.0** * **116.431** = **1880.962**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **21** * (**21**-1) / 2 = **210**	Number of sample pairs during trend detection period.
5	S = **-27.593**	Sen's estimator of trend.
6	var(S) = **1092.667**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z$_{.99}$** * **var(S)$^{1/2}$**) / 2 = (**210** - **2.326** * **1092.667$^{1/2}$**) / 2 = **66.556**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-50.059**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Sulfate (mg/L) at CBL-341I
Normal Control Limit

Step	Equation	Description
1	$\bar{X} = \textbf{sum[X]} / \textbf{N}$ $= \textbf{7568.0} / \textbf{22}$ $= \textbf{344.0}$	Compute background mean.
2	$S = ((\textbf{sum[X}^{\textbf{2}}\textbf{]} - \textbf{sum[X]}^2/\textbf{N}) / (\textbf{N}-1))^{½}$ $= ((\textbf{2.63}\times\textbf{10}^{\textbf{6}} - \textbf{5.73}\times\textbf{10}^{\textbf{7}}/\textbf{22}) / (\textbf{22}-1))^{½}$ $= \textbf{36.433}$	Compute background sd.
3	$SCL = \bar{\textbf{X}} + \textbf{F} * \textbf{S}$ $= \textbf{344.0} + \textbf{4.0} * \textbf{36.433}$ $= \textbf{489.73}$	Compute combined Shewhart-CUSUM normal control limit.
4	$N' = \textbf{N} * (\textbf{N}-1) / 2$ $= \textbf{22} * (\textbf{22}-1) / 2$ $= \textbf{231}$	Number of sample pairs during trend detection period.
5	$S = \textbf{-7.766}$	Sen's estimator of trend.
6	$var(S) = \textbf{1255.667}$	Variance estimate for slope.
7	$M_1(S) = (\textbf{N'} - \textbf{Z}_{.99} * \textbf{var(S)}^{½}) / 2$ $= (\textbf{231} - \textbf{2.326} * \textbf{1255.667}^{½}) / 2$ $= \textbf{74.289}$	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
8	$LCL(S) = \textbf{-16.759}$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Total Dissolved Solids (mg/L) at CBL-301I
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **117920.0** / **22** = **5360.0**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**6.43x10^8** - **1.39x10^{10}**/**22**) / (**22**-1))^{½} = **726.616**	Compute background sd.
3	SCL = $\bar{X}$ + **F** * **S** = **5360.0** + **4.0** * **726.616** = **8266.466**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **22** * (**22**-1) / 2 = **231**	Number of sample pairs during trend detection period.
5	S = **-50.231**	Sen's estimator of trend.
6	var(S) = **1257.667**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z$_{.99}$** * **var(S)**^{½}) / 2 = (**231** - **2.326** * **1257.667**^{½}) / 2 = **74.256**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-222.523**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Total Dissolved Solids (mg/L) at CBL-302I
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **115480.0** / **22** = **5249.091**	Compute background mean.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{6.17{\times}10^8} - \mathbf{1.33{\times}10^{10}}/\mathbf{22}) / (\mathbf{22}-1))^{1/2}$ = **703.203**	Compute background sd.
3	SCL = $\bar{\mathbf{X}}$ + **F** * **S** = **5249.091** + **4.0** * **703.203** = **8061.903**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **22** * (**22**-1) / 2 = **231**	Number of sample pairs during trend detection period.
5	S = **-128.85**	Sen's estimator of trend.
6	var(S) = **1256.667**	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N'} - \mathbf{Z}_{.99} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{231} - \mathbf{2.326} * \mathbf{1256.667}^{1/2}) / 2$ = **74.272**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-261.261**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Total Dissolved Solids (mg/L) at CBL-306I
Normal Control Limit

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{29632.0} / \mathbf{22}$ $= \mathbf{1346.909}$	Compute background mean.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{4.29 \times 10^7} - \mathbf{8.78 \times 10^8}/\mathbf{22}) / (\mathbf{22}-1))^{1/2}$ $= \mathbf{379.055}$	Compute background sd.
3	$SCL = \bar{\mathbf{X}} + \mathbf{F} * \mathbf{S}$ $= \mathbf{1346.909} + \mathbf{4.0} * \mathbf{379.055}$ $= \mathbf{2863.128}$	Compute combined Shewhart-CUSUM normal control limit.
4	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{22} * (\mathbf{22}-1) / 2$ $= \mathbf{231}$	Number of sample pairs during trend detection period.
5	$S = \mathbf{39.851}$	Sen's estimator of trend.
6	$var(S) = \mathbf{1254.667}$	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N'} - \mathbf{Z}_{.99} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{231} - \mathbf{2.326} * \mathbf{1254.667}^{1/2}) / 2$ $= \mathbf{74.305}$	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1 th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	$LCL(S) = \mathbf{-41.807}$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Total Dissolved Solids (mg/L) at CBL-308I
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **143250.0** / **22** = **6511.364**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**9.69x10^8** - **2.05x10^{10}/22**) / (**22**-1))^{½} = **1311.645**	Compute background sd.
3	SCL = $\bar{X}$ + **F** * **S** = **6511.364** + **4.0** * **1311.645** = **11757.943**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **22** * (**22**-1) / 2 = **231**	Number of sample pairs during trend detection period.
5	S = **-206.604**	Sen's estimator of trend.
6	var(S) = **1256.667**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z$_{.99}$** * **var(S)**^{½}) / 2 = (**231** - **2.326** * **1256.667**^{½}) / 2 = **74.272**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-456.306**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Total Dissolved Solids (mg/L) at CBL-341I
Normal Control Limit

Step	Equation	Description
1	$\bar{X} = \textbf{sum[X]} / \textbf{N}$ $= \textbf{100290.0} / \textbf{22}$ $= \textbf{4558.636}$	Compute background mean.
2	$S = ((\textbf{sum[X}^{\textbf{2}}\textbf{]} - \textbf{sum[X]}^2/\textbf{N}) / (\textbf{N}-1))^{½}$ $= ((\textbf{4.64}\times\textbf{10}^{\textbf{8}} - \textbf{1.01}\times\textbf{10}^{\textbf{10}}/\textbf{22}) / (\textbf{22}-1))^{½}$ $= \textbf{563.038}$	Compute background sd.
3	$SCL = \bar{\textbf{X}} + \textbf{F} * \textbf{S}$ $= \textbf{4558.636} + \textbf{4.0} * \textbf{563.038}$ $= \textbf{6810.79}$	Compute combined Shewhart-CUSUM normal control limit.
4	$N' = \textbf{N} * (\textbf{N}-1) / 2$ $= \textbf{22} * (\textbf{22}-1) / 2$ $= \textbf{231}$	Number of sample pairs during trend detection period.
5	$S = \textbf{-106.829}$	Sen's estimator of trend.
6	$var(S) = \textbf{1256.667}$	Variance estimate for slope.
7	$M_1(S) = (\textbf{N'} - \textbf{Z}_{.99} * \textbf{var(S)}^{½}) / 2$ $= (\textbf{231} - \textbf{2.326} * \textbf{1256.667}^{½}) / 2$ $= \textbf{74.272}$	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
8	$LCL(S) = \textbf{-260.149}$	One-sided lower confidence limit for slope.

Table 2

Analytical Data and CUSUM Summary

Constituent	Units	Well	Date	Background	Result		Outlier	CUSUM	Adjusted	
Boron, Total	mg/L	CBL-301I	01/21/2016	yes	0.0500	ND				
Boron, Total	mg/L	CBL-301I	05/04/2016	yes	0.0500	ND				
Boron, Total	mg/L	CBL-301I	07/27/2016	yes	0.0500	ND				
Boron, Total	mg/L	CBL-301I	10/24/2016	yes	0.0500	ND				
Boron, Total	mg/L	CBL-301I	01/23/2017	yes	0.0500	ND				
Boron, Total	mg/L	CBL-301I	03/22/2017	yes	0.0500	ND				
Boron, Total	mg/L	CBL-301I	05/18/2017	yes	0.0707					
Boron, Total	mg/L	CBL-301I	07/26/2017	yes	0.0500	ND				
Boron, Total	mg/L	CBL-301I	02/08/2018	yes	0.0500	ND				
Boron, Total	mg/L	CBL-301I	07/25/2018	yes	0.0500	ND				
Boron, Total	mg/L	CBL-301I	01/17/2019	yes	0.0500	ND				
Boron, Total	mg/L	CBL-301I	05/02/2019	yes	0.0500	ND				
Boron, Total	mg/L	CBL-301I	07/31/2019	yes	0.0500	ND				
Boron, Total	mg/L	CBL-301I	01/28/2020	yes	0.0500	ND				
Boron, Total	mg/L	CBL-301I	09/17/2020	yes	0.0801					
Boron, Total	mg/L	CBL-301I	01/26/2021	yes	0.0500	ND				
Boron, Total	mg/L	CBL-301I	07/20/2021	yes	0.0826					
Boron, Total	mg/L	CBL-301I	09/07/2021	yes	0.0500	ND				
Boron, Total	mg/L	CBL-301I	01/26/2022	yes	0.0500	ND				
Boron, Total	mg/L	CBL-301I	07/27/2022	yes	0.0850					
Boron, Total	mg/L	CBL-301I	08/30/2022	yes	0.1070					
Boron, Total	mg/L	CBL-301I	10/25/2022	yes	0.0645					
Boron, Total	mg/L	CBL-301I	01/25/2023	yes	0.1080					
Boron, Total	mg/L	CBL-301I	03/07/2023	yes	0.1020					
Boron, Total	mg/L	CBL-301I	08/02/2023	yes	0.0500	ND				
Boron, Total	mg/L	CBL-301I	01/29/2024	yes	0.1070					
Boron, Total	mg/L	CBL-301I	07/23/2024	yes	0.0820					
Boron, Total	mg/L	CBL-301I	01/27/2025		0.1060			0.0900		
Boron, Total	mg/L	CBL-302I	01/22/2016	yes	0.0500	ND				
Boron, Total	mg/L	CBL-302I	05/04/2016	yes	0.0500	ND				
Boron, Total	mg/L	CBL-302I	07/27/2016	yes	0.0500	ND				
Boron, Total	mg/L	CBL-302I	10/24/2016	yes	0.1560					
Boron, Total	mg/L	CBL-302I	01/23/2017	yes	0.0500	ND				
Boron, Total	mg/L	CBL-302I	03/22/2017	yes	0.2970					
Boron, Total	mg/L	CBL-302I	05/16/2017	yes	0.0500	ND				
Boron, Total	mg/L	CBL-302I	07/27/2017	yes	0.0500	ND				
Boron, Total	mg/L	CBL-302I	02/08/2018	yes	0.0500	ND				
Boron, Total	mg/L	CBL-302I	07/27/2018	yes	0.0500	ND				
Boron, Total	mg/L	CBL-302I	01/22/2019	yes	0.0500	ND				
Boron, Total	mg/L	CBL-302I	07/31/2019	yes	0.0500	ND				
Boron, Total	mg/L	CBL-302I	01/30/2020	yes	0.0500	ND				
Boron, Total	mg/L	CBL-302I	09/17/2020	yes	0.0500	ND				
Boron, Total	mg/L	CBL-302I	01/28/2021	yes	0.0500	ND				
Boron, Total	mg/L	CBL-302I	07/21/2021	yes	0.0743					
Boron, Total	mg/L	CBL-302I	01/27/2022	yes	0.0500	ND				
Boron, Total	mg/L	CBL-302I	07/28/2022	yes	0.0500	ND				
Boron, Total	mg/L	CBL-302I	01/26/2023	yes	0.1160					
Boron, Total	mg/L	CBL-302I	07/18/2023	yes	0.0500	ND				
Boron, Total	mg/L	CBL-302I	01/29/2024	yes	0.1600					
Boron, Total	mg/L	CBL-302I	04/05/2024	yes	0.1630					

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Table 2

Analytical Data and CUSUM Summary

Constituent	Units	Well	Date	Background	Result		Outlier	CUSUM	Adjusted	
Boron, Total	mg/L	CBL-302I	07/22/2024	yes	0.1370					
Boron, Total	mg/L	CBL-302I	01/27/2025		0.2100			0.1634		
Boron, Total	mg/L	CBL-306I	01/21/2016	yes	0.0500	ND				
Boron, Total	mg/L	CBL-306I	05/04/2016	yes	0.0717					
Boron, Total	mg/L	CBL-306I	07/26/2016	yes	0.0998					
Boron, Total	mg/L	CBL-306I	10/24/2016	yes	0.0556					
Boron, Total	mg/L	CBL-306I	01/19/2017	yes	0.0500	ND				
Boron, Total	mg/L	CBL-306I	03/22/2017	yes	0.1240					
Boron, Total	mg/L	CBL-306I	05/18/2017	yes	0.0832					
Boron, Total	mg/L	CBL-306I	07/27/2017	yes	0.0531					
Boron, Total	mg/L	CBL-306I	02/08/2018	yes	0.0500	ND				
Boron, Total	mg/L	CBL-306I	07/27/2018	yes	0.0500	ND				
Boron, Total	mg/L	CBL-306I	01/16/2019	yes	0.0500	ND				
Boron, Total	mg/L	CBL-306I	07/31/2019	yes	0.0824		yes			*
Boron, Total	mg/L	CBL-306I	08/23/2019	yes	0.0500					
Boron, Total	mg/L	CBL-306I	01/29/2020	yes	0.0500	ND				
Boron, Total	mg/L	CBL-306I	09/19/2020	yes	0.0773					
Boron, Total	mg/L	CBL-306I	01/28/2021	yes	0.0500	ND				
Boron, Total	mg/L	CBL-306I	07/21/2021	yes	0.0927					
Boron, Total	mg/L	CBL-306I	01/27/2022	yes	0.0548					
Boron, Total	mg/L	CBL-306I	07/28/2022	yes	0.1100					
Boron, Total	mg/L	CBL-306I	01/26/2023	yes	0.0973					
Boron, Total	mg/L	CBL-306I	07/18/2023	yes	0.0659					
Boron, Total	mg/L	CBL-306I	01/29/2024	yes	0.1330					
Boron, Total	mg/L	CBL-306I	07/23/2024	yes	0.1340					
Boron, Total	mg/L	CBL-306I	01/27/2025		0.1600			0.1378		
Boron, Total	mg/L	CBL-308I	01/22/2016	yes	0.0500	ND				
Boron, Total	mg/L	CBL-308I	05/04/2016	yes	0.1210					
Boron, Total	mg/L	CBL-308I	07/26/2016	yes	0.1860					
Boron, Total	mg/L	CBL-308I	10/24/2016	yes	0.2560					
Boron, Total	mg/L	CBL-308I	01/19/2017	yes	0.0500	ND				
Boron, Total	mg/L	CBL-308I	03/22/2017	yes	0.5450					
Boron, Total	mg/L	CBL-308I	05/16/2017	yes	0.1090					
Boron, Total	mg/L	CBL-308I	07/26/2017	yes	0.0799					
Boron, Total	mg/L	CBL-308I	02/06/2018	yes	0.0500	ND				
Boron, Total	mg/L	CBL-308I	07/25/2018	yes	0.0500	ND				
Boron, Total	mg/L	CBL-308I	01/18/2019	yes	0.0500	ND				
Boron, Total	mg/L	CBL-308I	07/31/2019	yes	0.0500	ND				
Boron, Total	mg/L	CBL-308I	01/29/2020	yes	0.0500	ND				
Boron, Total	mg/L	CBL-308I	09/18/2020	yes	0.1030					
Boron, Total	mg/L	CBL-308I	01/28/2021	yes	0.0500	ND				
Boron, Total	mg/L	CBL-308I	07/21/2021	yes	0.1300					
Boron, Total	mg/L	CBL-308I	01/27/2022	yes	0.0500	ND				
Boron, Total	mg/L	CBL-308I	07/27/2022	yes	0.0790					
Boron, Total	mg/L	CBL-308I	01/26/2023	yes	0.1430					
Boron, Total	mg/L	CBL-308I	07/18/2023	yes	0.0500	ND				
Boron, Total	mg/L	CBL-308I	01/30/2024	yes	0.1500					
Boron, Total	mg/L	CBL-308I	07/22/2024	yes	0.1390					
Boron, Total	mg/L	CBL-308I	01/27/2025		0.1630			0.1155		
Boron, Total	mg/L	CBL-341I	01/23/2017	yes	0.0500	ND				

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Table 2

Analytical Data and CUSUM Summary

Constituent	Units	Well	Date	Background	Result		Outlier	CUSUM	Adjusted	
Boron, Total	mg/L	CBL-341I	02/23/2017	yes	0.0500	ND				
Boron, Total	mg/L	CBL-341I	03/22/2017	yes	0.0500	ND				
Boron, Total	mg/L	CBL-341I	04/20/2017	yes	0.0587					
Boron, Total	mg/L	CBL-341I	05/16/2017	yes	0.0896					
Boron, Total	mg/L	CBL-341I	06/20/2017	yes	0.0668					
Boron, Total	mg/L	CBL-341I	07/27/2017	yes	0.0507					
Boron, Total	mg/L	CBL-341I	09/11/2017	yes	0.0500	ND				
Boron, Total	mg/L	CBL-341I	02/08/2018	yes	0.0500	ND				
Boron, Total	mg/L	CBL-341I	08/24/2018	yes	0.0500	ND				
Boron, Total	mg/L	CBL-341I	01/22/2019	yes	0.0500	ND				
Boron, Total	mg/L	CBL-341I	07/31/2019	yes	0.0500	ND				
Boron, Total	mg/L	CBL-341I	01/30/2020	yes	0.0500	ND				
Boron, Total	mg/L	CBL-341I	09/17/2020	yes	0.1020					
Boron, Total	mg/L	CBL-341I	01/27/2021	yes	0.0500	ND				
Boron, Total	mg/L	CBL-341I	07/22/2021	yes	0.1110					
Boron, Total	mg/L	CBL-341I	01/27/2022	yes	0.0500	ND				
Boron, Total	mg/L	CBL-341I	07/28/2022	yes	0.1150					
Boron, Total	mg/L	CBL-341I	01/26/2023	yes	0.1340					
Boron, Total	mg/L	CBL-341I	07/19/2023	yes	0.0760					
Boron, Total	mg/L	CBL-341I	01/29/2024	yes	0.1330					
Boron, Total	mg/L	CBL-341I	07/22/2024	yes	0.1190					
Boron, Total	mg/L	CBL-341I	10/01/2024	yes	0.1360					
Boron, Total	mg/L	CBL-341I	01/28/2025		0.1380			0.1132		
Calcium, Total	mg/L	CBL-301I	01/21/2016	yes	905.0000					
Calcium, Total	mg/L	CBL-301I	05/04/2016	yes	949.0000					
Calcium, Total	mg/L	CBL-301I	07/27/2016	yes	925.0000					
Calcium, Total	mg/L	CBL-301I	10/24/2016	yes	978.0000					
Calcium, Total	mg/L	CBL-301I	01/23/2017	yes	1000.0000					
Calcium, Total	mg/L	CBL-301I	03/22/2017	yes	1030.0000					
Calcium, Total	mg/L	CBL-301I	05/18/2017	yes	1060.0000					
Calcium, Total	mg/L	CBL-301I	07/26/2017	yes	961.0000					
Calcium, Total	mg/L	CBL-301I	02/08/2018	yes	873.0000					
Calcium, Total	mg/L	CBL-301I	07/25/2018	yes	993.0000					
Calcium, Total	mg/L	CBL-301I	01/17/2019	yes	156.0000		yes			*
Calcium, Total	mg/L	CBL-301I	05/02/2019	yes	762.0000					
Calcium, Total	mg/L	CBL-301I	07/31/2019	yes	783.0000					
Calcium, Total	mg/L	CBL-301I	01/28/2020	yes	851.0000					
Calcium, Total	mg/L	CBL-301I	09/17/2020	yes	1060.0000					
Calcium, Total	mg/L	CBL-301I	01/26/2021	yes	1130.0000					
Calcium, Total	mg/L	CBL-301I	07/20/2021	yes	1100.0000					
Calcium, Total	mg/L	CBL-301I	01/26/2022	yes	999.0000					
Calcium, Total	mg/L	CBL-301I	07/27/2022	yes	1010.0000					
Calcium, Total	mg/L	CBL-301I	01/25/2023	yes	977.0000					
Calcium, Total	mg/L	CBL-301I	08/02/2023	yes	1260.0000					
Calcium, Total	mg/L	CBL-301I	01/29/2024	yes	1050.0000					
Calcium, Total	mg/L	CBL-301I	07/23/2024	yes	912.0000					
Calcium, Total	mg/L	CBL-301I	01/27/2025		907.0000			980.3636		
Calcium, Total	mg/L	CBL-302I	01/22/2016	yes	1030.0000					
Calcium, Total	mg/L	CBL-302I	05/04/2016	yes	1010.0000					
Calcium, Total	mg/L	CBL-302I	07/27/2016	yes	1030.0000					

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**** - ND value replaced with manual RL.
ND = Not detected, Result = detection limit.

Table 2

Analytical Data and CUSUM Summary

Constituent	Units	Well	Date	Background	Result		Outlier	CUSUM	Adjusted	
Calcium, Total	mg/L	CBL-302I	10/24/2016	yes	1070.0000					
Calcium, Total	mg/L	CBL-302I	01/23/2017	yes	1100.0000					
Calcium, Total	mg/L	CBL-302I	03/22/2017	yes	1090.0000					
Calcium, Total	mg/L	CBL-302I	05/16/2017	yes	1100.0000					
Calcium, Total	mg/L	CBL-302I	07/27/2017	yes	1040.0000					
Calcium, Total	mg/L	CBL-302I	02/08/2018	yes	934.0000					
Calcium, Total	mg/L	CBL-302I	07/27/2018	yes	995.0000					
Calcium, Total	mg/L	CBL-302I	01/22/2019	yes	855.0000					
Calcium, Total	mg/L	CBL-302I	07/31/2019	yes	914.0000					
Calcium, Total	mg/L	CBL-302I	01/30/2020	yes	838.0000					
Calcium, Total	mg/L	CBL-302I	09/17/2020	yes	853.0000					
Calcium, Total	mg/L	CBL-302I	01/28/2021	yes	1020.0000					
Calcium, Total	mg/L	CBL-302I	07/21/2021	yes	844.0000					
Calcium, Total	mg/L	CBL-302I	01/27/2022	yes	754.0000					
Calcium, Total	mg/L	CBL-302I	07/28/2022	yes	750.0000					
Calcium, Total	mg/L	CBL-302I	01/26/2023	yes	889.0000					
Calcium, Total	mg/L	CBL-302I	07/18/2023	yes	981.0000					
Calcium, Total	mg/L	CBL-302I	01/29/2024	yes	937.0000					
Calcium, Total	mg/L	CBL-302I	07/22/2024	yes	845.0000					
Calcium, Total	mg/L	CBL-302I	01/27/2025		878.0000			949.0455		
Calcium, Total	mg/L	CBL-306I	01/21/2016	yes	137.0000					
Calcium, Total	mg/L	CBL-306I	05/04/2016	yes	47.2000		yes			*
Calcium, Total	mg/L	CBL-306I	07/26/2016	yes	105.0000		yes			*
Calcium, Total	mg/L	CBL-306I	10/24/2016	yes	198.0000					
Calcium, Total	mg/L	CBL-306I	01/19/2017	yes	174.0000					
Calcium, Total	mg/L	CBL-306I	03/22/2017	yes	204.0000					
Calcium, Total	mg/L	CBL-306I	05/18/2017	yes	205.0000					
Calcium, Total	mg/L	CBL-306I	07/27/2017	yes	234.0000					
Calcium, Total	mg/L	CBL-306I	02/08/2018	yes	230.0000					
Calcium, Total	mg/L	CBL-306I	07/27/2018	yes	275.0000					
Calcium, Total	mg/L	CBL-306I	01/16/2019	yes	180.0000					
Calcium, Total	mg/L	CBL-306I	07/31/2019	yes	106.0000		yes			*
Calcium, Total	mg/L	CBL-306I	08/23/2019	yes	226.0000					
Calcium, Total	mg/L	CBL-306I	01/29/2020	yes	247.0000					
Calcium, Total	mg/L	CBL-306I	09/19/2020	yes	260.0000					
Calcium, Total	mg/L	CBL-306I	01/28/2021	yes	257.0000					
Calcium, Total	mg/L	CBL-306I	07/21/2021	yes	216.0000					
Calcium, Total	mg/L	CBL-306I	01/27/2022	yes	212.0000					
Calcium, Total	mg/L	CBL-306I	07/28/2022	yes	182.0000					
Calcium, Total	mg/L	CBL-306I	01/26/2023	yes	149.0000					
Calcium, Total	mg/L	CBL-306I	07/18/2023	yes	260.0000					
Calcium, Total	mg/L	CBL-306I	01/29/2024	yes	186.0000					
Calcium, Total	mg/L	CBL-306I	07/23/2024	yes	115.0000					
Calcium, Total	mg/L	CBL-306I	01/27/2025		206.0000			207.3500		
Calcium, Total	mg/L	CBL-308I	01/22/2016	yes	903.0000					
Calcium, Total	mg/L	CBL-308I	05/04/2016	yes	870.0000					
Calcium, Total	mg/L	CBL-308I	07/26/2016	yes	911.0000					
Calcium, Total	mg/L	CBL-308I	10/24/2016	yes	939.0000					
Calcium, Total	mg/L	CBL-308I	01/19/2017	yes	919.0000					
Calcium, Total	mg/L	CBL-308I	03/22/2017	yes	947.0000					

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Table 2

Analytical Data and CUSUM Summary

Constituent	Units	Well	Date	Background	Result		Outlier	CUSUM	Adjusted	
Calcium, Total	mg/L	CBL-308I	05/16/2017	yes	954.0000					
Calcium, Total	mg/L	CBL-308I	07/26/2017	yes	878.0000					
Calcium, Total	mg/L	CBL-308I	02/06/2018	yes	859.0000					
Calcium, Total	mg/L	CBL-308I	07/25/2018	yes	863.0000					
Calcium, Total	mg/L	CBL-308I	01/18/2019	yes	760.0000					
Calcium, Total	mg/L	CBL-308I	07/31/2019	yes	840.0000					
Calcium, Total	mg/L	CBL-308I	01/29/2020	yes	745.0000					
Calcium, Total	mg/L	CBL-308I	09/18/2020	yes	838.0000					
Calcium, Total	mg/L	CBL-308I	01/28/2021	yes	830.0000					
Calcium, Total	mg/L	CBL-308I	07/21/2021	yes	684.0000					
Calcium, Total	mg/L	CBL-308I	01/27/2022	yes	974.0000					
Calcium, Total	mg/L	CBL-308I	07/27/2022	yes	736.0000					
Calcium, Total	mg/L	CBL-308I	01/26/2023	yes	732.0000					
Calcium, Total	mg/L	CBL-308I	07/18/2023	yes	642.0000					
Calcium, Total	mg/L	CBL-308I	01/30/2024	yes	714.0000					
Calcium, Total	mg/L	CBL-308I	07/22/2024	yes	683.0000					
Calcium, Total	mg/L	CBL-308I	01/27/2025		698.0000			828.2273		
Calcium, Total	mg/L	CBL-341I	01/23/2017	yes	854.0000					
Calcium, Total	mg/L	CBL-341I	02/23/2017	yes	870.0000					
Calcium, Total	mg/L	CBL-341I	03/22/2017	yes	906.0000					
Calcium, Total	mg/L	CBL-341I	04/20/2017	yes	898.0000					
Calcium, Total	mg/L	CBL-341I	05/16/2017	yes	860.0000					
Calcium, Total	mg/L	CBL-341I	06/20/2017	yes	950.0000					
Calcium, Total	mg/L	CBL-341I	07/27/2017	yes	829.0000					
Calcium, Total	mg/L	CBL-341I	09/11/2017	yes	848.0000					
Calcium, Total	mg/L	CBL-341I	02/08/2018	yes	810.0000					
Calcium, Total	mg/L	CBL-341I	08/24/2018	yes	824.0000					
Calcium, Total	mg/L	CBL-341I	01/22/2019	yes	782.0000					
Calcium, Total	mg/L	CBL-341I	07/31/2019	yes	714.0000					
Calcium, Total	mg/L	CBL-341I	01/30/2020	yes	767.0000					
Calcium, Total	mg/L	CBL-341I	09/17/2020	yes	814.0000					
Calcium, Total	mg/L	CBL-341I	01/27/2021	yes	874.0000					
Calcium, Total	mg/L	CBL-341I	07/22/2021	yes	852.0000					
Calcium, Total	mg/L	CBL-341I	01/27/2022	yes	1040.0000					
Calcium, Total	mg/L	CBL-341I	07/28/2022	yes	704.0000					
Calcium, Total	mg/L	CBL-341I	01/26/2023	yes	797.0000					
Calcium, Total	mg/L	CBL-341I	07/19/2023	yes	710.0000					
Calcium, Total	mg/L	CBL-341I	01/29/2024	yes	875.0000					
Calcium, Total	mg/L	CBL-341I	07/22/2024	yes	801.0000					
Calcium, Total	mg/L	CBL-341I	01/28/2025		778.0000			835.4091		
Chloride	mg/L	CBL-301I	01/21/2016	yes	2300.0000					
Chloride	mg/L	CBL-301I	05/04/2016	yes	2160.0000					
Chloride	mg/L	CBL-301I	07/27/2016	yes	2290.0000					
Chloride	mg/L	CBL-301I	10/24/2016	yes	2250.0000					
Chloride	mg/L	CBL-301I	01/23/2017	yes	3200.0000					
Chloride	mg/L	CBL-301I	03/22/2017	yes	2390.0000					
Chloride	mg/L	CBL-301I	05/18/2017	yes	2420.0000					
Chloride	mg/L	CBL-301I	07/26/2017	yes	2500.0000					
Chloride	mg/L	CBL-301I	02/08/2018	yes	2480.0000					
Chloride	mg/L	CBL-301I	07/25/2018	yes	1330.0000					

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Table 2

Analytical Data and CUSUM Summary

Constituent	Units	Well	Date	Background	Result		Outlier	CUSUM	Adjusted	
Chloride	mg/L	CBL-301I	01/17/2019	yes	619.0000		yes			*
Chloride	mg/L	CBL-301I	05/02/2019	yes	1910.0000					
Chloride	mg/L	CBL-301I	07/31/2019	yes	2240.0000					
Chloride	mg/L	CBL-301I	01/28/2020	yes	2360.0000					
Chloride	mg/L	CBL-301I	09/17/2020	yes	2270.0000					
Chloride	mg/L	CBL-301I	01/26/2021	yes	2420.0000					
Chloride	mg/L	CBL-301I	07/20/2021	yes	2590.0000					
Chloride	mg/L	CBL-301I	01/26/2022	yes	2440.0000					
Chloride	mg/L	CBL-301I	07/27/2022	yes	1840.0000					
Chloride	mg/L	CBL-301I	01/25/2023	yes	1960.0000					
Chloride	mg/L	CBL-301I	08/02/2023	yes	2220.0000					
Chloride	mg/L	CBL-301I	01/29/2024	yes	2270.0000					
Chloride	mg/L	CBL-301I	07/23/2024	yes	2350.0000					
Chloride	mg/L	CBL-301I	01/27/2025		2270.0000			2281.3636		
Chloride	mg/L	CBL-302I	01/22/2016	yes	2190.0000					
Chloride	mg/L	CBL-302I	05/04/2016	yes	2130.0000					
Chloride	mg/L	CBL-302I	07/27/2016	yes	2210.0000					
Chloride	mg/L	CBL-302I	10/24/2016	yes	2170.0000					
Chloride	mg/L	CBL-302I	01/23/2017	yes	2080.0000					
Chloride	mg/L	CBL-302I	03/22/2017	yes	2050.0000					
Chloride	mg/L	CBL-302I	05/16/2017	yes	2230.0000					
Chloride	mg/L	CBL-302I	07/27/2017	yes	2040.0000					
Chloride	mg/L	CBL-302I	02/08/2018	yes	2080.0000					
Chloride	mg/L	CBL-302I	07/27/2018	yes	1980.0000					
Chloride	mg/L	CBL-302I	01/22/2019	yes	1960.0000					
Chloride	mg/L	CBL-302I	07/31/2019	yes	1540.0000					
Chloride	mg/L	CBL-302I	01/30/2020	yes	1540.0000					
Chloride	mg/L	CBL-302I	09/17/2020	yes	1410.0000					
Chloride	mg/L	CBL-302I	01/28/2021	yes	1370.0000					
Chloride	mg/L	CBL-302I	07/21/2021	yes	1380.0000					
Chloride	mg/L	CBL-302I	01/27/2022	yes	1310.0000					
Chloride	mg/L	CBL-302I	07/28/2022	yes	1300.0000					
Chloride	mg/L	CBL-302I	01/26/2023	yes	1460.0000					
Chloride	mg/L	CBL-302I	07/18/2023	yes	1330.0000					
Chloride	mg/L	CBL-302I	01/29/2024	yes	1440.0000					
Chloride	mg/L	CBL-302I	07/22/2024	yes	1650.0000					
Chloride	mg/L	CBL-302I	01/27/2025		1730.0000			1765.9091		
Chloride	mg/L	CBL-306I	01/21/2016	yes	155.0000					
Chloride	mg/L	CBL-306I	05/04/2016	yes	20.0000		yes			*
Chloride	mg/L	CBL-306I	07/26/2016	yes	114.0000		yes			*
Chloride	mg/L	CBL-306I	10/24/2016	yes	330.0000					
Chloride	mg/L	CBL-306I	01/19/2017	yes	197.0000					
Chloride	mg/L	CBL-306I	03/22/2017	yes	231.0000					
Chloride	mg/L	CBL-306I	05/18/2017	yes	289.0000					
Chloride	mg/L	CBL-306I	07/27/2017	yes	350.0000					
Chloride	mg/L	CBL-306I	02/08/2018	yes	385.0000					
Chloride	mg/L	CBL-306I	07/27/2018	yes	283.0000					
Chloride	mg/L	CBL-306I	01/16/2019	yes	215.0000					
Chloride	mg/L	CBL-306I	07/31/2019	yes	538.0000		yes			*
Chloride	mg/L	CBL-306I	08/23/2019	yes	318.0000					

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Table 2

Analytical Data and CUSUM Summary

Constituent	Units	Well	Date	Background	Result		Outlier	CUSUM	Adjusted	
Chloride	mg/L	CBL-306I	01/29/2020	yes	445.0000					
Chloride	mg/L	CBL-306I	09/19/2020	yes	420.0000					
Chloride	mg/L	CBL-306I	01/28/2021	yes	292.0000					
Chloride	mg/L	CBL-306I	07/21/2021	yes	255.0000					
Chloride	mg/L	CBL-306I	01/27/2022	yes	384.0000					
Chloride	mg/L	CBL-306I	07/28/2022	yes	261.0000					
Chloride	mg/L	CBL-306I	01/26/2023	yes	148.0000					
Chloride	mg/L	CBL-306I	07/18/2023	yes	336.0000					
Chloride	mg/L	CBL-306I	01/29/2024	yes	153.0000					
Chloride	mg/L	CBL-306I	07/23/2024	yes	10.2000		yes			*
Chloride	mg/L	CBL-306I	01/27/2025		286.0000			286.6842		
Chloride	mg/L	CBL-308I	01/22/2016	yes	2760.0000					
Chloride	mg/L	CBL-308I	05/04/2016	yes	2580.0000					
Chloride	mg/L	CBL-308I	07/26/2016	yes	2680.0000					
Chloride	mg/L	CBL-308I	10/24/2016	yes	2870.0000					
Chloride	mg/L	CBL-308I	01/19/2017	yes	2360.0000					
Chloride	mg/L	CBL-308I	03/22/2017	yes	2530.0000					
Chloride	mg/L	CBL-308I	05/16/2017	yes	2740.0000					
Chloride	mg/L	CBL-308I	07/26/2017	yes	2760.0000					
Chloride	mg/L	CBL-308I	02/06/2018	yes	2750.0000					
Chloride	mg/L	CBL-308I	07/25/2018	yes	2680.0000					
Chloride	mg/L	CBL-308I	01/18/2019	yes	2240.0000					
Chloride	mg/L	CBL-308I	07/31/2019	yes	2290.0000					
Chloride	mg/L	CBL-308I	01/29/2020	yes	2110.0000					
Chloride	mg/L	CBL-308I	09/18/2020	yes	2410.0000					
Chloride	mg/L	CBL-308I	01/28/2021	yes	2200.0000					
Chloride	mg/L	CBL-308I	07/21/2021	yes	1780.0000					
Chloride	mg/L	CBL-308I	01/27/2022	yes	2020.0000					
Chloride	mg/L	CBL-308I	07/27/2022	yes	2470.0000					
Chloride	mg/L	CBL-308I	01/26/2023	yes	2570.0000					
Chloride	mg/L	CBL-308I	07/18/2023	yes	1840.0000					
Chloride	mg/L	CBL-308I	01/30/2024	yes	1790.0000					
Chloride	mg/L	CBL-308I	07/22/2024	yes	2250.0000					
Chloride	mg/L	CBL-308I	01/27/2025		2190.0000			2394.5455		
Chloride	mg/L	CBL-341I	01/23/2017	yes	1600.0000					
Chloride	mg/L	CBL-341I	02/23/2017	yes	2000.0000					
Chloride	mg/L	CBL-341I	03/22/2017	yes	1780.0000					
Chloride	mg/L	CBL-341I	04/20/2017	yes	1770.0000					
Chloride	mg/L	CBL-341I	05/16/2017	yes	1900.0000					
Chloride	mg/L	CBL-341I	06/20/2017	yes	1820.0000					
Chloride	mg/L	CBL-341I	07/27/2017	yes	1970.0000					
Chloride	mg/L	CBL-341I	09/11/2017	yes	1710.0000					
Chloride	mg/L	CBL-341I	02/08/2018	yes	2110.0000					
Chloride	mg/L	CBL-341I	08/24/2018	yes	1910.0000					
Chloride	mg/L	CBL-341I	01/22/2019	yes	1790.0000					
Chloride	mg/L	CBL-341I	07/31/2019	yes	1650.0000					
Chloride	mg/L	CBL-341I	01/30/2020	yes	1780.0000					
Chloride	mg/L	CBL-341I	09/17/2020	yes	1700.0000					
Chloride	mg/L	CBL-341I	01/27/2021	yes	1800.0000					
Chloride	mg/L	CBL-341I	07/22/2021	yes	1750.0000					

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Table 2

Analytical Data and CUSUM Summary

Constituent	Units	Well	Date	Background	Result		Outlier	CUSUM	Adjusted	
Chloride	mg/L	CBL-341I	01/27/2022	yes	1810.0000					
Chloride	mg/L	CBL-341I	07/28/2022	yes	1690.0000					
Chloride	mg/L	CBL-341I	01/26/2023	yes	1660.0000					
Chloride	mg/L	CBL-341I	07/19/2023	yes	1530.0000					
Chloride	mg/L	CBL-341I	01/29/2024	yes	1700.0000					
Chloride	mg/L	CBL-341I	07/22/2024	yes	1960.0000					
Chloride	mg/L	CBL-341I	01/28/2025		1780.0000			1790.4545		
Fluoride	mg/L	CBL-301I	01/21/2016	yes	0.2500	ND			0.5000	***
Fluoride	mg/L	CBL-301I	05/04/2016	yes	0.5000	ND				
Fluoride	mg/L	CBL-301I	07/27/2016	yes	0.5000	ND				
Fluoride	mg/L	CBL-301I	10/24/2016	yes	0.2500	ND			0.5000	***
Fluoride	mg/L	CBL-301I	01/23/2017	yes	0.3120					
Fluoride	mg/L	CBL-301I	03/22/2017	yes	0.5000	ND				
Fluoride	mg/L	CBL-301I	05/18/2017	yes	0.5000	ND				
Fluoride	mg/L	CBL-301I	07/26/2017	yes	0.5000	ND				
Fluoride	mg/L	CBL-301I	02/08/2018	yes	0.5000	ND				
Fluoride	mg/L	CBL-301I	07/25/2018	yes	0.5000	ND				
Fluoride	mg/L	CBL-301I	01/17/2019	yes	0.2190					
Fluoride	mg/L	CBL-301I	05/02/2019	yes	0.1120					
Fluoride	mg/L	CBL-301I	07/31/2019	yes	0.0510					
Fluoride	mg/L	CBL-301I	01/28/2020	yes	0.1300					
Fluoride	mg/L	CBL-301I	09/17/2020	yes	0.2500	ND			0.5000	***
Fluoride	mg/L	CBL-301I	01/26/2021	yes	0.5000	ND				
Fluoride	mg/L	CBL-301I	07/20/2021	yes	2.6800					
Fluoride	mg/L	CBL-301I	09/07/2021	yes	0.5000	ND				
Fluoride	mg/L	CBL-301I	01/26/2022	yes	0.0500	ND			0.5000	***
Fluoride	mg/L	CBL-301I	07/27/2022	yes	0.1560					
Fluoride	mg/L	CBL-301I	01/25/2023	yes	1.7200					
Fluoride	mg/L	CBL-301I	03/07/2023	yes	0.0500	ND			0.5000	***
Fluoride	mg/L	CBL-301I	08/02/2023	yes	0.0540					
Fluoride	mg/L	CBL-301I	01/29/2024	yes	0.1000	ND			0.5000	***
Fluoride	mg/L	CBL-301I	07/23/2024	yes	0.1000	ND			0.5000	***
Fluoride	mg/L	CBL-301I	01/27/2025		0.1000	ND		0.5374		
Fluoride	mg/L	CBL-302I	01/22/2016	yes	0.2500	ND			0.5000	***
Fluoride	mg/L	CBL-302I	05/04/2016	yes	0.5000	ND				
Fluoride	mg/L	CBL-302I	07/27/2016	yes	0.5000	ND				
Fluoride	mg/L	CBL-302I	10/24/2016	yes	0.2500	ND			0.5000	***
Fluoride	mg/L	CBL-302I	01/23/2017	yes	0.3320					
Fluoride	mg/L	CBL-302I	03/22/2017	yes	0.5000	ND				
Fluoride	mg/L	CBL-302I	05/16/2017	yes	0.5000	ND				
Fluoride	mg/L	CBL-302I	07/27/2017	yes	0.5000	ND				
Fluoride	mg/L	CBL-302I	02/08/2018	yes	0.1120					
Fluoride	mg/L	CBL-302I	07/27/2018	yes	0.5000	ND				
Fluoride	mg/L	CBL-302I	01/22/2019	yes	0.0402					
Fluoride	mg/L	CBL-302I	07/31/2019	yes	0.0605					
Fluoride	mg/L	CBL-302I	01/30/2020	yes	0.1930					
Fluoride	mg/L	CBL-302I	09/17/2020	yes	0.2500	ND			0.5000	***
Fluoride	mg/L	CBL-302I	01/28/2021	yes	0.5000	ND				
Fluoride	mg/L	CBL-302I	07/21/2021	yes	2.2500					
Fluoride	mg/L	CBL-302I	09/07/2021	yes	0.2500	ND			0.5000	***

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Table 2

Analytical Data and CUSUM Summary

Constituent	Units	Well	Date	Background	Result		Outlier	CUSUM	Adjusted	
Fluoride	mg/L	CBL-302I	01/27/2022	yes	0.0500	ND			0.5000	***
Fluoride	mg/L	CBL-302I	07/28/2022	yes	0.1650					
Fluoride	mg/L	CBL-302I	01/26/2023	yes	0.5000	ND				
Fluoride	mg/L	CBL-302I	07/18/2023	yes	1.7600					
Fluoride	mg/L	CBL-302I	01/29/2024	yes	0.1000	ND			0.5000	***
Fluoride	mg/L	CBL-302I	07/22/2024	yes	0.1010					
Fluoride	mg/L	CBL-302I	01/27/2025		0.1710			0.5223		
Fluoride	mg/L	CBL-306I	01/21/2016	yes	2.5000					
Fluoride	mg/L	CBL-306I	05/04/2016	yes	1.0000					
Fluoride	mg/L	CBL-306I	07/26/2016	yes	1.3700					
Fluoride	mg/L	CBL-306I	10/24/2016	yes	2.3800					
Fluoride	mg/L	CBL-306I	01/19/2017	yes	1.8500					
Fluoride	mg/L	CBL-306I	03/22/2017	yes	12.6000		yes			*
Fluoride	mg/L	CBL-306I	05/18/2017	yes	2.2000					
Fluoride	mg/L	CBL-306I	07/27/2017	yes	2.9100					
Fluoride	mg/L	CBL-306I	02/08/2018	yes	2.8100					
Fluoride	mg/L	CBL-306I	07/27/2018	yes	2.9500					
Fluoride	mg/L	CBL-306I	01/16/2019	yes	1.9800					
Fluoride	mg/L	CBL-306I	07/31/2019	yes	9.2600		yes			*
Fluoride	mg/L	CBL-306I	08/23/2019	yes	2.6600					
Fluoride	mg/L	CBL-306I	01/29/2020	yes	2.8300					
Fluoride	mg/L	CBL-306I	09/19/2020	yes	2.7200					
Fluoride	mg/L	CBL-306I	01/28/2021	yes	2.9000					
Fluoride	mg/L	CBL-306I	07/21/2021	yes	2.4200					
Fluoride	mg/L	CBL-306I	01/27/2022	yes	2.9900					
Fluoride	mg/L	CBL-306I	07/28/2022	yes	2.2600					
Fluoride	mg/L	CBL-306I	01/26/2023	yes	1.9200					
Fluoride	mg/L	CBL-306I	07/18/2023	yes	2.6600					
Fluoride	mg/L	CBL-306I	01/29/2024	yes	1.4900					
Fluoride	mg/L	CBL-306I	07/23/2024	yes	0.8230					
Fluoride	mg/L	CBL-306I	01/27/2025		2.2000			2.2678		
Fluoride	mg/L	CBL-308I	01/22/2016	yes	1.4900					
Fluoride	mg/L	CBL-308I	05/04/2016	yes	2.3000					
Fluoride	mg/L	CBL-308I	07/26/2016	yes	1.6400					
Fluoride	mg/L	CBL-308I	10/24/2016	yes	1.5900					
Fluoride	mg/L	CBL-308I	01/19/2017	yes	1.3300					
Fluoride	mg/L	CBL-308I	03/22/2017	yes	9.0500		yes			*
Fluoride	mg/L	CBL-308I	05/16/2017	yes	1.7000					
Fluoride	mg/L	CBL-308I	07/26/2017	yes	1.9000					
Fluoride	mg/L	CBL-308I	02/06/2018	yes	1.7600					
Fluoride	mg/L	CBL-308I	07/25/2018	yes	2.1000					
Fluoride	mg/L	CBL-308I	01/18/2019	yes	1.6800					
Fluoride	mg/L	CBL-308I	07/31/2019	yes	1.6200					
Fluoride	mg/L	CBL-308I	01/29/2020	yes	1.6000					
Fluoride	mg/L	CBL-308I	09/18/2020	yes	1.3300					
Fluoride	mg/L	CBL-308I	01/28/2021	yes	1.4400					
Fluoride	mg/L	CBL-308I	07/21/2021	yes	1.7400					
Fluoride	mg/L	CBL-308I	01/27/2022	yes	1.7500					
Fluoride	mg/L	CBL-308I	07/27/2022	yes	1.4300					
Fluoride	mg/L	CBL-308I	01/26/2023	yes	0.5000	ND	yes			*

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Table 2

Analytical Data and CUSUM Summary

Constituent	Units	Well	Date	Background	Result		Outlier	CUSUM	Adjusted	
Fluoride	mg/L	CBL-308I	07/18/2023	yes	1.8600					
Fluoride	mg/L	CBL-308I	01/30/2024	yes	1.2600					
Fluoride	mg/L	CBL-308I	07/22/2024	yes	0.8640					
Fluoride	mg/L	CBL-308I	01/27/2025		1.2000			1.6192		
Fluoride	mg/L	CBL-341I	01/23/2017	yes	0.5300					
Fluoride	mg/L	CBL-341I	02/23/2017	yes	0.5000	ND			0.2500	***
Fluoride	mg/L	CBL-341I	03/22/2017	yes	0.5000	ND			0.2500	***
Fluoride	mg/L	CBL-341I	04/20/2017	yes	0.5000	ND			0.2500	***
Fluoride	mg/L	CBL-341I	05/16/2017	yes	0.5000	ND			0.2500	***
Fluoride	mg/L	CBL-341I	06/20/2017	yes	0.3350					
Fluoride	mg/L	CBL-341I	07/27/2017	yes	0.0550					
Fluoride	mg/L	CBL-341I	09/11/2017	yes	0.3670					
Fluoride	mg/L	CBL-341I	02/08/2018	yes	0.1060					
Fluoride	mg/L	CBL-341I	08/24/2018	yes	0.1140					
Fluoride	mg/L	CBL-341I	01/22/2019	yes	0.0546					
Fluoride	mg/L	CBL-341I	07/31/2019	yes	0.1000					
Fluoride	mg/L	CBL-341I	01/30/2020	yes	0.1530					
Fluoride	mg/L	CBL-341I	09/17/2020	yes	0.2500	ND				
Fluoride	mg/L	CBL-341I	01/27/2021	yes	0.5000	ND			0.2500	***
Fluoride	mg/L	CBL-341I	07/22/2021	yes	1.1600					
Fluoride	mg/L	CBL-341I	09/07/2021	yes	0.2500	ND				
Fluoride	mg/L	CBL-341I	01/27/2022	yes	0.0500	ND			0.2500	***
Fluoride	mg/L	CBL-341I	07/28/2022	yes	0.1410					
Fluoride	mg/L	CBL-341I	01/26/2023	yes	0.2500	ND				
Fluoride	mg/L	CBL-341I	07/19/2023	yes	1.1200					
Fluoride	mg/L	CBL-341I	01/29/2024	yes	0.1000	ND			0.2500	***
Fluoride	mg/L	CBL-341I	07/22/2024	yes	0.1000	ND			0.2500	***
Fluoride	mg/L	CBL-341I	01/28/2025		0.1280			0.3037		
pH	S.U.	CBL-301I	01/21/2016	yes	6.3300					
pH	S.U.	CBL-301I	05/04/2016	yes	6.2600					
pH	S.U.	CBL-301I	07/27/2016	yes	5.9500					
pH	S.U.	CBL-301I	10/24/2016	yes	6.2300					
pH	S.U.	CBL-301I	01/23/2017	yes	6.2600					
pH	S.U.	CBL-301I	03/22/2017	yes	6.3100					
pH	S.U.	CBL-301I	05/18/2017	yes	5.9500					
pH	S.U.	CBL-301I	07/26/2017	yes	6.0200					
pH	S.U.	CBL-301I	02/08/2018	yes	6.1700					
pH	S.U.	CBL-301I	07/25/2018	yes	6.0400					
pH	S.U.	CBL-301I	01/17/2019	yes	7.1600					**
pH	S.U.	CBL-301I	05/02/2019	yes	6.1400					
pH	S.U.	CBL-301I	07/31/2019	yes	6.1900					
pH	S.U.	CBL-301I	01/28/2020	yes	6.2600					
pH	S.U.	CBL-301I	09/17/2020	yes	6.1300					
pH	S.U.	CBL-301I	01/26/2021	yes	6.0600					
pH	S.U.	CBL-301I	07/20/2021	yes	6.1300					
pH	S.U.	CBL-301I	09/07/2021	yes	6.1400					
pH	S.U.	CBL-301I	01/26/2022	yes	6.2700					
pH	S.U.	CBL-301I	07/27/2022	yes	6.0800					
pH	S.U.	CBL-301I	08/30/2022	yes	6.1400					
pH	S.U.	CBL-301I	10/25/2022	yes	6.2100					

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Table 2

Analytical Data and CUSUM Summary

Constituent	Units	Well	Date	Background	Result		Outlier	CUSUM	Adjusted	
pH	S.U.	CBL-301I	01/25/2023	yes	6.3400					
pH	S.U.	CBL-301I	08/02/2023	yes	6.2100					
pH	S.U.	CBL-301I	01/29/2024	yes	6.3500					
pH	S.U.	CBL-301I	07/23/2024	yes	6.4500					
pH	S.U.	CBL-301I	01/27/2025		6.5400			6.3691		
pH	S.U.	CBL-302I	01/22/2016	yes	6.2900					
pH	S.U.	CBL-302I	05/04/2016	yes	6.0100					
pH	S.U.	CBL-302I	07/27/2016	yes	5.1700					
pH	S.U.	CBL-302I	10/24/2016	yes	7.7500					
pH	S.U.	CBL-302I	01/23/2017	yes	5.3600					
pH	S.U.	CBL-302I	03/22/2017	yes	5.4000					
pH	S.U.	CBL-302I	05/16/2017	yes	4.9400					
pH	S.U.	CBL-302I	07/27/2017	yes	6.2000					
pH	S.U.	CBL-302I	02/08/2018	yes	6.2100					
pH	S.U.	CBL-302I	07/27/2018	yes	5.7700					
pH	S.U.	CBL-302I	01/22/2019	yes	6.4400					
pH	S.U.	CBL-302I	07/31/2019	yes	6.1500					
pH	S.U.	CBL-302I	01/30/2020	yes	6.3400					
pH	S.U.	CBL-302I	09/17/2020	yes	6.2000					
pH	S.U.	CBL-302I	01/28/2021	yes	6.2100					
pH	S.U.	CBL-302I	07/21/2021	yes	6.0600					
pH	S.U.	CBL-302I	09/07/2021	yes	6.2800					
pH	S.U.	CBL-302I	01/27/2022	yes	6.3200					
pH	S.U.	CBL-302I	07/28/2022	yes	6.2100					
pH	S.U.	CBL-302I	01/26/2023	yes	6.3300					
pH	S.U.	CBL-302I	07/18/2023	yes	6.2000					
pH	S.U.	CBL-302I	01/29/2024	yes	6.2800					
pH	S.U.	CBL-302I	07/22/2024	yes	6.4100					
pH	S.U.	CBL-302I	01/27/2025		6.4300			6.1100		
pH	S.U.	CBL-306I	01/21/2016	yes	7.0900					
pH	S.U.	CBL-306I	05/04/2016	yes	6.6900					
pH	S.U.	CBL-306I	07/26/2016	yes	6.9500					
pH	S.U.	CBL-306I	10/24/2016	yes	6.7200					
pH	S.U.	CBL-306I	01/19/2017	yes	7.2900					
pH	S.U.	CBL-306I	03/22/2017	yes	4.4100					
pH	S.U.	CBL-306I	05/18/2017	yes	5.6100					
pH	S.U.	CBL-306I	07/27/2017	yes	6.9400					
pH	S.U.	CBL-306I	02/08/2018	yes	6.6700					
pH	S.U.	CBL-306I	07/27/2018	yes	6.8600					
pH	S.U.	CBL-306I	01/16/2019	yes	6.7800					
pH	S.U.	CBL-306I	07/31/2019	yes	6.9200		yes			*
pH	S.U.	CBL-306I	08/23/2019	yes	6.8300					
pH	S.U.	CBL-306I	01/29/2020	yes	6.7000					
pH	S.U.	CBL-306I	09/19/2020	yes	7.1600					
pH	S.U.	CBL-306I	01/28/2021	yes	6.8400					
pH	S.U.	CBL-306I	07/21/2021	yes	6.5500					
pH	S.U.	CBL-306I	01/27/2022	yes	6.8700					
pH	S.U.	CBL-306I	07/28/2022	yes	6.7000					
pH	S.U.	CBL-306I	01/26/2023	yes	7.3000					
pH	S.U.	CBL-306I	07/18/2023	yes	6.4900					

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Table 2

Analytical Data and CUSUM Summary

Constituent	Units	Well	Date	Background	Result		Outlier	CUSUM	Adjusted	
pH	S.U.	CBL-306I	01/29/2024	yes	6.5500					
pH	S.U.	CBL-306I	07/23/2024	yes	6.5400					
pH	S.U.	CBL-306I	01/27/2025		6.4400			6.6609		
pH	S.U.	CBL-308I	01/22/2016	yes	6.3600					
pH	S.U.	CBL-308I	05/04/2016	yes	6.1300					
pH	S.U.	CBL-308I	07/26/2016	yes	5.9500					
pH	S.U.	CBL-308I	10/24/2016	yes	6.2700					
pH	S.U.	CBL-308I	01/19/2017	yes	6.8300					
pH	S.U.	CBL-308I	03/22/2017	yes	6.2700					
pH	S.U.	CBL-308I	05/16/2017	yes	5.5400					
pH	S.U.	CBL-308I	07/26/2017	yes	6.2700					
pH	S.U.	CBL-308I	02/06/2018	yes	6.2600					
pH	S.U.	CBL-308I	07/25/2018	yes	6.0700					
pH	S.U.	CBL-308I	01/18/2019	yes	6.3900					
pH	S.U.	CBL-308I	07/31/2019	yes	6.2500					
pH	S.U.	CBL-308I	01/29/2020	yes	6.3700					
pH	S.U.	CBL-308I	09/18/2020	yes	6.2200					
pH	S.U.	CBL-308I	01/28/2021	yes	6.2600					
pH	S.U.	CBL-308I	07/21/2021	yes	6.1600					
pH	S.U.	CBL-308I	01/27/2022	yes	6.3600					
pH	S.U.	CBL-308I	07/27/2022	yes	6.2300					
pH	S.U.	CBL-308I	01/26/2023	yes	6.4100					
pH	S.U.	CBL-308I	07/18/2023	yes	6.2600					
pH	S.U.	CBL-308I	01/30/2024	yes	6.5700					
pH	S.U.	CBL-308I	07/22/2024	yes	6.5300					
pH	S.U.	CBL-308I	01/27/2025		6.6400			6.4575		
pH	S.U.	CBL-341I	01/23/2017	yes	5.7400					
pH	S.U.	CBL-341I	02/23/2017	yes	5.2300		yes			*
pH	S.U.	CBL-341I	03/22/2017	yes	5.7200					
pH	S.U.	CBL-341I	04/20/2017	yes	5.7300					
pH	S.U.	CBL-341I	05/16/2017	yes	5.5400					
pH	S.U.	CBL-341I	06/20/2017	yes	6.1900					
pH	S.U.	CBL-341I	07/27/2017	yes	6.2100					
pH	S.U.	CBL-341I	09/11/2017	yes	6.1000					
pH	S.U.	CBL-341I	02/08/2018	yes	6.1800					
pH	S.U.	CBL-341I	08/24/2018	yes	5.8200					
pH	S.U.	CBL-341I	01/22/2019	yes	6.3800					
pH	S.U.	CBL-341I	07/31/2019	yes	6.2300					
pH	S.U.	CBL-341I	01/30/2020	yes	6.2700					
pH	S.U.	CBL-341I	09/17/2020	yes	6.1400					
pH	S.U.	CBL-341I	01/27/2021	yes	6.0600					
pH	S.U.	CBL-341I	07/22/2021	yes	5.9800					
pH	S.U.	CBL-341I	09/07/2021	yes	6.1800					
pH	S.U.	CBL-341I	01/27/2022	yes	6.2600					
pH	S.U.	CBL-341I	07/28/2022	yes	6.1600					
pH	S.U.	CBL-341I	01/26/2023	yes	6.2800					
pH	S.U.	CBL-341I	07/19/2023	yes	6.2200					
pH	S.U.	CBL-341I	01/29/2024	yes	6.3800					
pH	S.U.	CBL-341I	07/22/2024	yes	6.3900					
pH	S.U.	CBL-341I	01/28/2025		6.4600			6.2795		

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Table 2

Analytical Data and CUSUM Summary

Constituent	Units	Well	Date	Background	Result		Outlier	CUSUM	Adjusted	
Sulfate	mg/L	CBL-301I	01/21/2016	yes	336.0000					
Sulfate	mg/L	CBL-301I	05/04/2016	yes	311.0000					
Sulfate	mg/L	CBL-301I	07/27/2016	yes	336.0000					
Sulfate	mg/L	CBL-301I	10/24/2016	yes	326.0000					
Sulfate	mg/L	CBL-301I	01/23/2017	yes	488.0000					
Sulfate	mg/L	CBL-301I	03/22/2017	yes	337.0000					
Sulfate	mg/L	CBL-301I	05/18/2017	yes	342.0000					
Sulfate	mg/L	CBL-301I	07/26/2017	yes	381.0000					
Sulfate	mg/L	CBL-301I	02/08/2018	yes	344.0000					
Sulfate	mg/L	CBL-301I	07/25/2018	yes	196.0000					
Sulfate	mg/L	CBL-301I	01/17/2019	yes	104.0000					
Sulfate	mg/L	CBL-301I	05/02/2019	yes	398.0000					
Sulfate	mg/L	CBL-301I	07/31/2019	yes	332.0000					
Sulfate	mg/L	CBL-301I	01/28/2020	yes	349.0000					
Sulfate	mg/L	CBL-301I	09/17/2020	yes	350.0000					
Sulfate	mg/L	CBL-301I	01/26/2021	yes	374.0000					
Sulfate	mg/L	CBL-301I	07/20/2021	yes	419.0000					
Sulfate	mg/L	CBL-301I	01/26/2022	yes	406.0000					
Sulfate	mg/L	CBL-301I	07/27/2022	yes	285.0000					
Sulfate	mg/L	CBL-301I	01/25/2023	yes	1370.0000		yes			*
Sulfate	mg/L	CBL-301I	03/07/2023	yes	207.0000					
Sulfate	mg/L	CBL-301I	08/02/2023	yes	383.0000					
Sulfate	mg/L	CBL-301I	01/29/2024	yes	475.0000					
Sulfate	mg/L	CBL-301I	07/23/2024	yes	454.0000					
Sulfate	mg/L	CBL-301I	01/27/2025		467.0000			401.1284		
Sulfate	mg/L	CBL-302I	01/22/2016	yes	1020.0000					
Sulfate	mg/L	CBL-302I	05/04/2016	yes	993.0000					
Sulfate	mg/L	CBL-302I	07/27/2016	yes	1090.0000					
Sulfate	mg/L	CBL-302I	10/24/2016	yes	1180.0000					
Sulfate	mg/L	CBL-302I	01/23/2017	yes	1150.0000					
Sulfate	mg/L	CBL-302I	03/22/2017	yes	1120.0000					
Sulfate	mg/L	CBL-302I	05/16/2017	yes	1230.0000					
Sulfate	mg/L	CBL-302I	07/27/2017	yes	1180.0000					
Sulfate	mg/L	CBL-302I	02/08/2018	yes	1240.0000					
Sulfate	mg/L	CBL-302I	07/27/2018	yes	1390.0000					
Sulfate	mg/L	CBL-302I	01/22/2019	yes	1250.0000					
Sulfate	mg/L	CBL-302I	07/31/2019	yes	1260.0000					
Sulfate	mg/L	CBL-302I	01/30/2020	yes	1350.0000					
Sulfate	mg/L	CBL-302I	09/17/2020	yes	1280.0000					
Sulfate	mg/L	CBL-302I	01/28/2021	yes	1290.0000					
Sulfate	mg/L	CBL-302I	07/21/2021	yes	1350.0000					
Sulfate	mg/L	CBL-302I	01/27/2022	yes	1340.0000					
Sulfate	mg/L	CBL-302I	07/28/2022	yes	1300.0000					
Sulfate	mg/L	CBL-302I	01/26/2023	yes	1390.0000					
Sulfate	mg/L	CBL-302I	07/18/2023	yes	1230.0000					
Sulfate	mg/L	CBL-302I	01/29/2024	yes	1330.0000					
Sulfate	mg/L	CBL-302I	07/22/2024	yes	1370.0000					
Sulfate	mg/L	CBL-302I	01/27/2025		1490.0000			1404.3177		
Sulfate	mg/L	CBL-306I	01/21/2016	yes	266.0000					
Sulfate	mg/L	CBL-306I	05/04/2016	yes	29.5000		yes			*

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Table 2

Analytical Data and CUSUM Summary

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Sulfate	mg/L	CBL-306I	07/26/2016	yes	139.0000					
Sulfate	mg/L	CBL-306I	10/24/2016	yes	432.0000					
Sulfate	mg/L	CBL-306I	01/19/2017	yes	270.0000					
Sulfate	mg/L	CBL-306I	03/22/2017	yes	340.0000					
Sulfate	mg/L	CBL-306I	05/18/2017	yes	412.0000					
Sulfate	mg/L	CBL-306I	07/27/2017	yes	513.0000					
Sulfate	mg/L	CBL-306I	02/08/2018	yes	493.0000					
Sulfate	mg/L	CBL-306I	07/27/2018	yes	406.0000					
Sulfate	mg/L	CBL-306I	01/16/2019	yes	292.0000					
Sulfate	mg/L	CBL-306I	07/31/2019	yes	816.0000		yes			*
Sulfate	mg/L	CBL-306I	08/23/2019	yes	387.0000					
Sulfate	mg/L	CBL-306I	01/29/2020	yes	561.0000					
Sulfate	mg/L	CBL-306I	09/19/2020	yes	506.0000					
Sulfate	mg/L	CBL-306I	01/28/2021	yes	388.0000					
Sulfate	mg/L	CBL-306I	07/21/2021	yes	336.0000					
Sulfate	mg/L	CBL-306I	01/27/2022	yes	510.0000					
Sulfate	mg/L	CBL-306I	07/28/2022	yes	348.0000					
Sulfate	mg/L	CBL-306I	01/26/2023	yes	205.0000					
Sulfate	mg/L	CBL-306I	07/18/2023	yes	454.0000					
Sulfate	mg/L	CBL-306I	01/29/2024	yes	266.0000					
Sulfate	mg/L	CBL-306I	07/23/2024	yes	70.7000		yes			*
Sulfate	mg/L	CBL-306I	01/27/2025		433.0000			376.2000		
Sulfate	mg/L	CBL-308I	01/22/2016	yes	1490.0000					
Sulfate	mg/L	CBL-308I	05/04/2016	yes	1410.0000					
Sulfate	mg/L	CBL-308I	07/26/2016	yes	1490.0000					
Sulfate	mg/L	CBL-308I	10/24/2016	yes	1550.0000					
Sulfate	mg/L	CBL-308I	01/19/2017	yes	1320.0000					
Sulfate	mg/L	CBL-308I	03/22/2017	yes	1470.0000					
Sulfate	mg/L	CBL-308I	05/16/2017	yes	1580.0000					
Sulfate	mg/L	CBL-308I	07/26/2017	yes	1550.0000					
Sulfate	mg/L	CBL-308I	02/06/2018	yes	1570.0000					
Sulfate	mg/L	CBL-308I	07/25/2018	yes	1540.0000					
Sulfate	mg/L	CBL-308I	01/18/2019	yes	1520.0000					
Sulfate	mg/L	CBL-308I	07/31/2019	yes	1420.0000					
Sulfate	mg/L	CBL-308I	01/29/2020	yes	1340.0000					
Sulfate	mg/L	CBL-308I	09/18/2020	yes	1310.0000					
Sulfate	mg/L	CBL-308I	01/28/2021	yes	1340.0000					
Sulfate	mg/L	CBL-308I	07/21/2021	yes	1240.0000					
Sulfate	mg/L	CBL-308I	01/27/2022	yes	1310.0000					
Sulfate	mg/L	CBL-308I	07/27/2022	yes	1190.0000					
Sulfate	mg/L	CBL-308I	01/26/2023	yes	445.0000		yes			*
Sulfate	mg/L	CBL-308I	07/18/2023	yes	1290.0000					
Sulfate	mg/L	CBL-308I	01/30/2024	yes	1360.0000					
Sulfate	mg/L	CBL-308I	07/22/2024	yes	1430.0000					
Sulfate	mg/L	CBL-308I	01/27/2025		1360.0000			1415.2381		
Sulfate	mg/L	CBL-341I	01/23/2017	yes	307.0000					
Sulfate	mg/L	CBL-341I	02/23/2017	yes	404.0000					
Sulfate	mg/L	CBL-341I	03/22/2017	yes	346.0000					
Sulfate	mg/L	CBL-341I	04/20/2017	yes	336.0000					
Sulfate	mg/L	CBL-341I	05/16/2017	yes	369.0000					

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Table 2

Analytical Data and CUSUM Summary

Constituent	Units	Well	Date	Background	Result		Outlier	CUSUM	Adjusted	
Sulfate	mg/L	CBL-341I	06/20/2017	yes	363.0000					
Sulfate	mg/L	CBL-341I	07/27/2017	yes	419.0000					
Sulfate	mg/L	CBL-341I	09/11/2017	yes	354.0000					
Sulfate	mg/L	CBL-341I	02/08/2018	yes	383.0000					
Sulfate	mg/L	CBL-341I	08/24/2018	yes	376.0000					
Sulfate	mg/L	CBL-341I	01/22/2019	yes	358.0000					
Sulfate	mg/L	CBL-341I	07/31/2019	yes	329.0000					
Sulfate	mg/L	CBL-341I	01/30/2020	yes	351.0000					
Sulfate	mg/L	CBL-341I	09/17/2020	yes	336.0000					
Sulfate	mg/L	CBL-341I	01/27/2021	yes	324.0000					
Sulfate	mg/L	CBL-341I	07/22/2021	yes	316.0000					
Sulfate	mg/L	CBL-341I	01/27/2022	yes	320.0000					
Sulfate	mg/L	CBL-341I	07/28/2022	yes	296.0000					
Sulfate	mg/L	CBL-341I	01/26/2023	yes	309.0000					
Sulfate	mg/L	CBL-341I	07/19/2023	yes	259.0000					
Sulfate	mg/L	CBL-341I	01/29/2024	yes	346.0000					
Sulfate	mg/L	CBL-341I	07/22/2024	yes	367.0000					
Sulfate	mg/L	CBL-341I	01/28/2025		369.0000			344.0000		
Total Dissolved Solids	mg/L	CBL-301I	01/21/2016	yes	4380.0000					
Total Dissolved Solids	mg/L	CBL-301I	05/04/2016	yes	5050.0000					
Total Dissolved Solids	mg/L	CBL-301I	07/27/2016	yes	6020.0000					
Total Dissolved Solids	mg/L	CBL-301I	10/24/2016	yes	4570.0000					
Total Dissolved Solids	mg/L	CBL-301I	01/23/2017	yes	6140.0000					
Total Dissolved Solids	mg/L	CBL-301I	03/22/2017	yes	6570.0000					
Total Dissolved Solids	mg/L	CBL-301I	05/18/2017	yes	6430.0000					
Total Dissolved Solids	mg/L	CBL-301I	07/26/2017	yes	4290.0000					
Total Dissolved Solids	mg/L	CBL-301I	02/08/2018	yes	5120.0000					
Total Dissolved Solids	mg/L	CBL-301I	07/25/2018	yes	5390.0000					
Total Dissolved Solids	mg/L	CBL-301I	01/17/2019	yes	1460.0000		yes			*
Total Dissolved Solids	mg/L	CBL-301I	05/02/2019	yes	5650.0000					
Total Dissolved Solids	mg/L	CBL-301I	07/31/2019	yes	6040.0000					
Total Dissolved Solids	mg/L	CBL-301I	01/28/2020	yes	4790.0000					
Total Dissolved Solids	mg/L	CBL-301I	09/17/2020	yes	6340.0000					
Total Dissolved Solids	mg/L	CBL-301I	01/26/2021	yes	6060.0000					
Total Dissolved Solids	mg/L	CBL-301I	07/20/2021	yes	5870.0000					
Total Dissolved Solids	mg/L	CBL-301I	01/26/2022	yes	4700.0000					
Total Dissolved Solids	mg/L	CBL-301I	07/27/2022	yes	4590.0000					
Total Dissolved Solids	mg/L	CBL-301I	01/25/2023	yes	5160.0000					
Total Dissolved Solids	mg/L	CBL-301I	08/02/2023	yes	5360.0000					
Total Dissolved Solids	mg/L	CBL-301I	01/29/2024	yes	4820.0000					
Total Dissolved Solids	mg/L	CBL-301I	07/23/2024	yes	4580.0000					
Total Dissolved Solids	mg/L	CBL-301I	01/27/2025		3810.0000			5360.0000		
Total Dissolved Solids	mg/L	CBL-302I	01/22/2016	yes	5500.0000					
Total Dissolved Solids	mg/L	CBL-302I	05/04/2016	yes	5390.0000					
Total Dissolved Solids	mg/L	CBL-302I	07/27/2016	yes	6850.0000					
Total Dissolved Solids	mg/L	CBL-302I	10/24/2016	yes	4210.0000					
Total Dissolved Solids	mg/L	CBL-302I	01/23/2017	yes	6430.0000					
Total Dissolved Solids	mg/L	CBL-302I	03/22/2017	yes	6460.0000					
Total Dissolved Solids	mg/L	CBL-302I	05/16/2017	yes	5860.0000					
Total Dissolved Solids	mg/L	CBL-302I	07/27/2017	yes	5120.0000					

* - Outlier for that well and constituent.
** - Non-outlier detected sample Result and / or CUSUM value exceeds limit.
*** - ND value replaced with median RL.
**** - ND value replaced with manual RL.
ND = Not detected, Result = detection limit.

Table 2

Analytical Data and CUSUM Summary

Constituent	Units	Well	Date	Background	Result		Outlier	CUSUM	Adjusted	
Total Dissolved Solids	mg/L	CBL-302I	02/08/2018	yes	6010.0000					
Total Dissolved Solids	mg/L	CBL-302I	07/27/2018	yes	5510.0000					
Total Dissolved Solids	mg/L	CBL-302I	01/22/2019	yes	5060.0000					
Total Dissolved Solids	mg/L	CBL-302I	07/31/2019	yes	4190.0000					
Total Dissolved Solids	mg/L	CBL-302I	01/30/2020	yes	4790.0000					
Total Dissolved Solids	mg/L	CBL-302I	09/17/2020	yes	4990.0000					
Total Dissolved Solids	mg/L	CBL-302I	01/28/2021	yes	4800.0000					
Total Dissolved Solids	mg/L	CBL-302I	07/21/2021	yes	4810.0000					
Total Dissolved Solids	mg/L	CBL-302I	01/27/2022	yes	4510.0000					
Total Dissolved Solids	mg/L	CBL-302I	07/28/2022	yes	5120.0000					
Total Dissolved Solids	mg/L	CBL-302I	01/26/2023	yes	4930.0000					
Total Dissolved Solids	mg/L	CBL-302I	07/18/2023	yes	5150.0000					
Total Dissolved Solids	mg/L	CBL-302I	01/29/2024	yes	4950.0000					
Total Dissolved Solids	mg/L	CBL-302I	07/22/2024	yes	4840.0000					
Total Dissolved Solids	mg/L	CBL-302I	01/27/2025		4710.0000			5249.0909		
Total Dissolved Solids	mg/L	CBL-306I	01/21/2016	yes	1280.0000					
Total Dissolved Solids	mg/L	CBL-306I	05/04/2016	yes	431.0000					
Total Dissolved Solids	mg/L	CBL-306I	07/26/2016	yes	790.0000					
Total Dissolved Solids	mg/L	CBL-306I	10/24/2016	yes	1150.0000					
Total Dissolved Solids	mg/L	CBL-306I	01/19/2017	yes	1320.0000					
Total Dissolved Solids	mg/L	CBL-306I	03/22/2017	yes	1460.0000					
Total Dissolved Solids	mg/L	CBL-306I	05/18/2017	yes	1440.0000					
Total Dissolved Solids	mg/L	CBL-306I	07/27/2017	yes	1280.0000					
Total Dissolved Solids	mg/L	CBL-306I	02/08/2018	yes	1760.0000					
Total Dissolved Solids	mg/L	CBL-306I	07/27/2018	yes	1450.0000					
Total Dissolved Solids	mg/L	CBL-306I	01/16/2019	yes	1220.0000					
Total Dissolved Solids	mg/L	CBL-306I	07/31/2019	yes	676.0000		yes			*
Total Dissolved Solids	mg/L	CBL-306I	08/23/2019	yes	1710.0000					
Total Dissolved Solids	mg/L	CBL-306I	01/29/2020	yes	1830.0000					
Total Dissolved Solids	mg/L	CBL-306I	09/19/2020	yes	1730.0000					
Total Dissolved Solids	mg/L	CBL-306I	01/28/2021	yes	1420.0000					
Total Dissolved Solids	mg/L	CBL-306I	07/21/2021	yes	1320.0000					
Total Dissolved Solids	mg/L	CBL-306I	01/27/2022	yes	1730.0000					
Total Dissolved Solids	mg/L	CBL-306I	07/28/2022	yes	1540.0000					
Total Dissolved Solids	mg/L	CBL-306I	01/26/2023	yes	1000.0000					
Total Dissolved Solids	mg/L	CBL-306I	07/18/2023	yes	1910.0000					
Total Dissolved Solids	mg/L	CBL-306I	01/29/2024	yes	1170.0000					
Total Dissolved Solids	mg/L	CBL-306I	07/23/2024	yes	691.0000					
Total Dissolved Solids	mg/L	CBL-306I	01/27/2025		1480.0000			1346.9091		
Total Dissolved Solids	mg/L	CBL-308I	01/22/2016	yes	6820.0000					
Total Dissolved Solids	mg/L	CBL-308I	05/04/2016	yes	6120.0000					
Total Dissolved Solids	mg/L	CBL-308I	07/26/2016	yes	7890.0000					
Total Dissolved Solids	mg/L	CBL-308I	10/24/2016	yes	10200.0000					
Total Dissolved Solids	mg/L	CBL-308I	01/19/2017	yes	9620.0000					
Total Dissolved Solids	mg/L	CBL-308I	03/22/2017	yes	7260.0000					
Total Dissolved Solids	mg/L	CBL-308I	05/16/2017	yes	6590.0000					
Total Dissolved Solids	mg/L	CBL-308I	07/26/2017	yes	6480.0000					
Total Dissolved Solids	mg/L	CBL-308I	02/06/2018	yes	6200.0000					
Total Dissolved Solids	mg/L	CBL-308I	07/25/2018	yes	6320.0000					
Total Dissolved Solids	mg/L	CBL-308I	01/18/2019	yes	4760.0000					

* - Outlier for that well and constituent.
** - Non-outlier detected sample Result and / or CUSUM value exceeds limit.
*** - ND value replaced with median RL.
**** - ND value replaced with manual RL.
ND = Not detected, Result = detection limit.

Table 2

Analytical Data and CUSUM Summary

Constituent	Units	Well	Date	Background	Result		Outlier	CUSUM	Adjusted	
Total Dissolved Solids	mg/L	CBL-308I	07/31/2019	yes	5820.0000					
Total Dissolved Solids	mg/L	CBL-308I	01/29/2020	yes	5980.0000					
Total Dissolved Solids	mg/L	CBL-308I	09/18/2020	yes	6860.0000					
Total Dissolved Solids	mg/L	CBL-308I	01/28/2021	yes	6190.0000					
Total Dissolved Solids	mg/L	CBL-308I	07/21/2021	yes	5270.0000					
Total Dissolved Solids	mg/L	CBL-308I	01/27/2022	yes	5320.0000					
Total Dissolved Solids	mg/L	CBL-308I	07/27/2022	yes	6840.0000					
Total Dissolved Solids	mg/L	CBL-308I	01/26/2023	yes	5810.0000					
Total Dissolved Solids	mg/L	CBL-308I	07/18/2023	yes	5680.0000					
Total Dissolved Solids	mg/L	CBL-308I	01/30/2024	yes	5410.0000					
Total Dissolved Solids	mg/L	CBL-308I	07/22/2024	yes	5810.0000					
Total Dissolved Solids	mg/L	CBL-308I	01/27/2025		5290.0000			6511.3636		
Total Dissolved Solids	mg/L	CBL-341I	01/23/2017	yes	5000.0000					
Total Dissolved Solids	mg/L	CBL-341I	02/23/2017	yes	4520.0000					
Total Dissolved Solids	mg/L	CBL-341I	03/22/2017	yes	5110.0000					
Total Dissolved Solids	mg/L	CBL-341I	04/20/2017	yes	4240.0000					
Total Dissolved Solids	mg/L	CBL-341I	05/16/2017	yes	4840.0000					
Total Dissolved Solids	mg/L	CBL-341I	06/20/2017	yes	5940.0000					
Total Dissolved Solids	mg/L	CBL-341I	07/27/2017	yes	4150.0000					
Total Dissolved Solids	mg/L	CBL-341I	09/11/2017	yes	4860.0000					
Total Dissolved Solids	mg/L	CBL-341I	02/08/2018	yes	4320.0000					
Total Dissolved Solids	mg/L	CBL-341I	08/24/2018	yes	4800.0000					
Total Dissolved Solids	mg/L	CBL-341I	01/22/2019	yes	3870.0000					
Total Dissolved Solids	mg/L	CBL-341I	07/31/2019	yes	5370.0000					
Total Dissolved Solids	mg/L	CBL-341I	01/30/2020	yes	4900.0000					
Total Dissolved Solids	mg/L	CBL-341I	09/17/2020	yes	4930.0000					
Total Dissolved Solids	mg/L	CBL-341I	01/27/2021	yes	3940.0000					
Total Dissolved Solids	mg/L	CBL-341I	07/22/2021	yes	4520.0000					
Total Dissolved Solids	mg/L	CBL-341I	01/27/2022	yes	3800.0000					
Total Dissolved Solids	mg/L	CBL-341I	07/28/2022	yes	4910.0000					
Total Dissolved Solids	mg/L	CBL-341I	01/26/2023	yes	4390.0000					
Total Dissolved Solids	mg/L	CBL-341I	07/19/2023	yes	4190.0000					
Total Dissolved Solids	mg/L	CBL-341I	01/29/2024	yes	3990.0000					
Total Dissolved Solids	mg/L	CBL-341I	07/22/2024	yes	3700.0000					
Total Dissolved Solids	mg/L	CBL-341I	01/28/2025		4020.0000			4558.6364		

* - Outlier for that well and constituent.
** - Non-outlier detected sample Result and / or CUSUM value exceeds limit.
*** - ND value replaced with median RL.
**** - ND value replaced with manual RL.
ND = Not detected, Result = detection limit.

Table 4

Dixon's Test Outliers
1% Significance Level

Constituent	Units	Well	Date	Result	ND Qualifier	Date Range	N	Critical Value
Calcium, Total	mg/L	CBL-301I	01/17/2019	156.0000		01/21/2016-07/23/2024	23	0.5065
Chloride	mg/L	CBL-301I	01/17/2019	619.0000		01/21/2016-07/23/2024	23	0.5065
Chloride	mg/L	CBL-306I	05/04/2016	20.0000		01/21/2016-07/23/2024	21	0.5381
Chloride	mg/L	CBL-306I	07/23/2024	10.2000		01/21/2016-07/23/2024	21	0.5381
Fluoride	mg/L	CBL-306I	03/22/2017	12.6000		01/21/2016-07/23/2024	22	0.5162
Fluoride	mg/L	CBL-308I	03/22/2017	9.0500		01/22/2016-07/22/2024	22	0.5162
Fluoride	mg/L	CBL-308I	01/26/2023	0.5000	< 0.5000	01/22/2016-07/22/2024	22	0.5162
Sulfate	mg/L	CBL-301I	01/25/2023	1370.0000		01/21/2016-07/23/2024	24	0.4969
Sulfate	mg/L	CBL-306I	05/04/2016	29.5000		01/21/2016-07/23/2024	22	0.5263
Sulfate	mg/L	CBL-306I	07/23/2024	70.7000		01/21/2016-07/23/2024	22	0.5263
Sulfate	mg/L	CBL-308I	01/26/2023	445.0000		01/22/2016-07/22/2024	22	0.5162
Total Dissolved Solids	mg/L	CBL-301I	01/17/2019	1460.0000		01/21/2016-07/23/2024	23	0.5065

N = Total number of independent measurements in background at each well.
Date Range = Dates of the first and last measurements included in background at each well.
Critical Value depends on the significance level and on N-1 when the two most extreme values are tested or N for the most extreme value.

TABLE 5
Comparison of Update Control Limits to Prior Control Limits
LCRA
Combustion Byproducts Landfill
Detection Monitoring Program
(CCR 101)

Detection Monitoring Analyte	Control Limit	units	Monitoring Wells				
			CBL-301I	CBL-302I	CBL-306I	CBL-308I	CBL-341I
Boron	Previous	mg/L	0.1391	0.2970	0.1891	0.7217	0.1803
	Updated	mg/L	0.1497	0.3313	0.1933	0.5585	0.2082
Calcium	Previous	mg/L	1471	1541	396	1270	1242
	Updated	mg/L	1431	1384	381	1228	1149
Chloride	Previous	mg/L	4162	3633	711	3973	2453
	Updated	mg/L	3655	3197	644	3735	2350
Fluoride	Previous	mg/L	3.1915	2.7929	5.2610	2.9477	1.7141
	Updated	mg/L	2.7170	2.5382	4.8754	2.8660	1.4406
pH	Previous	SU	5.00-7.40	3.08-9.05	3.36-9.93	5.00-7.47	4.86-7.24
	Updated	SU	5.31-7.13	3.91-8.31	4.22-9.10	5.30-7.24	5.14-7.06
Sulfate	Previous	mg/L	652	1794	940	2032	514
	Updated	mg/L	696	1699	830	1881	490
Total Dissolved Solids	Previous	mg/L	9283	9136	2772	13623	7438
	Updated	mg/L	8266	8062	2863	11758	6811

Notes:
mg/L = milligrams per liter
SU = Standard Units

APPENDIX C

Results of the Groundwater Statistics for the Lower Colorado River Authority
First Semi-Annual Monitoring Event in 2025
Otter Creek Environmental Services, LLC
April 2025

Results of the Ground Water Statistics

for Lower Colorado River Authority Fayette Power Project

First Semi-Annual Monitoring Event in 2025

Prepared for:
Lower Colorado River Authority (LCRA)
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April 2025

INTRODUCTION

This report contains the results of the statistical analyses used to evaluate the groundwater data obtained during the first semi-annual monitoring event in 2025 at the Lower Colorado River Authority (LCRA) Fayette Power Project (FPP) Combustion Byproducts Landfill (CBL), the Coal Combustion Residuals (CCR) unit addressed in this report. The statistical analyses were completed within 90 days of receipt of the analytical data. The groundwater at the FPP is monitored by wells CBL-301I, CBL-302I, CBL-306I, CBL-308I, CBL-340I, and CBL-341I.

Statistical comparisons and evaluation for statistically significant increases (SSIs) are conducted on all wells with the exception of former background (side-gradient) monitoring well CBL-340I. Based on the Alternative Source Determination (ASD) study conducted in 2018, the identification of natural aquifer heterogeneity resulted in determination that CBL-340I could not be used to reliably characterize the background geochemistry of the groundwater flowing beneath the CCR unit. As such, intrawell analysis of wells potentially affected by CCR operation was selected at that time, and the need for use of CBL-340I geochemical data was negated. A Groundwater Monitoring System Addendum Certification was prepared in 2018, documenting the transition from former interwell analysis to intrawell analysis.

The statistical plan is designed to detect a release from the facility at the earliest indication. An intrawell methodology is described and then applied to the FPP data. The statistical method conforms with the Coal Combustion Residual (CCR) rule (40 CFR Part 257), USEPA Guidance document (*Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Unified Guidance,* March 2009), and the American Society for Testing and Materials (ASTM) standard D6312-98, *Developing Appropriate Statistical Approaches for Ground-Water Detection Monitoring Programs*. The intrawell statistical evaluations were completed within 90 days of receipt of laboratory data.

Ground Water Monitoring Program

The groundwater monitoring network for FPP includes background well CBL-340I and downgradient wells CBL-301I, CBL-302I, CBL-306I, CBL-308I, and CBL-341I. Each of the groundwater monitoring wells is to be sampled at least semiannually and analyzed for the detection monitoring parameters listed in Appendix III of 40 CFR Part 257, as follows:

Boron
Calcium
Chloride
Fluoride
pH
Sulfate
Total Dissolved Solids

Statistical analysis is conducted on data from all Groundwater Monitoring Plan (GMP) wells with the exception of CBL-340I, as described above. The groundwater data obtained for statistical evaluation during the first semi-annual monitoring event in 2025 are summarized in Attachment A. Historical Appendix III data is summarized in Attachment B.

STATISTICAL METHODOLOGIES FOR DETECTION MONITORING

The CCR rule for statistical analysis provides several options for evaluating the ground water data [40 CFR 257.93(f)]. As referenced in Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance (EPA 530/R-09-007), the preferred methods for comparing ground water data are using either prediction limits or using control charts. The control chart procedure offers an advantage over the prediction limits procedure as more data is generated over time, because the control chart procedure generates a graph of compliance data over time and allows for better identification of long-term trends.

An intrawell control chart method was applied to the FPP 2025 first semiannual data using the DUMPStat® statistical program. DUMPStat® is a program for the statistical analysis of groundwater monitoring data using methods described in "Statistical Methods for Groundwater Monitoring" by Dr. Robert D. Gibbons. Groundwater statistical analysis was conducted on the Appendix III constituents listed above.

Intrawell statistics

Intrawell statistics compare new measurements to the historical data at each groundwater monitoring well independently. The Unified Guidance-recommended technique for intrawell comparisons is the combined Shewhart-CUSUM control chart. This control chart procedure detects changes in analyte concentrations both in terms of constituent concentration and cumulative concentration increases. This method is also extremely sensitive to sudden and gradual releases. A requirement for constructing these control charts is that the parameter is detected at a frequency greater than or equal to 25%, otherwise the data variance is not properly defined (ASTM D 6312-98 *Standard Guide for Developing Appropriate Statistical Approaches for Ground-Water Detection Monitoring Programs*).

The combined Shewhart-CUSUM control chart assumes that the data are independent and normally distributed with a fixed mean and a constant variance. Independent data is much more critical than the normality assumption. To achieve independence, it is recommended that data are collected no more frequently than quarterly to account for seasonal variation. The combined Shewhart-CUSUM control chart is robust to deviations from normality. Because the control charts do not use a specific multiplier based on a normal distribution, it is more conservative to assume normality.

Some groundwater monitoring parameters are not detected at a frequency great enough to generate the combined Shewhart-CUSUM control charts. For constituents that are detected less than 25% of the time at a particular well, the data are plotted as a time series until a sufficient number of data points are available to provide a 99% confidence nonparametric prediction limit. Thirteen independent measurements (with 1 resample) are necessary to achieve a 99% confidence (1% false positive rate) nonparametric prediction limit. Eight independent measurements (for pass 1 of 2 resamples) are necessary to achieve a 99% confidence nonparametric prediction limit. The nonparametric prediction limit is the largest determination out of the data set collected for that well and parameter. If the detection frequency is 0% after thirteen samples have been collected, the practical quantitation limit (PQL) becomes the nonparametric prediction limit.

In developing the statistical background, the historical data must be thoroughly screened for anomalous data due to sample collection error or laboratory analysis error. An erroneous data point, if not removed prior to the mean and variance computations, would yield a larger control limit thus increasing the false negative rate. The DUMPStat® program screens the background for outliers using the Dixon test on values at least three times the median background concentration for intrawell analyses. If the Dixon test indicates a statistical outlier, the value will not be used in the mean and variance determinations. Anomalous data will still be plotted on the graphs (with a unique symbol) but will not be included in the calculations.

The verification resample plan is an integral function of the statistical plan to reduce the probability that anomalous data obtained after the background has been established is indicative of a landfill release. Should an indication of an SSI be identified, the resampling plan is implemented by the operator to collect a verification sample.

The background data for each well and constituent is tested for existing trends using Sen's nonparametric estimate of trend.

Results of the Intrawell Statistics

The Appendix III parameter data from wells CBL-301I, CBL-302I, CBL-306I, CBL-308I, and CBL-341I were evaluated using the combined Shewhart-CUSUM control chart method.

The initial background was established with the ProUCL software using data obtained in 2016 and 2017. Initial exceedances for boron at CBL-301I and boron at CBL-341I were reported following the first semi-annual monitoring in 2020. Since the boron concentrations determined subsequently in January 2021 at CBL-301I (<0.050 mg/L) and CBL-341I (<0.050 mg/L) do not exceed the baseline threshold values (BTV), the previous exceedances are not statistically significant. BTV will be analogous to control limits in this report and future reports. Background was later established to include historical data obtained from 2016 through 2020 and then 2016 through 2022 using DUMPStats.

Monitoring well background data sets must be periodically updated with valid detection monitoring results that are representative of background groundwater quality. Failure to update background data sets will exclude factors such as natural temporal variation, changes in field or laboratory methodologies, and changes in the water table due to meteorological conditions or other influences. Since there were no exceedances attributed to the unit, the background data in this evaluation includes historical data obtained from 2016 through 2024 for wells CBL-301I, CBL-302I, CBL-306I, CBL-308I, and CBL-341I.

A summary of the intrawell statistics is included in Attachment C, Table 1 "Summary Statistics and Intermediate Computations for Combined Shewhart-CUSUM Control Charts." The control charts or time series graphs follow the summary table. For the parameters analyzed, there are no control limit exceedances. Slight increasing trends were detected in the background data for pH at CBL-341 and sulfate at CBL-302I. The trends appear to be a function of the more inconsistent data obtained during the initial monitoring period in 2016 and 2017.

A control chart factor was selected to provide a balance of the site-wide false positive and false negative rates. A statistical power curve indicates the expected false assessments for the site as a whole. The site-wide false positive rate is 3% and the test becomes sensitive to 3 standard deviation units over background.

CONCLUSIONS

This document describes a comprehensive statistical plan designated for the FPP. The groundwater monitoring network for FPP consists of wells CBL-301I, CBL-302I, CBL-306I, CBL-308I, and CBL-341I. Each of the groundwater monitoring wells is sampled and analyzed for the detection monitoring parameters listed in Appendix III of 40 CFR Part 257. The current ground water data was compared to background using intrawell control charts. Using intrawell comparisons, there were no control limit exceedances detected.

Attachment A

Ground Water Data obtained during the First Semi-Annual Monitoring Event in 2025

Table 1

Analytical Data Summary for 1/27/2025 to 1/28/2025

Constituents	Units	CBL-301I	CBL-302I	CBL-306I	CBL-308I	CBL-340I	CBL-341I
Boron, Total	mg/L	.106	.210	.160	.163	.183	.138
Calcium, Total	mg/L	907	878	206	698	556	778
Chloride	mg/L	2270	1730	286	2190	2310	1780
Fluoride	mg/L	<.100	.171	2.200	1.200	.724	.128
pH	S.U.	6.54	6.43	6.44	6.64	6.29	6.46
Sulfate	mg/L	467	1490	433	1360	717	369
Total Dissolved Solids	mg/L	3810	4710	1480	5290	4730	4020

* - The displayed value is the arithmetic mean of multiple database matches.

Attachment B

Historical Appendix III Ground Water Data

Table 1

Analytical Data Summary for CBL-301I

Constituents	Units	1/21/2016	5/4/2016	7/27/2016	10/24/2016	1/23/2017	3/22/2017	5/18/2017	7/26/2017	2/8/2018	7/25/2018	1/17/2019	5/2/2019	7/31/2019
Boron, Total	mg/L	<.0500	<.0500	<.0500	<.0500	<.0500	<.0500	.0707	<.0500	<.0500	<.0500	<.0500	<.0500	<.0500
Calcium, Total	mg/L	905	949	925	978	1000	1030	1060	961	873	993	156	762	783
Chloride	mg/L	2300	2160	2290	2250	3200	2390	2420	2500	2480	1330	619	1910	2240
Fluoride	mg/L	<.250	<.500	<.500	<.250	.312	<.500	<.500	<.500	<.500	<.500	.219	.112	.051
pH	S.U.	6.33	6.26	5.95	6.23	6.26	6.31	5.95	6.02	6.17	6.04	7.16	6.14	6.19
Sulfate	mg/L	336	311	336	326	488	337	342	381	344	196	104	398	332
Total Dissolved Solids	mg/L	4380	5050	6020	4570	6140	6570	6430	4290	5120	5390	1460	5650	6040

* - The displayed value is the arithmetic mean of multiple database matches.

Table 1

Analytical Data Summary for CBL-301I

Constituents	1/28/2020	9/17/2020	1/26/2021	7/20/2021	9/7/2021	1/26/2022	7/27/2022	8/30/2022	10/25/2022	1/25/2023	3/7/2023	8/2/2023	1/29/2024	7/23/2024
Boron, Total	<.0500	.0801	<.0500	.0826	<.0500	<.0500	.0850	.1070	.0645	.1080	.1020	<.0500	.1070	.0820
Calcium, Total	851	1060	1130	1100		999	1010			977		1260	1050	912
Chloride	2360	2270	2420	2590		2440	1840			1960		2220	2270	2350
Fluoride	.130	<.250	<.500	2.680	<.500	<.050	.156			1.720	<.050	.054	<.100	<.100
pH	6.26	6.13	6.06	6.13	6.14	6.27	6.08	6.14	6.21	6.34		6.21	6.35	6.45
Sulfate	349	350	374	419		406	285			1370	207	383	475	454
Total Dissolved Solids	4790	6340	6060	5870		4700	4590			5160		5360	4820	4580

* - The displayed value is the arithmetic mean of multiple database matches.

Table 1

Analytical Data Summary for CBL-301I

Constituents	1/27/2025
Boron, Total	.1060
Calcium, Total	907
Chloride	2270
Fluoride	<.100
pH	6.54
Sulfate	467
Total Dissolved Solids	3810

* - The displayed value is the arithmetic mean of multiple database matches.

Table 2

Analytical Data Summary for CBL-302I

Constituents	Units	1/22/2016	5/4/2016	7/27/2016	10/24/2016	1/23/2017	3/22/2017	5/16/2017	7/27/2017	2/8/2018	7/27/2018	1/22/2019	7/31/2019	1/30/2020
Boron, Total	mg/L	<.0500	<.0500	<.0500	.1560	<.0500	.2970	<.0500	<.0500	<.0500	<.0500	<.0500	<.0500	<.0500
Calcium, Total	mg/L	1030	1010	1030	1070	1100	1090	1100	1040	934	995	855	914	838
Chloride	mg/L	2190	2130	2210	2170	2080	2050	2230	2040	2080	1980	1960	1540	1540
Fluoride	mg/L	<.2500	<.5000	<.5000	<.2500	.3320	<.5000	<.5000	<.5000	.1120	<.5000	.0402	.0605	.1930
pH	S.U.	6.29	6.01	5.17	7.75	5.36	5.40	4.94	6.20	6.21	5.77	6.44	6.15	6.34
Sulfate	mg/L	1020	993	1090	1180	1150	1120	1230	1180	1240	1390	1250	1260	1350
Total Dissolved Solids	mg/L	5500	5390	6850	4210	6430	6460	5860	5120	6010	5510	5060	4190	4790

* - The displayed value is the arithmetic mean of multiple database matches.

Table 2

Analytical Data Summary for CBL-302I

Constituents	9/17/2020	1/28/2021	7/21/2021	9/7/2021	1/27/2022	7/28/2022	1/26/2023	7/18/2023	1/29/2024	4/5/2024	7/22/2024	1/27/2025
Boron, Total	<.0500	<.0500	.0743		<.0500	<.0500	.1160	<.0500	.1600	.1630	.1370	.2100
Calcium, Total	853	1020	844		754	750	889	981	937		845	878
Chloride	1410	1370	1380		1310	1300	1460	1330	1440		1650	1730
Fluoride	<.2500	<.5000	2.2500	<.2500	<.0500	.1650	<.5000	1.7600	<.1000		.1010	.1710
pH	6.20	6.21	6.06	6.28	6.32	6.21	6.33	6.20	6.28		6.41	6.43
Sulfate	1280	1290	1350		1340	1300	1390	1230	1330		1370	1490
Total Dissolved Solids	4990	4800	4810		4510	5120	4930	5150	4950		4840	4710

* - The displayed value is the arithmetic mean of multiple database matches.

Table 3

Analytical Data Summary for CBL-306I

Constituents	Units	1/21/2016	5/4/2016	7/26/2016	10/24/2016	1/19/2017	3/22/2017	5/18/2017	7/27/2017	2/8/2018	7/27/2018	1/16/2019	7/31/2019	8/23/2019
Boron, Total	mg/L	<.0500	.0717	.0998	.0556	<.0500	.1240	.0832	.0531	<.0500	<.0500	<.0500	.0824	.0500
Calcium, Total	mg/L	137.0	47.2	105.0	198.0	174.0	204.0	205.0	234.0	230.0	275.0	180.0	106.0	226.0
Chloride	mg/L	155.0	20.0	114.0	330.0	197.0	231.0	289.0	350.0	385.0	283.0	215.0	538.0	318.0
Fluoride	mg/L	2.500	1.000	1.370	2.380	1.850	12.600	2.200	2.910	2.810	2.950	1.980	9.260	2.660
pH	S.U.	7.09	6.69	6.95	6.72	7.29	4.41	5.61	6.94	6.67	6.86	6.78	6.92	6.83
Sulfate	mg/L	266.0	29.5	139.0	432.0	270.0	340.0	412.0	513.0	493.0	406.0	292.0	816.0	387.0
Total Dissolved Solids	mg/L	1280	431	790	1150	1320	1460	1440	1280	1760	1450	1220	676	1710

* - The displayed value is the arithmetic mean of multiple database matches.

Table 3

Analytical Data Summary for CBL-306I

Constituents	1/29/2020	9/19/2020	1/28/2021	7/21/2021	1/27/2022	7/28/2022	1/26/2023	7/18/2023	1/29/2024	7/23/2024	1/27/2025
Boron, Total	<.0500	.0773	<.0500	.0927	.0548	.1100	.0973	.0659	.1330	.1340	.1600
Calcium, Total	247.0	260.0	257.0	216.0	212.0	182.0	149.0	260.0	186.0	115.0	206.0
Chloride	445.0	420.0	292.0	255.0	384.0	261.0	148.0	336.0	153.0	10.2	286.0
Fluoride	2.830	2.720	2.900	2.420	2.990	2.260	1.920	2.660	1.490	.823	2.200
pH	6.70	7.16	6.84	6.55	6.87	6.70	7.30	6.49	6.55	6.54	6.44
Sulfate	561.0	506.0	388.0	336.0	510.0	348.0	205.0	454.0	266.0	70.7	433.0
Total Dissolved Solids	1830	1730	1420	1320	1730	1540	1000	1910	1170	691	1480

* - The displayed value is the arithmetic mean of multiple database matches.

Table 4

Analytical Data Summary for CBL-308I

Constituents	Units	1/22/2016	5/4/2016	7/26/2016	10/24/2016	1/19/2017	3/22/2017	5/16/2017	7/26/2017	2/6/2018	7/25/2018	1/18/2019	7/31/2019	1/29/2020
Boron, Total	mg/L	<.0500	.1210	.1860	.2560	<.0500	.5450	.1090	.0799	<.0500	<.0500	<.0500	<.0500	<.0500
Calcium, Total	mg/L	903	870	911	939	919	947	954	878	859	863	760	840	745
Chloride	mg/L	2760	2580	2680	2870	2360	2530	2740	2760	2750	2680	2240	2290	2110
Fluoride	mg/L	1.490	2.300	1.640	1.590	1.330	9.050	1.700	1.900	1.760	2.100	1.680	1.620	1.600
pH	S.U.	6.36	6.13	5.95	6.27	6.83	6.27	5.54	6.27	6.26	6.07	6.39	6.25	6.37
Sulfate	mg/L	1490	1410	1490	1550	1320	1470	1580	1550	1570	1540	1520	1420	1340
Total Dissolved Solids	mg/L	6820	6120	7890	10200	9620	7260	6590	6480	6200	6320	4760	5820	5980

* - The displayed value is the arithmetic mean of multiple database matches.

Table 4

Analytical Data Summary for CBL-308I

Constituents	9/18/2020	1/28/2021	7/21/2021	1/27/2022	7/27/2022	1/26/2023	7/18/2023	1/30/2024	7/22/2024	1/27/2025
Boron, Total	.1030	<.0500	.1300	<.0500	.0790	.1430	<.0500	.1500	.1390	.1630
Calcium, Total	838	830	684	974	736	732	642	714	683	698
Chloride	2410	2200	1780	2020	2470	2570	1840	1790	2250	2190
Fluoride	1.330	1.440	1.740	1.750	1.430	<.500	1.860	1.260	.864	1.200
pH	6.22	6.26	6.16	6.36	6.23	6.41	6.26	6.57	6.53	6.64
Sulfate	1310	1340	1240	1310	1190	445	1290	1360	1430	1360
Total Dissolved Solids	6860	6190	5270	5320	6840	5810	5680	5410	5810	5290

* - The displayed value is the arithmetic mean of multiple database matches.

Table 5

Analytical Data Summary for CBL-340I

Constituents	Units	1/21/2016	5/4/2016	7/27/2016	10/24/2016	1/23/2017	3/22/2017	5/16/2017	7/27/2017	2/8/2018	7/27/2018	1/22/2019	7/31/2019	1/30/2020
Boron, Total	mg/L	<.0500	.0832	.0810	.1580	<.0500	.1740	.1040	.0816	.0638	<.0500	<.0500	.1240	.0562
Calcium, Total	mg/L	564	560	575	607	627	581	584	571	555	544	518	518	539
Chloride	mg/L	2370	2260	2350	2380	2070	2280	2520	2380	2730	2450	2250	2280	2240
Fluoride	mg/L	1.090	1.920	1.060	1.260	.840	8.440	1.010	.850	1.000	1.300	.830	.880	.870
pH	S.U.	6.52	6.13	6.95	6.19	5.46	6.49	5.77	6.42	6.41	6.25	6.59	6.45	6.49
Sulfate	mg/L	652	616	668	675	571	635	715	685	752	711	639	684	637
Total Dissolved Solids	mg/L	4990	5230	6250	5670	6230	5480	5470	4880	5290	5100	4720	5560	5080

* - The displayed value is the arithmetic mean of multiple database matches.

Table 5

Analytical Data Summary for CBL-340I

Constituents	9/18/2020	1/28/2021	7/22/2021	1/28/2022	7/28/2022	1/30/2023	7/19/2023	1/31/2024	7/23/2024	1/28/2025
Boron, Total	.1460	<.0500	.3840	.1600	.2850	.1670	.2760	.1780	.1810	.1830
Calcium, Total	547	607	532	597	538	635	631	607	560	556
Chloride	2130	2260	2200	2200	2160	2230	2130	2210	2480	2310
Fluoride	.725	.835	.865	1.060	.865	.850	1.070	.605	.521	.724
pH	6.32	6.32	6.24	6.42	6.35	6.37	6.41	6.12	6.12	6.29
Sulfate	608	634	618	619	614	643	599	705	780	717
Total Dissolved Solids	5430	5520	4990	4870	5490	5010	5290	5090	5320	4730

* - The displayed value is the arithmetic mean of multiple database matches.

Table 6

Analytical Data Summary for CBL-341I

Constituents	Units	1/23/2017	2/23/2017	3/22/2017	4/20/2017	5/16/2017	6/20/2017	7/27/2017	9/11/2017	2/8/2018	8/24/2018	1/22/2019	7/31/2019	1/30/2020
Boron, Total	mg/L	<.0500	<.0500	<.0500	.0587	.0896	.0668	.0507	<.0500	<.0500	<.0500	<.0500	<.0500	<.0500
Calcium, Total	mg/L	854	870	906	898	860	950	829	848	810	824	782	714	767
Chloride	mg/L	1600	2000	1780	1770	1900	1820	1970	1710	2110	1910	1790	1650	1780
Fluoride	mg/L	.5300	<.5000	<.5000	<.5000	<.5000	.3350	.0550	.3670	.1060	.1140	.0546	.1000	.1530
pH	S.U.	5.74	5.23	5.72	5.73	5.54	6.19	6.21	6.10	6.18	5.82	6.38	6.23	6.27
Sulfate	mg/L	307	404	346	336	369	363	419	354	383	376	358	329	351
Total Dissolved Solids	mg/L	5000	4520	5110	4240	4840	5940	4150	4860	4320	4800	3870	5370	4900

* - The displayed value is the arithmetic mean of multiple database matches.

Table 6

Analytical Data Summary for CBL-341I

Constituents	9/17/2020	1/27/2021	7/22/2021	9/7/2021	1/27/2022	7/28/2022	1/26/2023	7/19/2023	1/29/2024	7/22/2024	10/1/2024	1/28/2025
Boron, Total	.1020	<.0500	.1110		<.0500	.1150	.1340	.0760	.1330	.1190	.1360	.1380
Calcium, Total	814	874	852		1040	704	797	710	875	801		778
Chloride	1700	1800	1750		1810	1690	1660	1530	1700	1960		1780
Fluoride	<.2500	<.5000	1.1600	<.2500	<.0500	.1410	<.2500	1.1200	<.1000	<.1000		.1280
pH	6.14	6.06	5.98	6.18	6.26	6.16	6.28	6.22	6.38	6.39		6.46
Sulfate	336	324	316		320	296	309	259	346	367		369
Total Dissolved Solids	4930	3940	4520		3800	4910	4390	4190	3990	3700		4020

* - The displayed value is the arithmetic mean of multiple database matches.

Attachment C

Summary Tables and Graphs for the Intrawell Comparisons

Table 1

Summary Statistics and Intermediate Computations for Combined Shewhart-CUSUM Control Charts

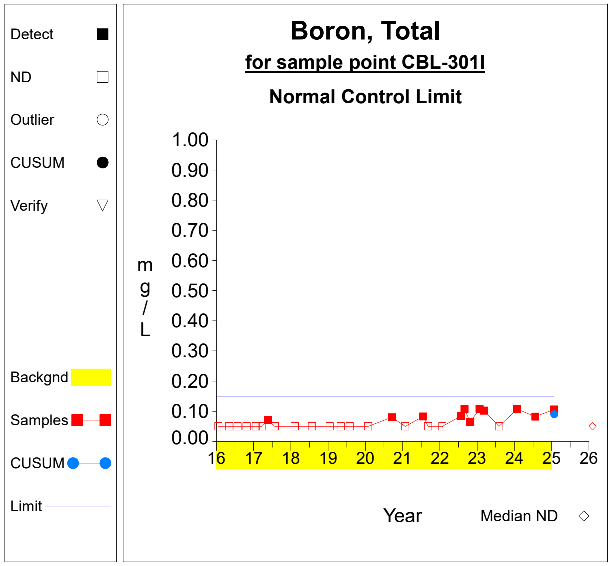
Constituent	Units	Well	N(back)	N(mon)	N(tot)	Mean	SD	R(i-1)	R(i)	S(i-1)	S(i)	Limit	Type	Conf
Boron, Total	mg/L	CBL-301I	27	1	28	0.0644	0.0213	0.0820	0.1060		0.0900	0.1497	normal	
Boron, Total	mg/L	CBL-302I	23	1	24	0.0828	0.0621	0.1370	0.2100		0.1634	0.3313	normal	
Boron, Total	mg/L	CBL-306I	22	1	24	0.0751	0.0295	0.1340	0.1600		0.1378	0.1933	normal	
Boron, Total	mg/L	CBL-308I	22	1	23	0.1155	0.1108	0.1390	0.1630		0.1155	0.5585	normal	
Boron, Total	mg/L	CBL-341I	23	1	24	0.0757	0.0331	0.1360	0.1380		0.1132	0.2082	normal	
Calcium, Total	mg/L	CBL-301I	22	1	24	980.3636	112.6222	912.0000	907.0000		980.3636	1430.8525	normal	
Calcium, Total	mg/L	CBL-302I	22	1	23	949.0455	108.7730	845.0000	878.0000		949.0455	1384.1375	normal	
Calcium, Total	mg/L	CBL-306I	20	1	24	207.3500	43.3896	115.0000	206.0000		207.3500	380.9085	normal	
Calcium, Total	mg/L	CBL-308I	22	1	23	828.2273	99.9314	683.0000	698.0000		828.2273	1227.9528	normal	
Calcium, Total	mg/L	CBL-341I	22	1	23	835.4091	78.2941	801.0000	778.0000		835.4091	1148.5855	normal	
Chloride	mg/L	CBL-301I	22	1	24	2281.3636	343.3490	2350.0000	2270.0000		2281.3636	3654.7596	normal	
Chloride	mg/L	CBL-302I	22	1	23	1765.9091	357.7397	1650.0000	1730.0000		1765.9091	3196.8680	normal	
Chloride	mg/L	CBL-306I	19	1	24	286.6842	89.3526	10.2000	286.0000		286.6842	644.0948	normal	
Chloride	mg/L	CBL-308I	22	1	23	2394.5455	335.0867	2250.0000	2190.0000		2394.5455	3734.8924	normal	
Chloride	mg/L	CBL-341I	22	1	23	1790.4545	139.8461	1960.0000	1780.0000		1790.4545	2349.8389	normal	
Fluoride	mg/L	CBL-301I	25	1	26	0.5374	0.5449	0.5000	0.1000		0.5374	2.7170	normal	
Fluoride	mg/L	CBL-302I	23	1	24	0.5223	0.5040	0.1010	0.1710		0.5223	2.5382	normal	
Fluoride	mg/L	CBL-306I	21	1	24	2.2678	0.6519	0.8230	2.2000		2.2678	4.8754	normal	
Fluoride	mg/L	CBL-308I	20	1	23	1.6192	0.3117	0.8640	1.2000		1.6192	2.8660	normal	
Fluoride	mg/L	CBL-341I	23	1	24	0.3037	0.2842	0.2500	0.1280		0.3037	1.4406	normal	
pH	S.U.	CBL-301I	26	1	27	6.2223	0.2278	6.4500	6.5400		6.3691	5.31 - 7.13	normal	
pH	S.U.	CBL-302I	23	1	24	6.1100	0.5489	6.4100	6.4300		6.1100	3.91 - 8.31	normal	
pH	S.U.	CBL-306I	22	1	24	6.6609	0.6096	6.5400	6.4400		6.6609	4.22 - 9.10	normal	
pH	S.U.	CBL-308I	22	1	23	6.2709	0.2433	6.5300	6.6400		6.4575	5.30 - 7.24	normal	
pH	S.U.	CBL-341I	22	1	24	6.0982	0.2406	6.3900	6.4600		6.2795	5.14 - 7.06	normal	
Sulfate	mg/L	CBL-301I	23	1	25	344.9130	87.8288	454.0000	467.0000		401.1284	696.2283	normal	
Sulfate	mg/L	CBL-302I	22	1	23	1242.4091	114.2431	1370.0000	1490.0000		1404.3177	1699.3816	normal	
Sulfate	mg/L	CBL-306I	20	1	24	376.2000	113.5089	70.7000	433.0000		376.2000	830.2357	normal	
Sulfate	mg/L	CBL-308I	21	1	23	1415.2381	116.4311	1430.0000	1360.0000		1415.2381	1880.9623	normal	
Sulfate	mg/L	CBL-341I	22	1	23	344.0000	36.4326	367.0000	369.0000		344.0000	489.7303	normal	
Total Dissolved Solids	mg/L	CBL-301I	22	1	24	5360.0000	726.6164	4580.0000	3810.0000		5360.0000	8266.4657	normal	
Total Dissolved Solids	mg/L	CBL-302I	22	1	23	5249.0909	703.2029	4840.0000	4710.0000		5249.0909	8061.9027	normal	
Total Dissolved Solids	mg/L	CBL-306I	22	1	24	1346.9091	379.0547	691.0000	1480.0000		1346.9091	2863.1279	normal	
Total Dissolved Solids	mg/L	CBL-308I	22	1	23	6511.3636	1311.6449	5810.0000	5290.0000		6511.3636	11757.9432	normal	
Total Dissolved Solids	mg/L	CBL-341I	22	1	23	4558.6364	563.0385	3700.0000	4020.0000		4558.6364	6810.7903	normal	

N(back) and N(mon) = Non-outlier measurements in the background and monitoring periods.
N(tot) = All independent measurements for that constituent and well.
For transformed data, mean and SD in transformed units and control limit in original units.
Conf = confidence level for passing initial test or one of two verification resamples (nonparametric test only).
* - Insufficient Data.
** - Detection Frequency < 25%.
*** - Zero Variance.

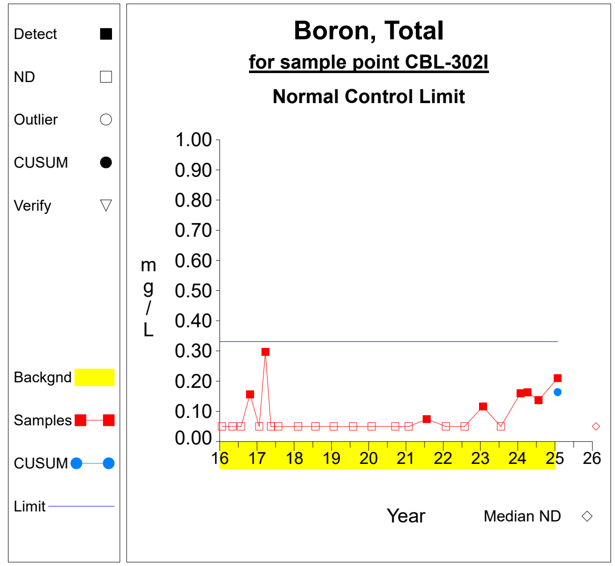
LCRA Fayette Power [GW]

April 2025

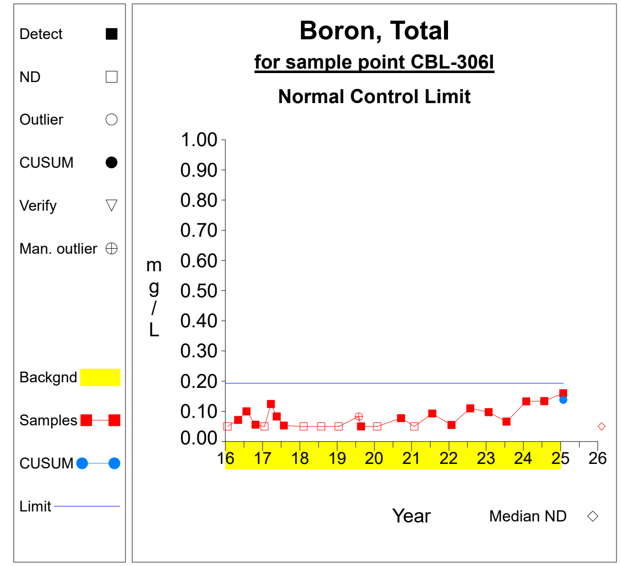
Intra-Well Control Charts / Prediction Limits



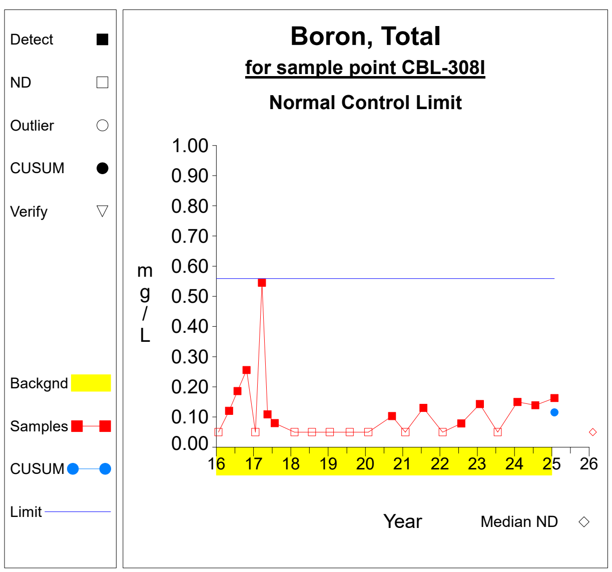
Graph 1



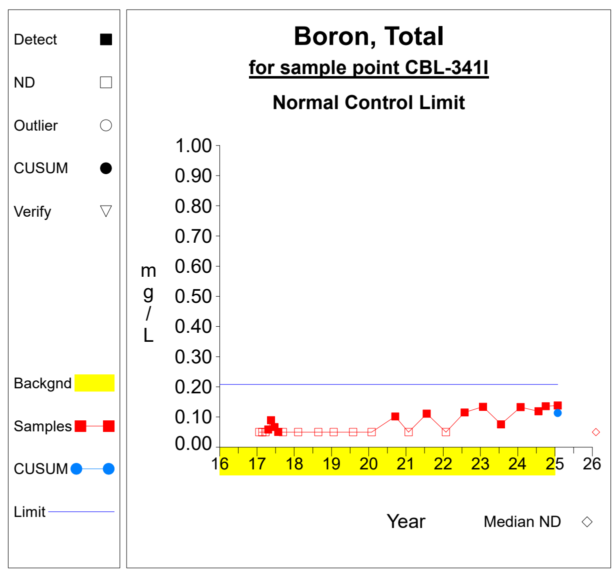
Graph 2



Graph 3



Graph 4



Graph 5

Prepared by: Otter Creek Environmental

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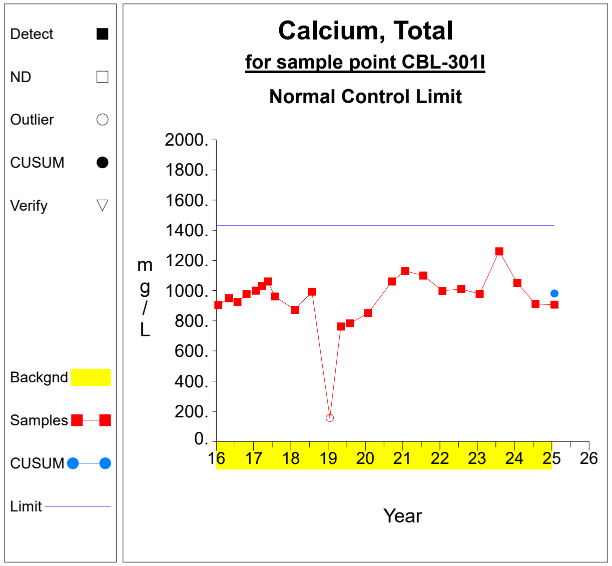
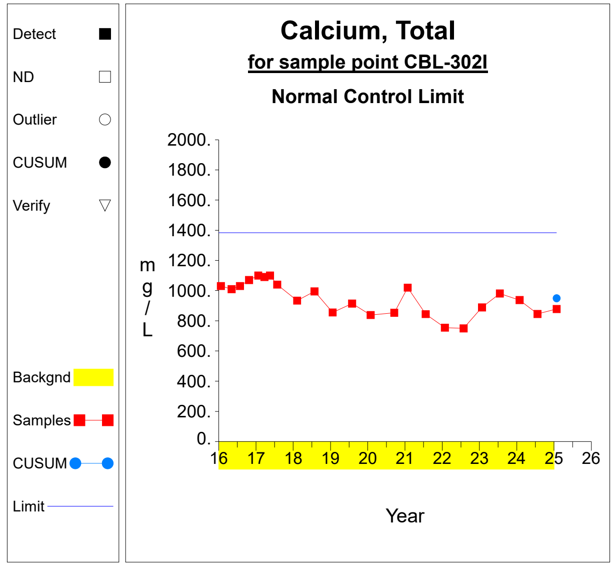
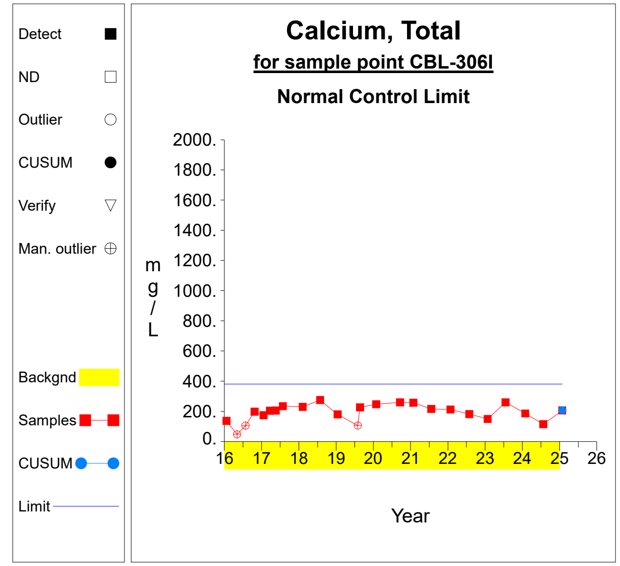
Intra-Well Control Charts / Prediction Limits



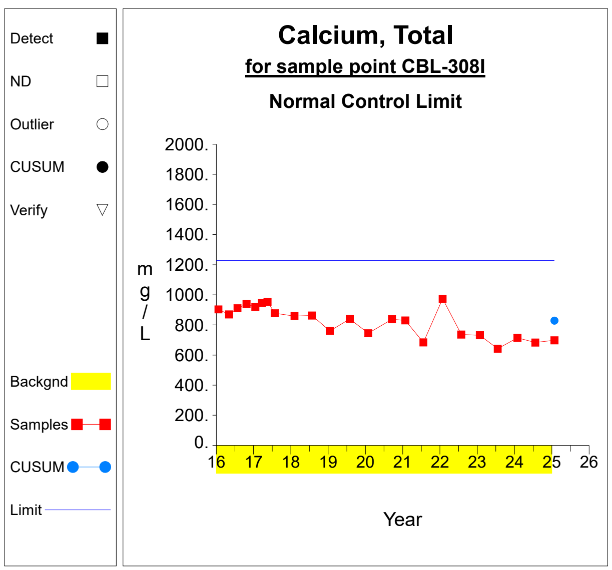
Graph 6



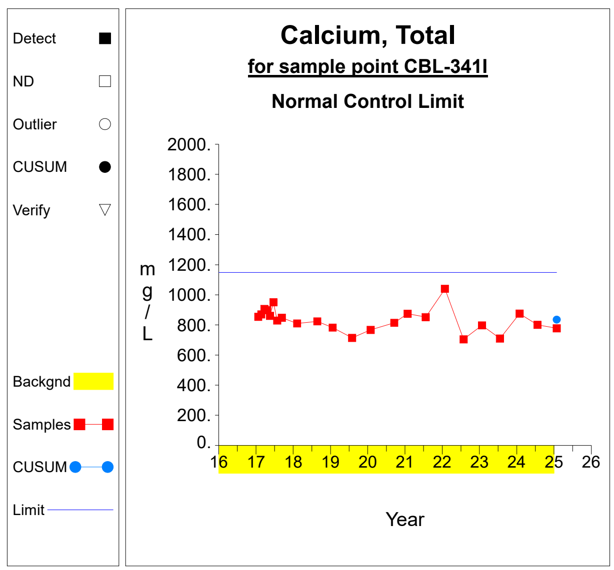
Graph 7



Graph 8



Graph 9



Graph 10

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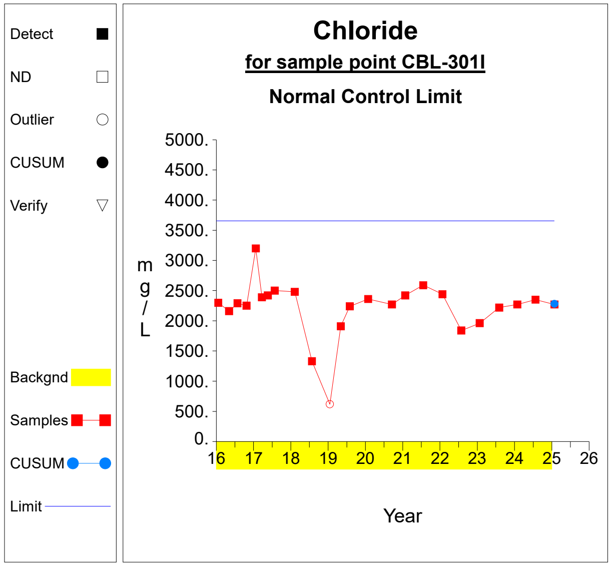
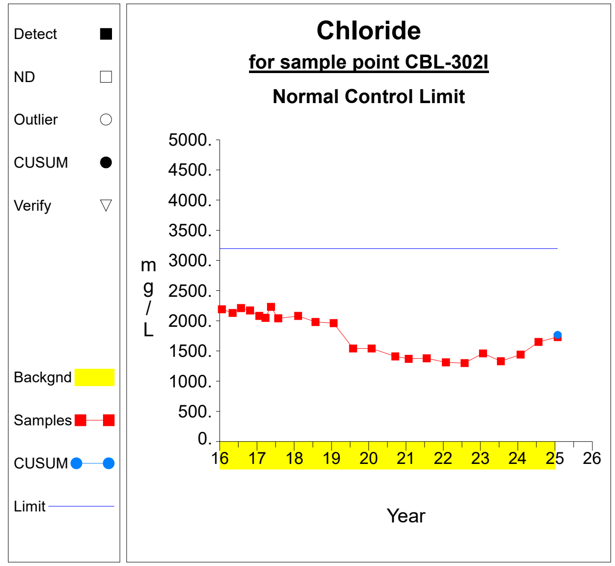
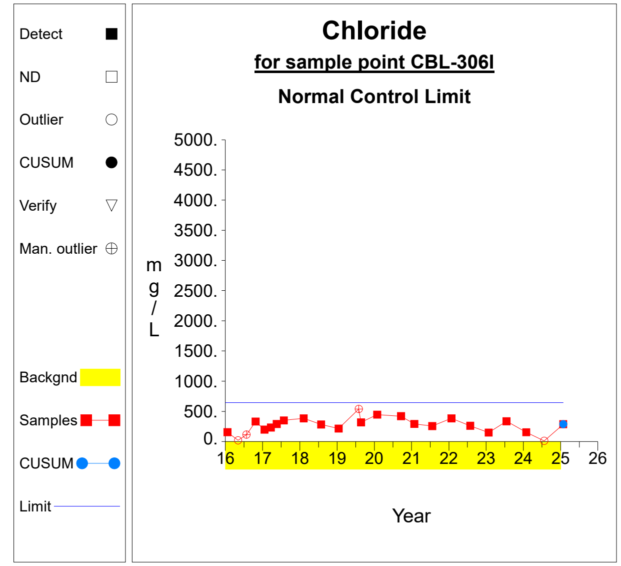
Intra-Well Control Charts / Prediction Limits



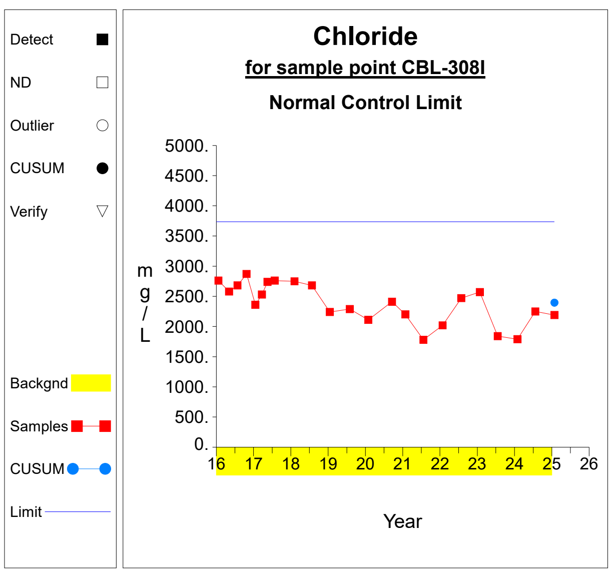
Graph 11



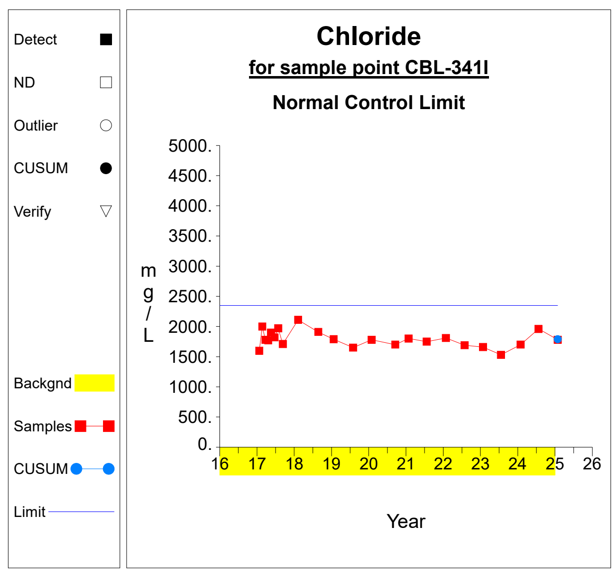
Graph 12



Graph 13



Graph 14



Graph 15

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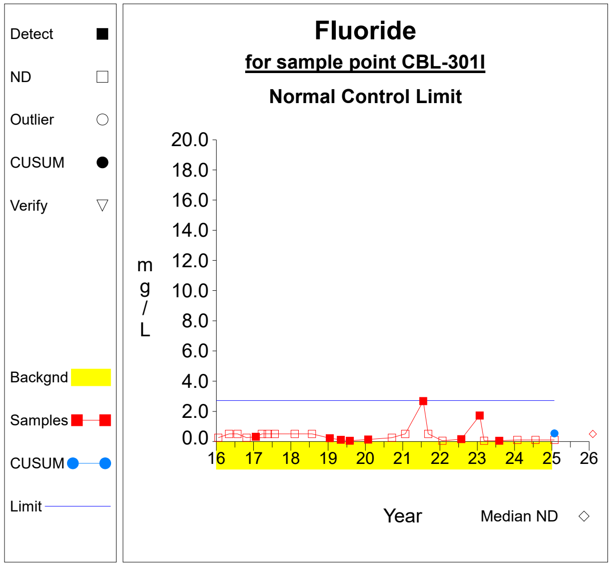
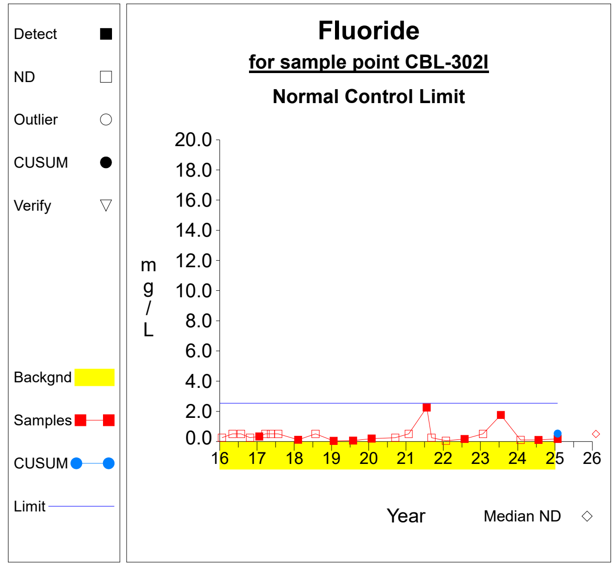
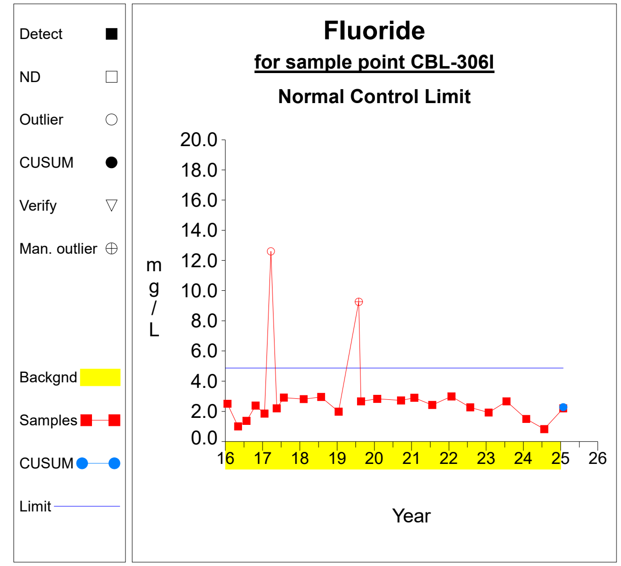
Intra-Well Control Charts / Prediction Limits



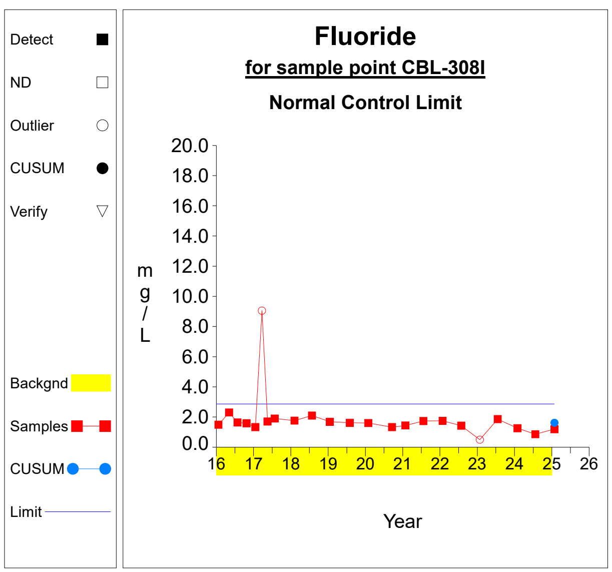
Graph 16



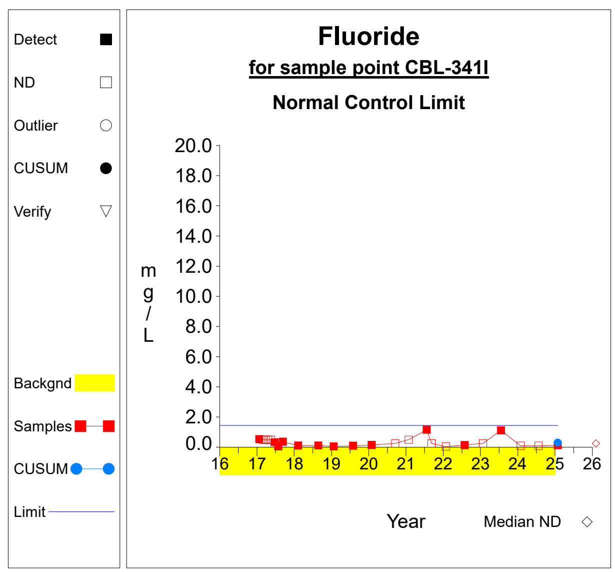
Graph 17



Graph 18



Graph 19



Graph 20

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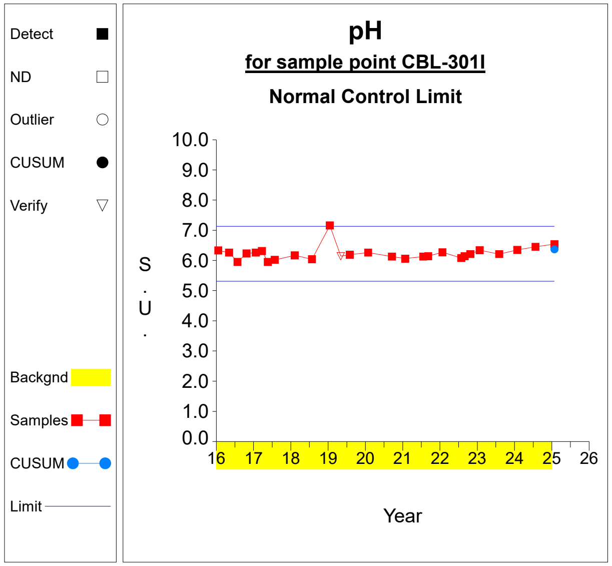
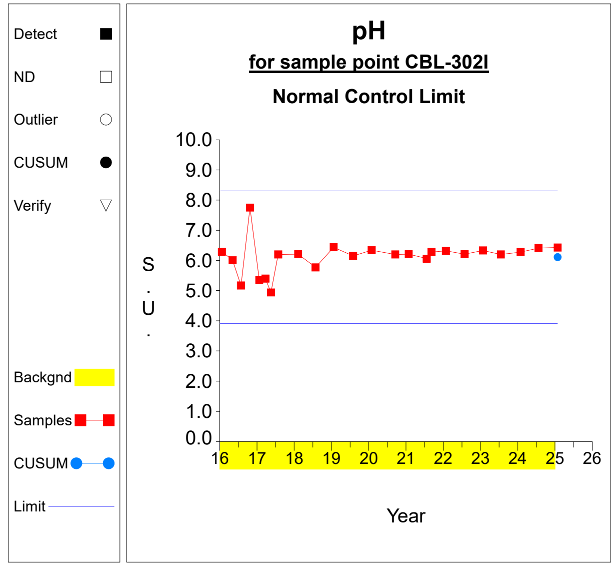
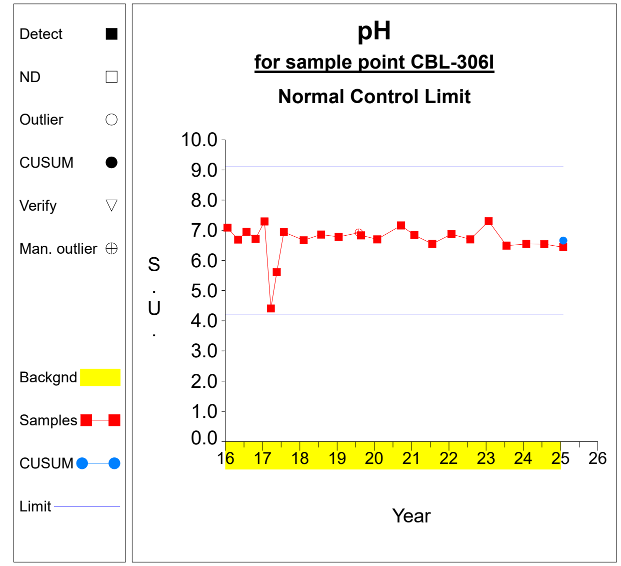
Intra-Well Control Charts / Prediction Limits



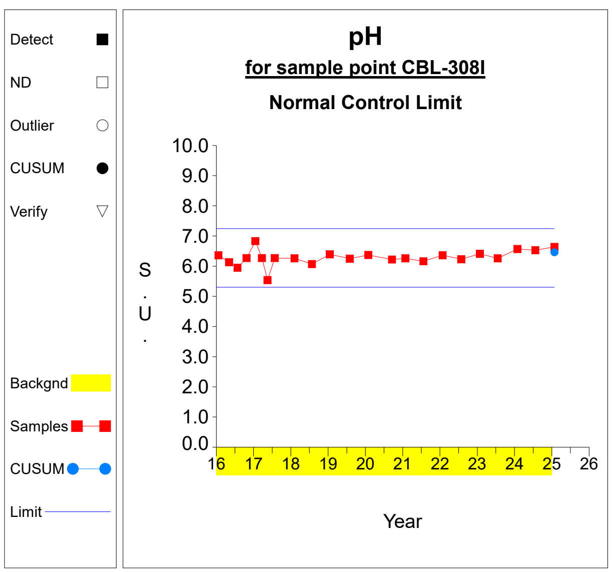
Graph 21



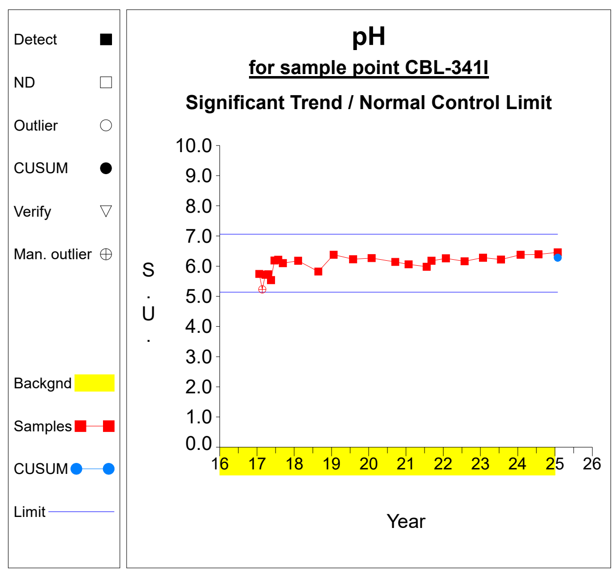
Graph 22



Graph 23



Graph 24



Graph 25

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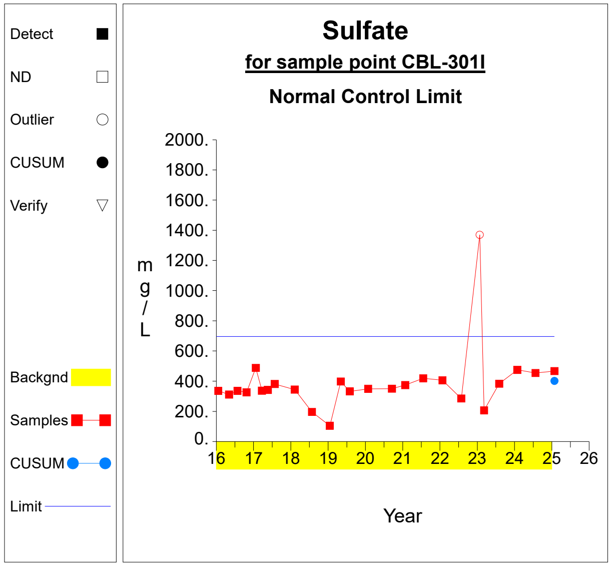
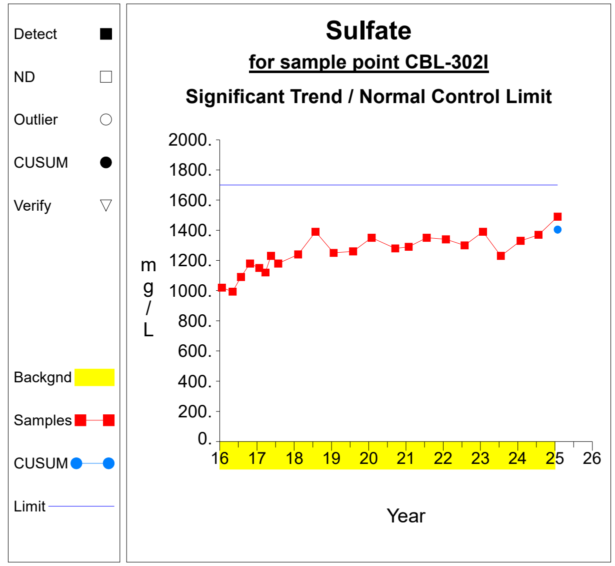
LCRA Fayette Power [GW]

April 2025

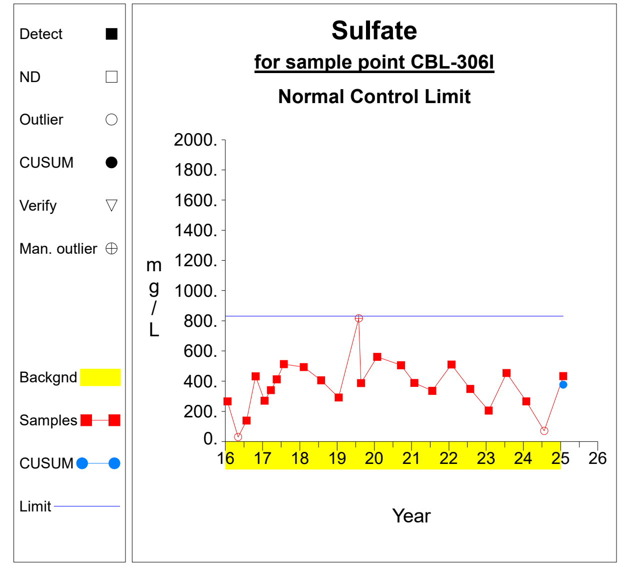
Intra-Well Control Charts / Prediction Limits



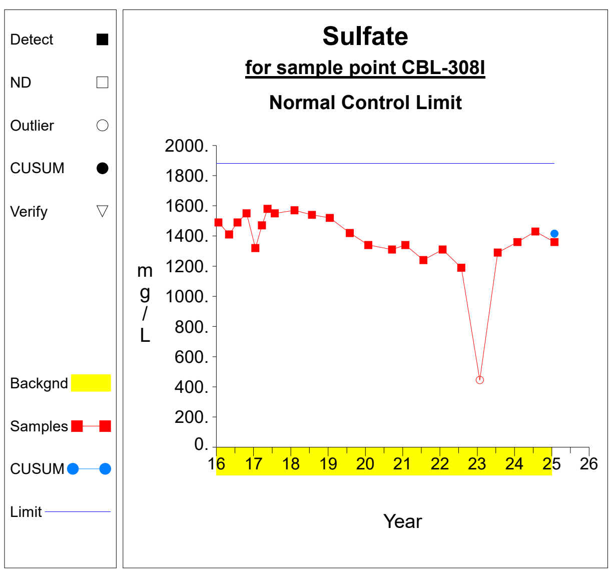
Graph 26



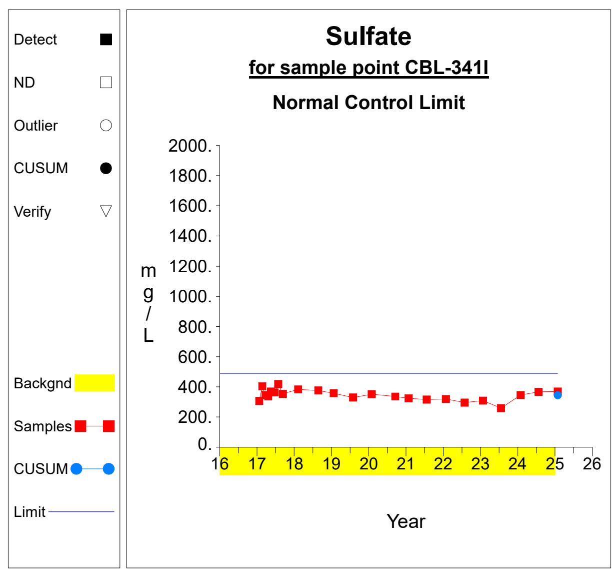
Graph 27



Graph 28



Graph 29



Graph 30

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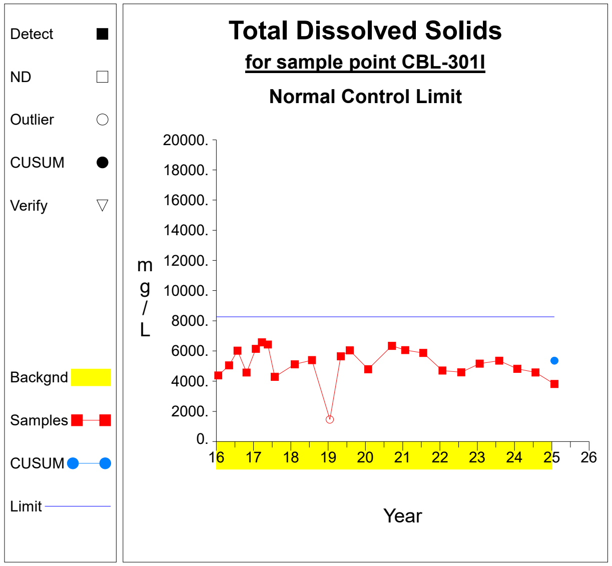
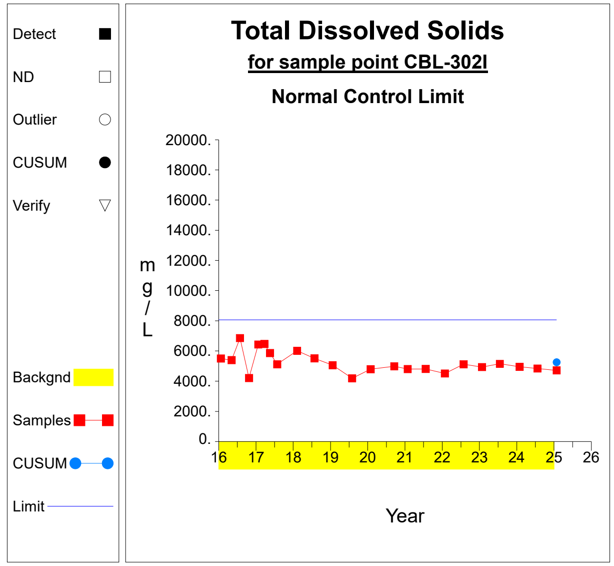
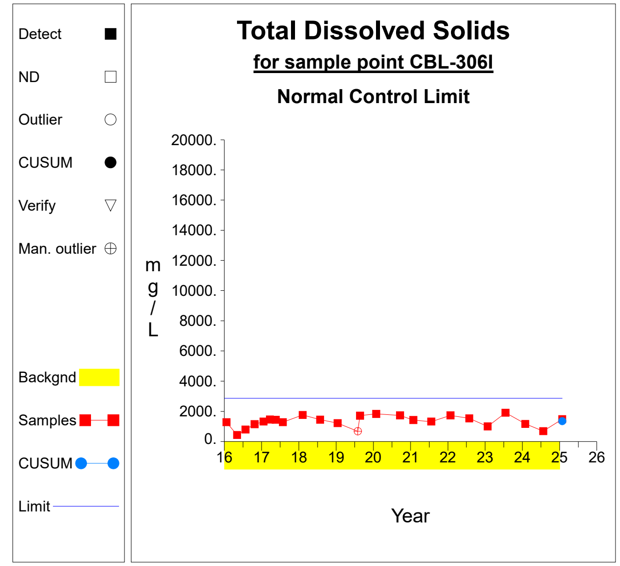
Intra-Well Control Charts / Prediction Limits



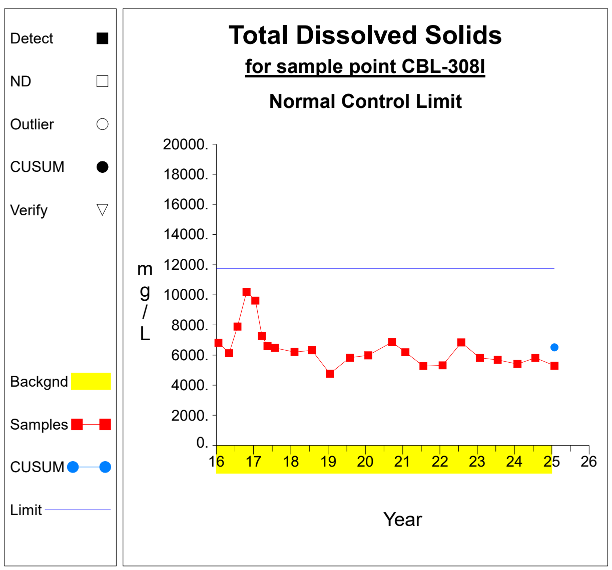
Graph 31



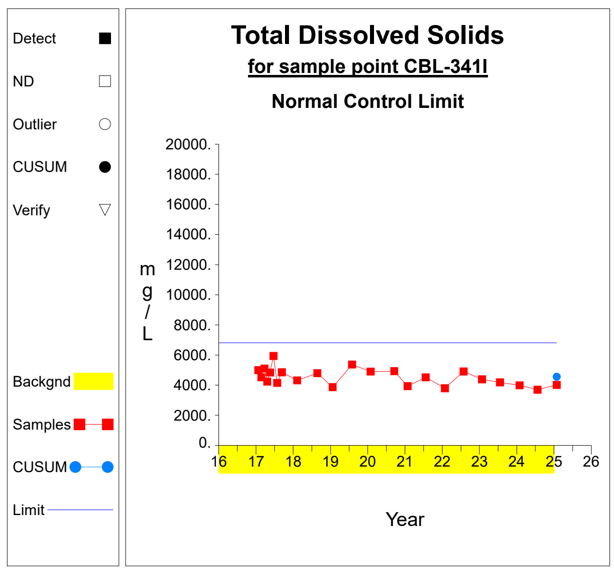
Graph 32



Graph 33



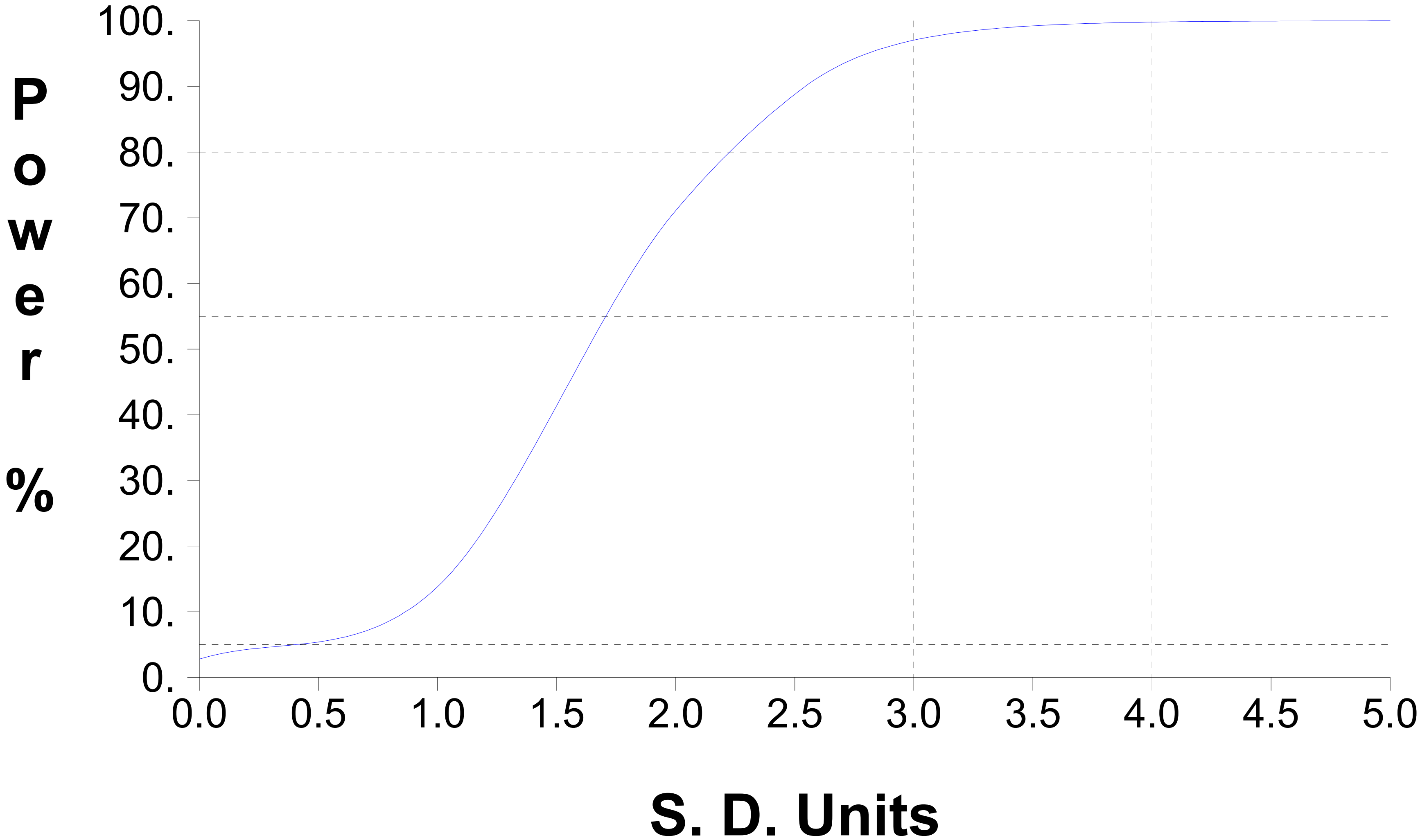
Graph 34



Graph 35

Prepared by: Otter Creek Environmental

False Positive and False Negative Rates for Current Intra-Well Control Charts Monitoring Program



Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Boron, Total (mg/L) at CBL-301I
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **1.739** / **27** = **0.064**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**0.124** - **3.024**/**27**) / (**27**-1))^{½} = **0.021**	Compute background sd.
3	SCL = $\overline{\mathbf{X}}$ + **F** * **S** = **0.064** + **4.0** * **0.021** = **0.15**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **27** * (**27**-1) / 2 = **351**	Number of sample pairs during trend detection period.
5	S = **0.002**	Sen's estimator of trend.
6	var(S) = **1710.667**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z**$_{.99}$ * **var(S)**^{½}) / 2 = (**351** - **2.326** * **1710.667**^{½}) / 2 = **127.398**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **0.0**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Boron, Total (mg/L) at CBL-302I
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **1.903** / **23** = **0.083**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]^2**/**N**) / (**N**-1))$^{1/2}$ = ((**0.242** - **3.623**/**23**) / (**23**-1))$^{1/2}$ = **0.062**	Compute background sd.
3	SCL = $\bar{\mathbf{X}}$ + **F** * **S** = **0.083** + **4.0** * **0.062** = **0.331**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **23** * (**23**-1) / 2 = **253**	Number of sample pairs during trend detection period.
5	S = **0.0**	Sen's estimator of trend.
6	var(S) = **940.333**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z**$_{.99}$ * **var(S)**$^{1/2}$) / 2 = (**253** - **2.326** * **940.333**$^{1/2}$) / 2 = **90.837**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **0.0**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Boron, Total (mg/L) at CBL-306I
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **1.652** / **22** = **0.075**	Compute background mean.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))^{½} = ((**0.142 - 2.73/22**) / (**22**-1))^{½} = **0.03**	Compute background sd.
3	SCL = $\bar{\mathbf{X}}$ + **F** * **S** = **0.075** + **4.0** * **0.03** = **0.193**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **22** * (**22**-1) / 2 = **231**	Number of sample pairs during trend detection period.
5	S = **0.002**	Sen's estimator of trend.
6	var(S) = **1192.333**	Variance estimate for slope.
7	M_1(S) = (**N' - $Z_{.99}$** * **var(S)**^{½}) / 2 = (**231 - 2.326** * **1192.333**^{½}) / 2 = **75.341**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **0.0**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Boron, Total (mg/L) at CBL-308I
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **2.541** / **22** = **0.115**	Compute background mean.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))^{½} = ((**0.551** - **6.456**/**22**) / (**22**-1))^{½} = **0.111**	Compute background sd.
3	SCL = **$\bar{X}$** + **F** * **S** = **0.115** + **4.0** * **0.111** = **0.559**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **22** * (**22**-1) / 2 = **231**	Number of sample pairs during trend detection period.
5	S = **0.0**	Sen's estimator of trend.
6	var(S) = **1132.667**	Variance estimate for slope.
7	M_1(S) = (**N' - $Z_{.99}$** * **var(S)**^{½}) / 2 = (**231** - **2.326** * **1132.667**^{½}) / 2 = **76.359**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-0.012**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Boron, Total (mg/L) at CBL-341I
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **1.742** / **23** = **0.076**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**0.156** - **3.034**/**23**) / (**23**-1))^{½} = **0.033**	Compute background sd.
3	SCL = $\bar{\mathbf{X}}$ + **F** * **S** = **0.076** + **4.0** * **0.033** = **0.208**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **23** * (**23**-1) / 2 = **253**	Number of sample pairs during trend detection period.
5	S = **0.006**	Sen's estimator of trend.
6	var(S) = **1268.667**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z**$_{.99}$ * **var(S)**^{½}) / 2 = (**253** - **2.326** * **1268.667**^{½}) / 2 = **85.076**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **0.0**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Calcium, Total (mg/L) at CBL-301I
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **21568.0** / **22** = **980.364**	Compute background mean.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{2.14{\times}10^7} - \mathbf{4.65{\times}10^8/22}) / (\mathbf{22}-1))^{1/2}$ = **112.622**	Compute background sd.
3	SCL = $\bar{\mathbf{X}}$ + **F** * **S** = **980.364** + **4.0** * **112.622** = **1430.853**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **22** * (**22**-1) / 2 = **231**	Number of sample pairs during trend detection period.
5	S = **13.605**	Sen's estimator of trend.
6	var(S) = **1256.667**	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N'} - \mathbf{Z}_{.99} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{231} - \mathbf{2.326} * \mathbf{1256.667}^{1/2}) / 2$ = **74.272**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-10.751**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Calcium, Total (mg/L) at CBL-302I
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **20879.0** / **22** = **949.045**	Compute background mean.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))$^{1/2}$ = ((**2.01**x**10^7** - **4.36**x**10^8/22**) / (**22**-1))$^{1/2}$ = **108.773**	Compute background sd.
3	SCL = **$\bar{X}$** + **F** * **S** = **949.045** + **4.0** * **108.773** = **1384.138**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **22** * (**22**-1) / 2 = **231**	Number of sample pairs during trend detection period.
5	S = **-29.058**	Sen's estimator of trend.
6	var(S) = **1255.667**	Variance estimate for slope.
7	M_1(S) = (**N' - $Z_{.99}$** * **var(S)**$^{1/2}$) / 2 = (**231** - **2.326** * **1255.667**$^{1/2}$) / 2 = **74.289**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-50.515**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Calcium, Total (mg/L) at CBL-306I
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **4147.0** / **20** = **207.35**	Compute background mean.
2	S = ((**sum[X^2] - sum[X]^2**/**N**) / (**N**-1))$^{1/2}$ = ((**895651.0 - 1.72x10^7/20**) / (**20**-1))$^{1/2}$ = **43.39**	Compute background sd.
3	SCL = $\bar{X}$ + **F** * **S** = **207.35** + **4.0** * **43.39** = **380.909**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **20** * (**20**-1) / 2 = **190**	Number of sample pairs during trend detection period.
5	S = **1.47**	Sen's estimator of trend.
6	var(S) = **949.0**	Variance estimate for slope.
7	M_1(S) = (**N' - $Z_{.99}$** * **var(S)**$^{1/2}$) / 2 = (**190 - 2.326** * **949.0**$^{1/2}$) / 2 = **59.173**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-10.298**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Calcium, Total (mg/L) at CBL-308I
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **18221.0** / **22** = **828.227**	Compute background mean.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))^{½} = ((**1.53x10^7 - 3.32x10^8/22**) / (**22**-1))^{½} = **99.931**	Compute background sd.
3	SCL = $\bar{X}$ + **F** * **S** = **828.227** + **4.0** * **99.931** = **1227.953**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **22** * (**22**-1) / 2 = **231**	Number of sample pairs during trend detection period.
5	S = **-28.539**	Sen's estimator of trend.
6	var(S) = **1257.667**	Variance estimate for slope.
7	M_1(S) = (**N' - $Z_{.99}$ * var(S)^{½}**) / 2 = (**231 - 2.326 * 1257.667^{½}**) / 2 = **74.256**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-39.221**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Calcium, Total (mg/L) at CBL-341I
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X] / N** = **18379.0 / 22** = **835.409**	Compute background mean.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))^{½} = ((**1.55x10^7 - 3.38x10^8/22**) / (**22**-1))^{½} = **78.294**	Compute background sd.
3	SCL = **$\bar{X}$** + **F** * **S** = **835.409** + **4.0** * **78.294** = **1148.586**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **22** * (**22**-1) / 2 = **231**	Number of sample pairs during trend detection period.
5	S = **-13.77**	Sen's estimator of trend.
6	var(S) = **1257.667**	Variance estimate for slope.
7	M_1(S) = (**N' - $Z_{.99}$** * **var(S)**^{½}) / 2 = (**231 - 2.326** * **1257.667**^{½}) / 2 = **74.256**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-31.394**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Chloride (mg/L) at CBL-301I
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **50190.0** / **22** = **2281.364**	Compute background mean.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))^{½} = ((**1.17x10^8 - 2.52x10^9/22**) / (**22**-1))^{½} = **343.349**	Compute background sd.
3	SCL = $\bar{X}$ + **F** * **S** = **2281.364** + **4.0** * **343.349** = **3654.76**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **22** * (**22**-1) / 2 = **231**	Number of sample pairs during trend detection period.
5	S = **-4.828**	Sen's estimator of trend.
6	var(S) = **1255.667**	Variance estimate for slope.
7	M_1(S) = (**N' - Z$_{.99}$** * **var(S)^{½}**) / 2 = (**231** - **2.326** * **1255.667**^{½}) / 2 = **74.289**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-59.442**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Chloride (mg/L) at CBL-302I
Normal Control Limit

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{38850.0} / \mathbf{22}$ $= \mathbf{1765.909}$	Compute background mean.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{7.13 \times 10^7} - \mathbf{1.51 \times 10^9}/\mathbf{22}) / (\mathbf{22}-1))^{1/2}$ $= \mathbf{357.74}$	Compute background sd.
3	$SCL = \bar{\mathbf{X}} + \mathbf{F} * \mathbf{S}$ $= \mathbf{1765.909} + \mathbf{4.0} * \mathbf{357.74}$ $= \mathbf{3196.868}$	Compute combined Shewhart-CUSUM normal control limit.
4	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{22} * (\mathbf{22}-1) / 2$ $= \mathbf{231}$	Number of sample pairs during trend detection period.
5	$S = \mathbf{-113.865}$	Sen's estimator of trend.
6	$var(S) = \mathbf{1255.667}$	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N'} - \mathbf{Z}_{.99} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{231} - \mathbf{2.326} * \mathbf{1255.667}^{1/2}) / 2$ $= \mathbf{74.289}$	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
8	$LCL(S) = \mathbf{-163.058}$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Chloride (mg/L) at CBL-306I
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **5447.0** / **19** = **286.684**	Compute background mean.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))^{½} = ((**1.71×10^6 - 2.97×10^7/19**) / (**19**-1))^{½} = **89.353**	Compute background sd.
3	SCL = **$\bar{X}$** + **F** * **S** = **286.684** + **4.0** * **89.353** = **644.095**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **19** * (**19**-1) / 2 = **171**	Number of sample pairs during trend detection period.
5	S = **3.59**	Sen's estimator of trend.
6	var(S) = **817.0**	Variance estimate for slope.
7	M_1(S) = (**N' - $Z_{.99}$** * **var(S)**^{½}) / 2 = (**171 - 2.326** * **817.0**^{½}) / 2 = **52.258**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-24.663**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Chloride (mg/L) at CBL-308I
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N**	Compute background mean.
	= **52680.0** / **22**	
	= **2394.545**	
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))^{½}	Compute background sd.
	= ((**1.29×10^8** - **2.78×10^9/22**) / (**22**-1))^{½}	
	= **335.087**	
3	SCL = $\bar{X}$ + **F** * **S**	Compute combined Shewhart-CUSUM normal control limit.
	= **2394.545** + **4.0** * **335.087**	
	= **3734.892**	
4	N' = **N** * (**N**-1) / 2	Number of sample pairs during trend detection period.
	= **22** * (**22**-1) / 2	
	= **231**	
5	S = **-89.526**	Sen's estimator of trend.
6	var(S) = **1255.667**	Variance estimate for slope.
7	M_1(S) = (**N' - $Z_{.99}$** * **var(S)**^{½}) / 2	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
	= (**231** - **2.326** * **1255.667**^{½}) / 2	
	= **74.289**	
8	LCL(S) = **-146.734**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Chloride (mg/L) at CBL-341I
Normal Control Limit

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{39390.0} / \mathbf{22}$ $= \mathbf{1790.455}$	Compute background mean.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{½}$ $= ((\mathbf{7.09 \times 10^7} - \mathbf{1.55 \times 10^9/22}) / (\mathbf{22}-1))^{½}$ $= \mathbf{139.846}$	Compute background sd.
3	$SCL = \bar{\mathbf{X}} + \mathbf{F} * \mathbf{S}$ $= \mathbf{1790.455} + \mathbf{4.0} * \mathbf{139.846}$ $= \mathbf{2349.839}$	Compute combined Shewhart-CUSUM normal control limit.
4	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{22} * (\mathbf{22}-1) / 2$ $= \mathbf{231}$	Number of sample pairs during trend detection period.
5	$S = \mathbf{-19.065}$	Sen's estimator of trend.
6	$var(S) = \mathbf{1255.667}$	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N'} - \mathbf{Z}_{.99} * \mathbf{var(S)}^{½}) / 2$ $= (\mathbf{231} - \mathbf{2.326} * \mathbf{1255.667}^{½}) / 2$ $= \mathbf{74.289}$	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	$LCL(S) = \mathbf{-55.076}$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Fluoride (mg/L) at CBL-301I
Normal Control Limit

Step	Equation	Description
1	$\overline{X} = \text{sum}[X] / N$	Compute background mean.
	$= 13.434 / 25$	
	$= 0.537$	
2	$S = ((\text{sum}[X^2] - \text{sum}[X]^2/N) / (N-1))^{1/2}$	Compute background sd.
	$= ((14.345 - 180.472/25) / (25-1))^{1/2}$	
	$= 0.545$	
3	$SCL = \overline{X} + F * S$	Compute combined Shewhart-CUSUM normal control limit.
	$= 0.537 + 4.0 * 0.545$	
	$= 2.717$	
4	$N' = N * (N-1) / 2$	Number of sample pairs during trend detection period.
	$= 25 * (25-1) / 2$	
	$= 300$	
5	$S = 0.0$	Sen's estimator of trend.
6	$var(S) = 1340.0$	Variance estimate for slope.
7	$M_1(S) = (N' - Z_{.99} * var(S)^{1/2}) / 2$	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
	$= (300 - 2.326 * 1340.0^{1/2}) / 2$	
	$= 107.427$	
8	$LCL(S) = 0.0$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Fluoride (mg/L) at CBL-302I
Normal Control Limit

Step	Equation	Description
1	$\overline{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{12.014} / \mathbf{23}$ $= \mathbf{0.522}$	Compute background mean.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{½}$ $= ((\mathbf{11.863} - \mathbf{144.329/23}) / (\mathbf{23}-1))^{½}$ $= \mathbf{0.504}$	Compute background sd.
3	$SCL = \mathbf{\overline{X}} + \mathbf{F} * \mathbf{S}$ $= \mathbf{0.522} + \mathbf{4.0} * \mathbf{0.504}$ $= \mathbf{2.538}$	Compute combined Shewhart-CUSUM normal control limit.
4	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{23} * (\mathbf{23}-1) / 2$ $= \mathbf{253}$	Number of sample pairs during trend detection period.
5	$S = \mathbf{0.0}$	Sen's estimator of trend.
6	$var(S) = \mathbf{1100.0}$	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N'} - \mathbf{Z}_{.99} * \mathbf{var(S)}^{½}) / 2$ $= (\mathbf{253} - \mathbf{2.326} * \mathbf{1100.0}^{½}) / 2$ $= \mathbf{87.928}$	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
8	$LCL(S) = \mathbf{0.0}$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Fluoride (mg/L) at CBL-306I
Normal Control Limit

Step	Equation	Description
1	$\bar{X} = \textbf{sum[X]} / \textbf{N}$ $= \textbf{47.623} / \textbf{21}$ $= \textbf{2.268}$	Compute background mean.
2	$S = ((\textbf{sum[X}^2\textbf{]} - \textbf{sum[X]}^2/\textbf{N}) / (\textbf{N}-1))^{1/2}$ $= ((\textbf{116.497} - \textbf{2267.95/21}) / (\textbf{21}-1))^{1/2}$ $= \textbf{0.652}$	Compute background sd.
3	$SCL = \bar{\textbf{X}} + \textbf{F} * \textbf{S}$ $= \textbf{2.268} + \textbf{4.0} * \textbf{0.652}$ $= \textbf{4.875}$	Compute combined Shewhart-CUSUM normal control limit.
4	$N' = \textbf{N} * (\textbf{N}-1) / 2$ $= \textbf{21} * (\textbf{21}-1) / 2$ $= \textbf{210}$	Number of sample pairs during trend detection period.
5	$S = \textbf{0.011}$	Sen's estimator of trend.
6	$var(S) = \textbf{1095.667}$	Variance estimate for slope.
7	$M_1(S) = (\textbf{N'} - \textbf{Z}_{.99} * \textbf{var(S)}^{1/2}) / 2$ $= (\textbf{210} - \textbf{2.326} * \textbf{1095.667}^{1/2}) / 2$ $= \textbf{66.504}$	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
8	$LCL(S) = \textbf{-0.137}$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Fluoride (mg/L) at CBL-308I
Normal Control Limit

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{32.384} / \mathbf{20}$ $= \mathbf{1.619}$	Compute background mean.
2	$S = ((\mathbf{sum[X^2] - sum[X]^2/N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{54.282 - 1048.723/20}) / (\mathbf{20}-1))^{1/2}$ $= \mathbf{0.312}$	Compute background sd.
3	$SCL = \mathbf{\bar{X}} + \mathbf{F} * \mathbf{S}$ $= \mathbf{1.619} + \mathbf{4.0} * \mathbf{0.312}$ $= \mathbf{2.866}$	Compute combined Shewhart-CUSUM normal control limit.
4	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{20} * (\mathbf{20}-1) / 2$ $= \mathbf{190}$	Number of sample pairs during trend detection period.
5	$S = \mathbf{-0.042}$	Sen's estimator of trend.
6	$var(S) = \mathbf{949.0}$	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N' - Z_{.99} * var(S)^{1/2}}) / 2$ $= (\mathbf{190 - 2.326 * 949.0^{1/2}}) / 2$ $= \mathbf{59.173}$	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
8	$LCL(S) = \mathbf{-0.113}$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Fluoride (mg/L) at CBL-341I
Normal Control Limit

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{6.986} / \mathbf{23}$ $= \mathbf{0.304}$	Compute background mean.
2	$S = ((\mathbf{sum[X^2] - sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{½}$ $= ((\mathbf{3.899 - 48.799/23}) / (\mathbf{23}-1))^{½}$ $= \mathbf{0.284}$	Compute background sd.
3	$SCL = \bar{\mathbf{X}} + \mathbf{F} * \mathbf{S}$ $= \mathbf{0.304} + \mathbf{4.0} * \mathbf{0.284}$ $= \mathbf{1.441}$	Compute combined Shewhart-CUSUM normal control limit.
4	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{23} * (\mathbf{23}-1) / 2$ $= \mathbf{253}$	Number of sample pairs during trend detection period.
5	$S = \mathbf{0.0}$	Sen's estimator of trend.
6	$var(S) = \mathbf{1268.667}$	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N' - Z_{.99} * var(S)}^{½}) / 2$ $= (\mathbf{253 - 2.326 * 1268.667}^{½}) / 2$ $= \mathbf{85.076}$	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
8	$LCL(S) = \mathbf{-0.018}$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
pH (S.U.) at CBL-301I
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **161.78** / **26** = **6.222**	Compute background mean.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))^{½} = ((**1007.943** - **26172.768/26**) / (**26**-1))^{½} = **0.228**	Compute background sd.
3	SCL = $\bar{X}$ ± **F** * **S** = **6.222** ± **4.0** * **0.228** = **5.311**, **7.134**	Compute combined Shewhart-CUSUM normal control interval.
4	N' = **N** * (**N**-1) / 2 = **26** * (**26**-1) / 2 = **325**	Number of sample pairs during trend detection period.
5	S = **0.012**	Sen's estimator of trend.
6	var(S) = **2048.0**	Variance estimate for slope.
7	M_1(S) = (**N'** - **$Z_{.99}$** * **var(S)**^{½}) / 2 = (**325** - **2.326** * **2048.0**^{½}) / 2 = **109.869**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-0.017**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
pH (S.U.) at CBL-302I
Normal Control Limit

Step	Equation	Description
1	$\bar{X} = \textbf{sum[X]} / \textbf{N}$	Compute background mean.
	$= \textbf{140.53} / \textbf{23}$	
	$= \textbf{6.11}$	
2	$S = ((\textbf{sum[X}^{\textbf{2}}\textbf{]} - \textbf{sum[X]}^2/\textbf{N}) / (\textbf{N}-1))^{½}$	Compute background sd.
	$= ((\textbf{865.266} - \textbf{19748.681}/\textbf{23}) / (\textbf{23}-1))^{½}$	
	$= \textbf{0.549}$	
3	$SCL = \bar{\textbf{X}} \pm \textbf{F} * \textbf{S}$	Compute combined Shewhart-CUSUM normal control interval.
	$= \textbf{6.11} \pm \textbf{4.0} * \textbf{0.549}$	
	$= \textbf{3.915}, \textbf{8.305}$	
4	$N' = \textbf{N} * (\textbf{N}-1) / 2$	Number of sample pairs during trend detection period.
	$= \textbf{23} * (\textbf{23}-1) / 2$	
	$= \textbf{253}$	
5	$S = \textbf{0.043}$	Sen's estimator of trend.
6	$var(S) = \textbf{1425.333}$	Variance estimate for slope.
7	$M_1(S) = (\textbf{N'} - \textbf{Z}_{.99} * \textbf{var(S)}^{½}) / 2$	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
	$= (\textbf{253} - \textbf{2.326} * \textbf{1425.333}^{½}) / 2$	
	$= \textbf{82.593}$	
8	$LCL(S) = \textbf{-0.002}$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
pH (S.U.) at CBL-306I
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N**	Compute background mean.
	= **146.54** / **22**	
	= **6.661**	
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½}	Compute background sd.
	= ((**983.894** - **21473.972**/**22**) / (**22**-1))^{½}	
	= **0.61**	
3	SCL = **$\bar{X}$** ± **F** * **S**	Compute combined Shewhart-CUSUM normal control interval.
	= **6.661** ± **4.0** * **0.61**	
	= **4.222**, **9.099**	
4	N' = **N** * (**N**-1) / 2	Number of sample pairs during trend detection period.
	= **22** * (**22**-1) / 2	
	= **231**	
5	S = **-0.024**	Sen's estimator of trend.
6	var(S) = **1255.667**	Variance estimate for slope.
7	M_1(S) = (**N' - Z$_{.99}$** * **var(S)**^{½}) / 2	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
	= (**231** - **2.326** * **1255.667**^{½}) / 2	
	= **74.289**	
8	LCL(S) = **-0.074**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
pH (S.U.) at CBL-308I
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **137.96** / **22** = **6.271**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]^2**/**N**) / (**N**-1))^{½} = ((**866.378** - **19032.962**/**22**) / (**22**-1))^{½} = **0.243**	Compute background sd.
3	SCL = $\bar{X}$ ± **F** * **S** = **6.271** ± **4.0** * **0.243** = **5.298**, **7.244**	Compute combined Shewhart-CUSUM normal control interval.
4	N' = **N** * (**N**-1) / 2 = **22** * (**22**-1) / 2 = **231**	Number of sample pairs during trend detection period.
5	S = **0.024**	Sen's estimator of trend.
6	var(S) = **1249.333**	Variance estimate for slope.
7	M_1(S) = (**N' - $Z_{.99}$** * **var(S)**^{½}) / 2 = (**231** - **2.326** * **1249.333**^{½}) / 2 = **74.393**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-0.009**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
pH (S.U.) at CBL-341I
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N**	Compute background mean.
	= **134.16** / **22**	
	= **6.098**	
2	S = ((**sum[X^2]** - **sum[X]^2**/**N**) / (**N**-1))^{½}	Compute background sd.
	= ((**819.348** - **17998.906**/**22**) / (**22**-1))^{½}	
	= **0.241**	
3	SCL = **$\overline{X}$** ± **F** * **S**	Compute combined Shewhart-CUSUM normal control interval.
	= **6.098** ± **4.0** * **0.241**	
	= **5.136**, **7.061**	
4	N' = **N** * (**N**-1) / 2	Number of sample pairs during trend detection period.
	= **22** * (**22**-1) / 2	
	= **231**	
5	S = **0.067**	Sen's estimator of trend.
6	var(S) = **1255.667**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z**$_{.99}$ * **var(S)**^{½}) / 2	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
	= (**231** - **2.326** * **1255.667**^{½}) / 2	
	= **74.289**	
8	LCL(S) = **0.015**	One-sided lower confidence limit for slope.
9	LCL(S) > 0	**Significant increasing trend.**

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Sulfate (mg/L) at CBL-301I
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **7933.0** / **23** = **344.913**	Compute background mean.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))^{½} = ((**2.91x10^6 - 6.29x10^7/23**) / (**23**-1))^{½} = **87.829**	Compute background sd.
3	SCL = **$\bar{X}$** + **F** * **S** = **344.913** + **4.0** * **87.829** = **696.228**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **23** * (**23**-1) / 2 = **253**	Number of sample pairs during trend detection period.
5	S = **8.921**	Sen's estimator of trend.
6	var(S) = **1432.667**	Variance estimate for slope.
7	M_1(S) = (**N' - $Z_{.99}$** * **var(S)**^{½}) / 2 = (**253 - 2.326** * **1432.667**^{½}) / 2 = **82.48**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-3.864**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Sulfate (mg/L) at CBL-302I
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **27333.0** / **22** = **1242.409**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))$^{1/2}$ = ((**3.42**x**10^7** - **7.47**x**10^8**/**22**) / (**22**-1))$^{1/2}$ = **114.243**	Compute background sd.
3	SCL = **$\overline{X}$** + **F** * **S** = **1242.409** + **4.0** * **114.243** = **1699.382**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **22** * (**22**-1) / 2 = **231**	Number of sample pairs during trend detection period.
5	S = **33.641**	Sen's estimator of trend.
6	var(S) = **1253.667**	Variance estimate for slope.
7	M_1(S) = (**N'** - **$Z_{.99}$** * **var(S)**$^{1/2}$) / 2 = (**231** - **2.326** * **1253.667**$^{1/2}$) / 2 = **74.321**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **19.299**	One-sided lower confidence limit for slope.
9	LCL(S) > 0	**Significant increasing trend.**

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Sulfate (mg/L) at CBL-306I
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **7524.0** / **20** = **376.2**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))$^{1/2}$ = ((**3.08x10^6** - **5.66x10^7**/**20**) / (**20**-1))$^{1/2}$ = **113.509**	Compute background sd.
3	SCL = **$\bar{X}$** + **F** * **S** = **376.2** + **4.0** * **113.509** = **830.236**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **20** * (**20**-1) / 2 = **190**	Number of sample pairs during trend detection period.
5	S = **4.631**	Sen's estimator of trend.
6	var(S) = **949.0**	Variance estimate for slope.
7	M_1(S) = (**N'** - **$Z_{.99}$** * **var(S)**$^{1/2}$) / 2 = (**190** - **2.326** * **949.0**$^{1/2}$) / 2 = **59.173**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-23.396**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Sulfate (mg/L) at CBL-308I
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N**	Compute background mean.
	= **29720.0** / **21**	
	= **1415.238**	
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½}	Compute background sd.
	= ((**4.23**x**10^7** - **8.83**x**10^8**/**21**) / (**21**-1))^{½}	
	= **116.431**	
3	SCL = $\overline{\mathbf{X}}$ + **F** * **S**	Compute combined Shewhart-CUSUM normal control limit.
	= **1415.238** + **4.0** * **116.431**	
	= **1880.962**	
4	N' = **N** * (**N**-1) / 2	Number of sample pairs during trend detection period.
	= **21** * (**21**-1) / 2	
	= **210**	
5	S = **-27.593**	Sen's estimator of trend.
6	var(S) = **1092.667**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z**$_{.99}$ * **var(S)**^{½}) / 2	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
	= (**210** - **2.326** * **1092.667**^{½}) / 2	
	= **66.556**	
8	LCL(S) = **-50.059**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Sulfate (mg/L) at CBL-341I
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **7568.0** / **22** = **344.0**	Compute background mean.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{2.63{\times}10^6} - \mathbf{5.73{\times}10^7/22}) / (\mathbf{22}-1))^{1/2}$ = **36.433**	Compute background sd.
3	SCL = $\bar{\mathbf{X}}$ + **F** * **S** = **344.0** + **4.0** * **36.433** = **489.73**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **22** * (**22**-1) / 2 = **231**	Number of sample pairs during trend detection period.
5	S = **-7.766**	Sen's estimator of trend.
6	var(S) = **1255.667**	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N'} - \mathbf{Z}_{.99} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{231} - \mathbf{2.326} * \mathbf{1255.667}^{1/2}) / 2$ = **74.289**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-16.759**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Total Dissolved Solids (mg/L) at CBL-301I
Normal Control Limit

Step	Equation	Description
1	$\overline{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{117920.0} / \mathbf{22}$ $= \mathbf{5360.0}$	Compute background mean.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{½}$ $= ((\mathbf{6.43{\times}10^8} - \mathbf{1.39{\times}10^{10}}/\mathbf{22}) / (\mathbf{22}-1))^{½}$ $= \mathbf{726.616}$	Compute background sd.
3	$SCL = \overline{\mathbf{X}} + \mathbf{F} * \mathbf{S}$ $= \mathbf{5360.0} + \mathbf{4.0} * \mathbf{726.616}$ $= \mathbf{8266.466}$	Compute combined Shewhart-CUSUM normal control limit.
4	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{22} * (\mathbf{22}-1) / 2$ $= \mathbf{231}$	Number of sample pairs during trend detection period.
5	$S = \mathbf{-50.231}$	Sen's estimator of trend.
6	$var(S) = \mathbf{1257.667}$	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N'} - \mathbf{Z_{.99}} * \mathbf{var(S)}^{½}) / 2$ $= (\mathbf{231} - \mathbf{2.326} * \mathbf{1257.667}^{½}) / 2$ $= \mathbf{74.256}$	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	$LCL(S) = \mathbf{-222.523}$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Total Dissolved Solids (mg/L) at CBL-302I
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **115480.0** / **22** = **5249.091**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**6.17**x**10^8** - **1.33**x**10^{10}**/**22**) / (**22**-1))^{½} = **703.203**	Compute background sd.
3	SCL = **$\bar{X}$** + **F** * **S** = **5249.091** + **4.0** * **703.203** = **8061.903**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **22** * (**22**-1) / 2 = **231**	Number of sample pairs during trend detection period.
5	S = **-128.85**	Sen's estimator of trend.
6	var(S) = **1256.667**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z$_{.99}$** * **var(S)**^{½}) / 2 = (**231** - **2.326** * **1256.667**^{½}) / 2 = **74.272**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-261.261**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Total Dissolved Solids (mg/L) at CBL-306I
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **29632.0** / **22** = **1346.909**	Compute background mean.
2	S = ((**sum[X^2] - sum[X]^2**/**N**) / (**N**-1))$^{1/2}$ = ((**4.29**x**10^7** - **8.78**x**10^8**/**22**) / (**22**-1))$^{1/2}$ = **379.055**	Compute background sd.
3	SCL = **$\bar{X}$** + **F** * **S** = **1346.909** + **4.0** * **379.055** = **2863.128**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **22** * (**22**-1) / 2 = **231**	Number of sample pairs during trend detection period.
5	S = **39.851**	Sen's estimator of trend.
6	var(S) = **1254.667**	Variance estimate for slope.
7	M_1(S) = (**N' - $Z_{.99}$** * **var(S)$^{1/2}$**) / 2 = (**231** - **2.326** * **1254.667$^{1/2}$**) / 2 = **74.305**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-41.807**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Total Dissolved Solids (mg/L) at CBL-308I
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **143250.0** / **22** = **6511.364**	Compute background mean.
2	S = ((**sum[X^2] - sum[X]^2**/**N**) / (**N**-1))$^{1/2}$ = ((**9.69x10^8** - **2.05x10^{10}**/**22**) / (**22**-1))$^{1/2}$ = **1311.645**	Compute background sd.
3	SCL = $\bar{X}$ + **F** * **S** = **6511.364** + **4.0** * **1311.645** = **11757.943**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **22** * (**22**-1) / 2 = **231**	Number of sample pairs during trend detection period.
5	S = **-206.604**	Sen's estimator of trend.
6	var(S) = **1256.667**	Variance estimate for slope.
7	M_1(S) = (**N'** - **$Z_{.99}$** * **var(S)**$^{1/2}$) / 2 = (**231** - **2.326** * **1256.667**$^{1/2}$) / 2 = **74.272**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-456.306**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Total Dissolved Solids (mg/L) at CBL-341I
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N**	Compute background mean.
	= **100290.0** / **22**	
	= **4558.636**	
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½}	Compute background sd.
	= ((**4.64**x**10^8** - **1.01**x**10^{10}**/**22**) / (**22**-1))^{½}	
	= **563.038**	
3	SCL = **$\overline{X}$** + **F** * **S**	Compute combined Shewhart-CUSUM normal control limit.
	= **4558.636** + **4.0** * **563.038**	
	= **6810.79**	
4	N' = **N** * (**N**-1) / 2	Number of sample pairs during trend detection period.
	= **22** * (**22**-1) / 2	
	= **231**	
5	S = **-106.829**	Sen's estimator of trend.
6	var(S) = **1256.667**	Variance estimate for slope.
7	M_1(S) = (**N' - $Z_{.99}$** * **var(S)**^{½}) / 2	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
	= (**231** - **2.326** * **1256.667**^{½}) / 2	
	= **74.272**	
8	LCL(S) = **-260.149**	One-sided lower confidence limit for slope.

Table 2

Analytical Data and CUSUM Summary

Constituent	Units	Well	Date	Background	Result		Outlier	CUSUM	Adjusted	
Boron, Total	mg/L	CBL-301I	01/21/2016	yes	0.0500	ND				
Boron, Total	mg/L	CBL-301I	05/04/2016	yes	0.0500	ND				
Boron, Total	mg/L	CBL-301I	07/27/2016	yes	0.0500	ND				
Boron, Total	mg/L	CBL-301I	10/24/2016	yes	0.0500	ND				
Boron, Total	mg/L	CBL-301I	01/23/2017	yes	0.0500	ND				
Boron, Total	mg/L	CBL-301I	03/22/2017	yes	0.0500	ND				
Boron, Total	mg/L	CBL-301I	05/18/2017	yes	0.0707					
Boron, Total	mg/L	CBL-301I	07/26/2017	yes	0.0500	ND				
Boron, Total	mg/L	CBL-301I	02/08/2018	yes	0.0500	ND				
Boron, Total	mg/L	CBL-301I	07/25/2018	yes	0.0500	ND				
Boron, Total	mg/L	CBL-301I	01/17/2019	yes	0.0500	ND				
Boron, Total	mg/L	CBL-301I	05/02/2019	yes	0.0500	ND				
Boron, Total	mg/L	CBL-301I	07/31/2019	yes	0.0500	ND				
Boron, Total	mg/L	CBL-301I	01/28/2020	yes	0.0500	ND				
Boron, Total	mg/L	CBL-301I	09/17/2020	yes	0.0801					
Boron, Total	mg/L	CBL-301I	01/26/2021	yes	0.0500	ND				
Boron, Total	mg/L	CBL-301I	07/20/2021	yes	0.0826					
Boron, Total	mg/L	CBL-301I	09/07/2021	yes	0.0500	ND				
Boron, Total	mg/L	CBL-301I	01/26/2022	yes	0.0500	ND				
Boron, Total	mg/L	CBL-301I	07/27/2022	yes	0.0850					
Boron, Total	mg/L	CBL-301I	08/30/2022	yes	0.1070					
Boron, Total	mg/L	CBL-301I	10/25/2022	yes	0.0645					
Boron, Total	mg/L	CBL-301I	01/25/2023	yes	0.1080					
Boron, Total	mg/L	CBL-301I	03/07/2023	yes	0.1020					
Boron, Total	mg/L	CBL-301I	08/02/2023	yes	0.0500	ND				
Boron, Total	mg/L	CBL-301I	01/29/2024	yes	0.1070					
Boron, Total	mg/L	CBL-301I	07/23/2024	yes	0.0820					
Boron, Total	mg/L	CBL-301I	01/27/2025		0.1060			0.0900		
Boron, Total	mg/L	CBL-302I	01/22/2016	yes	0.0500	ND				
Boron, Total	mg/L	CBL-302I	05/04/2016	yes	0.0500	ND				
Boron, Total	mg/L	CBL-302I	07/27/2016	yes	0.0500	ND				
Boron, Total	mg/L	CBL-302I	10/24/2016	yes	0.1560					
Boron, Total	mg/L	CBL-302I	01/23/2017	yes	0.0500	ND				
Boron, Total	mg/L	CBL-302I	03/22/2017	yes	0.2970					
Boron, Total	mg/L	CBL-302I	05/16/2017	yes	0.0500	ND				
Boron, Total	mg/L	CBL-302I	07/27/2017	yes	0.0500	ND				
Boron, Total	mg/L	CBL-302I	02/08/2018	yes	0.0500	ND				
Boron, Total	mg/L	CBL-302I	07/27/2018	yes	0.0500	ND				
Boron, Total	mg/L	CBL-302I	01/22/2019	yes	0.0500	ND				
Boron, Total	mg/L	CBL-302I	07/31/2019	yes	0.0500	ND				
Boron, Total	mg/L	CBL-302I	01/30/2020	yes	0.0500	ND				
Boron, Total	mg/L	CBL-302I	09/17/2020	yes	0.0500	ND				
Boron, Total	mg/L	CBL-302I	01/28/2021	yes	0.0500	ND				
Boron, Total	mg/L	CBL-302I	07/21/2021	yes	0.0743					
Boron, Total	mg/L	CBL-302I	01/27/2022	yes	0.0500	ND				
Boron, Total	mg/L	CBL-302I	07/28/2022	yes	0.0500	ND				
Boron, Total	mg/L	CBL-302I	01/26/2023	yes	0.1160					
Boron, Total	mg/L	CBL-302I	07/18/2023	yes	0.0500	ND				
Boron, Total	mg/L	CBL-302I	01/29/2024	yes	0.1600					
Boron, Total	mg/L	CBL-302I	04/05/2024	yes	0.1630					

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Table 2

Analytical Data and CUSUM Summary

Constituent	Units	Well	Date	Background	Result		Outlier	CUSUM	Adjusted	
Boron, Total	mg/L	CBL-302I	07/22/2024	yes	0.1370					
Boron, Total	mg/L	CBL-302I	01/27/2025		0.2100			0.1634		
Boron, Total	mg/L	CBL-306I	01/21/2016	yes	0.0500	ND				
Boron, Total	mg/L	CBL-306I	05/04/2016	yes	0.0717					
Boron, Total	mg/L	CBL-306I	07/26/2016	yes	0.0998					
Boron, Total	mg/L	CBL-306I	10/24/2016	yes	0.0556					
Boron, Total	mg/L	CBL-306I	01/19/2017	yes	0.0500	ND				
Boron, Total	mg/L	CBL-306I	03/22/2017	yes	0.1240					
Boron, Total	mg/L	CBL-306I	05/18/2017	yes	0.0832					
Boron, Total	mg/L	CBL-306I	07/27/2017	yes	0.0531					
Boron, Total	mg/L	CBL-306I	02/08/2018	yes	0.0500	ND				
Boron, Total	mg/L	CBL-306I	07/27/2018	yes	0.0500	ND				
Boron, Total	mg/L	CBL-306I	01/16/2019	yes	0.0500	ND				
Boron, Total	mg/L	CBL-306I	07/31/2019	yes	0.0824		yes			*
Boron, Total	mg/L	CBL-306I	08/23/2019	yes	0.0500					
Boron, Total	mg/L	CBL-306I	01/29/2020	yes	0.0500	ND				
Boron, Total	mg/L	CBL-306I	09/19/2020	yes	0.0773					
Boron, Total	mg/L	CBL-306I	01/28/2021	yes	0.0500	ND				
Boron, Total	mg/L	CBL-306I	07/21/2021	yes	0.0927					
Boron, Total	mg/L	CBL-306I	01/27/2022	yes	0.0548					
Boron, Total	mg/L	CBL-306I	07/28/2022	yes	0.1100					
Boron, Total	mg/L	CBL-306I	01/26/2023	yes	0.0973					
Boron, Total	mg/L	CBL-306I	07/18/2023	yes	0.0659					
Boron, Total	mg/L	CBL-306I	01/29/2024	yes	0.1330					
Boron, Total	mg/L	CBL-306I	07/23/2024	yes	0.1340					
Boron, Total	mg/L	CBL-306I	01/27/2025		0.1600			0.1378		
Boron, Total	mg/L	CBL-308I	01/22/2016	yes	0.0500	ND				
Boron, Total	mg/L	CBL-308I	05/04/2016	yes	0.1210					
Boron, Total	mg/L	CBL-308I	07/26/2016	yes	0.1860					
Boron, Total	mg/L	CBL-308I	10/24/2016	yes	0.2560					
Boron, Total	mg/L	CBL-308I	01/19/2017	yes	0.0500	ND				
Boron, Total	mg/L	CBL-308I	03/22/2017	yes	0.5450					
Boron, Total	mg/L	CBL-308I	05/16/2017	yes	0.1090					
Boron, Total	mg/L	CBL-308I	07/26/2017	yes	0.0799					
Boron, Total	mg/L	CBL-308I	02/06/2018	yes	0.0500	ND				
Boron, Total	mg/L	CBL-308I	07/25/2018	yes	0.0500	ND				
Boron, Total	mg/L	CBL-308I	01/18/2019	yes	0.0500	ND				
Boron, Total	mg/L	CBL-308I	07/31/2019	yes	0.0500	ND				
Boron, Total	mg/L	CBL-308I	01/29/2020	yes	0.0500	ND				
Boron, Total	mg/L	CBL-308I	09/18/2020	yes	0.1030					
Boron, Total	mg/L	CBL-308I	01/28/2021	yes	0.0500	ND				
Boron, Total	mg/L	CBL-308I	07/21/2021	yes	0.1300					
Boron, Total	mg/L	CBL-308I	01/27/2022	yes	0.0500	ND				
Boron, Total	mg/L	CBL-308I	07/27/2022	yes	0.0790					
Boron, Total	mg/L	CBL-308I	01/26/2023	yes	0.1430					
Boron, Total	mg/L	CBL-308I	07/18/2023	yes	0.0500	ND				
Boron, Total	mg/L	CBL-308I	01/30/2024	yes	0.1500					
Boron, Total	mg/L	CBL-308I	07/22/2024	yes	0.1390					
Boron, Total	mg/L	CBL-308I	01/27/2025		0.1630			0.1155		
Boron, Total	mg/L	CBL-341I	01/23/2017	yes	0.0500	ND				

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**** - ND value replaced with manual RL.
ND = Not detected, Result = detection limit.

Table 2

Analytical Data and CUSUM Summary

Constituent	Units	Well	Date	Background	Result		Outlier	CUSUM	Adjusted	
Boron, Total	mg/L	CBL-341I	02/23/2017	yes	0.0500	ND				
Boron, Total	mg/L	CBL-341I	03/22/2017	yes	0.0500	ND				
Boron, Total	mg/L	CBL-341I	04/20/2017	yes	0.0587					
Boron, Total	mg/L	CBL-341I	05/16/2017	yes	0.0896					
Boron, Total	mg/L	CBL-341I	06/20/2017	yes	0.0668					
Boron, Total	mg/L	CBL-341I	07/27/2017	yes	0.0507					
Boron, Total	mg/L	CBL-341I	09/11/2017	yes	0.0500	ND				
Boron, Total	mg/L	CBL-341I	02/08/2018	yes	0.0500	ND				
Boron, Total	mg/L	CBL-341I	08/24/2018	yes	0.0500	ND				
Boron, Total	mg/L	CBL-341I	01/22/2019	yes	0.0500	ND				
Boron, Total	mg/L	CBL-341I	07/31/2019	yes	0.0500	ND				
Boron, Total	mg/L	CBL-341I	01/30/2020	yes	0.0500	ND				
Boron, Total	mg/L	CBL-341I	09/17/2020	yes	0.1020					
Boron, Total	mg/L	CBL-341I	01/27/2021	yes	0.0500	ND				
Boron, Total	mg/L	CBL-341I	07/22/2021	yes	0.1110					
Boron, Total	mg/L	CBL-341I	01/27/2022	yes	0.0500	ND				
Boron, Total	mg/L	CBL-341I	07/28/2022	yes	0.1150					
Boron, Total	mg/L	CBL-341I	01/26/2023	yes	0.1340					
Boron, Total	mg/L	CBL-341I	07/19/2023	yes	0.0760					
Boron, Total	mg/L	CBL-341I	01/29/2024	yes	0.1330					
Boron, Total	mg/L	CBL-341I	07/22/2024	yes	0.1190					
Boron, Total	mg/L	CBL-341I	10/01/2024	yes	0.1360					
Boron, Total	mg/L	CBL-341I	01/28/2025		0.1380			0.1132		
Calcium, Total	mg/L	CBL-301I	01/21/2016	yes	905.0000					
Calcium, Total	mg/L	CBL-301I	05/04/2016	yes	949.0000					
Calcium, Total	mg/L	CBL-301I	07/27/2016	yes	925.0000					
Calcium, Total	mg/L	CBL-301I	10/24/2016	yes	978.0000					
Calcium, Total	mg/L	CBL-301I	01/23/2017	yes	1000.0000					
Calcium, Total	mg/L	CBL-301I	03/22/2017	yes	1030.0000					
Calcium, Total	mg/L	CBL-301I	05/18/2017	yes	1060.0000					
Calcium, Total	mg/L	CBL-301I	07/26/2017	yes	961.0000					
Calcium, Total	mg/L	CBL-301I	02/08/2018	yes	873.0000					
Calcium, Total	mg/L	CBL-301I	07/25/2018	yes	993.0000					
Calcium, Total	mg/L	CBL-301I	01/17/2019	yes	156.0000		yes			*
Calcium, Total	mg/L	CBL-301I	05/02/2019	yes	762.0000					
Calcium, Total	mg/L	CBL-301I	07/31/2019	yes	783.0000					
Calcium, Total	mg/L	CBL-301I	01/28/2020	yes	851.0000					
Calcium, Total	mg/L	CBL-301I	09/17/2020	yes	1060.0000					
Calcium, Total	mg/L	CBL-301I	01/26/2021	yes	1130.0000					
Calcium, Total	mg/L	CBL-301I	07/20/2021	yes	1100.0000					
Calcium, Total	mg/L	CBL-301I	01/26/2022	yes	999.0000					
Calcium, Total	mg/L	CBL-301I	07/27/2022	yes	1010.0000					
Calcium, Total	mg/L	CBL-301I	01/25/2023	yes	977.0000					
Calcium, Total	mg/L	CBL-301I	08/02/2023	yes	1260.0000					
Calcium, Total	mg/L	CBL-301I	01/29/2024	yes	1050.0000					
Calcium, Total	mg/L	CBL-301I	07/23/2024	yes	912.0000					
Calcium, Total	mg/L	CBL-301I	01/27/2025		907.0000			980.3636		
Calcium, Total	mg/L	CBL-302I	01/22/2016	yes	1030.0000					
Calcium, Total	mg/L	CBL-302I	05/04/2016	yes	1010.0000					
Calcium, Total	mg/L	CBL-302I	07/27/2016	yes	1030.0000					

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Table 2

Analytical Data and CUSUM Summary

Constituent	Units	Well	Date	Background	Result		Outlier	CUSUM	Adjusted	
Calcium, Total	mg/L	CBL-302I	10/24/2016	yes	1070.0000					
Calcium, Total	mg/L	CBL-302I	01/23/2017	yes	1100.0000					
Calcium, Total	mg/L	CBL-302I	03/22/2017	yes	1090.0000					
Calcium, Total	mg/L	CBL-302I	05/16/2017	yes	1100.0000					
Calcium, Total	mg/L	CBL-302I	07/27/2017	yes	1040.0000					
Calcium, Total	mg/L	CBL-302I	02/08/2018	yes	934.0000					
Calcium, Total	mg/L	CBL-302I	07/27/2018	yes	995.0000					
Calcium, Total	mg/L	CBL-302I	01/22/2019	yes	855.0000					
Calcium, Total	mg/L	CBL-302I	07/31/2019	yes	914.0000					
Calcium, Total	mg/L	CBL-302I	01/30/2020	yes	838.0000					
Calcium, Total	mg/L	CBL-302I	09/17/2020	yes	853.0000					
Calcium, Total	mg/L	CBL-302I	01/28/2021	yes	1020.0000					
Calcium, Total	mg/L	CBL-302I	07/21/2021	yes	844.0000					
Calcium, Total	mg/L	CBL-302I	01/27/2022	yes	754.0000					
Calcium, Total	mg/L	CBL-302I	07/28/2022	yes	750.0000					
Calcium, Total	mg/L	CBL-302I	01/26/2023	yes	889.0000					
Calcium, Total	mg/L	CBL-302I	07/18/2023	yes	981.0000					
Calcium, Total	mg/L	CBL-302I	01/29/2024	yes	937.0000					
Calcium, Total	mg/L	CBL-302I	07/22/2024	yes	845.0000					
Calcium, Total	mg/L	CBL-302I	01/27/2025		878.0000			949.0455		
Calcium, Total	mg/L	CBL-306I	01/21/2016	yes	137.0000					
Calcium, Total	mg/L	CBL-306I	05/04/2016	yes	47.2000		yes			*
Calcium, Total	mg/L	CBL-306I	07/26/2016	yes	105.0000		yes			*
Calcium, Total	mg/L	CBL-306I	10/24/2016	yes	198.0000					
Calcium, Total	mg/L	CBL-306I	01/19/2017	yes	174.0000					
Calcium, Total	mg/L	CBL-306I	03/22/2017	yes	204.0000					
Calcium, Total	mg/L	CBL-306I	05/18/2017	yes	205.0000					
Calcium, Total	mg/L	CBL-306I	07/27/2017	yes	234.0000					
Calcium, Total	mg/L	CBL-306I	02/08/2018	yes	230.0000					
Calcium, Total	mg/L	CBL-306I	07/27/2018	yes	275.0000					
Calcium, Total	mg/L	CBL-306I	01/16/2019	yes	180.0000					
Calcium, Total	mg/L	CBL-306I	07/31/2019	yes	106.0000		yes			*
Calcium, Total	mg/L	CBL-306I	08/23/2019	yes	226.0000					
Calcium, Total	mg/L	CBL-306I	01/29/2020	yes	247.0000					
Calcium, Total	mg/L	CBL-306I	09/19/2020	yes	260.0000					
Calcium, Total	mg/L	CBL-306I	01/28/2021	yes	257.0000					
Calcium, Total	mg/L	CBL-306I	07/21/2021	yes	216.0000					
Calcium, Total	mg/L	CBL-306I	01/27/2022	yes	212.0000					
Calcium, Total	mg/L	CBL-306I	07/28/2022	yes	182.0000					
Calcium, Total	mg/L	CBL-306I	01/26/2023	yes	149.0000					
Calcium, Total	mg/L	CBL-306I	07/18/2023	yes	260.0000					
Calcium, Total	mg/L	CBL-306I	01/29/2024	yes	186.0000					
Calcium, Total	mg/L	CBL-306I	07/23/2024	yes	115.0000					
Calcium, Total	mg/L	CBL-306I	01/27/2025		206.0000			207.3500		
Calcium, Total	mg/L	CBL-308I	01/22/2016	yes	903.0000					
Calcium, Total	mg/L	CBL-308I	05/04/2016	yes	870.0000					
Calcium, Total	mg/L	CBL-308I	07/26/2016	yes	911.0000					
Calcium, Total	mg/L	CBL-308I	10/24/2016	yes	939.0000					
Calcium, Total	mg/L	CBL-308I	01/19/2017	yes	919.0000					
Calcium, Total	mg/L	CBL-308I	03/22/2017	yes	947.0000					

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Table 2

Analytical Data and CUSUM Summary

Constituent	Units	Well	Date	Background	Result		Outlier	CUSUM	Adjusted	
Calcium, Total	mg/L	CBL-308I	05/16/2017	yes	954.0000					
Calcium, Total	mg/L	CBL-308I	07/26/2017	yes	878.0000					
Calcium, Total	mg/L	CBL-308I	02/06/2018	yes	859.0000					
Calcium, Total	mg/L	CBL-308I	07/25/2018	yes	863.0000					
Calcium, Total	mg/L	CBL-308I	01/18/2019	yes	760.0000					
Calcium, Total	mg/L	CBL-308I	07/31/2019	yes	840.0000					
Calcium, Total	mg/L	CBL-308I	01/29/2020	yes	745.0000					
Calcium, Total	mg/L	CBL-308I	09/18/2020	yes	838.0000					
Calcium, Total	mg/L	CBL-308I	01/28/2021	yes	830.0000					
Calcium, Total	mg/L	CBL-308I	07/21/2021	yes	684.0000					
Calcium, Total	mg/L	CBL-308I	01/27/2022	yes	974.0000					
Calcium, Total	mg/L	CBL-308I	07/27/2022	yes	736.0000					
Calcium, Total	mg/L	CBL-308I	01/26/2023	yes	732.0000					
Calcium, Total	mg/L	CBL-308I	07/18/2023	yes	642.0000					
Calcium, Total	mg/L	CBL-308I	01/30/2024	yes	714.0000					
Calcium, Total	mg/L	CBL-308I	07/22/2024	yes	683.0000					
Calcium, Total	mg/L	CBL-308I	01/27/2025		698.0000			828.2273		
Calcium, Total	mg/L	CBL-341I	01/23/2017	yes	854.0000					
Calcium, Total	mg/L	CBL-341I	02/23/2017	yes	870.0000					
Calcium, Total	mg/L	CBL-341I	03/22/2017	yes	906.0000					
Calcium, Total	mg/L	CBL-341I	04/20/2017	yes	898.0000					
Calcium, Total	mg/L	CBL-341I	05/16/2017	yes	860.0000					
Calcium, Total	mg/L	CBL-341I	06/20/2017	yes	950.0000					
Calcium, Total	mg/L	CBL-341I	07/27/2017	yes	829.0000					
Calcium, Total	mg/L	CBL-341I	09/11/2017	yes	848.0000					
Calcium, Total	mg/L	CBL-341I	02/08/2018	yes	810.0000					
Calcium, Total	mg/L	CBL-341I	08/24/2018	yes	824.0000					
Calcium, Total	mg/L	CBL-341I	01/22/2019	yes	782.0000					
Calcium, Total	mg/L	CBL-341I	07/31/2019	yes	714.0000					
Calcium, Total	mg/L	CBL-341I	01/30/2020	yes	767.0000					
Calcium, Total	mg/L	CBL-341I	09/17/2020	yes	814.0000					
Calcium, Total	mg/L	CBL-341I	01/27/2021	yes	874.0000					
Calcium, Total	mg/L	CBL-341I	07/22/2021	yes	852.0000					
Calcium, Total	mg/L	CBL-341I	01/27/2022	yes	1040.0000					
Calcium, Total	mg/L	CBL-341I	07/28/2022	yes	704.0000					
Calcium, Total	mg/L	CBL-341I	01/26/2023	yes	797.0000					
Calcium, Total	mg/L	CBL-341I	07/19/2023	yes	710.0000					
Calcium, Total	mg/L	CBL-341I	01/29/2024	yes	875.0000					
Calcium, Total	mg/L	CBL-341I	07/22/2024	yes	801.0000					
Calcium, Total	mg/L	CBL-341I	01/28/2025		778.0000			835.4091		
Chloride	mg/L	CBL-301I	01/21/2016	yes	2300.0000					
Chloride	mg/L	CBL-301I	05/04/2016	yes	2160.0000					
Chloride	mg/L	CBL-301I	07/27/2016	yes	2290.0000					
Chloride	mg/L	CBL-301I	10/24/2016	yes	2250.0000					
Chloride	mg/L	CBL-301I	01/23/2017	yes	3200.0000					
Chloride	mg/L	CBL-301I	03/22/2017	yes	2390.0000					
Chloride	mg/L	CBL-301I	05/18/2017	yes	2420.0000					
Chloride	mg/L	CBL-301I	07/26/2017	yes	2500.0000					
Chloride	mg/L	CBL-301I	02/08/2018	yes	2480.0000					
Chloride	mg/L	CBL-301I	07/25/2018	yes	1330.0000					

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Table 2

Analytical Data and CUSUM Summary

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Chloride	mg/L	CBL-301I	01/17/2019	yes	619.0000		yes			*
Chloride	mg/L	CBL-301I	05/02/2019	yes	1910.0000					
Chloride	mg/L	CBL-301I	07/31/2019	yes	2240.0000					
Chloride	mg/L	CBL-301I	01/28/2020	yes	2360.0000					
Chloride	mg/L	CBL-301I	09/17/2020	yes	2270.0000					
Chloride	mg/L	CBL-301I	01/26/2021	yes	2420.0000					
Chloride	mg/L	CBL-301I	07/20/2021	yes	2590.0000					
Chloride	mg/L	CBL-301I	01/26/2022	yes	2440.0000					
Chloride	mg/L	CBL-301I	07/27/2022	yes	1840.0000					
Chloride	mg/L	CBL-301I	01/25/2023	yes	1960.0000					
Chloride	mg/L	CBL-301I	08/02/2023	yes	2220.0000					
Chloride	mg/L	CBL-301I	01/29/2024	yes	2270.0000					
Chloride	mg/L	CBL-301I	07/23/2024	yes	2350.0000					
Chloride	mg/L	CBL-301I	01/27/2025		2270.0000			2281.3636		
Chloride	mg/L	CBL-302I	01/22/2016	yes	2190.0000					
Chloride	mg/L	CBL-302I	05/04/2016	yes	2130.0000					
Chloride	mg/L	CBL-302I	07/27/2016	yes	2210.0000					
Chloride	mg/L	CBL-302I	10/24/2016	yes	2170.0000					
Chloride	mg/L	CBL-302I	01/23/2017	yes	2080.0000					
Chloride	mg/L	CBL-302I	03/22/2017	yes	2050.0000					
Chloride	mg/L	CBL-302I	05/16/2017	yes	2230.0000					
Chloride	mg/L	CBL-302I	07/27/2017	yes	2040.0000					
Chloride	mg/L	CBL-302I	02/08/2018	yes	2080.0000					
Chloride	mg/L	CBL-302I	07/27/2018	yes	1980.0000					
Chloride	mg/L	CBL-302I	01/22/2019	yes	1960.0000					
Chloride	mg/L	CBL-302I	07/31/2019	yes	1540.0000					
Chloride	mg/L	CBL-302I	01/30/2020	yes	1540.0000					
Chloride	mg/L	CBL-302I	09/17/2020	yes	1410.0000					
Chloride	mg/L	CBL-302I	01/28/2021	yes	1370.0000					
Chloride	mg/L	CBL-302I	07/21/2021	yes	1380.0000					
Chloride	mg/L	CBL-302I	01/27/2022	yes	1310.0000					
Chloride	mg/L	CBL-302I	07/28/2022	yes	1300.0000					
Chloride	mg/L	CBL-302I	01/26/2023	yes	1460.0000					
Chloride	mg/L	CBL-302I	07/18/2023	yes	1330.0000					
Chloride	mg/L	CBL-302I	01/29/2024	yes	1440.0000					
Chloride	mg/L	CBL-302I	07/22/2024	yes	1650.0000					
Chloride	mg/L	CBL-302I	01/27/2025		1730.0000			1765.9091		
Chloride	mg/L	CBL-306I	01/21/2016	yes	155.0000					
Chloride	mg/L	CBL-306I	05/04/2016	yes	20.0000		yes			*
Chloride	mg/L	CBL-306I	07/26/2016	yes	114.0000		yes			*
Chloride	mg/L	CBL-306I	10/24/2016	yes	330.0000					
Chloride	mg/L	CBL-306I	01/19/2017	yes	197.0000					
Chloride	mg/L	CBL-306I	03/22/2017	yes	231.0000					
Chloride	mg/L	CBL-306I	05/18/2017	yes	289.0000					
Chloride	mg/L	CBL-306I	07/27/2017	yes	350.0000					
Chloride	mg/L	CBL-306I	02/08/2018	yes	385.0000					
Chloride	mg/L	CBL-306I	07/27/2018	yes	283.0000					
Chloride	mg/L	CBL-306I	01/16/2019	yes	215.0000					
Chloride	mg/L	CBL-306I	07/31/2019	yes	538.0000		yes			*
Chloride	mg/L	CBL-306I	08/23/2019	yes	318.0000					

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Chloride	mg/L	CBL-306I	01/29/2020	yes	445.0000					
Chloride	mg/L	CBL-306I	09/19/2020	yes	420.0000					
Chloride	mg/L	CBL-306I	01/28/2021	yes	292.0000					
Chloride	mg/L	CBL-306I	07/21/2021	yes	255.0000					
Chloride	mg/L	CBL-306I	01/27/2022	yes	384.0000					
Chloride	mg/L	CBL-306I	07/28/2022	yes	261.0000					
Chloride	mg/L	CBL-306I	01/26/2023	yes	148.0000					
Chloride	mg/L	CBL-306I	07/18/2023	yes	336.0000					
Chloride	mg/L	CBL-306I	01/29/2024	yes	153.0000					
Chloride	mg/L	CBL-306I	07/23/2024	yes	10.2000		yes			*
Chloride	mg/L	CBL-306I	01/27/2025		286.0000			286.6842		
Chloride	mg/L	CBL-308I	01/22/2016	yes	2760.0000					
Chloride	mg/L	CBL-308I	05/04/2016	yes	2580.0000					
Chloride	mg/L	CBL-308I	07/26/2016	yes	2680.0000					
Chloride	mg/L	CBL-308I	10/24/2016	yes	2870.0000					
Chloride	mg/L	CBL-308I	01/19/2017	yes	2360.0000					
Chloride	mg/L	CBL-308I	03/22/2017	yes	2530.0000					
Chloride	mg/L	CBL-308I	05/16/2017	yes	2740.0000					
Chloride	mg/L	CBL-308I	07/26/2017	yes	2760.0000					
Chloride	mg/L	CBL-308I	02/06/2018	yes	2750.0000					
Chloride	mg/L	CBL-308I	07/25/2018	yes	2680.0000					
Chloride	mg/L	CBL-308I	01/18/2019	yes	2240.0000					
Chloride	mg/L	CBL-308I	07/31/2019	yes	2290.0000					
Chloride	mg/L	CBL-308I	01/29/2020	yes	2110.0000					
Chloride	mg/L	CBL-308I	09/18/2020	yes	2410.0000					
Chloride	mg/L	CBL-308I	01/28/2021	yes	2200.0000					
Chloride	mg/L	CBL-308I	07/21/2021	yes	1780.0000					
Chloride	mg/L	CBL-308I	01/27/2022	yes	2020.0000					
Chloride	mg/L	CBL-308I	07/27/2022	yes	2470.0000					
Chloride	mg/L	CBL-308I	01/26/2023	yes	2570.0000					
Chloride	mg/L	CBL-308I	07/18/2023	yes	1840.0000					
Chloride	mg/L	CBL-308I	01/30/2024	yes	1790.0000					
Chloride	mg/L	CBL-308I	07/22/2024	yes	2250.0000					
Chloride	mg/L	CBL-308I	01/27/2025		2190.0000			2394.5455		
Chloride	mg/L	CBL-341I	01/23/2017	yes	1600.0000					
Chloride	mg/L	CBL-341I	02/23/2017	yes	2000.0000					
Chloride	mg/L	CBL-341I	03/22/2017	yes	1780.0000					
Chloride	mg/L	CBL-341I	04/20/2017	yes	1770.0000					
Chloride	mg/L	CBL-341I	05/16/2017	yes	1900.0000					
Chloride	mg/L	CBL-341I	06/20/2017	yes	1820.0000					
Chloride	mg/L	CBL-341I	07/27/2017	yes	1970.0000					
Chloride	mg/L	CBL-341I	09/11/2017	yes	1710.0000					
Chloride	mg/L	CBL-341I	02/08/2018	yes	2110.0000					
Chloride	mg/L	CBL-341I	08/24/2018	yes	1910.0000					
Chloride	mg/L	CBL-341I	01/22/2019	yes	1790.0000					
Chloride	mg/L	CBL-341I	07/31/2019	yes	1650.0000					
Chloride	mg/L	CBL-341I	01/30/2020	yes	1780.0000					
Chloride	mg/L	CBL-341I	09/17/2020	yes	1700.0000					
Chloride	mg/L	CBL-341I	01/27/2021	yes	1800.0000					
Chloride	mg/L	CBL-341I	07/22/2021	yes	1750.0000					

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Chloride	mg/L	CBL-341I	01/27/2022	yes	1810.0000					
Chloride	mg/L	CBL-341I	07/28/2022	yes	1690.0000					
Chloride	mg/L	CBL-341I	01/26/2023	yes	1660.0000					
Chloride	mg/L	CBL-341I	07/19/2023	yes	1530.0000					
Chloride	mg/L	CBL-341I	01/29/2024	yes	1700.0000					
Chloride	mg/L	CBL-341I	07/22/2024	yes	1960.0000					
Chloride	mg/L	CBL-341I	01/28/2025		1780.0000			1790.4545		
Fluoride	mg/L	CBL-301I	01/21/2016	yes	0.2500	ND			0.5000	***
Fluoride	mg/L	CBL-301I	05/04/2016	yes	0.5000	ND				
Fluoride	mg/L	CBL-301I	07/27/2016	yes	0.5000	ND				
Fluoride	mg/L	CBL-301I	10/24/2016	yes	0.2500	ND			0.5000	***
Fluoride	mg/L	CBL-301I	01/23/2017	yes	0.3120					
Fluoride	mg/L	CBL-301I	03/22/2017	yes	0.5000	ND				
Fluoride	mg/L	CBL-301I	05/18/2017	yes	0.5000	ND				
Fluoride	mg/L	CBL-301I	07/26/2017	yes	0.5000	ND				
Fluoride	mg/L	CBL-301I	02/08/2018	yes	0.5000	ND				
Fluoride	mg/L	CBL-301I	07/25/2018	yes	0.5000	ND				
Fluoride	mg/L	CBL-301I	01/17/2019	yes	0.2190					
Fluoride	mg/L	CBL-301I	05/02/2019	yes	0.1120					
Fluoride	mg/L	CBL-301I	07/31/2019	yes	0.0510					
Fluoride	mg/L	CBL-301I	01/28/2020	yes	0.1300					
Fluoride	mg/L	CBL-301I	09/17/2020	yes	0.2500	ND			0.5000	***
Fluoride	mg/L	CBL-301I	01/26/2021	yes	0.5000	ND				
Fluoride	mg/L	CBL-301I	07/20/2021	yes	2.6800					
Fluoride	mg/L	CBL-301I	09/07/2021	yes	0.5000	ND				
Fluoride	mg/L	CBL-301I	01/26/2022	yes	0.0500	ND			0.5000	***
Fluoride	mg/L	CBL-301I	07/27/2022	yes	0.1560					
Fluoride	mg/L	CBL-301I	01/25/2023	yes	1.7200					
Fluoride	mg/L	CBL-301I	03/07/2023	yes	0.0500	ND			0.5000	***
Fluoride	mg/L	CBL-301I	08/02/2023	yes	0.0540					
Fluoride	mg/L	CBL-301I	01/29/2024	yes	0.1000	ND			0.5000	***
Fluoride	mg/L	CBL-301I	07/23/2024	yes	0.1000	ND			0.5000	***
Fluoride	mg/L	CBL-301I	01/27/2025		0.1000	ND		0.5374		
Fluoride	mg/L	CBL-302I	01/22/2016	yes	0.2500	ND			0.5000	***
Fluoride	mg/L	CBL-302I	05/04/2016	yes	0.5000	ND				
Fluoride	mg/L	CBL-302I	07/27/2016	yes	0.5000	ND				
Fluoride	mg/L	CBL-302I	10/24/2016	yes	0.2500	ND			0.5000	***
Fluoride	mg/L	CBL-302I	01/23/2017	yes	0.3320					
Fluoride	mg/L	CBL-302I	03/22/2017	yes	0.5000	ND				
Fluoride	mg/L	CBL-302I	05/16/2017	yes	0.5000	ND				
Fluoride	mg/L	CBL-302I	07/27/2017	yes	0.5000	ND				
Fluoride	mg/L	CBL-302I	02/08/2018	yes	0.1120					
Fluoride	mg/L	CBL-302I	07/27/2018	yes	0.5000	ND				
Fluoride	mg/L	CBL-302I	01/22/2019	yes	0.0402					
Fluoride	mg/L	CBL-302I	07/31/2019	yes	0.0605					
Fluoride	mg/L	CBL-302I	01/30/2020	yes	0.1930					
Fluoride	mg/L	CBL-302I	09/17/2020	yes	0.2500	ND			0.5000	***
Fluoride	mg/L	CBL-302I	01/28/2021	yes	0.5000	ND				
Fluoride	mg/L	CBL-302I	07/21/2021	yes	2.2500					
Fluoride	mg/L	CBL-302I	09/07/2021	yes	0.2500	ND			0.5000	***

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Table 2

Analytical Data and CUSUM Summary

Constituent	Units	Well	Date	Background	Result		Outlier	CUSUM	Adjusted	
Fluoride	mg/L	CBL-302I	01/27/2022	yes	0.0500	ND			0.5000	***
Fluoride	mg/L	CBL-302I	07/28/2022	yes	0.1650					
Fluoride	mg/L	CBL-302I	01/26/2023	yes	0.5000	ND				
Fluoride	mg/L	CBL-302I	07/18/2023	yes	1.7600					
Fluoride	mg/L	CBL-302I	01/29/2024	yes	0.1000	ND			0.5000	***
Fluoride	mg/L	CBL-302I	07/22/2024	yes	0.1010					
Fluoride	mg/L	CBL-302I	01/27/2025		0.1710			0.5223		
Fluoride	mg/L	CBL-306I	01/21/2016	yes	2.5000					
Fluoride	mg/L	CBL-306I	05/04/2016	yes	1.0000					
Fluoride	mg/L	CBL-306I	07/26/2016	yes	1.3700					
Fluoride	mg/L	CBL-306I	10/24/2016	yes	2.3800					
Fluoride	mg/L	CBL-306I	01/19/2017	yes	1.8500					
Fluoride	mg/L	CBL-306I	03/22/2017	yes	12.6000		yes			*
Fluoride	mg/L	CBL-306I	05/18/2017	yes	2.2000					
Fluoride	mg/L	CBL-306I	07/27/2017	yes	2.9100					
Fluoride	mg/L	CBL-306I	02/08/2018	yes	2.8100					
Fluoride	mg/L	CBL-306I	07/27/2018	yes	2.9500					
Fluoride	mg/L	CBL-306I	01/16/2019	yes	1.9800					
Fluoride	mg/L	CBL-306I	07/31/2019	yes	9.2600		yes			*
Fluoride	mg/L	CBL-306I	08/23/2019	yes	2.6600					
Fluoride	mg/L	CBL-306I	01/29/2020	yes	2.8300					
Fluoride	mg/L	CBL-306I	09/19/2020	yes	2.7200					
Fluoride	mg/L	CBL-306I	01/28/2021	yes	2.9000					
Fluoride	mg/L	CBL-306I	07/21/2021	yes	2.4200					
Fluoride	mg/L	CBL-306I	01/27/2022	yes	2.9900					
Fluoride	mg/L	CBL-306I	07/28/2022	yes	2.2600					
Fluoride	mg/L	CBL-306I	01/26/2023	yes	1.9200					
Fluoride	mg/L	CBL-306I	07/18/2023	yes	2.6600					
Fluoride	mg/L	CBL-306I	01/29/2024	yes	1.4900					
Fluoride	mg/L	CBL-306I	07/23/2024	yes	0.8230					
Fluoride	mg/L	CBL-306I	01/27/2025		2.2000			2.2678		
Fluoride	mg/L	CBL-308I	01/22/2016	yes	1.4900					
Fluoride	mg/L	CBL-308I	05/04/2016	yes	2.3000					
Fluoride	mg/L	CBL-308I	07/26/2016	yes	1.6400					
Fluoride	mg/L	CBL-308I	10/24/2016	yes	1.5900					
Fluoride	mg/L	CBL-308I	01/19/2017	yes	1.3300					
Fluoride	mg/L	CBL-308I	03/22/2017	yes	9.0500		yes			*
Fluoride	mg/L	CBL-308I	05/16/2017	yes	1.7000					
Fluoride	mg/L	CBL-308I	07/26/2017	yes	1.9000					
Fluoride	mg/L	CBL-308I	02/06/2018	yes	1.7600					
Fluoride	mg/L	CBL-308I	07/25/2018	yes	2.1000					
Fluoride	mg/L	CBL-308I	01/18/2019	yes	1.6800					
Fluoride	mg/L	CBL-308I	07/31/2019	yes	1.6200					
Fluoride	mg/L	CBL-308I	01/29/2020	yes	1.6000					
Fluoride	mg/L	CBL-308I	09/18/2020	yes	1.3300					
Fluoride	mg/L	CBL-308I	01/28/2021	yes	1.4400					
Fluoride	mg/L	CBL-308I	07/21/2021	yes	1.7400					
Fluoride	mg/L	CBL-308I	01/27/2022	yes	1.7500					
Fluoride	mg/L	CBL-308I	07/27/2022	yes	1.4300					
Fluoride	mg/L	CBL-308I	01/26/2023	yes	0.5000	ND	yes			*

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Table 2

Analytical Data and CUSUM Summary

Constituent	Units	Well	Date	Background	Result		Outlier	CUSUM	Adjusted	
Fluoride	mg/L	CBL-308I	07/18/2023	yes	1.8600					
Fluoride	mg/L	CBL-308I	01/30/2024	yes	1.2600					
Fluoride	mg/L	CBL-308I	07/22/2024	yes	0.8640					
Fluoride	mg/L	CBL-308I	01/27/2025		1.2000			1.6192		
Fluoride	mg/L	CBL-341I	01/23/2017	yes	0.5300					
Fluoride	mg/L	CBL-341I	02/23/2017	yes	0.5000	ND			0.2500	***
Fluoride	mg/L	CBL-341I	03/22/2017	yes	0.5000	ND			0.2500	***
Fluoride	mg/L	CBL-341I	04/20/2017	yes	0.5000	ND			0.2500	***
Fluoride	mg/L	CBL-341I	05/16/2017	yes	0.5000	ND			0.2500	***
Fluoride	mg/L	CBL-341I	06/20/2017	yes	0.3350					
Fluoride	mg/L	CBL-341I	07/27/2017	yes	0.0550					
Fluoride	mg/L	CBL-341I	09/11/2017	yes	0.3670					
Fluoride	mg/L	CBL-341I	02/08/2018	yes	0.1060					
Fluoride	mg/L	CBL-341I	08/24/2018	yes	0.1140					
Fluoride	mg/L	CBL-341I	01/22/2019	yes	0.0546					
Fluoride	mg/L	CBL-341I	07/31/2019	yes	0.1000					
Fluoride	mg/L	CBL-341I	01/30/2020	yes	0.1530					
Fluoride	mg/L	CBL-341I	09/17/2020	yes	0.2500	ND				
Fluoride	mg/L	CBL-341I	01/27/2021	yes	0.5000	ND			0.2500	***
Fluoride	mg/L	CBL-341I	07/22/2021	yes	1.1600					
Fluoride	mg/L	CBL-341I	09/07/2021	yes	0.2500	ND				
Fluoride	mg/L	CBL-341I	01/27/2022	yes	0.0500	ND			0.2500	***
Fluoride	mg/L	CBL-341I	07/28/2022	yes	0.1410					
Fluoride	mg/L	CBL-341I	01/26/2023	yes	0.2500	ND				
Fluoride	mg/L	CBL-341I	07/19/2023	yes	1.1200					
Fluoride	mg/L	CBL-341I	01/29/2024	yes	0.1000	ND			0.2500	***
Fluoride	mg/L	CBL-341I	07/22/2024	yes	0.1000	ND			0.2500	***
Fluoride	mg/L	CBL-341I	01/28/2025		0.1280			0.3037		
pH	S.U.	CBL-301I	01/21/2016	yes	6.3300					
pH	S.U.	CBL-301I	05/04/2016	yes	6.2600					
pH	S.U.	CBL-301I	07/27/2016	yes	5.9500					
pH	S.U.	CBL-301I	10/24/2016	yes	6.2300					
pH	S.U.	CBL-301I	01/23/2017	yes	6.2600					
pH	S.U.	CBL-301I	03/22/2017	yes	6.3100					
pH	S.U.	CBL-301I	05/18/2017	yes	5.9500					
pH	S.U.	CBL-301I	07/26/2017	yes	6.0200					
pH	S.U.	CBL-301I	02/08/2018	yes	6.1700					
pH	S.U.	CBL-301I	07/25/2018	yes	6.0400					
pH	S.U.	CBL-301I	01/17/2019	yes	7.1600					**
pH	S.U.	CBL-301I	05/02/2019	yes	6.1400					
pH	S.U.	CBL-301I	07/31/2019	yes	6.1900					
pH	S.U.	CBL-301I	01/28/2020	yes	6.2600					
pH	S.U.	CBL-301I	09/17/2020	yes	6.1300					
pH	S.U.	CBL-301I	01/26/2021	yes	6.0600					
pH	S.U.	CBL-301I	07/20/2021	yes	6.1300					
pH	S.U.	CBL-301I	09/07/2021	yes	6.1400					
pH	S.U.	CBL-301I	01/26/2022	yes	6.2700					
pH	S.U.	CBL-301I	07/27/2022	yes	6.0800					
pH	S.U.	CBL-301I	08/30/2022	yes	6.1400					
pH	S.U.	CBL-301I	10/25/2022	yes	6.2100					

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Table 2

Analytical Data and CUSUM Summary

Constituent	Units	Well	Date	Background	Result		Outlier	CUSUM	Adjusted	
pH	S.U.	CBL-301I	01/25/2023	yes	6.3400					
pH	S.U.	CBL-301I	08/02/2023	yes	6.2100					
pH	S.U.	CBL-301I	01/29/2024	yes	6.3500					
pH	S.U.	CBL-301I	07/23/2024	yes	6.4500					
pH	S.U.	CBL-301I	01/27/2025		6.5400			6.3691		
pH	S.U.	CBL-302I	01/22/2016	yes	6.2900					
pH	S.U.	CBL-302I	05/04/2016	yes	6.0100					
pH	S.U.	CBL-302I	07/27/2016	yes	5.1700					
pH	S.U.	CBL-302I	10/24/2016	yes	7.7500					
pH	S.U.	CBL-302I	01/23/2017	yes	5.3600					
pH	S.U.	CBL-302I	03/22/2017	yes	5.4000					
pH	S.U.	CBL-302I	05/16/2017	yes	4.9400					
pH	S.U.	CBL-302I	07/27/2017	yes	6.2000					
pH	S.U.	CBL-302I	02/08/2018	yes	6.2100					
pH	S.U.	CBL-302I	07/27/2018	yes	5.7700					
pH	S.U.	CBL-302I	01/22/2019	yes	6.4400					
pH	S.U.	CBL-302I	07/31/2019	yes	6.1500					
pH	S.U.	CBL-302I	01/30/2020	yes	6.3400					
pH	S.U.	CBL-302I	09/17/2020	yes	6.2000					
pH	S.U.	CBL-302I	01/28/2021	yes	6.2100					
pH	S.U.	CBL-302I	07/21/2021	yes	6.0600					
pH	S.U.	CBL-302I	09/07/2021	yes	6.2800					
pH	S.U.	CBL-302I	01/27/2022	yes	6.3200					
pH	S.U.	CBL-302I	07/28/2022	yes	6.2100					
pH	S.U.	CBL-302I	01/26/2023	yes	6.3300					
pH	S.U.	CBL-302I	07/18/2023	yes	6.2000					
pH	S.U.	CBL-302I	01/29/2024	yes	6.2800					
pH	S.U.	CBL-302I	07/22/2024	yes	6.4100					
pH	S.U.	CBL-302I	01/27/2025		6.4300			6.1100		
pH	S.U.	CBL-306I	01/21/2016	yes	7.0900					
pH	S.U.	CBL-306I	05/04/2016	yes	6.6900					
pH	S.U.	CBL-306I	07/26/2016	yes	6.9500					
pH	S.U.	CBL-306I	10/24/2016	yes	6.7200					
pH	S.U.	CBL-306I	01/19/2017	yes	7.2900					
pH	S.U.	CBL-306I	03/22/2017	yes	4.4100					
pH	S.U.	CBL-306I	05/18/2017	yes	5.6100					
pH	S.U.	CBL-306I	07/27/2017	yes	6.9400					
pH	S.U.	CBL-306I	02/08/2018	yes	6.6700					
pH	S.U.	CBL-306I	07/27/2018	yes	6.8600					
pH	S.U.	CBL-306I	01/16/2019	yes	6.7800					
pH	S.U.	CBL-306I	07/31/2019	yes	6.9200		yes			*
pH	S.U.	CBL-306I	08/23/2019	yes	6.8300					
pH	S.U.	CBL-306I	01/29/2020	yes	6.7000					
pH	S.U.	CBL-306I	09/19/2020	yes	7.1600					
pH	S.U.	CBL-306I	01/28/2021	yes	6.8400					
pH	S.U.	CBL-306I	07/21/2021	yes	6.5500					
pH	S.U.	CBL-306I	01/27/2022	yes	6.8700					
pH	S.U.	CBL-306I	07/28/2022	yes	6.7000					
pH	S.U.	CBL-306I	01/26/2023	yes	7.3000					
pH	S.U.	CBL-306I	07/18/2023	yes	6.4900					

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Table 2

Analytical Data and CUSUM Summary

Constituent	Units	Well	Date	Background	Result		Outlier	CUSUM	Adjusted	
pH	S.U.	CBL-306I	01/29/2024	yes	6.5500					
pH	S.U.	CBL-306I	07/23/2024	yes	6.5400					
pH	S.U.	CBL-306I	01/27/2025		6.4400			6.6609		
pH	S.U.	CBL-308I	01/22/2016	yes	6.3600					
pH	S.U.	CBL-308I	05/04/2016	yes	6.1300					
pH	S.U.	CBL-308I	07/26/2016	yes	5.9500					
pH	S.U.	CBL-308I	10/24/2016	yes	6.2700					
pH	S.U.	CBL-308I	01/19/2017	yes	6.8300					
pH	S.U.	CBL-308I	03/22/2017	yes	6.2700					
pH	S.U.	CBL-308I	05/16/2017	yes	5.5400					
pH	S.U.	CBL-308I	07/26/2017	yes	6.2700					
pH	S.U.	CBL-308I	02/06/2018	yes	6.2600					
pH	S.U.	CBL-308I	07/25/2018	yes	6.0700					
pH	S.U.	CBL-308I	01/18/2019	yes	6.3900					
pH	S.U.	CBL-308I	07/31/2019	yes	6.2500					
pH	S.U.	CBL-308I	01/29/2020	yes	6.3700					
pH	S.U.	CBL-308I	09/18/2020	yes	6.2200					
pH	S.U.	CBL-308I	01/28/2021	yes	6.2600					
pH	S.U.	CBL-308I	07/21/2021	yes	6.1600					
pH	S.U.	CBL-308I	01/27/2022	yes	6.3600					
pH	S.U.	CBL-308I	07/27/2022	yes	6.2300					
pH	S.U.	CBL-308I	01/26/2023	yes	6.4100					
pH	S.U.	CBL-308I	07/18/2023	yes	6.2600					
pH	S.U.	CBL-308I	01/30/2024	yes	6.5700					
pH	S.U.	CBL-308I	07/22/2024	yes	6.5300					
pH	S.U.	CBL-308I	01/27/2025		6.6400			6.4575		
pH	S.U.	CBL-341I	01/23/2017	yes	5.7400					
pH	S.U.	CBL-341I	02/23/2017	yes	5.2300		yes			*
pH	S.U.	CBL-341I	03/22/2017	yes	5.7200					
pH	S.U.	CBL-341I	04/20/2017	yes	5.7300					
pH	S.U.	CBL-341I	05/16/2017	yes	5.5400					
pH	S.U.	CBL-341I	06/20/2017	yes	6.1900					
pH	S.U.	CBL-341I	07/27/2017	yes	6.2100					
pH	S.U.	CBL-341I	09/11/2017	yes	6.1000					
pH	S.U.	CBL-341I	02/08/2018	yes	6.1800					
pH	S.U.	CBL-341I	08/24/2018	yes	5.8200					
pH	S.U.	CBL-341I	01/22/2019	yes	6.3800					
pH	S.U.	CBL-341I	07/31/2019	yes	6.2300					
pH	S.U.	CBL-341I	01/30/2020	yes	6.2700					
pH	S.U.	CBL-341I	09/17/2020	yes	6.1400					
pH	S.U.	CBL-341I	01/27/2021	yes	6.0600					
pH	S.U.	CBL-341I	07/22/2021	yes	5.9800					
pH	S.U.	CBL-341I	09/07/2021	yes	6.1800					
pH	S.U.	CBL-341I	01/27/2022	yes	6.2600					
pH	S.U.	CBL-341I	07/28/2022	yes	6.1600					
pH	S.U.	CBL-341I	01/26/2023	yes	6.2800					
pH	S.U.	CBL-341I	07/19/2023	yes	6.2200					
pH	S.U.	CBL-341I	01/29/2024	yes	6.3800					
pH	S.U.	CBL-341I	07/22/2024	yes	6.3900					
pH	S.U.	CBL-341I	01/28/2025		6.4600			6.2795		

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Table 2

Analytical Data and CUSUM Summary

Constituent	Units	Well	Date	Background	Result		Outlier	CUSUM	Adjusted	
Sulfate	mg/L	CBL-301I	01/21/2016	yes	336.0000					
Sulfate	mg/L	CBL-301I	05/04/2016	yes	311.0000					
Sulfate	mg/L	CBL-301I	07/27/2016	yes	336.0000					
Sulfate	mg/L	CBL-301I	10/24/2016	yes	326.0000					
Sulfate	mg/L	CBL-301I	01/23/2017	yes	488.0000					
Sulfate	mg/L	CBL-301I	03/22/2017	yes	337.0000					
Sulfate	mg/L	CBL-301I	05/18/2017	yes	342.0000					
Sulfate	mg/L	CBL-301I	07/26/2017	yes	381.0000					
Sulfate	mg/L	CBL-301I	02/08/2018	yes	344.0000					
Sulfate	mg/L	CBL-301I	07/25/2018	yes	196.0000					
Sulfate	mg/L	CBL-301I	01/17/2019	yes	104.0000					
Sulfate	mg/L	CBL-301I	05/02/2019	yes	398.0000					
Sulfate	mg/L	CBL-301I	07/31/2019	yes	332.0000					
Sulfate	mg/L	CBL-301I	01/28/2020	yes	349.0000					
Sulfate	mg/L	CBL-301I	09/17/2020	yes	350.0000					
Sulfate	mg/L	CBL-301I	01/26/2021	yes	374.0000					
Sulfate	mg/L	CBL-301I	07/20/2021	yes	419.0000					
Sulfate	mg/L	CBL-301I	01/26/2022	yes	406.0000					
Sulfate	mg/L	CBL-301I	07/27/2022	yes	285.0000					
Sulfate	mg/L	CBL-301I	01/25/2023	yes	1370.0000		yes			*
Sulfate	mg/L	CBL-301I	03/07/2023	yes	207.0000					
Sulfate	mg/L	CBL-301I	08/02/2023	yes	383.0000					
Sulfate	mg/L	CBL-301I	01/29/2024	yes	475.0000					
Sulfate	mg/L	CBL-301I	07/23/2024	yes	454.0000					
Sulfate	mg/L	CBL-301I	01/27/2025		467.0000			401.1284		
Sulfate	mg/L	CBL-302I	01/22/2016	yes	1020.0000					
Sulfate	mg/L	CBL-302I	05/04/2016	yes	993.0000					
Sulfate	mg/L	CBL-302I	07/27/2016	yes	1090.0000					
Sulfate	mg/L	CBL-302I	10/24/2016	yes	1180.0000					
Sulfate	mg/L	CBL-302I	01/23/2017	yes	1150.0000					
Sulfate	mg/L	CBL-302I	03/22/2017	yes	1120.0000					
Sulfate	mg/L	CBL-302I	05/16/2017	yes	1230.0000					
Sulfate	mg/L	CBL-302I	07/27/2017	yes	1180.0000					
Sulfate	mg/L	CBL-302I	02/08/2018	yes	1240.0000					
Sulfate	mg/L	CBL-302I	07/27/2018	yes	1390.0000					
Sulfate	mg/L	CBL-302I	01/22/2019	yes	1250.0000					
Sulfate	mg/L	CBL-302I	07/31/2019	yes	1260.0000					
Sulfate	mg/L	CBL-302I	01/30/2020	yes	1350.0000					
Sulfate	mg/L	CBL-302I	09/17/2020	yes	1280.0000					
Sulfate	mg/L	CBL-302I	01/28/2021	yes	1290.0000					
Sulfate	mg/L	CBL-302I	07/21/2021	yes	1350.0000					
Sulfate	mg/L	CBL-302I	01/27/2022	yes	1340.0000					
Sulfate	mg/L	CBL-302I	07/28/2022	yes	1300.0000					
Sulfate	mg/L	CBL-302I	01/26/2023	yes	1390.0000					
Sulfate	mg/L	CBL-302I	07/18/2023	yes	1230.0000					
Sulfate	mg/L	CBL-302I	01/29/2024	yes	1330.0000					
Sulfate	mg/L	CBL-302I	07/22/2024	yes	1370.0000					
Sulfate	mg/L	CBL-302I	01/27/2025		1490.0000			1404.3177		
Sulfate	mg/L	CBL-306I	01/21/2016	yes	266.0000					
Sulfate	mg/L	CBL-306I	05/04/2016	yes	29.5000		yes			*

* - Outlier for that well and constituent.
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*** - ND value replaced with median RL.
**** - ND value replaced with manual RL.
ND = Not detected, Result = detection limit.

Table 2

Analytical Data and CUSUM Summary

Constituent	Units	Well	Date	Background	Result		Outlier	CUSUM	Adjusted	
Sulfate	mg/L	CBL-306I	07/26/2016	yes	139.0000					
Sulfate	mg/L	CBL-306I	10/24/2016	yes	432.0000					
Sulfate	mg/L	CBL-306I	01/19/2017	yes	270.0000					
Sulfate	mg/L	CBL-306I	03/22/2017	yes	340.0000					
Sulfate	mg/L	CBL-306I	05/18/2017	yes	412.0000					
Sulfate	mg/L	CBL-306I	07/27/2017	yes	513.0000					
Sulfate	mg/L	CBL-306I	02/08/2018	yes	493.0000					
Sulfate	mg/L	CBL-306I	07/27/2018	yes	406.0000					
Sulfate	mg/L	CBL-306I	01/16/2019	yes	292.0000					
Sulfate	mg/L	CBL-306I	07/31/2019	yes	816.0000		yes			*
Sulfate	mg/L	CBL-306I	08/23/2019	yes	387.0000					
Sulfate	mg/L	CBL-306I	01/29/2020	yes	561.0000					
Sulfate	mg/L	CBL-306I	09/19/2020	yes	506.0000					
Sulfate	mg/L	CBL-306I	01/28/2021	yes	388.0000					
Sulfate	mg/L	CBL-306I	07/21/2021	yes	336.0000					
Sulfate	mg/L	CBL-306I	01/27/2022	yes	510.0000					
Sulfate	mg/L	CBL-306I	07/28/2022	yes	348.0000					
Sulfate	mg/L	CBL-306I	01/26/2023	yes	205.0000					
Sulfate	mg/L	CBL-306I	07/18/2023	yes	454.0000					
Sulfate	mg/L	CBL-306I	01/29/2024	yes	266.0000					
Sulfate	mg/L	CBL-306I	07/23/2024	yes	70.7000		yes			*
Sulfate	mg/L	CBL-306I	01/27/2025		433.0000			376.2000		
Sulfate	mg/L	CBL-308I	01/22/2016	yes	1490.0000					
Sulfate	mg/L	CBL-308I	05/04/2016	yes	1410.0000					
Sulfate	mg/L	CBL-308I	07/26/2016	yes	1490.0000					
Sulfate	mg/L	CBL-308I	10/24/2016	yes	1550.0000					
Sulfate	mg/L	CBL-308I	01/19/2017	yes	1320.0000					
Sulfate	mg/L	CBL-308I	03/22/2017	yes	1470.0000					
Sulfate	mg/L	CBL-308I	05/16/2017	yes	1580.0000					
Sulfate	mg/L	CBL-308I	07/26/2017	yes	1550.0000					
Sulfate	mg/L	CBL-308I	02/06/2018	yes	1570.0000					
Sulfate	mg/L	CBL-308I	07/25/2018	yes	1540.0000					
Sulfate	mg/L	CBL-308I	01/18/2019	yes	1520.0000					
Sulfate	mg/L	CBL-308I	07/31/2019	yes	1420.0000					
Sulfate	mg/L	CBL-308I	01/29/2020	yes	1340.0000					
Sulfate	mg/L	CBL-308I	09/18/2020	yes	1310.0000					
Sulfate	mg/L	CBL-308I	01/28/2021	yes	1340.0000					
Sulfate	mg/L	CBL-308I	07/21/2021	yes	1240.0000					
Sulfate	mg/L	CBL-308I	01/27/2022	yes	1310.0000					
Sulfate	mg/L	CBL-308I	07/27/2022	yes	1190.0000					
Sulfate	mg/L	CBL-308I	01/26/2023	yes	445.0000		yes			*
Sulfate	mg/L	CBL-308I	07/18/2023	yes	1290.0000					
Sulfate	mg/L	CBL-308I	01/30/2024	yes	1360.0000					
Sulfate	mg/L	CBL-308I	07/22/2024	yes	1430.0000					
Sulfate	mg/L	CBL-308I	01/27/2025		1360.0000			1415.2381		
Sulfate	mg/L	CBL-341I	01/23/2017	yes	307.0000					
Sulfate	mg/L	CBL-341I	02/23/2017	yes	404.0000					
Sulfate	mg/L	CBL-341I	03/22/2017	yes	346.0000					
Sulfate	mg/L	CBL-341I	04/20/2017	yes	336.0000					
Sulfate	mg/L	CBL-341I	05/16/2017	yes	369.0000					

* - Outlier for that well and constituent.
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*** - ND value replaced with median RL.
**** - ND value replaced with manual RL.
ND = Not detected, Result = detection limit.

Table 2

Analytical Data and CUSUM Summary

Constituent	Units	Well	Date	Background	Result		Outlier	CUSUM	Adjusted	
Sulfate	mg/L	CBL-341I	06/20/2017	yes	363.0000					
Sulfate	mg/L	CBL-341I	07/27/2017	yes	419.0000					
Sulfate	mg/L	CBL-341I	09/11/2017	yes	354.0000					
Sulfate	mg/L	CBL-341I	02/08/2018	yes	383.0000					
Sulfate	mg/L	CBL-341I	08/24/2018	yes	376.0000					
Sulfate	mg/L	CBL-341I	01/22/2019	yes	358.0000					
Sulfate	mg/L	CBL-341I	07/31/2019	yes	329.0000					
Sulfate	mg/L	CBL-341I	01/30/2020	yes	351.0000					
Sulfate	mg/L	CBL-341I	09/17/2020	yes	336.0000					
Sulfate	mg/L	CBL-341I	01/27/2021	yes	324.0000					
Sulfate	mg/L	CBL-341I	07/22/2021	yes	316.0000					
Sulfate	mg/L	CBL-341I	01/27/2022	yes	320.0000					
Sulfate	mg/L	CBL-341I	07/28/2022	yes	296.0000					
Sulfate	mg/L	CBL-341I	01/26/2023	yes	309.0000					
Sulfate	mg/L	CBL-341I	07/19/2023	yes	259.0000					
Sulfate	mg/L	CBL-341I	01/29/2024	yes	346.0000					
Sulfate	mg/L	CBL-341I	07/22/2024	yes	367.0000					
Sulfate	mg/L	CBL-341I	01/28/2025		369.0000			344.0000		
Total Dissolved Solids	mg/L	CBL-301I	01/21/2016	yes	4380.0000					
Total Dissolved Solids	mg/L	CBL-301I	05/04/2016	yes	5050.0000					
Total Dissolved Solids	mg/L	CBL-301I	07/27/2016	yes	6020.0000					
Total Dissolved Solids	mg/L	CBL-301I	10/24/2016	yes	4570.0000					
Total Dissolved Solids	mg/L	CBL-301I	01/23/2017	yes	6140.0000					
Total Dissolved Solids	mg/L	CBL-301I	03/22/2017	yes	6570.0000					
Total Dissolved Solids	mg/L	CBL-301I	05/18/2017	yes	6430.0000					
Total Dissolved Solids	mg/L	CBL-301I	07/26/2017	yes	4290.0000					
Total Dissolved Solids	mg/L	CBL-301I	02/08/2018	yes	5120.0000					
Total Dissolved Solids	mg/L	CBL-301I	07/25/2018	yes	5390.0000					
Total Dissolved Solids	mg/L	CBL-301I	01/17/2019	yes	1460.0000		yes			*
Total Dissolved Solids	mg/L	CBL-301I	05/02/2019	yes	5650.0000					
Total Dissolved Solids	mg/L	CBL-301I	07/31/2019	yes	6040.0000					
Total Dissolved Solids	mg/L	CBL-301I	01/28/2020	yes	4790.0000					
Total Dissolved Solids	mg/L	CBL-301I	09/17/2020	yes	6340.0000					
Total Dissolved Solids	mg/L	CBL-301I	01/26/2021	yes	6060.0000					
Total Dissolved Solids	mg/L	CBL-301I	07/20/2021	yes	5870.0000					
Total Dissolved Solids	mg/L	CBL-301I	01/26/2022	yes	4700.0000					
Total Dissolved Solids	mg/L	CBL-301I	07/27/2022	yes	4590.0000					
Total Dissolved Solids	mg/L	CBL-301I	01/25/2023	yes	5160.0000					
Total Dissolved Solids	mg/L	CBL-301I	08/02/2023	yes	5360.0000					
Total Dissolved Solids	mg/L	CBL-301I	01/29/2024	yes	4820.0000					
Total Dissolved Solids	mg/L	CBL-301I	07/23/2024	yes	4580.0000					
Total Dissolved Solids	mg/L	CBL-301I	01/27/2025		3810.0000			5360.0000		
Total Dissolved Solids	mg/L	CBL-302I	01/22/2016	yes	5500.0000					
Total Dissolved Solids	mg/L	CBL-302I	05/04/2016	yes	5390.0000					
Total Dissolved Solids	mg/L	CBL-302I	07/27/2016	yes	6850.0000					
Total Dissolved Solids	mg/L	CBL-302I	10/24/2016	yes	4210.0000					
Total Dissolved Solids	mg/L	CBL-302I	01/23/2017	yes	6430.0000					
Total Dissolved Solids	mg/L	CBL-302I	03/22/2017	yes	6460.0000					
Total Dissolved Solids	mg/L	CBL-302I	05/16/2017	yes	5860.0000					
Total Dissolved Solids	mg/L	CBL-302I	07/27/2017	yes	5120.0000					

* - Outlier for that well and constituent.
** - Non-outlier detected sample Result and / or CUSUM value exceeds limit.
*** - ND value replaced with median RL.
**** - ND value replaced with manual RL.
ND = Not detected, Result = detection limit.

Table 2

Analytical Data and CUSUM Summary

Constituent	Units	Well	Date	Background	Result		Outlier	CUSUM	Adjusted	
Total Dissolved Solids	mg/L	CBL-302I	02/08/2018	yes	6010.0000					
Total Dissolved Solids	mg/L	CBL-302I	07/27/2018	yes	5510.0000					
Total Dissolved Solids	mg/L	CBL-302I	01/22/2019	yes	5060.0000					
Total Dissolved Solids	mg/L	CBL-302I	07/31/2019	yes	4190.0000					
Total Dissolved Solids	mg/L	CBL-302I	01/30/2020	yes	4790.0000					
Total Dissolved Solids	mg/L	CBL-302I	09/17/2020	yes	4990.0000					
Total Dissolved Solids	mg/L	CBL-302I	01/28/2021	yes	4800.0000					
Total Dissolved Solids	mg/L	CBL-302I	07/21/2021	yes	4810.0000					
Total Dissolved Solids	mg/L	CBL-302I	01/27/2022	yes	4510.0000					
Total Dissolved Solids	mg/L	CBL-302I	07/28/2022	yes	5120.0000					
Total Dissolved Solids	mg/L	CBL-302I	01/26/2023	yes	4930.0000					
Total Dissolved Solids	mg/L	CBL-302I	07/18/2023	yes	5150.0000					
Total Dissolved Solids	mg/L	CBL-302I	01/29/2024	yes	4950.0000					
Total Dissolved Solids	mg/L	CBL-302I	07/22/2024	yes	4840.0000					
Total Dissolved Solids	mg/L	CBL-302I	01/27/2025		4710.0000			5249.0909		
Total Dissolved Solids	mg/L	CBL-306I	01/21/2016	yes	1280.0000					
Total Dissolved Solids	mg/L	CBL-306I	05/04/2016	yes	431.0000					
Total Dissolved Solids	mg/L	CBL-306I	07/26/2016	yes	790.0000					
Total Dissolved Solids	mg/L	CBL-306I	10/24/2016	yes	1150.0000					
Total Dissolved Solids	mg/L	CBL-306I	01/19/2017	yes	1320.0000					
Total Dissolved Solids	mg/L	CBL-306I	03/22/2017	yes	1460.0000					
Total Dissolved Solids	mg/L	CBL-306I	05/18/2017	yes	1440.0000					
Total Dissolved Solids	mg/L	CBL-306I	07/27/2017	yes	1280.0000					
Total Dissolved Solids	mg/L	CBL-306I	02/08/2018	yes	1760.0000					
Total Dissolved Solids	mg/L	CBL-306I	07/27/2018	yes	1450.0000					
Total Dissolved Solids	mg/L	CBL-306I	01/16/2019	yes	1220.0000					
Total Dissolved Solids	mg/L	CBL-306I	07/31/2019	yes	676.0000		yes			*
Total Dissolved Solids	mg/L	CBL-306I	08/23/2019	yes	1710.0000					
Total Dissolved Solids	mg/L	CBL-306I	01/29/2020	yes	1830.0000					
Total Dissolved Solids	mg/L	CBL-306I	09/19/2020	yes	1730.0000					
Total Dissolved Solids	mg/L	CBL-306I	01/28/2021	yes	1420.0000					
Total Dissolved Solids	mg/L	CBL-306I	07/21/2021	yes	1320.0000					
Total Dissolved Solids	mg/L	CBL-306I	01/27/2022	yes	1730.0000					
Total Dissolved Solids	mg/L	CBL-306I	07/28/2022	yes	1540.0000					
Total Dissolved Solids	mg/L	CBL-306I	01/26/2023	yes	1000.0000					
Total Dissolved Solids	mg/L	CBL-306I	07/18/2023	yes	1910.0000					
Total Dissolved Solids	mg/L	CBL-306I	01/29/2024	yes	1170.0000					
Total Dissolved Solids	mg/L	CBL-306I	07/23/2024	yes	691.0000					
Total Dissolved Solids	mg/L	CBL-306I	01/27/2025		1480.0000			1346.9091		
Total Dissolved Solids	mg/L	CBL-308I	01/22/2016	yes	6820.0000					
Total Dissolved Solids	mg/L	CBL-308I	05/04/2016	yes	6120.0000					
Total Dissolved Solids	mg/L	CBL-308I	07/26/2016	yes	7890.0000					
Total Dissolved Solids	mg/L	CBL-308I	10/24/2016	yes	10200.0000					
Total Dissolved Solids	mg/L	CBL-308I	01/19/2017	yes	9620.0000					
Total Dissolved Solids	mg/L	CBL-308I	03/22/2017	yes	7260.0000					
Total Dissolved Solids	mg/L	CBL-308I	05/16/2017	yes	6590.0000					
Total Dissolved Solids	mg/L	CBL-308I	07/26/2017	yes	6480.0000					
Total Dissolved Solids	mg/L	CBL-308I	02/06/2018	yes	6200.0000					
Total Dissolved Solids	mg/L	CBL-308I	07/25/2018	yes	6320.0000					
Total Dissolved Solids	mg/L	CBL-308I	01/18/2019	yes	4760.0000					

* - Outlier for that well and constituent.
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*** - ND value replaced with median RL.
**** - ND value replaced with manual RL.
ND = Not detected, Result = detection limit.

Table 2

Analytical Data and CUSUM Summary

Constituent	Units	Well	Date	Background	Result		Outlier	CUSUM	Adjusted	
Total Dissolved Solids	mg/L	CBL-308I	07/31/2019	yes	5820.0000					
Total Dissolved Solids	mg/L	CBL-308I	01/29/2020	yes	5980.0000					
Total Dissolved Solids	mg/L	CBL-308I	09/18/2020	yes	6860.0000					
Total Dissolved Solids	mg/L	CBL-308I	01/28/2021	yes	6190.0000					
Total Dissolved Solids	mg/L	CBL-308I	07/21/2021	yes	5270.0000					
Total Dissolved Solids	mg/L	CBL-308I	01/27/2022	yes	5320.0000					
Total Dissolved Solids	mg/L	CBL-308I	07/27/2022	yes	6840.0000					
Total Dissolved Solids	mg/L	CBL-308I	01/26/2023	yes	5810.0000					
Total Dissolved Solids	mg/L	CBL-308I	07/18/2023	yes	5680.0000					
Total Dissolved Solids	mg/L	CBL-308I	01/30/2024	yes	5410.0000					
Total Dissolved Solids	mg/L	CBL-308I	07/22/2024	yes	5810.0000					
Total Dissolved Solids	mg/L	CBL-308I	01/27/2025		5290.0000			6511.3636		
Total Dissolved Solids	mg/L	CBL-341I	01/23/2017	yes	5000.0000					
Total Dissolved Solids	mg/L	CBL-341I	02/23/2017	yes	4520.0000					
Total Dissolved Solids	mg/L	CBL-341I	03/22/2017	yes	5110.0000					
Total Dissolved Solids	mg/L	CBL-341I	04/20/2017	yes	4240.0000					
Total Dissolved Solids	mg/L	CBL-341I	05/16/2017	yes	4840.0000					
Total Dissolved Solids	mg/L	CBL-341I	06/20/2017	yes	5940.0000					
Total Dissolved Solids	mg/L	CBL-341I	07/27/2017	yes	4150.0000					
Total Dissolved Solids	mg/L	CBL-341I	09/11/2017	yes	4860.0000					
Total Dissolved Solids	mg/L	CBL-341I	02/08/2018	yes	4320.0000					
Total Dissolved Solids	mg/L	CBL-341I	08/24/2018	yes	4800.0000					
Total Dissolved Solids	mg/L	CBL-341I	01/22/2019	yes	3870.0000					
Total Dissolved Solids	mg/L	CBL-341I	07/31/2019	yes	5370.0000					
Total Dissolved Solids	mg/L	CBL-341I	01/30/2020	yes	4900.0000					
Total Dissolved Solids	mg/L	CBL-341I	09/17/2020	yes	4930.0000					
Total Dissolved Solids	mg/L	CBL-341I	01/27/2021	yes	3940.0000					
Total Dissolved Solids	mg/L	CBL-341I	07/22/2021	yes	4520.0000					
Total Dissolved Solids	mg/L	CBL-341I	01/27/2022	yes	3800.0000					
Total Dissolved Solids	mg/L	CBL-341I	07/28/2022	yes	4910.0000					
Total Dissolved Solids	mg/L	CBL-341I	01/26/2023	yes	4390.0000					
Total Dissolved Solids	mg/L	CBL-341I	07/19/2023	yes	4190.0000					
Total Dissolved Solids	mg/L	CBL-341I	01/29/2024	yes	3990.0000					
Total Dissolved Solids	mg/L	CBL-341I	07/22/2024	yes	3700.0000					
Total Dissolved Solids	mg/L	CBL-341I	01/28/2025		4020.0000			4558.6364		

* - Outlier for that well and constituent.
** - Non-outlier detected sample Result and / or CUSUM value exceeds limit.
*** - ND value replaced with median RL.
**** - ND value replaced with manual RL.
ND = Not detected, Result = detection limit.

Table 4

Dixon's Test Outliers
1% Significance Level

Constituent	Units	Well	Date	Result	ND Qualifier	Date Range	N	Critical Value
Calcium, Total	mg/L	CBL-301I	01/17/2019	156.0000		01/21/2016-07/23/2024	23	0.5065
Chloride	mg/L	CBL-301I	01/17/2019	619.0000		01/21/2016-07/23/2024	23	0.5065
Chloride	mg/L	CBL-306I	05/04/2016	20.0000		01/21/2016-07/23/2024	21	0.5381
Chloride	mg/L	CBL-306I	07/23/2024	10.2000		01/21/2016-07/23/2024	21	0.5381
Fluoride	mg/L	CBL-306I	03/22/2017	12.6000		01/21/2016-07/23/2024	22	0.5162
Fluoride	mg/L	CBL-308I	03/22/2017	9.0500		01/22/2016-07/22/2024	22	0.5162
Fluoride	mg/L	CBL-308I	01/26/2023	0.5000	< 0.5000	01/22/2016-07/22/2024	22	0.5162
Sulfate	mg/L	CBL-301I	01/25/2023	1370.0000		01/21/2016-07/23/2024	24	0.4969
Sulfate	mg/L	CBL-306I	05/04/2016	29.5000		01/21/2016-07/23/2024	22	0.5263
Sulfate	mg/L	CBL-306I	07/23/2024	70.7000		01/21/2016-07/23/2024	22	0.5263
Sulfate	mg/L	CBL-308I	01/26/2023	445.0000		01/22/2016-07/22/2024	22	0.5162
Total Dissolved Solids	mg/L	CBL-301I	01/17/2019	1460.0000		01/21/2016-07/23/2024	23	0.5065

N = Total number of independent measurements in background at each well.
Date Range = Dates of the first and last measurements included in background at each well.
Critical Value depends on the significance level and on N-1 when the two most extreme values are tested or N for the most extreme value.

APPENDIX D

Results of the Groundwater Statistics for the Lower Colorado River Authority
Second Semi-Annual Monitoring Event in 2025
Otter Creek Environmental Services, LLC
September 2025

Results of the Ground Water Statistics

for Lower Colorado River Authority Fayette Power Project

Second Semi-Annual Monitoring Event in 2025

Prepared for:
Lower Colorado River Authority (LCRA)
Fayette Power Project
LaGrange, TX

Prepared by:
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September 2025

INTRODUCTION

This report contains the results of the statistical analyses used to evaluate the groundwater data obtained during the second semi-annual monitoring event in 2025 at the Lower Colorado River Authority (LCRA) Fayette Power Project (FPP) Combustion Byproducts Landfill (CBL), the Coal Combustion Residuals (CCR) unit addressed in this report. The statistical analyses were completed within 90 days of receipt of the analytical data. The groundwater at the FPP is monitored by wells CBL-301I, CBL-302I, CBL-306I, CBL-308I, CBL-340I, and CBL-341I.

Statistical comparisons and evaluation for statistically significant increases (SSIs) are conducted on all wells with the exception of former background (side-gradient) monitoring well CBL-340I. Based on the Alternative Source Determination (ASD) study conducted in 2018, the identification of natural aquifer heterogeneity resulted in determination that CBL-340I could not be used to reliably characterize the background geochemistry of the groundwater flowing beneath the CCR unit. As such, intrawell analysis of wells potentially affected by CCR operation was selected at that time, and the need for use of CBL-340I geochemical data was negated. A Groundwater Monitoring System Addendum Certification was prepared in 2018, documenting the transition from former interwell analysis to intrawell analysis.

The statistical plan is designed to detect a release from the facility at the earliest indication. An intrawell methodology is described and then applied to the FPP data. The statistical method conforms with the Coal Combustion Residual (CCR) rule (40 CFR Part 257), USEPA Guidance document (*Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Unified Guidance,* March 2009), and the American Society for Testing and Materials (ASTM) standard D6312-98, *Developing Appropriate Statistical Approaches for Ground-Water Detection Monitoring Programs*. The intrawell statistical evaluations were completed within 90 days of receipt of laboratory data.

Ground Water Monitoring Program

The groundwater monitoring network for FPP includes background well CBL-340I and downgradient wells CBL-301I, CBL-302I, CBL-306I, CBL-308I, and CBL-341I. Each of the groundwater monitoring wells is to be sampled at least semiannually and analyzed for the detection monitoring parameters listed in Appendix III of 40 CFR Part 257, as follows:

Boron
Calcium
Chloride
Fluoride
pH
Sulfate
Total Dissolved Solids

Statistical analysis is conducted on data from all Groundwater Monitoring Plan (GMP) wells with the exception of CBL-340I, as described above. The groundwater data obtained for statistical evaluation during the second semi-annual monitoring event in 2025 are summarized in Attachment A. Historical Appendix III data is summarized in Attachment B.

STATISTICAL METHODOLOGIES FOR DETECTION MONITORING

The CCR rule for statistical analysis provides several options for evaluating the ground water data [40 CFR 257.93(f)]. As referenced in Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance (EPA 530/R-09-007), the preferred methods for comparing ground water data are using either prediction limits or using control charts. The control chart procedure offers an advantage over the prediction limits procedure as more data is generated over time, because the control chart procedure generates a graph of compliance data over time and allows for better identification of long-term trends.

An intrawell control chart method was applied to the FPP 2025 second semiannual data using the DUMPStat® statistical program. DUMPStat® is a program for the statistical analysis of groundwater monitoring data using methods described in "Statistical Methods for Groundwater Monitoring" by Dr. Robert D. Gibbons. Groundwater statistical analysis was conducted on the Appendix III constituents listed above.

Intrawell statistics

Intrawell statistics compare new measurements to the historical data at each groundwater monitoring well independently. The Unified Guidance-recommended technique for intrawell comparisons is the combined Shewhart-CUSUM control chart. This control chart procedure detects changes in analyte concentrations both in terms of constituent concentration and cumulative concentration increases. This method is also extremely sensitive to sudden and gradual releases. A requirement for constructing these control charts is that the parameter is detected at a frequency greater than or equal to 25%, otherwise the data variance is not properly defined (ASTM D 6312-98 *Standard Guide for Developing Appropriate Statistical Approaches for Ground-Water Detection Monitoring Programs*).

The combined Shewhart-CUSUM control chart assumes that the data are independent and normally distributed with a fixed mean and a constant variance. Independent data is much more critical than the normality assumption. To achieve independence, it is recommended that data are collected no more frequently than quarterly to account for seasonal variation. The combined Shewhart-CUSUM control chart is robust to deviations from normality. Because the control charts do not use a specific multiplier based on a normal distribution, it is more conservative to assume normality.

Some groundwater monitoring parameters are not detected at a frequency great enough to generate the combined Shewhart-CUSUM control charts. For constituents that are detected less than 25% of the time at a particular well, the data are plotted as a time series until a sufficient number of data points are available to provide a 99% confidence nonparametric prediction limit. Thirteen independent measurements (with 1 resample) are necessary to achieve a 99% confidence (1% false positive rate) nonparametric prediction limit. Eight independent measurements (for pass 1 of 2 resamples) are necessary to achieve a 99% confidence nonparametric prediction limit. The nonparametric prediction limit is the largest determination out of the data set collected for that well and parameter. If the detection frequency is 0% after thirteen samples have been collected, the practical quantitation limit (PQL) becomes the nonparametric prediction limit.

In developing the statistical background, the historical data must be thoroughly screened for anomalous data due to sample collection error or laboratory analysis error. An erroneous data point, if not removed prior to the mean and variance computations, would yield a larger control limit thus increasing the false negative rate. The DUMPStat® program screens the background for outliers using the Dixon test on values at least three times the median background concentration for intrawell analyses. If the Dixon test indicates a statistical outlier, the value will not be used in the mean and variance determinations. Anomalous data will still be plotted on the graphs (with a unique symbol) but will not be included in the calculations.

The verification resample plan is an integral function of the statistical plan to reduce the probability that anomalous data obtained after the background has been established is indicative of a landfill release. Should an indication of an SSI be identified, the resampling plan is implemented by the operator to collect a verification sample.

The background data for each well and constituent is tested for existing trends using Sen's nonparametric estimate of trend.

Results of the Intrawell Statistics

The Appendix III parameter data from wells CBL-301I, CBL-302I, CBL-306I, CBL-308I, and CBL-341I were evaluated using the combined Shewhart-CUSUM control chart method.

The initial background was established with the ProUCL software using data obtained in 2016 and 2017. Initial exceedances for boron at CBL-301I and boron at CBL-341I were reported following the second semi-annual monitoring in 2020. Since the boron concentrations determined subsequently in January 2021 at CBL-301I (<0.050 mg/L) and CBL-341I (<0.050 mg/L) do not exceed the baseline threshold values (BTV), the previous exceedances are not statistically significant. BTV will be analogous to control limits in this report and future reports. Background was later established to include historical data obtained from 2016 through 2020 and then 2016 through 2022 using DUMPStats.

Monitoring well background data sets must be periodically updated with valid detection monitoring results that are representative of background groundwater quality. Failure to update background data sets will exclude factors such as natural temporal variation, changes in field or laboratory methodologies, and changes in the water table due to meteorological conditions or other influences. Since there were no exceedances attributed to the unit, the background data in this evaluation includes historical data obtained from 2016 through 2024 for wells CBL-301I, CBL-302I, CBL-306I, CBL-308I, and CBL-341I.

A summary of the intrawell statistics is included in Attachment C, Table 1 "Summary Statistics and Intermediate Computations for Combined Shewhart-CUSUM Control Charts." The control charts or time series graphs follow the summary table.

For the parameters analyzed, there was an initial control limit exceedance detected for boron at CBL-306I. The CUSUM value for boron at CBL-306I (0.2136 mg/L) exceeded the normal control limit of 0.1933 mg/L, however, the boron concentration determined at CBL-306I (0.173 mg/L) did not exceed the limit. The boron concentrations determined in both the equipment blank (0.0537 mg/L) and the field blank (0.0576 mg/L) were also elevated during this monitoring event so the boron exceedance at CBL-306I is questionable.

Slight increasing trends were detected in the background data for pH at CBL-341 and sulfate at CBL-302I. The trends appear to be a function of the more inconsistent data obtained during the initial monitoring period in 2016 and 2017.

A control chart factor was selected to provide a balance of the site-wide false positive and false negative rates. A statistical power curve indicates the expected false assessments for the site as a whole. The site-wide false positive rate is 3% and the test becomes sensitive to 3 standard deviation units over background.

The initial boron exceedance at CBL-306I was re-evaluated by resampling the well on September 9, 2025 for boron analysis. A summary of the intrawell statistics on the resample data is included in Attachment D. Neither the CUSUM value for boron at CBL-306I (0.1786 mg/L) nor the concentration (0.138 mg/L) exceeded the normal control limit of 0.1933 mg/L, therefore the previous exceedance is not statistically significant. The boron concentrations determined in both the equipment blank (0.0336 mg/L) and the field blank (0.0222 mg/L) were again elevated during this resample event.

CONCLUSIONS

This document describes a comprehensive statistical plan designated for the FPP. The groundwater monitoring network for FPP consists of wells CBL-301I, CBL-302I, CBL-306I, CBL-308I, and CBL-341I. Each of the groundwater monitoring wells is sampled and analyzed for the detection monitoring parameters listed in Appendix III of 40 CFR Part 257. The current ground water data was compared to background using intrawell control charts. Using intrawell comparisons, there were no confirmed control limit exceedances detected.

Attachment A

Ground Water Data obtained during the Second Semi-Annual Monitoring Event in 2025

Table 1

Analytical Data Summary for 7/28/2025 to 7/29/2025

Constituents	Units	CBL-301I	CBL-302I	CBL-306I	CBL-308I	CBL-340I	CBL-341I
Boron, Total	mg/L	.108	.240	.173	.180	.191	.151
Calcium, Total	mg/L	145	959	120	676	579	781
Chloride	mg/L	499.0	1630.0	39.7	1930.0	2650.0	1850.0
Fluoride	mg/L	.351	.194	1.990	1.260	.741	.306
pH	S.U.	6.62	6.35	6.53	6.68	6.38	6.56
Sulfate	mg/L	149	1270	139	1400	785	344
Total Dissolved Solids	mg/L	1420	5000	841	5530	5120	3700

* - The displayed value is the arithmetic mean of multiple database matches.

Table 2

Analytical Data Summary for 9/9/2025

Constituents	Units	CBL-306I
Boron, Total	mg/L	.138

* - The displayed value is the arithmetic mean of multiple database matches.

Attachment B

Historical Appendix III Ground Water Data

Table 1

Analytical Data Summary for CBL-301I

Constituents	Units	1/21/2016	5/4/2016	7/27/2016	10/24/2016	1/23/2017	3/22/2017	5/18/2017	7/26/2017	2/8/2018	7/25/2018	1/17/2019	5/2/2019	7/31/2019
Boron, Total	mg/L	<.0500	<.0500	<.0500	<.0500	<.0500	<.0500	.0707	<.0500	<.0500	<.0500	<.0500	<.0500	<.0500
Calcium, Total	mg/L	905	949	925	978	1000	1030	1060	961	873	993	156	762	783
Chloride	mg/L	2300	2160	2290	2250	3200	2390	2420	2500	2480	1330	619	1910	2240
Fluoride	mg/L	<.250	<.500	<.500	<.250	.312	<.500	<.500	<.500	<.500	<.500	.219	.112	.051
pH	S.U.	6.33	6.26	5.95	6.23	6.26	6.31	5.95	6.02	6.17	6.04	7.16	6.14	6.19
Sulfate	mg/L	336	311	336	326	488	337	342	381	344	196	104	398	332
Total Dissolved Solids	mg/L	4380	5050	6020	4570	6140	6570	6430	4290	5120	5390	1460	5650	6040

* - The displayed value is the arithmetic mean of multiple database matches.

Table 1

Analytical Data Summary for CBL-301I

Constituents	1/28/2020	9/17/2020	1/26/2021	7/20/2021	9/7/2021	1/26/2022	7/27/2022	8/30/2022	10/25/2022	1/25/2023	3/7/2023	8/2/2023	1/29/2024	7/23/2024
Boron, Total	<.0500	.0801	<.0500	.0826	<.0500	<.0500	.0850	.1070	.0645	.1080	.1020	<.0500	.1070	.0820
Calcium, Total	851	1060	1130	1100		999	1010			977		1260	1050	912
Chloride	2360	2270	2420	2590		2440	1840			1960		2220	2270	2350
Fluoride	.130	<.250	<.500	2.680	<.500	<.050	.156			1.720	<.050	.054	<.100	<.100
pH	6.26	6.13	6.06	6.13	6.14	6.27	6.08	6.14	6.21	6.34		6.21	6.35	6.45
Sulfate	349	350	374	419		406	285			1370	207	383	475	454
Total Dissolved Solids	4790	6340	6060	5870		4700	4590			5160		5360	4820	4580

* - The displayed value is the arithmetic mean of multiple database matches.

Table 1

Analytical Data Summary for CBL-301I

Constituents	1/27/2025	7/28/2025
Boron, Total	.1060	.1080
Calcium, Total	907	145
Chloride	2270	499
Fluoride	<.100	.351
pH	6.54	6.62
Sulfate	467	149
Total Dissolved Solids	3810	1420

* - The displayed value is the arithmetic mean of multiple database matches.

Table 2

Analytical Data Summary for CBL-302I

Constituents	Units	1/22/2016	5/4/2016	7/27/2016	10/24/2016	1/23/2017	3/22/2017	5/16/2017	7/27/2017	2/8/2018	7/27/2018	1/22/2019	7/31/2019	1/30/2020
Boron, Total	mg/L	<.0500	<.0500	<.0500	.1560	<.0500	.2970	<.0500	<.0500	<.0500	<.0500	<.0500	<.0500	<.0500
Calcium, Total	mg/L	1030	1010	1030	1070	1100	1090	1100	1040	934	995	855	914	838
Chloride	mg/L	2190	2130	2210	2170	2080	2050	2230	2040	2080	1980	1960	1540	1540
Fluoride	mg/L	<.2500	<.5000	<.5000	<.2500	.3320	<.5000	<.5000	<.5000	.1120	<.5000	.0402	.0605	.1930
pH	S.U.	6.29	6.01	5.17	7.75	5.36	5.40	4.94	6.20	6.21	5.77	6.44	6.15	6.34
Sulfate	mg/L	1020	993	1090	1180	1150	1120	1230	1180	1240	1390	1250	1260	1350
Total Dissolved Solids	mg/L	5500	5390	6850	4210	6430	6460	5860	5120	6010	5510	5060	4190	4790

* - The displayed value is the arithmetic mean of multiple database matches.

Table 2

Analytical Data Summary for CBL-302I

Constituents	9/17/2020	1/28/2021	7/21/2021	9/7/2021	1/27/2022	7/28/2022	1/26/2023	7/18/2023	1/29/2024	4/5/2024	7/22/2024	1/27/2025	7/28/2025
Boron, Total	<.0500	<.0500	.0743		<.0500	<.0500	.1160	<.0500	.1600	.1630	.1370	.2100	.2400
Calcium, Total	853	1020	844		754	750	889	981	937		845	878	959
Chloride	1410	1370	1380		1310	1300	1460	1330	1440		1650	1730	1630
Fluoride	<.2500	<.5000	2.2500	<.2500	<.0500	.1650	<.5000	1.7600	<.1000		.1010	.1710	.1940
pH	6.20	6.21	6.06	6.28	6.32	6.21	6.33	6.20	6.28		6.41	6.43	6.35
Sulfate	1280	1290	1350		1340	1300	1390	1230	1330		1370	1490	1270
Total Dissolved Solids	4990	4800	4810		4510	5120	4930	5150	4950		4840	4710	5000

* - The displayed value is the arithmetic mean of multiple database matches.

Table 3

Analytical Data Summary for CBL-306I

Constituents	Units	1/21/2016	5/4/2016	7/26/2016	10/24/2016	1/19/2017	3/22/2017	5/18/2017	7/27/2017	2/8/2018	7/27/2018	1/16/2019	7/31/2019	8/23/2019
Boron, Total	mg/L	<.0500	.0717	.0998	.0556	<.0500	.1240	.0832	.0531	<.0500	<.0500	<.0500	.0824	.0500
Calcium, Total	mg/L	137.0	47.2	105.0	198.0	174.0	204.0	205.0	234.0	230.0	275.0	180.0	106.0	226.0
Chloride	mg/L	155.0	20.0	114.0	330.0	197.0	231.0	289.0	350.0	385.0	283.0	215.0	538.0	318.0
Fluoride	mg/L	2.500	1.000	1.370	2.380	1.850	12.600	2.200	2.910	2.810	2.950	1.980	9.260	2.660
pH	S.U.	7.09	6.69	6.95	6.72	7.29	4.41	5.61	6.94	6.67	6.86	6.78	6.92	6.83
Sulfate	mg/L	266.0	29.5	139.0	432.0	270.0	340.0	412.0	513.0	493.0	406.0	292.0	816.0	387.0
Total Dissolved Solids	mg/L	1280	431	790	1150	1320	1460	1440	1280	1760	1450	1220	676	1710

* - The displayed value is the arithmetic mean of multiple database matches.

Table 3

Analytical Data Summary for CBL-306I

Constituents	1/29/2020	9/19/2020	1/28/2021	7/21/2021	1/27/2022	7/28/2022	1/26/2023	7/18/2023	1/29/2024	7/23/2024	1/27/2025	7/28/2025	9/9/2025
Boron, Total	<.0500	.0773	<.0500	.0927	.0548	.1100	.0973	.0659	.1330	.1340	.1600	.1730	.1380
Calcium, Total	247.0	260.0	257.0	216.0	212.0	182.0	149.0	260.0	186.0	115.0	206.0	120.0	
Chloride	445.0	420.0	292.0	255.0	384.0	261.0	148.0	336.0	153.0	10.2	286.0	39.7	
Fluoride	2.830	2.720	2.900	2.420	2.990	2.260	1.920	2.660	1.490	.823	2.200	1.990	
pH	6.70	7.16	6.84	6.55	6.87	6.70	7.30	6.49	6.55	6.54	6.44	6.53	
Sulfate	561.0	506.0	388.0	336.0	510.0	348.0	205.0	454.0	266.0	70.7	433.0	139.0	
Total Dissolved Solids	1830	1730	1420	1320	1730	1540	1000	1910	1170	691	1480	841	

* - The displayed value is the arithmetic mean of multiple database matches.

Table 4

Analytical Data Summary for CBL-308I

Constituents	Units	1/22/2016	5/4/2016	7/26/2016	10/24/2016	1/19/2017	3/22/2017	5/16/2017	7/26/2017	2/6/2018	7/25/2018	1/18/2019	7/31/2019	1/29/2020
Boron, Total	mg/L	<.0500	.1210	.1860	.2560	<.0500	.5450	.1090	.0799	<.0500	<.0500	<.0500	<.0500	<.0500
Calcium, Total	mg/L	903	870	911	939	919	947	954	878	859	863	760	840	745
Chloride	mg/L	2760	2580	2680	2870	2360	2530	2740	2760	2750	2680	2240	2290	2110
Fluoride	mg/L	1.490	2.300	1.640	1.590	1.330	9.050	1.700	1.900	1.760	2.100	1.680	1.620	1.600
pH	S.U.	6.36	6.13	5.95	6.27	6.83	6.27	5.54	6.27	6.26	6.07	6.39	6.25	6.37
Sulfate	mg/L	1490	1410	1490	1550	1320	1470	1580	1550	1570	1540	1520	1420	1340
Total Dissolved Solids	mg/L	6820	6120	7890	10200	9620	7260	6590	6480	6200	6320	4760	5820	5980

* - The displayed value is the arithmetic mean of multiple database matches.

Table 4

Analytical Data Summary for CBL-308I

Constituents	9/18/2020	1/28/2021	7/21/2021	1/27/2022	7/27/2022	1/26/2023	7/18/2023	1/30/2024	7/22/2024	1/27/2025	7/29/2025
Boron, Total	.1030	<.0500	.1300	<.0500	.0790	.1430	<.0500	.1500	.1390	.1630	.1800
Calcium, Total	838	830	684	974	736	732	642	714	683	698	676
Chloride	2410	2200	1780	2020	2470	2570	1840	1790	2250	2190	1930
Fluoride	1.330	1.440	1.740	1.750	1.430	<.500	1.860	1.260	.864	1.200	1.260
pH	6.22	6.26	6.16	6.36	6.23	6.41	6.26	6.57	6.53	6.64	6.68
Sulfate	1310	1340	1240	1310	1190	445	1290	1360	1430	1360	1400
Total Dissolved Solids	6860	6190	5270	5320	6840	5810	5680	5410	5810	5290	5530

* - The displayed value is the arithmetic mean of multiple database matches.

Table 5

Analytical Data Summary for CBL-340I

Constituents	Units	1/21/2016	5/4/2016	7/27/2016	10/24/2016	1/23/2017	3/22/2017	5/16/2017	7/27/2017	2/8/2018	7/27/2018	1/22/2019	7/31/2019	1/30/2020
Boron, Total	mg/L	<.0500	.0832	.0810	.1580	<.0500	.1740	.1040	.0816	.0638	<.0500	<.0500	.1240	.0562
Calcium, Total	mg/L	564	560	575	607	627	581	584	571	555	544	518	518	539
Chloride	mg/L	2370	2260	2350	2380	2070	2280	2520	2380	2730	2450	2250	2280	2240
Fluoride	mg/L	1.090	1.920	1.060	1.260	.840	8.440	1.010	.850	1.000	1.300	.830	.880	.870
pH	S.U.	6.52	6.13	6.95	6.19	5.46	6.49	5.77	6.42	6.41	6.25	6.59	6.45	6.49
Sulfate	mg/L	652	616	668	675	571	635	715	685	752	711	639	684	637
Total Dissolved Solids	mg/L	4990	5230	6250	5670	6230	5480	5470	4880	5290	5100	4720	5560	5080

* - The displayed value is the arithmetic mean of multiple database matches.

Table 5

Analytical Data Summary for CBL-340I

Constituents	9/18/2020	1/28/2021	7/22/2021	1/28/2022	7/28/2022	1/30/2023	7/19/2023	1/31/2024	7/23/2024	1/28/2025	7/29/2025
Boron, Total	.1460	<.0500	.3840	.1600	.2850	.1670	.2760	.1780	.1810	.1830	.1910
Calcium, Total	547	607	532	597	538	635	631	607	560	556	579
Chloride	2130	2260	2200	2200	2160	2230	2130	2210	2480	2310	2650
Fluoride	.725	.835	.865	1.060	.865	.850	1.070	.605	.521	.724	.741
pH	6.32	6.32	6.24	6.42	6.35	6.37	6.41	6.12	6.12	6.29	6.38
Sulfate	608	634	618	619	614	643	599	705	780	717	785
Total Dissolved Solids	5430	5520	4990	4870	5490	5010	5290	5090	5320	4730	5120

* - The displayed value is the arithmetic mean of multiple database matches.

Table 6

Analytical Data Summary for CBL-341I

Constituents	Units	1/23/2017	2/23/2017	3/22/2017	4/20/2017	5/16/2017	6/20/2017	7/27/2017	9/11/2017	2/8/2018	8/24/2018	1/22/2019	7/31/2019	1/30/2020
Boron, Total	mg/L	<.0500	<.0500	<.0500	.0587	.0896	.0668	.0507	<.0500	<.0500	<.0500	<.0500	<.0500	<.0500
Calcium, Total	mg/L	854	870	906	898	860	950	829	848	810	824	782	714	767
Chloride	mg/L	1600	2000	1780	1770	1900	1820	1970	1710	2110	1910	1790	1650	1780
Fluoride	mg/L	.5300	<.5000	<.5000	<.5000	<.5000	.3350	.0550	.3670	.1060	.1140	.0546	.1000	.1530
pH	S.U.	5.74	5.23	5.72	5.73	5.54	6.19	6.21	6.10	6.18	5.82	6.38	6.23	6.27
Sulfate	mg/L	307	404	346	336	369	363	419	354	383	376	358	329	351
Total Dissolved Solids	mg/L	5000	4520	5110	4240	4840	5940	4150	4860	4320	4800	3870	5370	4900

* - The displayed value is the arithmetic mean of multiple database matches.

Table 6

Analytical Data Summary for CBL-341I

Constituents	9/17/2020	1/27/2021	7/22/2021	9/7/2021	1/27/2022	7/28/2022	1/26/2023	7/19/2023	1/29/2024	7/22/2024	10/1/2024	1/28/2025	7/28/2025
Boron, Total	.1020	<.0500	.1110		<.0500	.1150	.1340	.0760	.1330	.1190	.1360	.1380	.1510
Calcium, Total	814	874	852		1040	704	797	710	875	801		778	781
Chloride	1700	1800	1750		1810	1690	1660	1530	1700	1960		1780	1850
Fluoride	<.2500	<.5000	1.1600	<.2500	<.0500	.1410	<.2500	1.1200	<.1000	<.1000		.1280	.3060
pH	6.14	6.06	5.98	6.18	6.26	6.16	6.28	6.22	6.38	6.39		6.46	6.56
Sulfate	336	324	316		320	296	309	259	346	367		369	344
Total Dissolved Solids	4930	3940	4520		3800	4910	4390	4190	3990	3700		4020	3700

* - The displayed value is the arithmetic mean of multiple database matches.

Attachment C

Summary Tables and Graphs for the Intrawell Comparisons

Table 1

Summary Statistics and Intermediate Computations for Combined Shewhart-CUSUM Control Charts

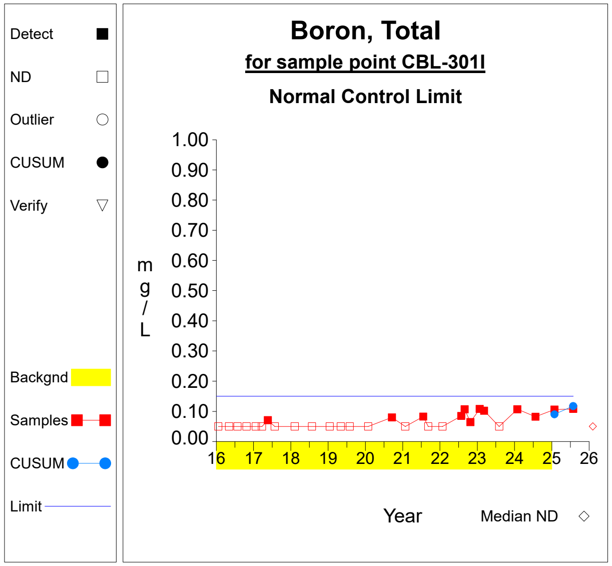
Constituent	Units	Well	N(back)	N(mon)	N(tot)	Mean	SD	R(i-1)	R(i)	S(i-1)	S(i)	Limit	Type	Conf
Boron, Total	mg/L	CBL-301I	27	2	29	0.0644	0.0213	0.1060	0.1080	0.0900	0.1176	0.1497	normal	
Boron, Total	mg/L	CBL-302I	23	2	25	0.0828	0.0621	0.2100	0.2400	0.1634	0.2740	0.3313	normal	
Boron, Total	mg/L	CBL-306I	22	2	25	0.0751	0.0295	0.1600	0.1730	0.1378	0.2136	0.1933	normal	
Boron, Total	mg/L	CBL-308I	22	2	24	0.1155	0.1108	0.1630	0.1800	0.1155	0.1155	0.5585	normal	
Boron, Total	mg/L	CBL-341I	23	2	25	0.0757	0.0331	0.1380	0.1510	0.1132	0.1636	0.2082	normal	
Calcium, Total	mg/L	CBL-301I	22	2	25	980.3636	112.6222	907.0000	145.0000	980.3636	980.3636	1430.8525	normal	
Calcium, Total	mg/L	CBL-302I	22	2	24	949.0455	108.7730	878.0000	959.0000	949.0455	949.0455	1384.1375	normal	
Calcium, Total	mg/L	CBL-306I	20	2	25	207.3500	43.3896	206.0000	120.0000	207.3500	207.3500	380.9085	normal	
Calcium, Total	mg/L	CBL-308I	22	2	24	828.2273	99.9314	698.0000	676.0000	828.2273	828.2273	1227.9528	normal	
Calcium, Total	mg/L	CBL-341I	22	2	24	835.4091	78.2941	778.0000	781.0000	835.4091	835.4091	1148.5855	normal	
Chloride	mg/L	CBL-301I	22	2	25	2281.3636	343.3490	2270.0000	499.0000	2281.3636	2281.3636	3654.7596	normal	
Chloride	mg/L	CBL-302I	22	2	24	1765.9091	357.7397	1730.0000	1630.0000	1765.9091	1765.9091	3196.8680	normal	
Chloride	mg/L	CBL-306I	19	2	25	286.6842	89.3526	286.0000	39.7000	286.6842	286.6842	644.0948	normal	
Chloride	mg/L	CBL-308I	22	2	24	2394.5455	335.0867	2190.0000	1930.0000	2394.5455	2394.5455	3734.8924	normal	
Chloride	mg/L	CBL-341I	22	2	24	1790.4545	139.8461	1780.0000	1850.0000	1790.4545	1790.4545	2349.8389	normal	
Fluoride	mg/L	CBL-301I	25	2	27	0.5374	0.5449	0.1000	0.3510	0.5374	0.5374	2.7170	normal	
Fluoride	mg/L	CBL-302I	23	2	25	0.5223	0.5040	0.1710	0.1940	0.5223	0.5223	2.5382	normal	
Fluoride	mg/L	CBL-306I	21	2	25	2.2678	0.6519	2.2000	1.9900	2.2678	2.2678	4.8754	normal	
Fluoride	mg/L	CBL-308I	20	2	24	1.6192	0.3117	1.2000	1.2600	1.6192	1.6192	2.8660	normal	
Fluoride	mg/L	CBL-341I	23	2	25	0.3037	0.2842	0.1280	0.3060	0.3037	0.3037	1.4406	normal	
pH	S.U.	CBL-301I	26	2	28	6.2223	0.2278	6.5400	6.6200	6.3691	6.5959	5.31 - 7.13	normal	
pH	S.U.	CBL-302I	23	2	25	6.1100	0.5489	6.4300	6.3500	6.1100	6.1100	3.91 - 8.31	normal	
pH	S.U.	CBL-306I	22	2	25	6.6609	0.6096	6.4400	6.5300	6.6609	6.6609	4.22 - 9.10	normal	
pH	S.U.	CBL-308I	22	2	24	6.2709	0.2433	6.6400	6.6800	6.4575	6.6841	5.30 - 7.24	normal	
pH	S.U.	CBL-341I	22	2	25	6.0982	0.2406	6.4600	6.5600	6.2795	6.5608	5.14 - 7.06	normal	
Sulfate	mg/L	CBL-301I	23	2	26	344.9130	87.8288	467.0000	149.0000	401.1284	344.9130	696.2283	normal	
Sulfate	mg/L	CBL-302I	22	2	24	1242.4091	114.2431	1490.0000	1270.0000	1404.3177	1346.2262	1699.3816	normal	
Sulfate	mg/L	CBL-306I	20	2	25	376.2000	113.5089	433.0000	139.0000	376.2000	376.2000	830.2357	normal	
Sulfate	mg/L	CBL-308I	21	2	24	1415.2381	116.4311	1360.0000	1400.0000	1415.2381	1415.2381	1880.9623	normal	
Sulfate	mg/L	CBL-341I	22	2	24	344.0000	36.4326	369.0000	344.0000	344.0000	344.0000	489.7303	normal	
Total Dissolved Solids	mg/L	CBL-301I	22	2	25	5360.0000	726.6164	3810.0000	1420.0000	5360.0000	5360.0000	8266.4657	normal	
Total Dissolved Solids	mg/L	CBL-302I	22	2	24	5249.0909	703.2029	4710.0000	5000.0000	5249.0909	5249.0909	8061.9027	normal	
Total Dissolved Solids	mg/L	CBL-306I	22	2	25	1346.9091	379.0547	1480.0000	841.0000	1346.9091	1346.9091	2863.1279	normal	
Total Dissolved Solids	mg/L	CBL-308I	22	2	24	6511.3636	1311.6449	5290.0000	5530.0000	6511.3636	6511.3636	11757.9432	normal	
Total Dissolved Solids	mg/L	CBL-341I	22	2	24	4558.6364	563.0385	4020.0000	3700.0000	4558.6364	4558.6364	6810.7903	normal	

N(back) and N(mon) = Non-outlier measurements in the background and monitoring periods.
N(tot) = All independent measurements for that constituent and well.
For transformed data, mean and SD in transformed units and control limit in original units.
Conf = confidence level for passing initial test or one of two verification resamples (nonparametric test only).
* - Insufficient Data.
** - Detection Frequency < 25%.
*** - Zero Variance.

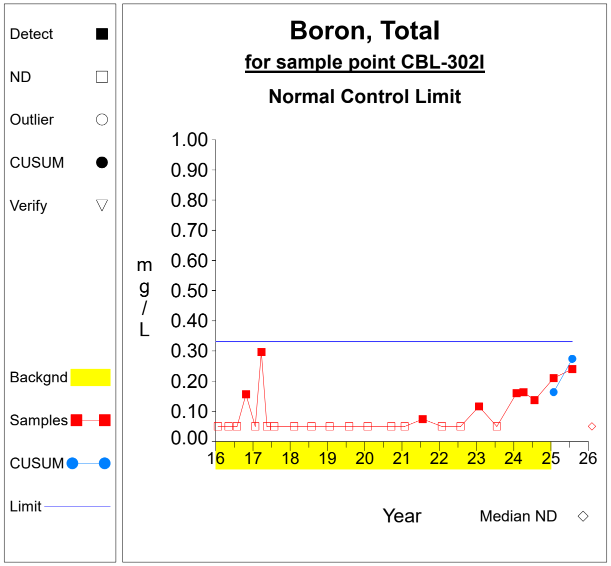
LCRA Fayette Power [GW]

September 2025

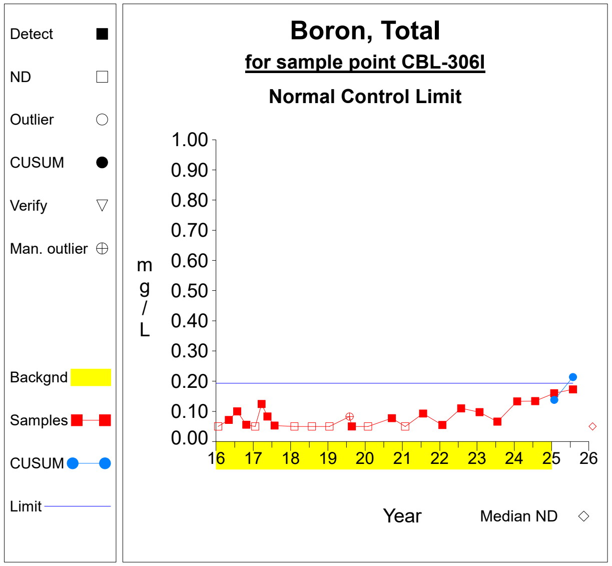
Intra-Well Control Charts / Prediction Limits



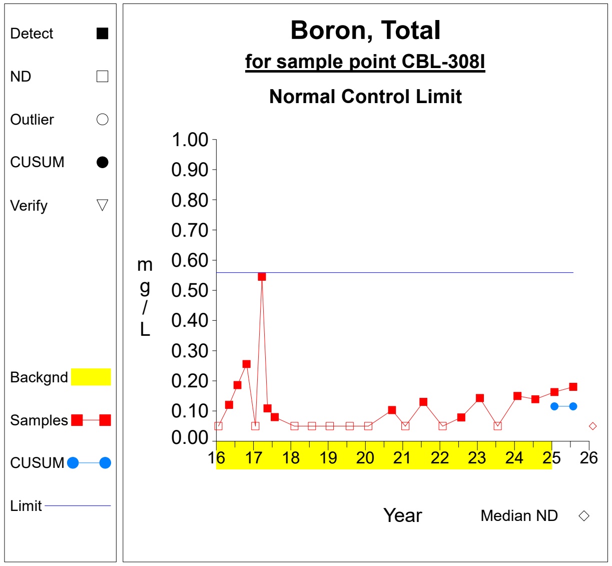
Graph 1



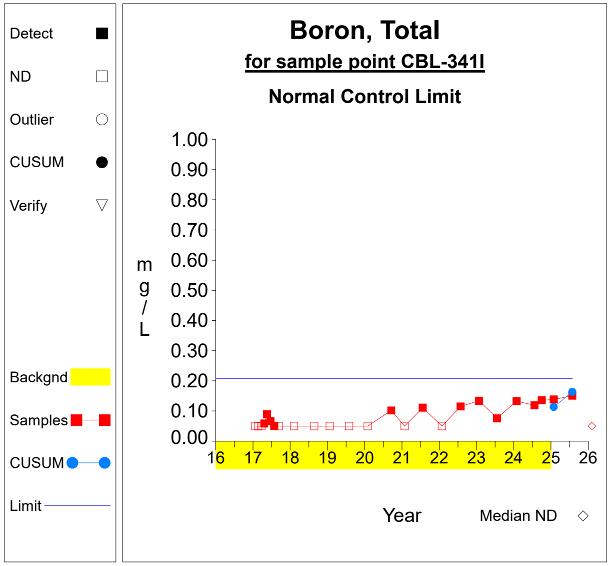
Graph 2



Graph 3



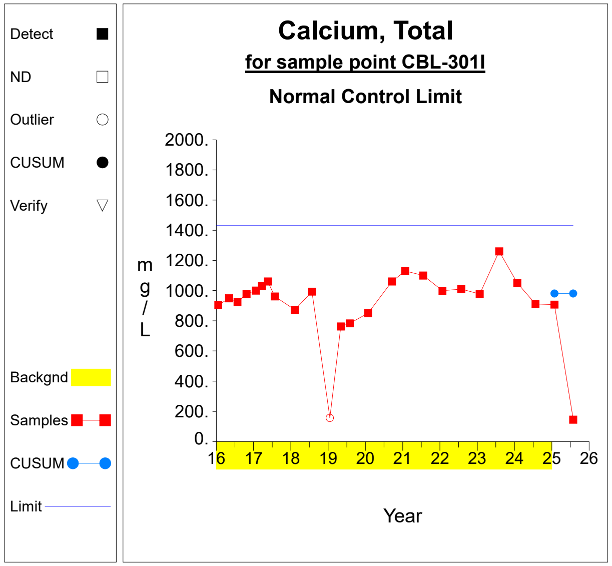
Graph 4



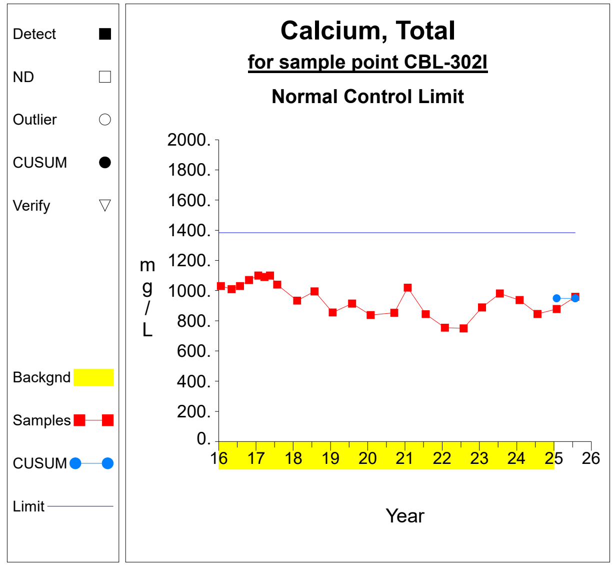
Graph 5

Prepared by: Otter Creek Environmental

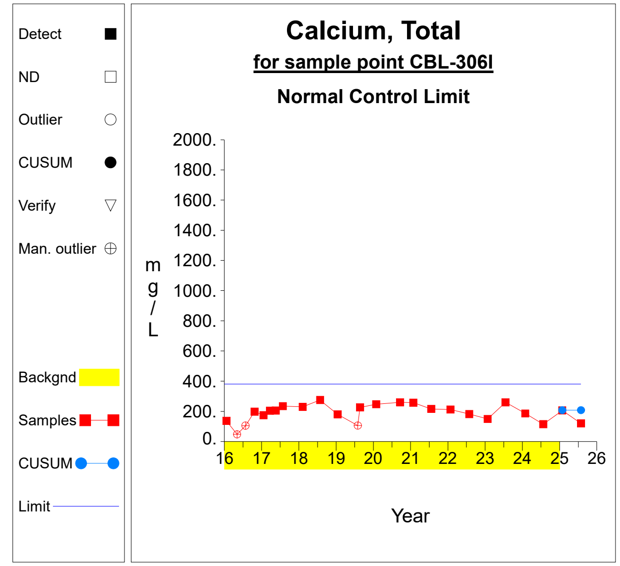
Intra-Well Control Charts / Prediction Limits



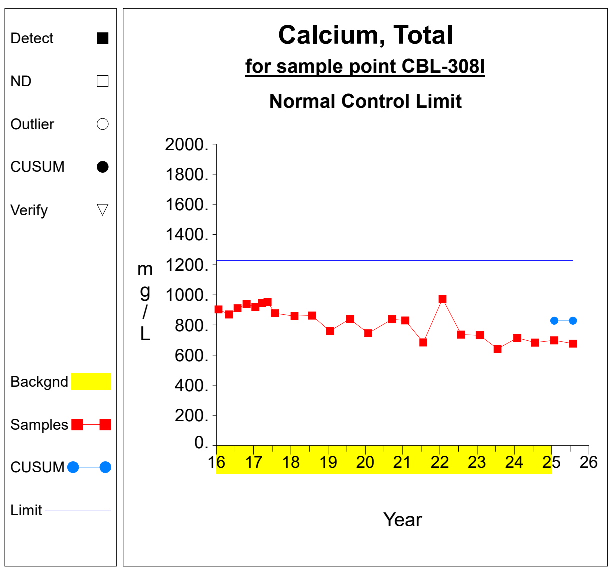
Graph 6



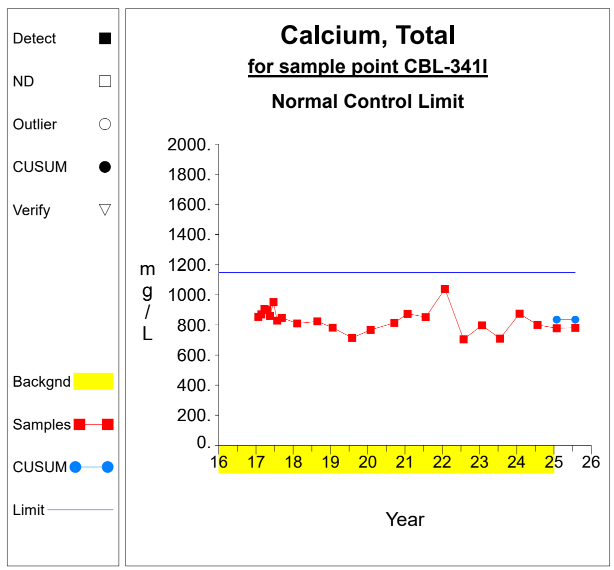
Graph 7



Graph 8



Graph 9



Graph 10

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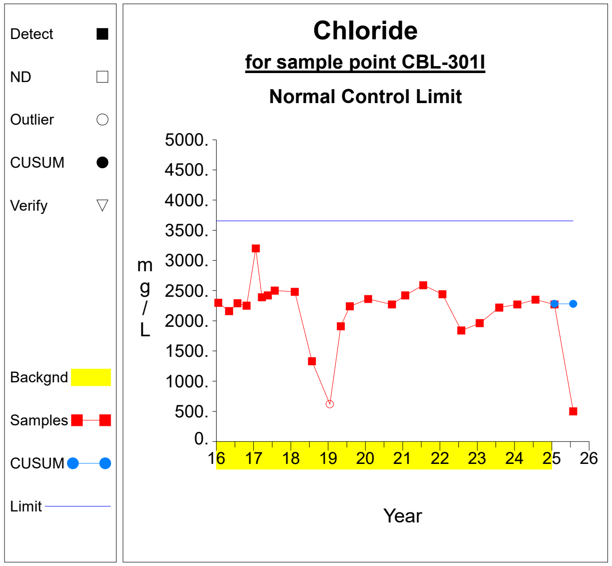
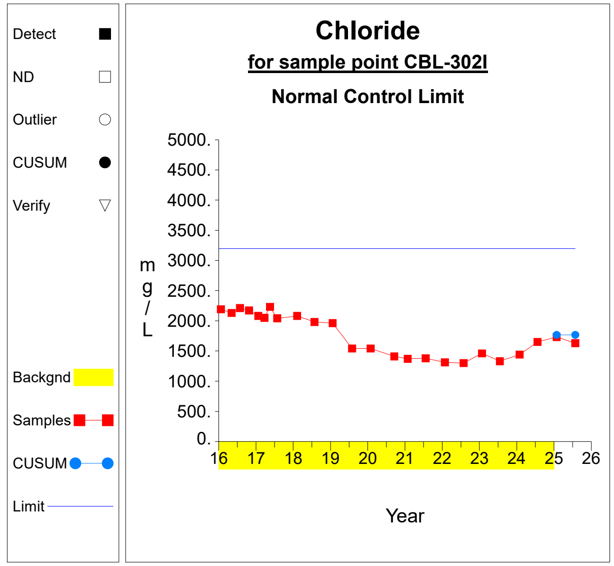
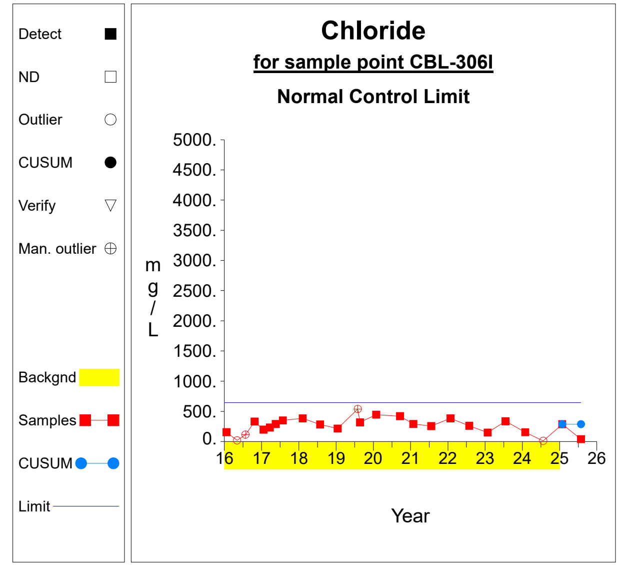
Intra-Well Control Charts / Prediction Limits



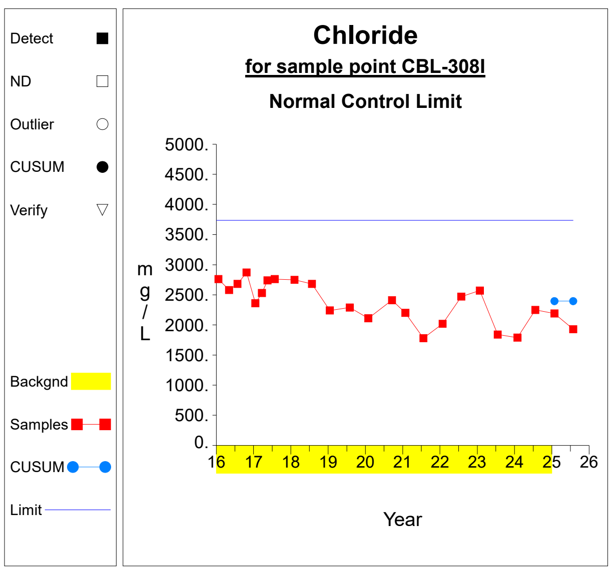
Graph 11



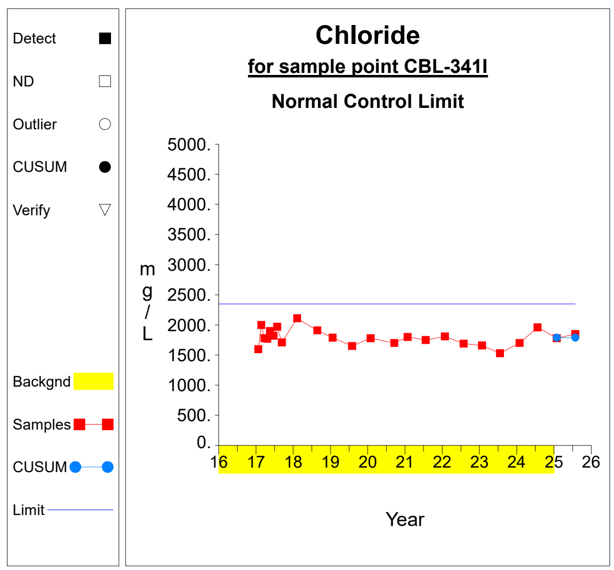
Graph 12



Graph 13



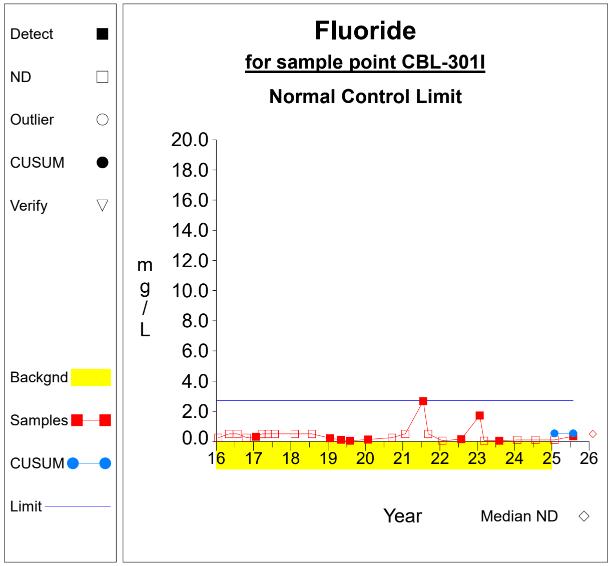
Graph 14



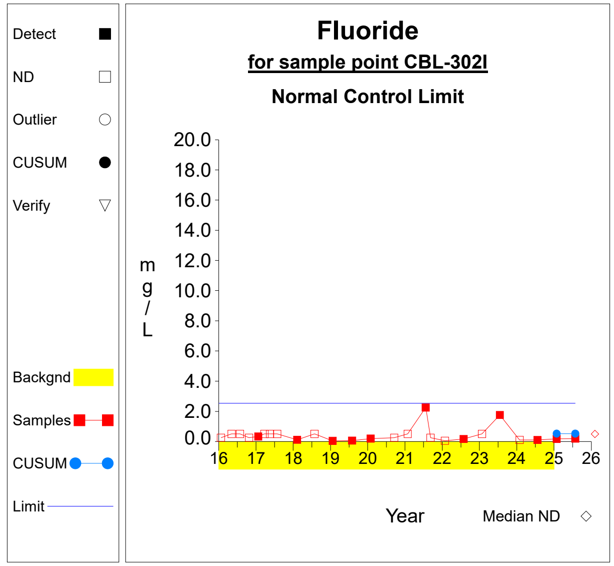
Graph 15

Prepared by: Otter Creek Environmental

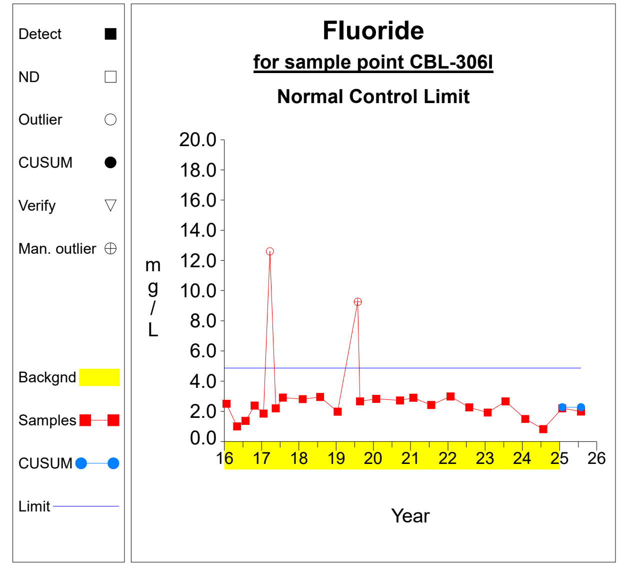
Intra-Well Control Charts / Prediction Limits



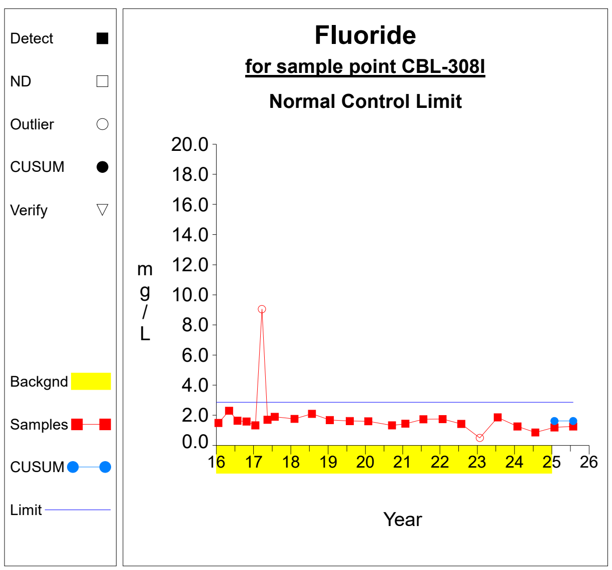
Graph 16



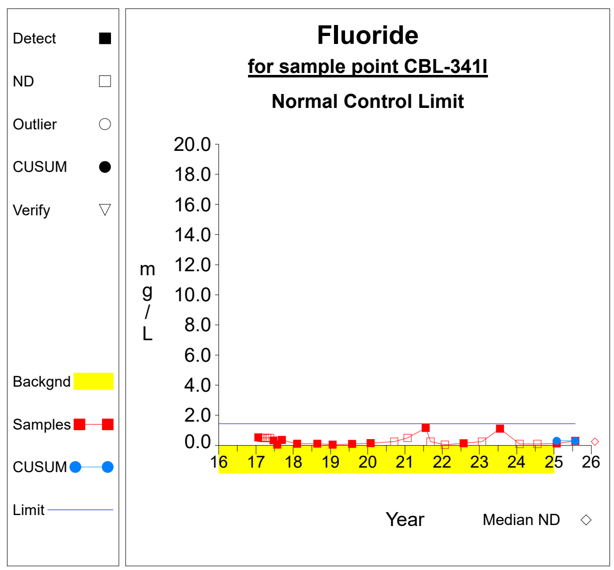
Graph 17



Graph 18



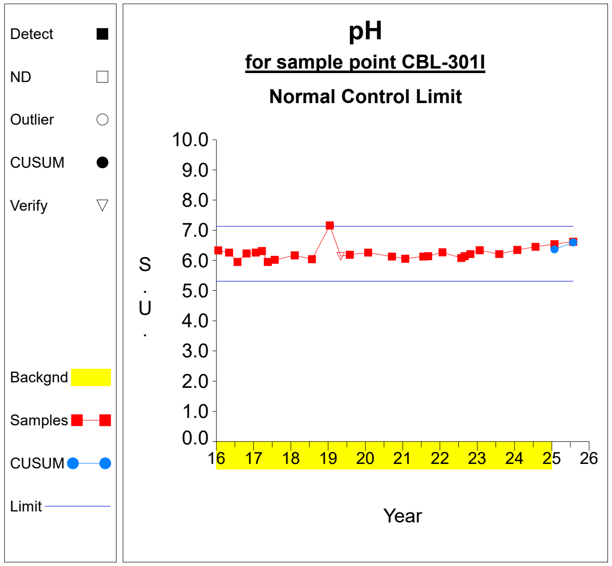
Graph 19



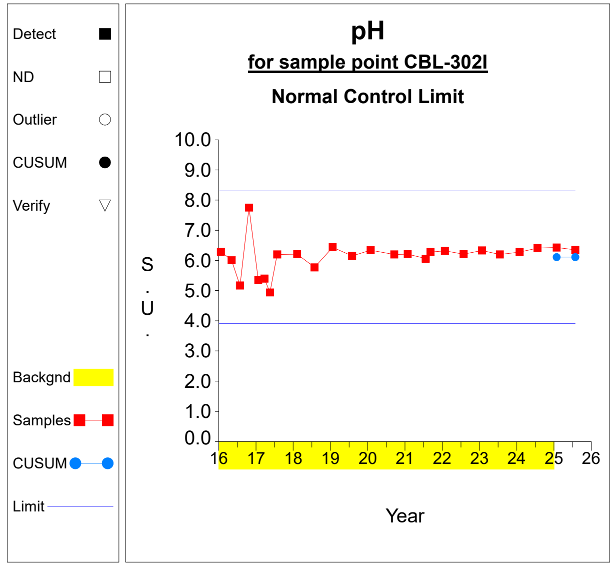
Graph 20

LCRA Fayette Power [GW] September 2025

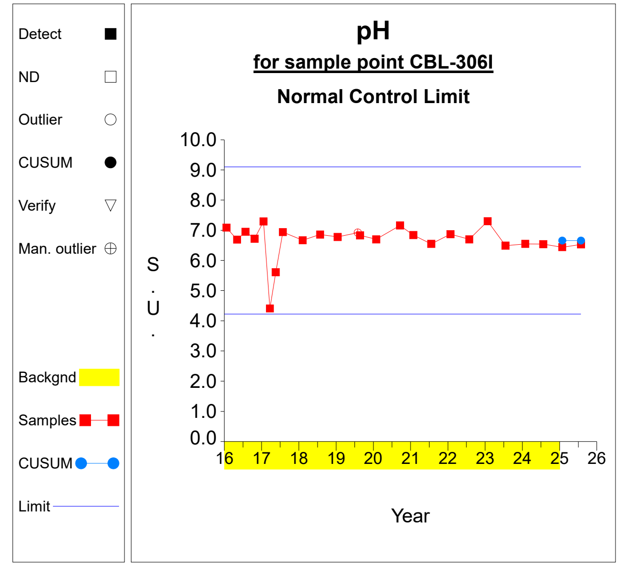
Intra-Well Control Charts / Prediction Limits



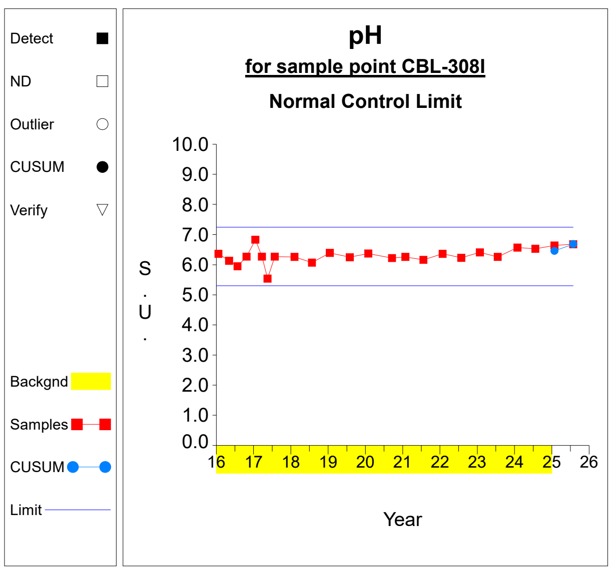
Graph 21



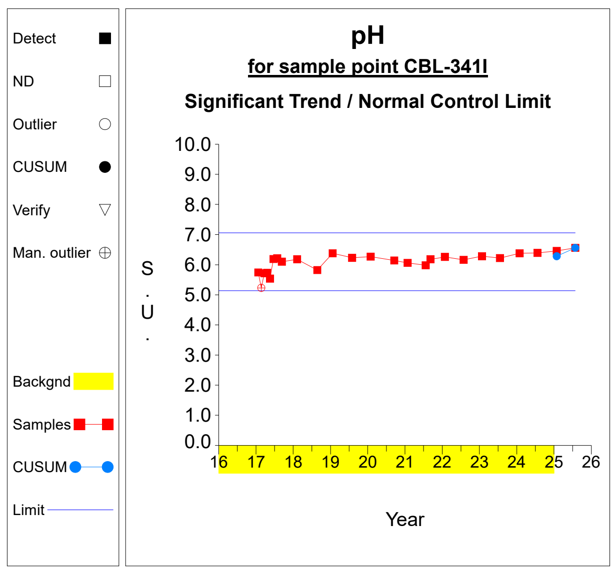
Graph 22



Graph 23



Graph 24



Graph 25

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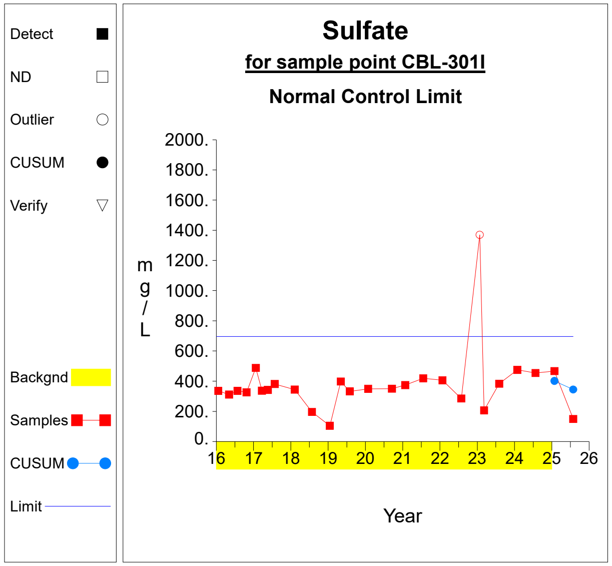
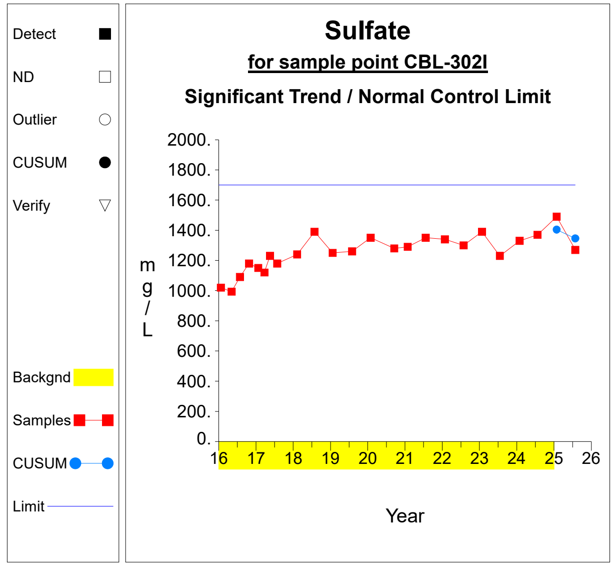
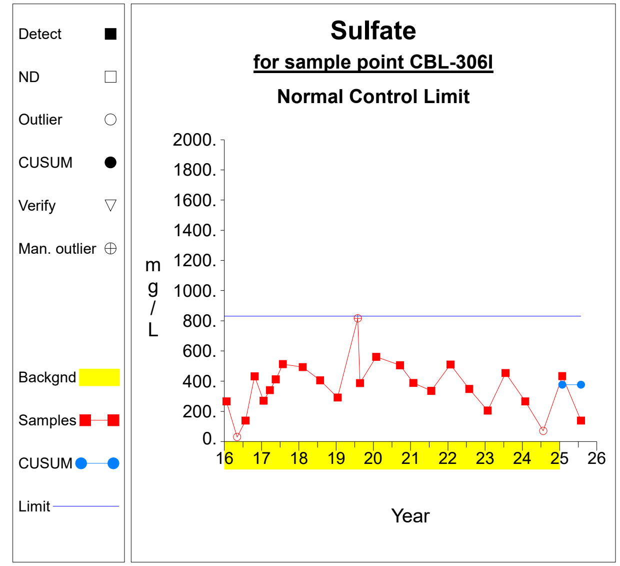
Intra-Well Control Charts / Prediction Limits



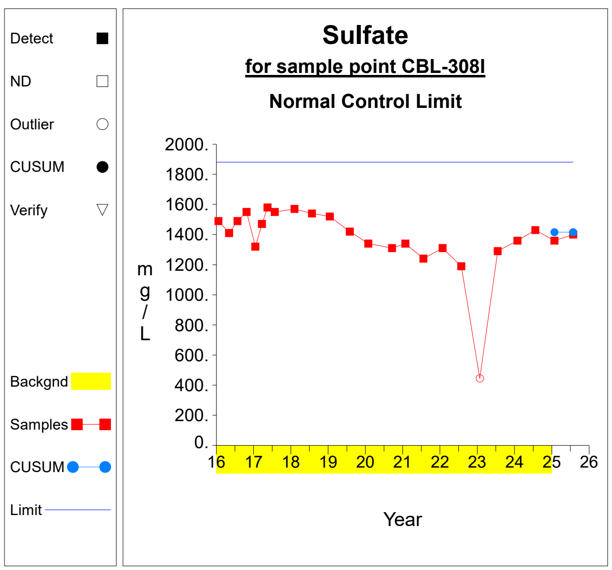
Graph 26



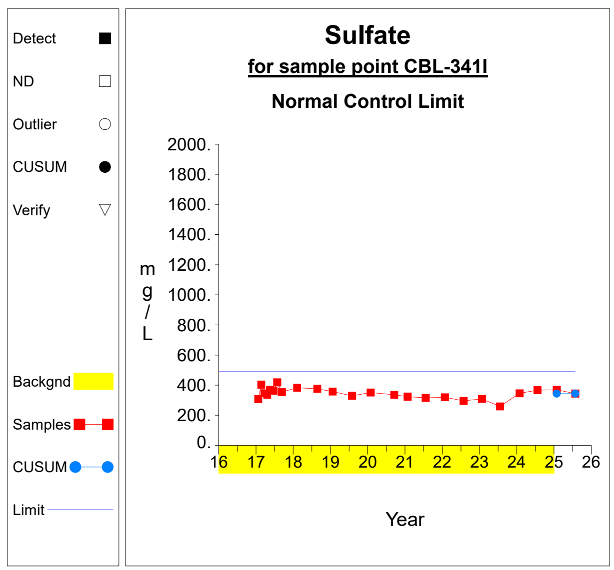
Graph 27



Graph 28



Graph 29

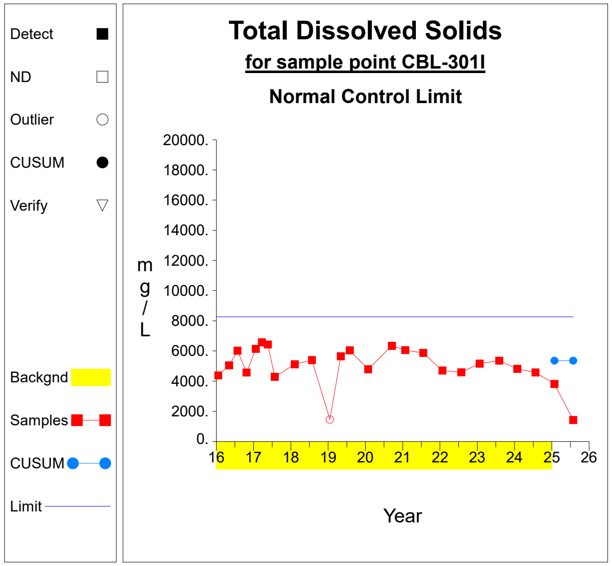


Graph 30

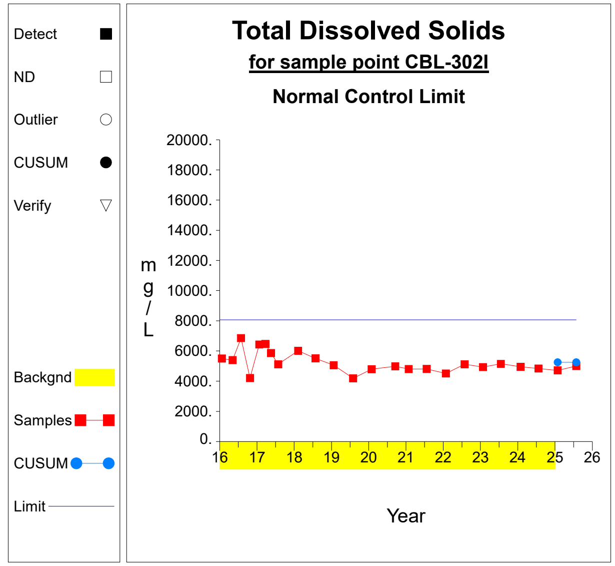
LCRA Fayette Power [GW]

September 2025

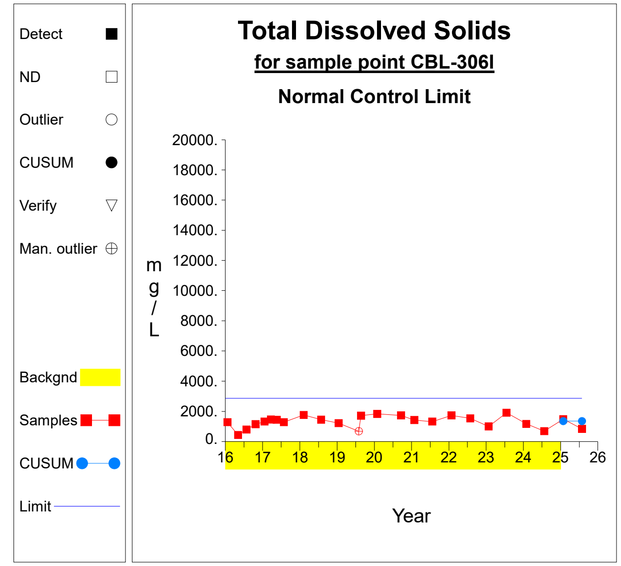
Intra-Well Control Charts / Prediction Limits



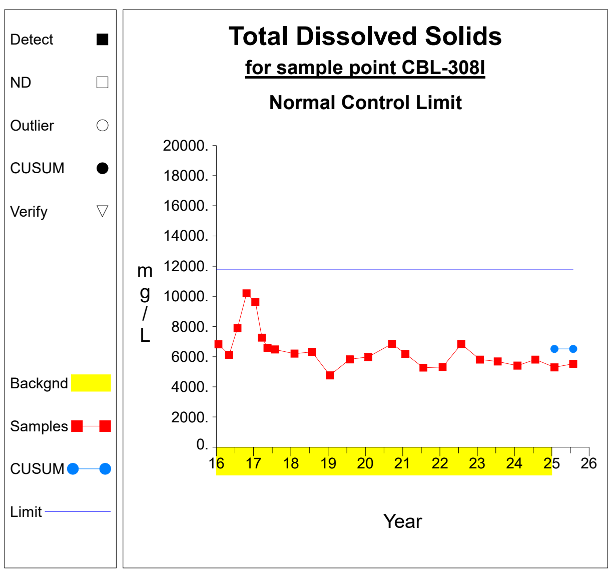
Graph 31



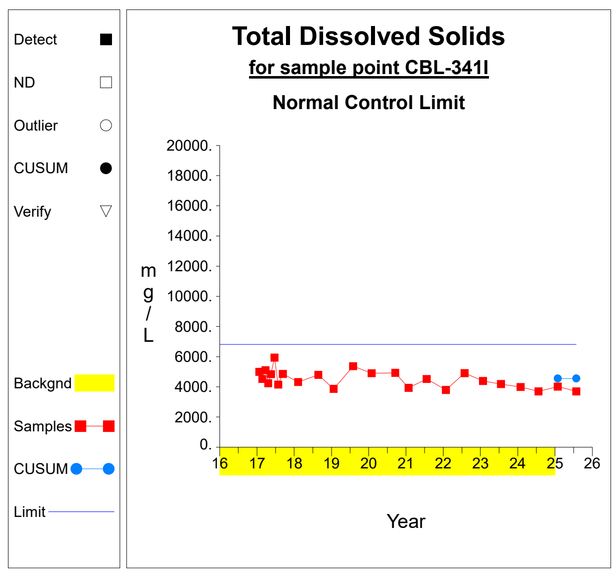
Graph 32



Graph 33



Graph 34



Graph 35

False Positive and False Negative Rates for Current Intra-Well Control Charts Monitoring Program

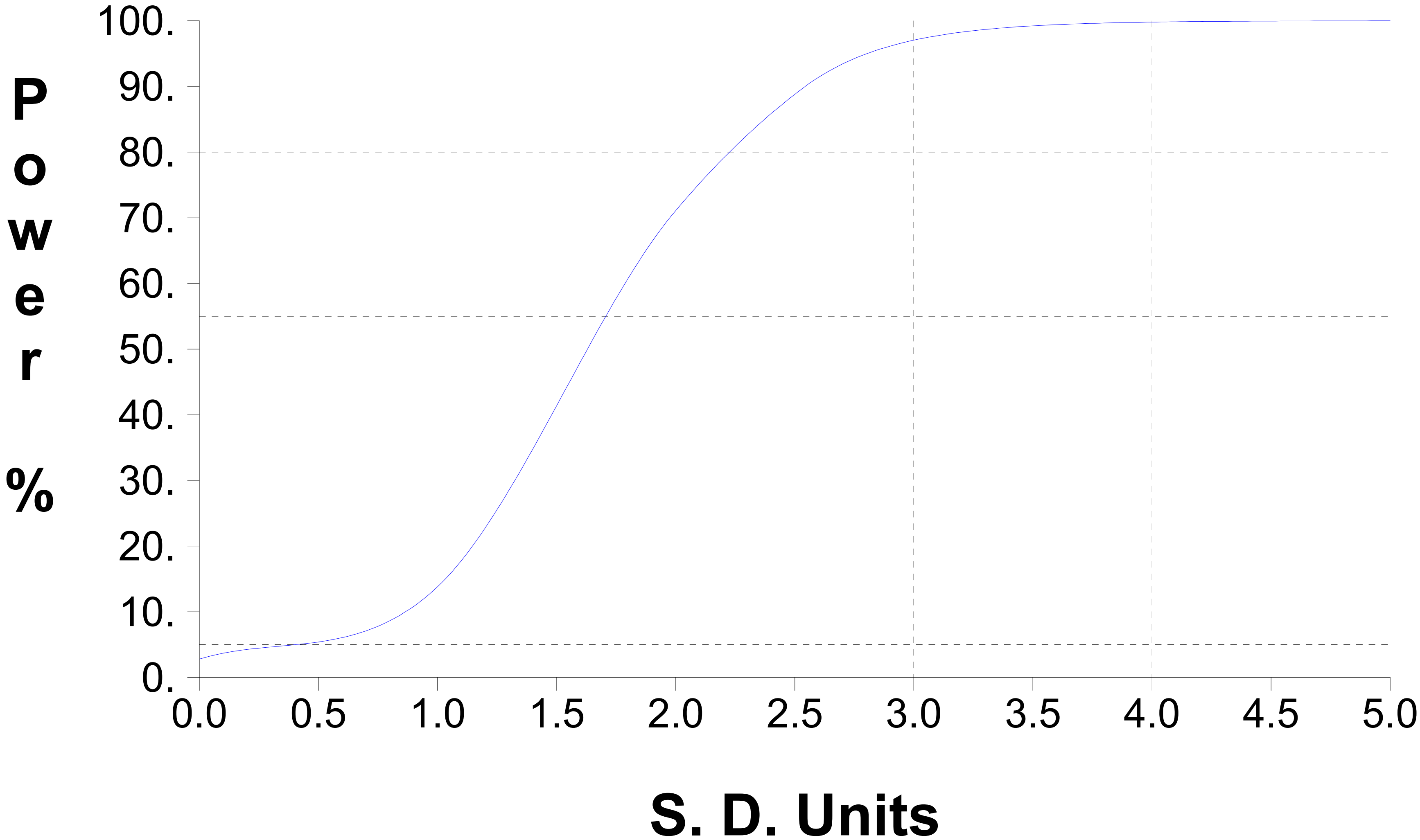


Table 2

Analytical Data and CUSUM Summary

Constituent	Units	Well	Date	Background	Result		Outlier	CUSUM	Adjusted	
Boron, Total	mg/L	CBL-301I	01/21/2016	yes	0.0500	ND				
Boron, Total	mg/L	CBL-301I	05/04/2016	yes	0.0500	ND				
Boron, Total	mg/L	CBL-301I	07/27/2016	yes	0.0500	ND				
Boron, Total	mg/L	CBL-301I	10/24/2016	yes	0.0500	ND				
Boron, Total	mg/L	CBL-301I	01/23/2017	yes	0.0500	ND				
Boron, Total	mg/L	CBL-301I	03/22/2017	yes	0.0500	ND				
Boron, Total	mg/L	CBL-301I	05/18/2017	yes	0.0707					
Boron, Total	mg/L	CBL-301I	07/26/2017	yes	0.0500	ND				
Boron, Total	mg/L	CBL-301I	02/08/2018	yes	0.0500	ND				
Boron, Total	mg/L	CBL-301I	07/25/2018	yes	0.0500	ND				
Boron, Total	mg/L	CBL-301I	01/17/2019	yes	0.0500	ND				
Boron, Total	mg/L	CBL-301I	05/02/2019	yes	0.0500	ND				
Boron, Total	mg/L	CBL-301I	07/31/2019	yes	0.0500	ND				
Boron, Total	mg/L	CBL-301I	01/28/2020	yes	0.0500	ND				
Boron, Total	mg/L	CBL-301I	09/17/2020	yes	0.0801					
Boron, Total	mg/L	CBL-301I	01/26/2021	yes	0.0500	ND				
Boron, Total	mg/L	CBL-301I	07/20/2021	yes	0.0826					
Boron, Total	mg/L	CBL-301I	09/07/2021	yes	0.0500	ND				
Boron, Total	mg/L	CBL-301I	01/26/2022	yes	0.0500	ND				
Boron, Total	mg/L	CBL-301I	07/27/2022	yes	0.0850					
Boron, Total	mg/L	CBL-301I	08/30/2022	yes	0.1070					
Boron, Total	mg/L	CBL-301I	10/25/2022	yes	0.0645					
Boron, Total	mg/L	CBL-301I	01/25/2023	yes	0.1080					
Boron, Total	mg/L	CBL-301I	03/07/2023	yes	0.1020					
Boron, Total	mg/L	CBL-301I	08/02/2023	yes	0.0500	ND				
Boron, Total	mg/L	CBL-301I	01/29/2024	yes	0.1070					
Boron, Total	mg/L	CBL-301I	07/23/2024	yes	0.0820					
Boron, Total	mg/L	CBL-301I	01/27/2025		0.1060			0.0900		
Boron, Total	mg/L	CBL-301I	07/28/2025		0.1080			0.1176		
Boron, Total	mg/L	CBL-302I	01/22/2016	yes	0.0500	ND				
Boron, Total	mg/L	CBL-302I	05/04/2016	yes	0.0500	ND				
Boron, Total	mg/L	CBL-302I	07/27/2016	yes	0.0500	ND				
Boron, Total	mg/L	CBL-302I	10/24/2016	yes	0.1560					
Boron, Total	mg/L	CBL-302I	01/23/2017	yes	0.0500	ND				
Boron, Total	mg/L	CBL-302I	03/22/2017	yes	0.2970					
Boron, Total	mg/L	CBL-302I	05/16/2017	yes	0.0500	ND				
Boron, Total	mg/L	CBL-302I	07/27/2017	yes	0.0500	ND				
Boron, Total	mg/L	CBL-302I	02/08/2018	yes	0.0500	ND				
Boron, Total	mg/L	CBL-302I	07/27/2018	yes	0.0500	ND				
Boron, Total	mg/L	CBL-302I	01/22/2019	yes	0.0500	ND				
Boron, Total	mg/L	CBL-302I	07/31/2019	yes	0.0500	ND				
Boron, Total	mg/L	CBL-302I	01/30/2020	yes	0.0500	ND				
Boron, Total	mg/L	CBL-302I	09/17/2020	yes	0.0500	ND				
Boron, Total	mg/L	CBL-302I	01/28/2021	yes	0.0500	ND				
Boron, Total	mg/L	CBL-302I	07/21/2021	yes	0.0743					
Boron, Total	mg/L	CBL-302I	01/27/2022	yes	0.0500	ND				
Boron, Total	mg/L	CBL-302I	07/28/2022	yes	0.0500	ND				
Boron, Total	mg/L	CBL-302I	01/26/2023	yes	0.1160					
Boron, Total	mg/L	CBL-302I	07/18/2023	yes	0.0500	ND				
Boron, Total	mg/L	CBL-302I	01/29/2024	yes	0.1600					

* - Outlier for that well and constituent.
** - Non-outlier detected sample Result and / or CUSUM value exceeds limit.
*** - ND value replaced with median RL.
**** - ND value replaced with manual RL.
ND = Not detected, Result = detection limit.

Table 2

Analytical Data and CUSUM Summary

Constituent	Units	Well	Date	Background	Result		Outlier	CUSUM	Adjusted	
Boron, Total	mg/L	CBL-302I	04/05/2024	yes	0.1630					
Boron, Total	mg/L	CBL-302I	07/22/2024	yes	0.1370					
Boron, Total	mg/L	CBL-302I	01/27/2025		0.2100			0.1634		
Boron, Total	mg/L	CBL-302I	07/28/2025		0.2400			0.2740		
Boron, Total	mg/L	CBL-306I	01/21/2016	yes	0.0500	ND				
Boron, Total	mg/L	CBL-306I	05/04/2016	yes	0.0717					
Boron, Total	mg/L	CBL-306I	07/26/2016	yes	0.0998					
Boron, Total	mg/L	CBL-306I	10/24/2016	yes	0.0556					
Boron, Total	mg/L	CBL-306I	01/19/2017	yes	0.0500	ND				
Boron, Total	mg/L	CBL-306I	03/22/2017	yes	0.1240					
Boron, Total	mg/L	CBL-306I	05/18/2017	yes	0.0832					
Boron, Total	mg/L	CBL-306I	07/27/2017	yes	0.0531					
Boron, Total	mg/L	CBL-306I	02/08/2018	yes	0.0500	ND				
Boron, Total	mg/L	CBL-306I	07/27/2018	yes	0.0500	ND				
Boron, Total	mg/L	CBL-306I	01/16/2019	yes	0.0500	ND				
Boron, Total	mg/L	CBL-306I	07/31/2019	yes	0.0824		yes			*
Boron, Total	mg/L	CBL-306I	08/23/2019	yes	0.0500					
Boron, Total	mg/L	CBL-306I	01/29/2020	yes	0.0500	ND				
Boron, Total	mg/L	CBL-306I	09/19/2020	yes	0.0773					
Boron, Total	mg/L	CBL-306I	01/28/2021	yes	0.0500	ND				
Boron, Total	mg/L	CBL-306I	07/21/2021	yes	0.0927					
Boron, Total	mg/L	CBL-306I	01/27/2022	yes	0.0548					
Boron, Total	mg/L	CBL-306I	07/28/2022	yes	0.1100					
Boron, Total	mg/L	CBL-306I	01/26/2023	yes	0.0973					
Boron, Total	mg/L	CBL-306I	07/18/2023	yes	0.0659					
Boron, Total	mg/L	CBL-306I	01/29/2024	yes	0.1330					
Boron, Total	mg/L	CBL-306I	07/23/2024	yes	0.1340					
Boron, Total	mg/L	CBL-306I	01/27/2025		0.1600			0.1378		
Boron, Total	mg/L	CBL-306I	07/28/2025		0.1730			0.2136		**
Boron, Total	mg/L	CBL-308I	01/22/2016	yes	0.0500	ND				
Boron, Total	mg/L	CBL-308I	05/04/2016	yes	0.1210					
Boron, Total	mg/L	CBL-308I	07/26/2016	yes	0.1860					
Boron, Total	mg/L	CBL-308I	10/24/2016	yes	0.2560					
Boron, Total	mg/L	CBL-308I	01/19/2017	yes	0.0500	ND				
Boron, Total	mg/L	CBL-308I	03/22/2017	yes	0.5450					
Boron, Total	mg/L	CBL-308I	05/16/2017	yes	0.1090					
Boron, Total	mg/L	CBL-308I	07/26/2017	yes	0.0799					
Boron, Total	mg/L	CBL-308I	02/06/2018	yes	0.0500	ND				
Boron, Total	mg/L	CBL-308I	07/25/2018	yes	0.0500	ND				
Boron, Total	mg/L	CBL-308I	01/18/2019	yes	0.0500	ND				
Boron, Total	mg/L	CBL-308I	07/31/2019	yes	0.0500	ND				
Boron, Total	mg/L	CBL-308I	01/29/2020	yes	0.0500	ND				
Boron, Total	mg/L	CBL-308I	09/18/2020	yes	0.1030					
Boron, Total	mg/L	CBL-308I	01/28/2021	yes	0.0500	ND				
Boron, Total	mg/L	CBL-308I	07/21/2021	yes	0.1300					
Boron, Total	mg/L	CBL-308I	01/27/2022	yes	0.0500	ND				
Boron, Total	mg/L	CBL-308I	07/27/2022	yes	0.0790					
Boron, Total	mg/L	CBL-308I	01/26/2023	yes	0.1430					
Boron, Total	mg/L	CBL-308I	07/18/2023	yes	0.0500	ND				
Boron, Total	mg/L	CBL-308I	01/30/2024	yes	0.1500					

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Table 2

Analytical Data and CUSUM Summary

Constituent	Units	Well	Date	Background	Result		Outlier	CUSUM	Adjusted	
Boron, Total	mg/L	CBL-308I	07/22/2024	yes	0.1390					
Boron, Total	mg/L	CBL-308I	01/27/2025		0.1630			0.1155		
Boron, Total	mg/L	CBL-308I	07/29/2025		0.1800			0.1155		
Boron, Total	mg/L	CBL-341I	01/23/2017	yes	0.0500	ND				
Boron, Total	mg/L	CBL-341I	02/23/2017	yes	0.0500	ND				
Boron, Total	mg/L	CBL-341I	03/22/2017	yes	0.0500	ND				
Boron, Total	mg/L	CBL-341I	04/20/2017	yes	0.0587					
Boron, Total	mg/L	CBL-341I	05/16/2017	yes	0.0896					
Boron, Total	mg/L	CBL-341I	06/20/2017	yes	0.0668					
Boron, Total	mg/L	CBL-341I	07/27/2017	yes	0.0507					
Boron, Total	mg/L	CBL-341I	09/11/2017	yes	0.0500	ND				
Boron, Total	mg/L	CBL-341I	02/08/2018	yes	0.0500	ND				
Boron, Total	mg/L	CBL-341I	08/24/2018	yes	0.0500	ND				
Boron, Total	mg/L	CBL-341I	01/22/2019	yes	0.0500	ND				
Boron, Total	mg/L	CBL-341I	07/31/2019	yes	0.0500	ND				
Boron, Total	mg/L	CBL-341I	01/30/2020	yes	0.0500	ND				
Boron, Total	mg/L	CBL-341I	09/17/2020	yes	0.1020					
Boron, Total	mg/L	CBL-341I	01/27/2021	yes	0.0500	ND				
Boron, Total	mg/L	CBL-341I	07/22/2021	yes	0.1110					
Boron, Total	mg/L	CBL-341I	01/27/2022	yes	0.0500	ND				
Boron, Total	mg/L	CBL-341I	07/28/2022	yes	0.1150					
Boron, Total	mg/L	CBL-341I	01/26/2023	yes	0.1340					
Boron, Total	mg/L	CBL-341I	07/19/2023	yes	0.0760					
Boron, Total	mg/L	CBL-341I	01/29/2024	yes	0.1330					
Boron, Total	mg/L	CBL-341I	07/22/2024	yes	0.1190					
Boron, Total	mg/L	CBL-341I	10/01/2024	yes	0.1360					
Boron, Total	mg/L	CBL-341I	01/28/2025		0.1380			0.1132		
Boron, Total	mg/L	CBL-341I	07/28/2025		0.1510			0.1636		
Calcium, Total	mg/L	CBL-301I	01/21/2016	yes	905.0000					
Calcium, Total	mg/L	CBL-301I	05/04/2016	yes	949.0000					
Calcium, Total	mg/L	CBL-301I	07/27/2016	yes	925.0000					
Calcium, Total	mg/L	CBL-301I	10/24/2016	yes	978.0000					
Calcium, Total	mg/L	CBL-301I	01/23/2017	yes	1000.0000					
Calcium, Total	mg/L	CBL-301I	03/22/2017	yes	1030.0000					
Calcium, Total	mg/L	CBL-301I	05/18/2017	yes	1060.0000					
Calcium, Total	mg/L	CBL-301I	07/26/2017	yes	961.0000					
Calcium, Total	mg/L	CBL-301I	02/08/2018	yes	873.0000					
Calcium, Total	mg/L	CBL-301I	07/25/2018	yes	993.0000					
Calcium, Total	mg/L	CBL-301I	01/17/2019	yes	156.0000		yes			*
Calcium, Total	mg/L	CBL-301I	05/02/2019	yes	762.0000					
Calcium, Total	mg/L	CBL-301I	07/31/2019	yes	783.0000					
Calcium, Total	mg/L	CBL-301I	01/28/2020	yes	851.0000					
Calcium, Total	mg/L	CBL-301I	09/17/2020	yes	1060.0000					
Calcium, Total	mg/L	CBL-301I	01/26/2021	yes	1130.0000					
Calcium, Total	mg/L	CBL-301I	07/20/2021	yes	1100.0000					
Calcium, Total	mg/L	CBL-301I	01/26/2022	yes	999.0000					
Calcium, Total	mg/L	CBL-301I	07/27/2022	yes	1010.0000					
Calcium, Total	mg/L	CBL-301I	01/25/2023	yes	977.0000					
Calcium, Total	mg/L	CBL-301I	08/02/2023	yes	1260.0000					
Calcium, Total	mg/L	CBL-301I	01/29/2024	yes	1050.0000					

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Table 2

Analytical Data and CUSUM Summary

Constituent	Units	Well	Date	Background	Result		Outlier	CUSUM	Adjusted	
Calcium, Total	mg/L	CBL-301I	07/23/2024	yes	912.0000					
Calcium, Total	mg/L	CBL-301I	01/27/2025		907.0000			980.3636		
Calcium, Total	mg/L	CBL-301I	07/28/2025		145.0000			980.3636		
Calcium, Total	mg/L	CBL-302I	01/22/2016	yes	1030.0000					
Calcium, Total	mg/L	CBL-302I	05/04/2016	yes	1010.0000					
Calcium, Total	mg/L	CBL-302I	07/27/2016	yes	1030.0000					
Calcium, Total	mg/L	CBL-302I	10/24/2016	yes	1070.0000					
Calcium, Total	mg/L	CBL-302I	01/23/2017	yes	1100.0000					
Calcium, Total	mg/L	CBL-302I	03/22/2017	yes	1090.0000					
Calcium, Total	mg/L	CBL-302I	05/16/2017	yes	1100.0000					
Calcium, Total	mg/L	CBL-302I	07/27/2017	yes	1040.0000					
Calcium, Total	mg/L	CBL-302I	02/08/2018	yes	934.0000					
Calcium, Total	mg/L	CBL-302I	07/27/2018	yes	995.0000					
Calcium, Total	mg/L	CBL-302I	01/22/2019	yes	855.0000					
Calcium, Total	mg/L	CBL-302I	07/31/2019	yes	914.0000					
Calcium, Total	mg/L	CBL-302I	01/30/2020	yes	838.0000					
Calcium, Total	mg/L	CBL-302I	09/17/2020	yes	853.0000					
Calcium, Total	mg/L	CBL-302I	01/28/2021	yes	1020.0000					
Calcium, Total	mg/L	CBL-302I	07/21/2021	yes	844.0000					
Calcium, Total	mg/L	CBL-302I	01/27/2022	yes	754.0000					
Calcium, Total	mg/L	CBL-302I	07/28/2022	yes	750.0000					
Calcium, Total	mg/L	CBL-302I	01/26/2023	yes	889.0000					
Calcium, Total	mg/L	CBL-302I	07/18/2023	yes	981.0000					
Calcium, Total	mg/L	CBL-302I	01/29/2024	yes	937.0000					
Calcium, Total	mg/L	CBL-302I	07/22/2024	yes	845.0000					
Calcium, Total	mg/L	CBL-302I	01/27/2025		878.0000			949.0455		
Calcium, Total	mg/L	CBL-302I	07/28/2025		959.0000			949.0455		
Calcium, Total	mg/L	CBL-306I	01/21/2016	yes	137.0000					
Calcium, Total	mg/L	CBL-306I	05/04/2016	yes	47.2000		yes			*
Calcium, Total	mg/L	CBL-306I	07/26/2016	yes	105.0000		yes			*
Calcium, Total	mg/L	CBL-306I	10/24/2016	yes	198.0000					
Calcium, Total	mg/L	CBL-306I	01/19/2017	yes	174.0000					
Calcium, Total	mg/L	CBL-306I	03/22/2017	yes	204.0000					
Calcium, Total	mg/L	CBL-306I	05/18/2017	yes	205.0000					
Calcium, Total	mg/L	CBL-306I	07/27/2017	yes	234.0000					
Calcium, Total	mg/L	CBL-306I	02/08/2018	yes	230.0000					
Calcium, Total	mg/L	CBL-306I	07/27/2018	yes	275.0000					
Calcium, Total	mg/L	CBL-306I	01/16/2019	yes	180.0000					
Calcium, Total	mg/L	CBL-306I	07/31/2019	yes	106.0000		yes			*
Calcium, Total	mg/L	CBL-306I	08/23/2019	yes	226.0000					
Calcium, Total	mg/L	CBL-306I	01/29/2020	yes	247.0000					
Calcium, Total	mg/L	CBL-306I	09/19/2020	yes	260.0000					
Calcium, Total	mg/L	CBL-306I	01/28/2021	yes	257.0000					
Calcium, Total	mg/L	CBL-306I	07/21/2021	yes	216.0000					
Calcium, Total	mg/L	CBL-306I	01/27/2022	yes	212.0000					
Calcium, Total	mg/L	CBL-306I	07/28/2022	yes	182.0000					
Calcium, Total	mg/L	CBL-306I	01/26/2023	yes	149.0000					
Calcium, Total	mg/L	CBL-306I	07/18/2023	yes	260.0000					
Calcium, Total	mg/L	CBL-306I	01/29/2024	yes	186.0000					
Calcium, Total	mg/L	CBL-306I	07/23/2024	yes	115.0000					

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Table 2

Analytical Data and CUSUM Summary

Constituent	Units	Well	Date	Background	Result		Outlier	CUSUM	Adjusted	
Calcium, Total	mg/L	CBL-306I	01/27/2025		206.0000			207.3500		
Calcium, Total	mg/L	CBL-306I	07/28/2025		120.0000			207.3500		
Calcium, Total	mg/L	CBL-308I	01/22/2016	yes	903.0000					
Calcium, Total	mg/L	CBL-308I	05/04/2016	yes	870.0000					
Calcium, Total	mg/L	CBL-308I	07/26/2016	yes	911.0000					
Calcium, Total	mg/L	CBL-308I	10/24/2016	yes	939.0000					
Calcium, Total	mg/L	CBL-308I	01/19/2017	yes	919.0000					
Calcium, Total	mg/L	CBL-308I	03/22/2017	yes	947.0000					
Calcium, Total	mg/L	CBL-308I	05/16/2017	yes	954.0000					
Calcium, Total	mg/L	CBL-308I	07/26/2017	yes	878.0000					
Calcium, Total	mg/L	CBL-308I	02/06/2018	yes	859.0000					
Calcium, Total	mg/L	CBL-308I	07/25/2018	yes	863.0000					
Calcium, Total	mg/L	CBL-308I	01/18/2019	yes	760.0000					
Calcium, Total	mg/L	CBL-308I	07/31/2019	yes	840.0000					
Calcium, Total	mg/L	CBL-308I	01/29/2020	yes	745.0000					
Calcium, Total	mg/L	CBL-308I	09/18/2020	yes	838.0000					
Calcium, Total	mg/L	CBL-308I	01/28/2021	yes	830.0000					
Calcium, Total	mg/L	CBL-308I	07/21/2021	yes	684.0000					
Calcium, Total	mg/L	CBL-308I	01/27/2022	yes	974.0000					
Calcium, Total	mg/L	CBL-308I	07/27/2022	yes	736.0000					
Calcium, Total	mg/L	CBL-308I	01/26/2023	yes	732.0000					
Calcium, Total	mg/L	CBL-308I	07/18/2023	yes	642.0000					
Calcium, Total	mg/L	CBL-308I	01/30/2024	yes	714.0000					
Calcium, Total	mg/L	CBL-308I	07/22/2024	yes	683.0000					
Calcium, Total	mg/L	CBL-308I	01/27/2025		698.0000			828.2273		
Calcium, Total	mg/L	CBL-308I	07/29/2025		676.0000			828.2273		
Calcium, Total	mg/L	CBL-341I	01/23/2017	yes	854.0000					
Calcium, Total	mg/L	CBL-341I	02/23/2017	yes	870.0000					
Calcium, Total	mg/L	CBL-341I	03/22/2017	yes	906.0000					
Calcium, Total	mg/L	CBL-341I	04/20/2017	yes	898.0000					
Calcium, Total	mg/L	CBL-341I	05/16/2017	yes	860.0000					
Calcium, Total	mg/L	CBL-341I	06/20/2017	yes	950.0000					
Calcium, Total	mg/L	CBL-341I	07/27/2017	yes	829.0000					
Calcium, Total	mg/L	CBL-341I	09/11/2017	yes	848.0000					
Calcium, Total	mg/L	CBL-341I	02/08/2018	yes	810.0000					
Calcium, Total	mg/L	CBL-341I	08/24/2018	yes	824.0000					
Calcium, Total	mg/L	CBL-341I	01/22/2019	yes	782.0000					
Calcium, Total	mg/L	CBL-341I	07/31/2019	yes	714.0000					
Calcium, Total	mg/L	CBL-341I	01/30/2020	yes	767.0000					
Calcium, Total	mg/L	CBL-341I	09/17/2020	yes	814.0000					
Calcium, Total	mg/L	CBL-341I	01/27/2021	yes	874.0000					
Calcium, Total	mg/L	CBL-341I	07/22/2021	yes	852.0000					
Calcium, Total	mg/L	CBL-341I	01/27/2022	yes	1040.0000					
Calcium, Total	mg/L	CBL-341I	07/28/2022	yes	704.0000					
Calcium, Total	mg/L	CBL-341I	01/26/2023	yes	797.0000					
Calcium, Total	mg/L	CBL-341I	07/19/2023	yes	710.0000					
Calcium, Total	mg/L	CBL-341I	01/29/2024	yes	875.0000					
Calcium, Total	mg/L	CBL-341I	07/22/2024	yes	801.0000					
Calcium, Total	mg/L	CBL-341I	01/28/2025		778.0000			835.4091		
Calcium, Total	mg/L	CBL-341I	07/28/2025		781.0000			835.4091		

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Table 2

Analytical Data and CUSUM Summary

Constituent	Units	Well	Date	Background	Result		Outlier	CUSUM	Adjusted	
Chloride	mg/L	CBL-301I	01/21/2016	yes	2300.0000					
Chloride	mg/L	CBL-301I	05/04/2016	yes	2160.0000					
Chloride	mg/L	CBL-301I	07/27/2016	yes	2290.0000					
Chloride	mg/L	CBL-301I	10/24/2016	yes	2250.0000					
Chloride	mg/L	CBL-301I	01/23/2017	yes	3200.0000					
Chloride	mg/L	CBL-301I	03/22/2017	yes	2390.0000					
Chloride	mg/L	CBL-301I	05/18/2017	yes	2420.0000					
Chloride	mg/L	CBL-301I	07/26/2017	yes	2500.0000					
Chloride	mg/L	CBL-301I	02/08/2018	yes	2480.0000					
Chloride	mg/L	CBL-301I	07/25/2018	yes	1330.0000					
Chloride	mg/L	CBL-301I	01/17/2019	yes	619.0000		yes			*
Chloride	mg/L	CBL-301I	05/02/2019	yes	1910.0000					
Chloride	mg/L	CBL-301I	07/31/2019	yes	2240.0000					
Chloride	mg/L	CBL-301I	01/28/2020	yes	2360.0000					
Chloride	mg/L	CBL-301I	09/17/2020	yes	2270.0000					
Chloride	mg/L	CBL-301I	01/26/2021	yes	2420.0000					
Chloride	mg/L	CBL-301I	07/20/2021	yes	2590.0000					
Chloride	mg/L	CBL-301I	01/26/2022	yes	2440.0000					
Chloride	mg/L	CBL-301I	07/27/2022	yes	1840.0000					
Chloride	mg/L	CBL-301I	01/25/2023	yes	1960.0000					
Chloride	mg/L	CBL-301I	08/02/2023	yes	2220.0000					
Chloride	mg/L	CBL-301I	01/29/2024	yes	2270.0000					
Chloride	mg/L	CBL-301I	07/23/2024	yes	2350.0000					
Chloride	mg/L	CBL-301I	01/27/2025		2270.0000			2281.3636		
Chloride	mg/L	CBL-301I	07/28/2025		499.0000			2281.3636		
Chloride	mg/L	CBL-302I	01/22/2016	yes	2190.0000					
Chloride	mg/L	CBL-302I	05/04/2016	yes	2130.0000					
Chloride	mg/L	CBL-302I	07/27/2016	yes	2210.0000					
Chloride	mg/L	CBL-302I	10/24/2016	yes	2170.0000					
Chloride	mg/L	CBL-302I	01/23/2017	yes	2080.0000					
Chloride	mg/L	CBL-302I	03/22/2017	yes	2050.0000					
Chloride	mg/L	CBL-302I	05/16/2017	yes	2230.0000					
Chloride	mg/L	CBL-302I	07/27/2017	yes	2040.0000					
Chloride	mg/L	CBL-302I	02/08/2018	yes	2080.0000					
Chloride	mg/L	CBL-302I	07/27/2018	yes	1980.0000					
Chloride	mg/L	CBL-302I	01/22/2019	yes	1960.0000					
Chloride	mg/L	CBL-302I	07/31/2019	yes	1540.0000					
Chloride	mg/L	CBL-302I	01/30/2020	yes	1540.0000					
Chloride	mg/L	CBL-302I	09/17/2020	yes	1410.0000					
Chloride	mg/L	CBL-302I	01/28/2021	yes	1370.0000					
Chloride	mg/L	CBL-302I	07/21/2021	yes	1380.0000					
Chloride	mg/L	CBL-302I	01/27/2022	yes	1310.0000					
Chloride	mg/L	CBL-302I	07/28/2022	yes	1300.0000					
Chloride	mg/L	CBL-302I	01/26/2023	yes	1460.0000					
Chloride	mg/L	CBL-302I	07/18/2023	yes	1330.0000					
Chloride	mg/L	CBL-302I	01/29/2024	yes	1440.0000					
Chloride	mg/L	CBL-302I	07/22/2024	yes	1650.0000					
Chloride	mg/L	CBL-302I	01/27/2025		1730.0000			1765.9091		
Chloride	mg/L	CBL-302I	07/28/2025		1630.0000			1765.9091		
Chloride	mg/L	CBL-306I	01/21/2016	yes	155.0000					

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Chloride	mg/L	CBL-306I	05/04/2016	yes	20.0000		yes			*
Chloride	mg/L	CBL-306I	07/26/2016	yes	114.0000		yes			*
Chloride	mg/L	CBL-306I	10/24/2016	yes	330.0000					
Chloride	mg/L	CBL-306I	01/19/2017	yes	197.0000					
Chloride	mg/L	CBL-306I	03/22/2017	yes	231.0000					
Chloride	mg/L	CBL-306I	05/18/2017	yes	289.0000					
Chloride	mg/L	CBL-306I	07/27/2017	yes	350.0000					
Chloride	mg/L	CBL-306I	02/08/2018	yes	385.0000					
Chloride	mg/L	CBL-306I	07/27/2018	yes	283.0000					
Chloride	mg/L	CBL-306I	01/16/2019	yes	215.0000					
Chloride	mg/L	CBL-306I	07/31/2019	yes	538.0000		yes			*
Chloride	mg/L	CBL-306I	08/23/2019	yes	318.0000					
Chloride	mg/L	CBL-306I	01/29/2020	yes	445.0000					
Chloride	mg/L	CBL-306I	09/19/2020	yes	420.0000					
Chloride	mg/L	CBL-306I	01/28/2021	yes	292.0000					
Chloride	mg/L	CBL-306I	07/21/2021	yes	255.0000					
Chloride	mg/L	CBL-306I	01/27/2022	yes	384.0000					
Chloride	mg/L	CBL-306I	07/28/2022	yes	261.0000					
Chloride	mg/L	CBL-306I	01/26/2023	yes	148.0000					
Chloride	mg/L	CBL-306I	07/18/2023	yes	336.0000					
Chloride	mg/L	CBL-306I	01/29/2024	yes	153.0000					
Chloride	mg/L	CBL-306I	07/23/2024	yes	10.2000		yes			*
Chloride	mg/L	CBL-306I	01/27/2025		286.0000			286.6842		
Chloride	mg/L	CBL-306I	07/28/2025		39.7000			286.6842		
Chloride	mg/L	CBL-308I	01/22/2016	yes	2760.0000					
Chloride	mg/L	CBL-308I	05/04/2016	yes	2580.0000					
Chloride	mg/L	CBL-308I	07/26/2016	yes	2680.0000					
Chloride	mg/L	CBL-308I	10/24/2016	yes	2870.0000					
Chloride	mg/L	CBL-308I	01/19/2017	yes	2360.0000					
Chloride	mg/L	CBL-308I	03/22/2017	yes	2530.0000					
Chloride	mg/L	CBL-308I	05/16/2017	yes	2740.0000					
Chloride	mg/L	CBL-308I	07/26/2017	yes	2760.0000					
Chloride	mg/L	CBL-308I	02/06/2018	yes	2750.0000					
Chloride	mg/L	CBL-308I	07/25/2018	yes	2680.0000					
Chloride	mg/L	CBL-308I	01/18/2019	yes	2240.0000					
Chloride	mg/L	CBL-308I	07/31/2019	yes	2290.0000					
Chloride	mg/L	CBL-308I	01/29/2020	yes	2110.0000					
Chloride	mg/L	CBL-308I	09/18/2020	yes	2410.0000					
Chloride	mg/L	CBL-308I	01/28/2021	yes	2200.0000					
Chloride	mg/L	CBL-308I	07/21/2021	yes	1780.0000					
Chloride	mg/L	CBL-308I	01/27/2022	yes	2020.0000					
Chloride	mg/L	CBL-308I	07/27/2022	yes	2470.0000					
Chloride	mg/L	CBL-308I	01/26/2023	yes	2570.0000					
Chloride	mg/L	CBL-308I	07/18/2023	yes	1840.0000					
Chloride	mg/L	CBL-308I	01/30/2024	yes	1790.0000					
Chloride	mg/L	CBL-308I	07/22/2024	yes	2250.0000					
Chloride	mg/L	CBL-308I	01/27/2025		2190.0000			2394.5455		
Chloride	mg/L	CBL-308I	07/29/2025		1930.0000			2394.5455		
Chloride	mg/L	CBL-341I	01/23/2017	yes	1600.0000					
Chloride	mg/L	CBL-341I	02/23/2017	yes	2000.0000					

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Table 2

Analytical Data and CUSUM Summary

Constituent	Units	Well	Date	Background	Result		Outlier	CUSUM	Adjusted	
Chloride	mg/L	CBL-341I	03/22/2017	yes	1780.0000					
Chloride	mg/L	CBL-341I	04/20/2017	yes	1770.0000					
Chloride	mg/L	CBL-341I	05/16/2017	yes	1900.0000					
Chloride	mg/L	CBL-341I	06/20/2017	yes	1820.0000					
Chloride	mg/L	CBL-341I	07/27/2017	yes	1970.0000					
Chloride	mg/L	CBL-341I	09/11/2017	yes	1710.0000					
Chloride	mg/L	CBL-341I	02/08/2018	yes	2110.0000					
Chloride	mg/L	CBL-341I	08/24/2018	yes	1910.0000					
Chloride	mg/L	CBL-341I	01/22/2019	yes	1790.0000					
Chloride	mg/L	CBL-341I	07/31/2019	yes	1650.0000					
Chloride	mg/L	CBL-341I	01/30/2020	yes	1780.0000					
Chloride	mg/L	CBL-341I	09/17/2020	yes	1700.0000					
Chloride	mg/L	CBL-341I	01/27/2021	yes	1800.0000					
Chloride	mg/L	CBL-341I	07/22/2021	yes	1750.0000					
Chloride	mg/L	CBL-341I	01/27/2022	yes	1810.0000					
Chloride	mg/L	CBL-341I	07/28/2022	yes	1690.0000					
Chloride	mg/L	CBL-341I	01/26/2023	yes	1660.0000					
Chloride	mg/L	CBL-341I	07/19/2023	yes	1530.0000					
Chloride	mg/L	CBL-341I	01/29/2024	yes	1700.0000					
Chloride	mg/L	CBL-341I	07/22/2024	yes	1960.0000					
Chloride	mg/L	CBL-341I	01/28/2025		1780.0000			1790.4545		
Chloride	mg/L	CBL-341I	07/28/2025		1850.0000			1790.4545		
Fluoride	mg/L	CBL-301I	01/21/2016	yes	0.2500	ND			0.5000	***
Fluoride	mg/L	CBL-301I	05/04/2016	yes	0.5000	ND				
Fluoride	mg/L	CBL-301I	07/27/2016	yes	0.5000	ND				
Fluoride	mg/L	CBL-301I	10/24/2016	yes	0.2500	ND			0.5000	***
Fluoride	mg/L	CBL-301I	01/23/2017	yes	0.3120					
Fluoride	mg/L	CBL-301I	03/22/2017	yes	0.5000	ND				
Fluoride	mg/L	CBL-301I	05/18/2017	yes	0.5000	ND				
Fluoride	mg/L	CBL-301I	07/26/2017	yes	0.5000	ND				
Fluoride	mg/L	CBL-301I	02/08/2018	yes	0.5000	ND				
Fluoride	mg/L	CBL-301I	07/25/2018	yes	0.5000	ND				
Fluoride	mg/L	CBL-301I	01/17/2019	yes	0.2190					
Fluoride	mg/L	CBL-301I	05/02/2019	yes	0.1120					
Fluoride	mg/L	CBL-301I	07/31/2019	yes	0.0510					
Fluoride	mg/L	CBL-301I	01/28/2020	yes	0.1300					
Fluoride	mg/L	CBL-301I	09/17/2020	yes	0.2500	ND			0.5000	***
Fluoride	mg/L	CBL-301I	01/26/2021	yes	0.5000	ND				
Fluoride	mg/L	CBL-301I	07/20/2021	yes	2.6800					
Fluoride	mg/L	CBL-301I	09/07/2021	yes	0.5000	ND				
Fluoride	mg/L	CBL-301I	01/26/2022	yes	0.0500	ND			0.5000	***
Fluoride	mg/L	CBL-301I	07/27/2022	yes	0.1560					
Fluoride	mg/L	CBL-301I	01/25/2023	yes	1.7200					
Fluoride	mg/L	CBL-301I	03/07/2023	yes	0.0500	ND			0.5000	***
Fluoride	mg/L	CBL-301I	08/02/2023	yes	0.0540					
Fluoride	mg/L	CBL-301I	01/29/2024	yes	0.1000	ND			0.5000	***
Fluoride	mg/L	CBL-301I	07/23/2024	yes	0.1000	ND			0.5000	***
Fluoride	mg/L	CBL-301I	01/27/2025		0.1000	ND		0.5374		
Fluoride	mg/L	CBL-301I	07/28/2025		0.3510			0.5374		
Fluoride	mg/L	CBL-302I	01/22/2016	yes	0.2500	ND			0.5000	***

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Table 2

Analytical Data and CUSUM Summary

Constituent	Units	Well	Date	Background	Result		Outlier	CUSUM	Adjusted	
Fluoride	mg/L	CBL-302I	05/04/2016	yes	0.5000	ND				
Fluoride	mg/L	CBL-302I	07/27/2016	yes	0.5000	ND				
Fluoride	mg/L	CBL-302I	10/24/2016	yes	0.2500	ND			0.5000	***
Fluoride	mg/L	CBL-302I	01/23/2017	yes	0.3320					
Fluoride	mg/L	CBL-302I	03/22/2017	yes	0.5000	ND				
Fluoride	mg/L	CBL-302I	05/16/2017	yes	0.5000	ND				
Fluoride	mg/L	CBL-302I	07/27/2017	yes	0.5000	ND				
Fluoride	mg/L	CBL-302I	02/08/2018	yes	0.1120					
Fluoride	mg/L	CBL-302I	07/27/2018	yes	0.5000	ND				
Fluoride	mg/L	CBL-302I	01/22/2019	yes	0.0402					
Fluoride	mg/L	CBL-302I	07/31/2019	yes	0.0605					
Fluoride	mg/L	CBL-302I	01/30/2020	yes	0.1930					
Fluoride	mg/L	CBL-302I	09/17/2020	yes	0.2500	ND			0.5000	***
Fluoride	mg/L	CBL-302I	01/28/2021	yes	0.5000	ND				
Fluoride	mg/L	CBL-302I	07/21/2021	yes	2.2500					
Fluoride	mg/L	CBL-302I	09/07/2021	yes	0.2500	ND			0.5000	***
Fluoride	mg/L	CBL-302I	01/27/2022	yes	0.0500	ND			0.5000	***
Fluoride	mg/L	CBL-302I	07/28/2022	yes	0.1650					
Fluoride	mg/L	CBL-302I	01/26/2023	yes	0.5000	ND				
Fluoride	mg/L	CBL-302I	07/18/2023	yes	1.7600					
Fluoride	mg/L	CBL-302I	01/29/2024	yes	0.1000	ND			0.5000	***
Fluoride	mg/L	CBL-302I	07/22/2024	yes	0.1010					
Fluoride	mg/L	CBL-302I	01/27/2025		0.1710			0.5223		
Fluoride	mg/L	CBL-302I	07/28/2025		0.1940			0.5223		
Fluoride	mg/L	CBL-306I	01/21/2016	yes	2.5000					
Fluoride	mg/L	CBL-306I	05/04/2016	yes	1.0000					
Fluoride	mg/L	CBL-306I	07/26/2016	yes	1.3700					
Fluoride	mg/L	CBL-306I	10/24/2016	yes	2.3800					
Fluoride	mg/L	CBL-306I	01/19/2017	yes	1.8500					
Fluoride	mg/L	CBL-306I	03/22/2017	yes	12.6000		yes			*
Fluoride	mg/L	CBL-306I	05/18/2017	yes	2.2000					
Fluoride	mg/L	CBL-306I	07/27/2017	yes	2.9100					
Fluoride	mg/L	CBL-306I	02/08/2018	yes	2.8100					
Fluoride	mg/L	CBL-306I	07/27/2018	yes	2.9500					
Fluoride	mg/L	CBL-306I	01/16/2019	yes	1.9800					
Fluoride	mg/L	CBL-306I	07/31/2019	yes	9.2600		yes			*
Fluoride	mg/L	CBL-306I	08/23/2019	yes	2.6600					
Fluoride	mg/L	CBL-306I	01/29/2020	yes	2.8300					
Fluoride	mg/L	CBL-306I	09/19/2020	yes	2.7200					
Fluoride	mg/L	CBL-306I	01/28/2021	yes	2.9000					
Fluoride	mg/L	CBL-306I	07/21/2021	yes	2.4200					
Fluoride	mg/L	CBL-306I	01/27/2022	yes	2.9900					
Fluoride	mg/L	CBL-306I	07/28/2022	yes	2.2600					
Fluoride	mg/L	CBL-306I	01/26/2023	yes	1.9200					
Fluoride	mg/L	CBL-306I	07/18/2023	yes	2.6600					
Fluoride	mg/L	CBL-306I	01/29/2024	yes	1.4900					
Fluoride	mg/L	CBL-306I	07/23/2024	yes	0.8230					
Fluoride	mg/L	CBL-306I	01/27/2025		2.2000			2.2678		
Fluoride	mg/L	CBL-306I	07/28/2025		1.9900			2.2678		
Fluoride	mg/L	CBL-308I	01/22/2016	yes	1.4900					

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Table 2

Analytical Data and CUSUM Summary

Constituent	Units	Well	Date	Background	Result		Outlier	CUSUM	Adjusted	
Fluoride	mg/L	CBL-308I	05/04/2016	yes	2.3000					
Fluoride	mg/L	CBL-308I	07/26/2016	yes	1.6400					
Fluoride	mg/L	CBL-308I	10/24/2016	yes	1.5900					
Fluoride	mg/L	CBL-308I	01/19/2017	yes	1.3300					
Fluoride	mg/L	CBL-308I	03/22/2017	yes	9.0500		yes			*
Fluoride	mg/L	CBL-308I	05/16/2017	yes	1.7000					
Fluoride	mg/L	CBL-308I	07/26/2017	yes	1.9000					
Fluoride	mg/L	CBL-308I	02/06/2018	yes	1.7600					
Fluoride	mg/L	CBL-308I	07/25/2018	yes	2.1000					
Fluoride	mg/L	CBL-308I	01/18/2019	yes	1.6800					
Fluoride	mg/L	CBL-308I	07/31/2019	yes	1.6200					
Fluoride	mg/L	CBL-308I	01/29/2020	yes	1.6000					
Fluoride	mg/L	CBL-308I	09/18/2020	yes	1.3300					
Fluoride	mg/L	CBL-308I	01/28/2021	yes	1.4400					
Fluoride	mg/L	CBL-308I	07/21/2021	yes	1.7400					
Fluoride	mg/L	CBL-308I	01/27/2022	yes	1.7500					
Fluoride	mg/L	CBL-308I	07/27/2022	yes	1.4300					
Fluoride	mg/L	CBL-308I	01/26/2023	yes	0.5000	ND	yes			*
Fluoride	mg/L	CBL-308I	07/18/2023	yes	1.8600					
Fluoride	mg/L	CBL-308I	01/30/2024	yes	1.2600					
Fluoride	mg/L	CBL-308I	07/22/2024	yes	0.8640					
Fluoride	mg/L	CBL-308I	01/27/2025		1.2000			1.6192		
Fluoride	mg/L	CBL-308I	07/29/2025		1.2600			1.6192		
Fluoride	mg/L	CBL-341I	01/23/2017	yes	0.5300					
Fluoride	mg/L	CBL-341I	02/23/2017	yes	0.5000	ND			0.2500	***
Fluoride	mg/L	CBL-341I	03/22/2017	yes	0.5000	ND			0.2500	***
Fluoride	mg/L	CBL-341I	04/20/2017	yes	0.5000	ND			0.2500	***
Fluoride	mg/L	CBL-341I	05/16/2017	yes	0.5000	ND			0.2500	***
Fluoride	mg/L	CBL-341I	06/20/2017	yes	0.3350					
Fluoride	mg/L	CBL-341I	07/27/2017	yes	0.0550					
Fluoride	mg/L	CBL-341I	09/11/2017	yes	0.3670					
Fluoride	mg/L	CBL-341I	02/08/2018	yes	0.1060					
Fluoride	mg/L	CBL-341I	08/24/2018	yes	0.1140					
Fluoride	mg/L	CBL-341I	01/22/2019	yes	0.0546					
Fluoride	mg/L	CBL-341I	07/31/2019	yes	0.1000					
Fluoride	mg/L	CBL-341I	01/30/2020	yes	0.1530					
Fluoride	mg/L	CBL-341I	09/17/2020	yes	0.2500	ND				
Fluoride	mg/L	CBL-341I	01/27/2021	yes	0.5000	ND			0.2500	***
Fluoride	mg/L	CBL-341I	07/22/2021	yes	1.1600					
Fluoride	mg/L	CBL-341I	09/07/2021	yes	0.2500	ND				
Fluoride	mg/L	CBL-341I	01/27/2022	yes	0.0500	ND			0.2500	***
Fluoride	mg/L	CBL-341I	07/28/2022	yes	0.1410					
Fluoride	mg/L	CBL-341I	01/26/2023	yes	0.2500	ND				
Fluoride	mg/L	CBL-341I	07/19/2023	yes	1.1200					
Fluoride	mg/L	CBL-341I	01/29/2024	yes	0.1000	ND			0.2500	***
Fluoride	mg/L	CBL-341I	07/22/2024	yes	0.1000	ND			0.2500	***
Fluoride	mg/L	CBL-341I	01/28/2025		0.1280			0.3037		
Fluoride	mg/L	CBL-341I	07/28/2025		0.3060			0.3037		
pH	S.U.	CBL-301I	01/21/2016	yes	6.3300					
pH	S.U.	CBL-301I	05/04/2016	yes	6.2600					

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Table 2

Analytical Data and CUSUM Summary

Constituent	Units	Well	Date	Background	Result		Outlier	CUSUM	Adjusted	
pH	S.U.	CBL-301I	07/27/2016	yes	5.9500					
pH	S.U.	CBL-301I	10/24/2016	yes	6.2300					
pH	S.U.	CBL-301I	01/23/2017	yes	6.2600					
pH	S.U.	CBL-301I	03/22/2017	yes	6.3100					
pH	S.U.	CBL-301I	05/18/2017	yes	5.9500					
pH	S.U.	CBL-301I	07/26/2017	yes	6.0200					
pH	S.U.	CBL-301I	02/08/2018	yes	6.1700					
pH	S.U.	CBL-301I	07/25/2018	yes	6.0400					
pH	S.U.	CBL-301I	01/17/2019	yes	7.1600					**
pH	S.U.	CBL-301I	05/02/2019	yes	6.1400					
pH	S.U.	CBL-301I	07/31/2019	yes	6.1900					
pH	S.U.	CBL-301I	01/28/2020	yes	6.2600					
pH	S.U.	CBL-301I	09/17/2020	yes	6.1300					
pH	S.U.	CBL-301I	01/26/2021	yes	6.0600					
pH	S.U.	CBL-301I	07/20/2021	yes	6.1300					
pH	S.U.	CBL-301I	09/07/2021	yes	6.1400					
pH	S.U.	CBL-301I	01/26/2022	yes	6.2700					
pH	S.U.	CBL-301I	07/27/2022	yes	6.0800					
pH	S.U.	CBL-301I	08/30/2022	yes	6.1400					
pH	S.U.	CBL-301I	10/25/2022	yes	6.2100					
pH	S.U.	CBL-301I	01/25/2023	yes	6.3400					
pH	S.U.	CBL-301I	08/02/2023	yes	6.2100					
pH	S.U.	CBL-301I	01/29/2024	yes	6.3500					
pH	S.U.	CBL-301I	07/23/2024	yes	6.4500					
pH	S.U.	CBL-301I	01/27/2025		6.5400			6.3691		
pH	S.U.	CBL-301I	07/28/2025		6.6200			6.5959		
pH	S.U.	CBL-302I	01/22/2016	yes	6.2900					
pH	S.U.	CBL-302I	05/04/2016	yes	6.0100					
pH	S.U.	CBL-302I	07/27/2016	yes	5.1700					
pH	S.U.	CBL-302I	10/24/2016	yes	7.7500					
pH	S.U.	CBL-302I	01/23/2017	yes	5.3600					
pH	S.U.	CBL-302I	03/22/2017	yes	5.4000					
pH	S.U.	CBL-302I	05/16/2017	yes	4.9400					
pH	S.U.	CBL-302I	07/27/2017	yes	6.2000					
pH	S.U.	CBL-302I	02/08/2018	yes	6.2100					
pH	S.U.	CBL-302I	07/27/2018	yes	5.7700					
pH	S.U.	CBL-302I	01/22/2019	yes	6.4400					
pH	S.U.	CBL-302I	07/31/2019	yes	6.1500					
pH	S.U.	CBL-302I	01/30/2020	yes	6.3400					
pH	S.U.	CBL-302I	09/17/2020	yes	6.2000					
pH	S.U.	CBL-302I	01/28/2021	yes	6.2100					
pH	S.U.	CBL-302I	07/21/2021	yes	6.0600					
pH	S.U.	CBL-302I	09/07/2021	yes	6.2800					
pH	S.U.	CBL-302I	01/27/2022	yes	6.3200					
pH	S.U.	CBL-302I	07/28/2022	yes	6.2100					
pH	S.U.	CBL-302I	01/26/2023	yes	6.3300					
pH	S.U.	CBL-302I	07/18/2023	yes	6.2000					
pH	S.U.	CBL-302I	01/29/2024	yes	6.2800					
pH	S.U.	CBL-302I	07/22/2024	yes	6.4100					
pH	S.U.	CBL-302I	01/27/2025		6.4300			6.1100		

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Constituent	Units	Well	Date	Background	Result		Outlier	CUSUM	Adjusted	
pH	S.U.	CBL-302I	07/28/2025		6.3500			6.1100		
pH	S.U.	CBL-306I	01/21/2016	yes	7.0900					
pH	S.U.	CBL-306I	05/04/2016	yes	6.6900					
pH	S.U.	CBL-306I	07/26/2016	yes	6.9500					
pH	S.U.	CBL-306I	10/24/2016	yes	6.7200					
pH	S.U.	CBL-306I	01/19/2017	yes	7.2900					
pH	S.U.	CBL-306I	03/22/2017	yes	4.4100					
pH	S.U.	CBL-306I	05/18/2017	yes	5.6100					
pH	S.U.	CBL-306I	07/27/2017	yes	6.9400					
pH	S.U.	CBL-306I	02/08/2018	yes	6.6700					
pH	S.U.	CBL-306I	07/27/2018	yes	6.8600					
pH	S.U.	CBL-306I	01/16/2019	yes	6.7800					
pH	S.U.	CBL-306I	07/31/2019	yes	6.9200		yes			*
pH	S.U.	CBL-306I	08/23/2019	yes	6.8300					
pH	S.U.	CBL-306I	01/29/2020	yes	6.7000					
pH	S.U.	CBL-306I	09/19/2020	yes	7.1600					
pH	S.U.	CBL-306I	01/28/2021	yes	6.8400					
pH	S.U.	CBL-306I	07/21/2021	yes	6.5500					
pH	S.U.	CBL-306I	01/27/2022	yes	6.8700					
pH	S.U.	CBL-306I	07/28/2022	yes	6.7000					
pH	S.U.	CBL-306I	01/26/2023	yes	7.3000					
pH	S.U.	CBL-306I	07/18/2023	yes	6.4900					
pH	S.U.	CBL-306I	01/29/2024	yes	6.5500					
pH	S.U.	CBL-306I	07/23/2024	yes	6.5400					
pH	S.U.	CBL-306I	01/27/2025		6.4400			6.6609		
pH	S.U.	CBL-306I	07/28/2025		6.5300			6.6609		
pH	S.U.	CBL-308I	01/22/2016	yes	6.3600					
pH	S.U.	CBL-308I	05/04/2016	yes	6.1300					
pH	S.U.	CBL-308I	07/26/2016	yes	5.9500					
pH	S.U.	CBL-308I	10/24/2016	yes	6.2700					
pH	S.U.	CBL-308I	01/19/2017	yes	6.8300					
pH	S.U.	CBL-308I	03/22/2017	yes	6.2700					
pH	S.U.	CBL-308I	05/16/2017	yes	5.5400					
pH	S.U.	CBL-308I	07/26/2017	yes	6.2700					
pH	S.U.	CBL-308I	02/06/2018	yes	6.2600					
pH	S.U.	CBL-308I	07/25/2018	yes	6.0700					
pH	S.U.	CBL-308I	01/18/2019	yes	6.3900					
pH	S.U.	CBL-308I	07/31/2019	yes	6.2500					
pH	S.U.	CBL-308I	01/29/2020	yes	6.3700					
pH	S.U.	CBL-308I	09/18/2020	yes	6.2200					
pH	S.U.	CBL-308I	01/28/2021	yes	6.2600					
pH	S.U.	CBL-308I	07/21/2021	yes	6.1600					
pH	S.U.	CBL-308I	01/27/2022	yes	6.3600					
pH	S.U.	CBL-308I	07/27/2022	yes	6.2300					
pH	S.U.	CBL-308I	01/26/2023	yes	6.4100					
pH	S.U.	CBL-308I	07/18/2023	yes	6.2600					
pH	S.U.	CBL-308I	01/30/2024	yes	6.5700					
pH	S.U.	CBL-308I	07/22/2024	yes	6.5300					
pH	S.U.	CBL-308I	01/27/2025		6.6400			6.4575		
pH	S.U.	CBL-308I	07/29/2025		6.6800			6.6841		

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Table 2

Analytical Data and CUSUM Summary

Constituent	Units	Well	Date	Background	Result		Outlier	CUSUM	Adjusted	
pH	S.U.	CBL-341I	01/23/2017	yes	5.7400					
pH	S.U.	CBL-341I	02/23/2017	yes	5.2300		yes			*
pH	S.U.	CBL-341I	03/22/2017	yes	5.7200					
pH	S.U.	CBL-341I	04/20/2017	yes	5.7300					
pH	S.U.	CBL-341I	05/16/2017	yes	5.5400					
pH	S.U.	CBL-341I	06/20/2017	yes	6.1900					
pH	S.U.	CBL-341I	07/27/2017	yes	6.2100					
pH	S.U.	CBL-341I	09/11/2017	yes	6.1000					
pH	S.U.	CBL-341I	02/08/2018	yes	6.1800					
pH	S.U.	CBL-341I	08/24/2018	yes	5.8200					
pH	S.U.	CBL-341I	01/22/2019	yes	6.3800					
pH	S.U.	CBL-341I	07/31/2019	yes	6.2300					
pH	S.U.	CBL-341I	01/30/2020	yes	6.2700					
pH	S.U.	CBL-341I	09/17/2020	yes	6.1400					
pH	S.U.	CBL-341I	01/27/2021	yes	6.0600					
pH	S.U.	CBL-341I	07/22/2021	yes	5.9800					
pH	S.U.	CBL-341I	09/07/2021	yes	6.1800					
pH	S.U.	CBL-341I	01/27/2022	yes	6.2600					
pH	S.U.	CBL-341I	07/28/2022	yes	6.1600					
pH	S.U.	CBL-341I	01/26/2023	yes	6.2800					
pH	S.U.	CBL-341I	07/19/2023	yes	6.2200					
pH	S.U.	CBL-341I	01/29/2024	yes	6.3800					
pH	S.U.	CBL-341I	07/22/2024	yes	6.3900					
pH	S.U.	CBL-341I	01/28/2025		6.4600			6.2795		
pH	S.U.	CBL-341I	07/28/2025		6.5600			6.5608		
Sulfate	mg/L	CBL-301I	01/21/2016	yes	336.0000					
Sulfate	mg/L	CBL-301I	05/04/2016	yes	311.0000					
Sulfate	mg/L	CBL-301I	07/27/2016	yes	336.0000					
Sulfate	mg/L	CBL-301I	10/24/2016	yes	326.0000					
Sulfate	mg/L	CBL-301I	01/23/2017	yes	488.0000					
Sulfate	mg/L	CBL-301I	03/22/2017	yes	337.0000					
Sulfate	mg/L	CBL-301I	05/18/2017	yes	342.0000					
Sulfate	mg/L	CBL-301I	07/26/2017	yes	381.0000					
Sulfate	mg/L	CBL-301I	02/08/2018	yes	344.0000					
Sulfate	mg/L	CBL-301I	07/25/2018	yes	196.0000					
Sulfate	mg/L	CBL-301I	01/17/2019	yes	104.0000					
Sulfate	mg/L	CBL-301I	05/02/2019	yes	398.0000					
Sulfate	mg/L	CBL-301I	07/31/2019	yes	332.0000					
Sulfate	mg/L	CBL-301I	01/28/2020	yes	349.0000					
Sulfate	mg/L	CBL-301I	09/17/2020	yes	350.0000					
Sulfate	mg/L	CBL-301I	01/26/2021	yes	374.0000					
Sulfate	mg/L	CBL-301I	07/20/2021	yes	419.0000					
Sulfate	mg/L	CBL-301I	01/26/2022	yes	406.0000					
Sulfate	mg/L	CBL-301I	07/27/2022	yes	285.0000					
Sulfate	mg/L	CBL-301I	01/25/2023	yes	1370.0000		yes			*
Sulfate	mg/L	CBL-301I	03/07/2023	yes	207.0000					
Sulfate	mg/L	CBL-301I	08/02/2023	yes	383.0000					
Sulfate	mg/L	CBL-301I	01/29/2024	yes	475.0000					
Sulfate	mg/L	CBL-301I	07/23/2024	yes	454.0000					
Sulfate	mg/L	CBL-301I	01/27/2025		467.0000			401.1284		

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Table 2

Analytical Data and CUSUM Summary

Constituent	Units	Well	Date	Background	Result		Outlier	CUSUM	Adjusted	
Sulfate	mg/L	CBL-301I	07/28/2025		149.0000			344.9130		
Sulfate	mg/L	CBL-302I	01/22/2016	yes	1020.0000					
Sulfate	mg/L	CBL-302I	05/04/2016	yes	993.0000					
Sulfate	mg/L	CBL-302I	07/27/2016	yes	1090.0000					
Sulfate	mg/L	CBL-302I	10/24/2016	yes	1180.0000					
Sulfate	mg/L	CBL-302I	01/23/2017	yes	1150.0000					
Sulfate	mg/L	CBL-302I	03/22/2017	yes	1120.0000					
Sulfate	mg/L	CBL-302I	05/16/2017	yes	1230.0000					
Sulfate	mg/L	CBL-302I	07/27/2017	yes	1180.0000					
Sulfate	mg/L	CBL-302I	02/08/2018	yes	1240.0000					
Sulfate	mg/L	CBL-302I	07/27/2018	yes	1390.0000					
Sulfate	mg/L	CBL-302I	01/22/2019	yes	1250.0000					
Sulfate	mg/L	CBL-302I	07/31/2019	yes	1260.0000					
Sulfate	mg/L	CBL-302I	01/30/2020	yes	1350.0000					
Sulfate	mg/L	CBL-302I	09/17/2020	yes	1280.0000					
Sulfate	mg/L	CBL-302I	01/28/2021	yes	1290.0000					
Sulfate	mg/L	CBL-302I	07/21/2021	yes	1350.0000					
Sulfate	mg/L	CBL-302I	01/27/2022	yes	1340.0000					
Sulfate	mg/L	CBL-302I	07/28/2022	yes	1300.0000					
Sulfate	mg/L	CBL-302I	01/26/2023	yes	1390.0000					
Sulfate	mg/L	CBL-302I	07/18/2023	yes	1230.0000					
Sulfate	mg/L	CBL-302I	01/29/2024	yes	1330.0000					
Sulfate	mg/L	CBL-302I	07/22/2024	yes	1370.0000					
Sulfate	mg/L	CBL-302I	01/27/2025		1490.0000			1404.3177		
Sulfate	mg/L	CBL-302I	07/28/2025		1270.0000			1346.2262		
Sulfate	mg/L	CBL-306I	01/21/2016	yes	266.0000					
Sulfate	mg/L	CBL-306I	05/04/2016	yes	29.5000		yes			*
Sulfate	mg/L	CBL-306I	07/26/2016	yes	139.0000					
Sulfate	mg/L	CBL-306I	10/24/2016	yes	432.0000					
Sulfate	mg/L	CBL-306I	01/19/2017	yes	270.0000					
Sulfate	mg/L	CBL-306I	03/22/2017	yes	340.0000					
Sulfate	mg/L	CBL-306I	05/18/2017	yes	412.0000					
Sulfate	mg/L	CBL-306I	07/27/2017	yes	513.0000					
Sulfate	mg/L	CBL-306I	02/08/2018	yes	493.0000					
Sulfate	mg/L	CBL-306I	07/27/2018	yes	406.0000					
Sulfate	mg/L	CBL-306I	01/16/2019	yes	292.0000					
Sulfate	mg/L	CBL-306I	07/31/2019	yes	816.0000		yes			*
Sulfate	mg/L	CBL-306I	08/23/2019	yes	387.0000					
Sulfate	mg/L	CBL-306I	01/29/2020	yes	561.0000					
Sulfate	mg/L	CBL-306I	09/19/2020	yes	506.0000					
Sulfate	mg/L	CBL-306I	01/28/2021	yes	388.0000					
Sulfate	mg/L	CBL-306I	07/21/2021	yes	336.0000					
Sulfate	mg/L	CBL-306I	01/27/2022	yes	510.0000					
Sulfate	mg/L	CBL-306I	07/28/2022	yes	348.0000					
Sulfate	mg/L	CBL-306I	01/26/2023	yes	205.0000					
Sulfate	mg/L	CBL-306I	07/18/2023	yes	454.0000					
Sulfate	mg/L	CBL-306I	01/29/2024	yes	266.0000					
Sulfate	mg/L	CBL-306I	07/23/2024	yes	70.7000		yes			*
Sulfate	mg/L	CBL-306I	01/27/2025		433.0000			376.2000		
Sulfate	mg/L	CBL-306I	07/28/2025		139.0000			376.2000		

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Table 2

Analytical Data and CUSUM Summary

Constituent	Units	Well	Date	Background	Result		Outlier	CUSUM	Adjusted	
Sulfate	mg/L	CBL-308I	01/22/2016	yes	1490.0000					
Sulfate	mg/L	CBL-308I	05/04/2016	yes	1410.0000					
Sulfate	mg/L	CBL-308I	07/26/2016	yes	1490.0000					
Sulfate	mg/L	CBL-308I	10/24/2016	yes	1550.0000					
Sulfate	mg/L	CBL-308I	01/19/2017	yes	1320.0000					
Sulfate	mg/L	CBL-308I	03/22/2017	yes	1470.0000					
Sulfate	mg/L	CBL-308I	05/16/2017	yes	1580.0000					
Sulfate	mg/L	CBL-308I	07/26/2017	yes	1550.0000					
Sulfate	mg/L	CBL-308I	02/06/2018	yes	1570.0000					
Sulfate	mg/L	CBL-308I	07/25/2018	yes	1540.0000					
Sulfate	mg/L	CBL-308I	01/18/2019	yes	1520.0000					
Sulfate	mg/L	CBL-308I	07/31/2019	yes	1420.0000					
Sulfate	mg/L	CBL-308I	01/29/2020	yes	1340.0000					
Sulfate	mg/L	CBL-308I	09/18/2020	yes	1310.0000					
Sulfate	mg/L	CBL-308I	01/28/2021	yes	1340.0000					
Sulfate	mg/L	CBL-308I	07/21/2021	yes	1240.0000					
Sulfate	mg/L	CBL-308I	01/27/2022	yes	1310.0000					
Sulfate	mg/L	CBL-308I	07/27/2022	yes	1190.0000					
Sulfate	mg/L	CBL-308I	01/26/2023	yes	445.0000		yes			*
Sulfate	mg/L	CBL-308I	07/18/2023	yes	1290.0000					
Sulfate	mg/L	CBL-308I	01/30/2024	yes	1360.0000					
Sulfate	mg/L	CBL-308I	07/22/2024	yes	1430.0000					
Sulfate	mg/L	CBL-308I	01/27/2025		1360.0000			1415.2381		
Sulfate	mg/L	CBL-308I	07/29/2025		1400.0000			1415.2381		
Sulfate	mg/L	CBL-341I	01/23/2017	yes	307.0000					
Sulfate	mg/L	CBL-341I	02/23/2017	yes	404.0000					
Sulfate	mg/L	CBL-341I	03/22/2017	yes	346.0000					
Sulfate	mg/L	CBL-341I	04/20/2017	yes	336.0000					
Sulfate	mg/L	CBL-341I	05/16/2017	yes	369.0000					
Sulfate	mg/L	CBL-341I	06/20/2017	yes	363.0000					
Sulfate	mg/L	CBL-341I	07/27/2017	yes	419.0000					
Sulfate	mg/L	CBL-341I	09/11/2017	yes	354.0000					
Sulfate	mg/L	CBL-341I	02/08/2018	yes	383.0000					
Sulfate	mg/L	CBL-341I	08/24/2018	yes	376.0000					
Sulfate	mg/L	CBL-341I	01/22/2019	yes	358.0000					
Sulfate	mg/L	CBL-341I	07/31/2019	yes	329.0000					
Sulfate	mg/L	CBL-341I	01/30/2020	yes	351.0000					
Sulfate	mg/L	CBL-341I	09/17/2020	yes	336.0000					
Sulfate	mg/L	CBL-341I	01/27/2021	yes	324.0000					
Sulfate	mg/L	CBL-341I	07/22/2021	yes	316.0000					
Sulfate	mg/L	CBL-341I	01/27/2022	yes	320.0000					
Sulfate	mg/L	CBL-341I	07/28/2022	yes	296.0000					
Sulfate	mg/L	CBL-341I	01/26/2023	yes	309.0000					
Sulfate	mg/L	CBL-341I	07/19/2023	yes	259.0000					
Sulfate	mg/L	CBL-341I	01/29/2024	yes	346.0000					
Sulfate	mg/L	CBL-341I	07/22/2024	yes	367.0000					
Sulfate	mg/L	CBL-341I	01/28/2025		369.0000			344.0000		
Sulfate	mg/L	CBL-341I	07/28/2025		344.0000			344.0000		
Total Dissolved Solids	mg/L	CBL-301I	01/21/2016	yes	4380.0000					
Total Dissolved Solids	mg/L	CBL-301I	05/04/2016	yes	5050.0000					

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Table 2

Analytical Data and CUSUM Summary

Constituent	Units	Well	Date	Background	Result		Outlier	CUSUM	Adjusted	
Total Dissolved Solids	mg/L	CBL-301I	07/27/2016	yes	6020.0000					
Total Dissolved Solids	mg/L	CBL-301I	10/24/2016	yes	4570.0000					
Total Dissolved Solids	mg/L	CBL-301I	01/23/2017	yes	6140.0000					
Total Dissolved Solids	mg/L	CBL-301I	03/22/2017	yes	6570.0000					
Total Dissolved Solids	mg/L	CBL-301I	05/18/2017	yes	6430.0000					
Total Dissolved Solids	mg/L	CBL-301I	07/26/2017	yes	4290.0000					
Total Dissolved Solids	mg/L	CBL-301I	02/08/2018	yes	5120.0000					
Total Dissolved Solids	mg/L	CBL-301I	07/25/2018	yes	5390.0000					
Total Dissolved Solids	mg/L	CBL-301I	01/17/2019	yes	1460.0000		yes			*
Total Dissolved Solids	mg/L	CBL-301I	05/02/2019	yes	5650.0000					
Total Dissolved Solids	mg/L	CBL-301I	07/31/2019	yes	6040.0000					
Total Dissolved Solids	mg/L	CBL-301I	01/28/2020	yes	4790.0000					
Total Dissolved Solids	mg/L	CBL-301I	09/17/2020	yes	6340.0000					
Total Dissolved Solids	mg/L	CBL-301I	01/26/2021	yes	6060.0000					
Total Dissolved Solids	mg/L	CBL-301I	07/20/2021	yes	5870.0000					
Total Dissolved Solids	mg/L	CBL-301I	01/26/2022	yes	4700.0000					
Total Dissolved Solids	mg/L	CBL-301I	07/27/2022	yes	4590.0000					
Total Dissolved Solids	mg/L	CBL-301I	01/25/2023	yes	5160.0000					
Total Dissolved Solids	mg/L	CBL-301I	08/02/2023	yes	5360.0000					
Total Dissolved Solids	mg/L	CBL-301I	01/29/2024	yes	4820.0000					
Total Dissolved Solids	mg/L	CBL-301I	07/23/2024	yes	4580.0000					
Total Dissolved Solids	mg/L	CBL-301I	01/27/2025		3810.0000			5360.0000		
Total Dissolved Solids	mg/L	CBL-301I	07/28/2025		1420.0000			5360.0000		
Total Dissolved Solids	mg/L	CBL-302I	01/22/2016	yes	5500.0000					
Total Dissolved Solids	mg/L	CBL-302I	05/04/2016	yes	5390.0000					
Total Dissolved Solids	mg/L	CBL-302I	07/27/2016	yes	6850.0000					
Total Dissolved Solids	mg/L	CBL-302I	10/24/2016	yes	4210.0000					
Total Dissolved Solids	mg/L	CBL-302I	01/23/2017	yes	6430.0000					
Total Dissolved Solids	mg/L	CBL-302I	03/22/2017	yes	6460.0000					
Total Dissolved Solids	mg/L	CBL-302I	05/16/2017	yes	5860.0000					
Total Dissolved Solids	mg/L	CBL-302I	07/27/2017	yes	5120.0000					
Total Dissolved Solids	mg/L	CBL-302I	02/08/2018	yes	6010.0000					
Total Dissolved Solids	mg/L	CBL-302I	07/27/2018	yes	5510.0000					
Total Dissolved Solids	mg/L	CBL-302I	01/22/2019	yes	5060.0000					
Total Dissolved Solids	mg/L	CBL-302I	07/31/2019	yes	4190.0000					
Total Dissolved Solids	mg/L	CBL-302I	01/30/2020	yes	4790.0000					
Total Dissolved Solids	mg/L	CBL-302I	09/17/2020	yes	4990.0000					
Total Dissolved Solids	mg/L	CBL-302I	01/28/2021	yes	4800.0000					
Total Dissolved Solids	mg/L	CBL-302I	07/21/2021	yes	4810.0000					
Total Dissolved Solids	mg/L	CBL-302I	01/27/2022	yes	4510.0000					
Total Dissolved Solids	mg/L	CBL-302I	07/28/2022	yes	5120.0000					
Total Dissolved Solids	mg/L	CBL-302I	01/26/2023	yes	4930.0000					
Total Dissolved Solids	mg/L	CBL-302I	07/18/2023	yes	5150.0000					
Total Dissolved Solids	mg/L	CBL-302I	01/29/2024	yes	4950.0000					
Total Dissolved Solids	mg/L	CBL-302I	07/22/2024	yes	4840.0000					
Total Dissolved Solids	mg/L	CBL-302I	01/27/2025		4710.0000			5249.0909		
Total Dissolved Solids	mg/L	CBL-302I	07/28/2025		5000.0000			5249.0909		
Total Dissolved Solids	mg/L	CBL-306I	01/21/2016	yes	1280.0000					
Total Dissolved Solids	mg/L	CBL-306I	05/04/2016	yes	431.0000					
Total Dissolved Solids	mg/L	CBL-306I	07/26/2016	yes	790.0000					

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Table 2

Analytical Data and CUSUM Summary

Constituent	Units	Well	Date	Background	Result		Outlier	CUSUM	Adjusted	
Total Dissolved Solids	mg/L	CBL-306I	10/24/2016	yes	1150.0000					
Total Dissolved Solids	mg/L	CBL-306I	01/19/2017	yes	1320.0000					
Total Dissolved Solids	mg/L	CBL-306I	03/22/2017	yes	1460.0000					
Total Dissolved Solids	mg/L	CBL-306I	05/18/2017	yes	1440.0000					
Total Dissolved Solids	mg/L	CBL-306I	07/27/2017	yes	1280.0000					
Total Dissolved Solids	mg/L	CBL-306I	02/08/2018	yes	1760.0000					
Total Dissolved Solids	mg/L	CBL-306I	07/27/2018	yes	1450.0000					
Total Dissolved Solids	mg/L	CBL-306I	01/16/2019	yes	1220.0000					
Total Dissolved Solids	mg/L	CBL-306I	07/31/2019	yes	676.0000		yes			*
Total Dissolved Solids	mg/L	CBL-306I	08/23/2019	yes	1710.0000					
Total Dissolved Solids	mg/L	CBL-306I	01/29/2020	yes	1830.0000					
Total Dissolved Solids	mg/L	CBL-306I	09/19/2020	yes	1730.0000					
Total Dissolved Solids	mg/L	CBL-306I	01/28/2021	yes	1420.0000					
Total Dissolved Solids	mg/L	CBL-306I	07/21/2021	yes	1320.0000					
Total Dissolved Solids	mg/L	CBL-306I	01/27/2022	yes	1730.0000					
Total Dissolved Solids	mg/L	CBL-306I	07/28/2022	yes	1540.0000					
Total Dissolved Solids	mg/L	CBL-306I	01/26/2023	yes	1000.0000					
Total Dissolved Solids	mg/L	CBL-306I	07/18/2023	yes	1910.0000					
Total Dissolved Solids	mg/L	CBL-306I	01/29/2024	yes	1170.0000					
Total Dissolved Solids	mg/L	CBL-306I	07/23/2024	yes	691.0000					
Total Dissolved Solids	mg/L	CBL-306I	01/27/2025		1480.0000			1346.9091		
Total Dissolved Solids	mg/L	CBL-306I	07/28/2025		841.0000			1346.9091		
Total Dissolved Solids	mg/L	CBL-308I	01/22/2016	yes	6820.0000					
Total Dissolved Solids	mg/L	CBL-308I	05/04/2016	yes	6120.0000					
Total Dissolved Solids	mg/L	CBL-308I	07/26/2016	yes	7890.0000					
Total Dissolved Solids	mg/L	CBL-308I	10/24/2016	yes	10200.0000					
Total Dissolved Solids	mg/L	CBL-308I	01/19/2017	yes	9620.0000					
Total Dissolved Solids	mg/L	CBL-308I	03/22/2017	yes	7260.0000					
Total Dissolved Solids	mg/L	CBL-308I	05/16/2017	yes	6590.0000					
Total Dissolved Solids	mg/L	CBL-308I	07/26/2017	yes	6480.0000					
Total Dissolved Solids	mg/L	CBL-308I	02/06/2018	yes	6200.0000					
Total Dissolved Solids	mg/L	CBL-308I	07/25/2018	yes	6320.0000					
Total Dissolved Solids	mg/L	CBL-308I	01/18/2019	yes	4760.0000					
Total Dissolved Solids	mg/L	CBL-308I	07/31/2019	yes	5820.0000					
Total Dissolved Solids	mg/L	CBL-308I	01/29/2020	yes	5980.0000					
Total Dissolved Solids	mg/L	CBL-308I	09/18/2020	yes	6860.0000					
Total Dissolved Solids	mg/L	CBL-308I	01/28/2021	yes	6190.0000					
Total Dissolved Solids	mg/L	CBL-308I	07/21/2021	yes	5270.0000					
Total Dissolved Solids	mg/L	CBL-308I	01/27/2022	yes	5320.0000					
Total Dissolved Solids	mg/L	CBL-308I	07/27/2022	yes	6840.0000					
Total Dissolved Solids	mg/L	CBL-308I	01/26/2023	yes	5810.0000					
Total Dissolved Solids	mg/L	CBL-308I	07/18/2023	yes	5680.0000					
Total Dissolved Solids	mg/L	CBL-308I	01/30/2024	yes	5410.0000					
Total Dissolved Solids	mg/L	CBL-308I	07/22/2024	yes	5810.0000					
Total Dissolved Solids	mg/L	CBL-308I	01/27/2025		5290.0000			6511.3636		
Total Dissolved Solids	mg/L	CBL-308I	07/29/2025		5530.0000			6511.3636		
Total Dissolved Solids	mg/L	CBL-341I	01/23/2017	yes	5000.0000					
Total Dissolved Solids	mg/L	CBL-341I	02/23/2017	yes	4520.0000					
Total Dissolved Solids	mg/L	CBL-341I	03/22/2017	yes	5110.0000					
Total Dissolved Solids	mg/L	CBL-341I	04/20/2017	yes	4240.0000					

* - Outlier for that well and constituent.
** - Non-outlier detected sample Result and / or CUSUM value exceeds limit.
*** - ND value replaced with median RL.
**** - ND value replaced with manual RL.
ND = Not detected, Result = detection limit.

Table 2

Analytical Data and CUSUM Summary

Constituent	Units	Well	Date	Background	Result		Outlier	CUSUM	Adjusted	
Total Dissolved Solids	mg/L	CBL-341I	05/16/2017	yes	4840.0000					
Total Dissolved Solids	mg/L	CBL-341I	06/20/2017	yes	5940.0000					
Total Dissolved Solids	mg/L	CBL-341I	07/27/2017	yes	4150.0000					
Total Dissolved Solids	mg/L	CBL-341I	09/11/2017	yes	4860.0000					
Total Dissolved Solids	mg/L	CBL-341I	02/08/2018	yes	4320.0000					
Total Dissolved Solids	mg/L	CBL-341I	08/24/2018	yes	4800.0000					
Total Dissolved Solids	mg/L	CBL-341I	01/22/2019	yes	3870.0000					
Total Dissolved Solids	mg/L	CBL-341I	07/31/2019	yes	5370.0000					
Total Dissolved Solids	mg/L	CBL-341I	01/30/2020	yes	4900.0000					
Total Dissolved Solids	mg/L	CBL-341I	09/17/2020	yes	4930.0000					
Total Dissolved Solids	mg/L	CBL-341I	01/27/2021	yes	3940.0000					
Total Dissolved Solids	mg/L	CBL-341I	07/22/2021	yes	4520.0000					
Total Dissolved Solids	mg/L	CBL-341I	01/27/2022	yes	3800.0000					
Total Dissolved Solids	mg/L	CBL-341I	07/28/2022	yes	4910.0000					
Total Dissolved Solids	mg/L	CBL-341I	01/26/2023	yes	4390.0000					
Total Dissolved Solids	mg/L	CBL-341I	07/19/2023	yes	4190.0000					
Total Dissolved Solids	mg/L	CBL-341I	01/29/2024	yes	3990.0000					
Total Dissolved Solids	mg/L	CBL-341I	07/22/2024	yes	3700.0000					
Total Dissolved Solids	mg/L	CBL-341I	01/28/2025		4020.0000			4558.6364		
Total Dissolved Solids	mg/L	CBL-341I	07/28/2025		3700.0000			4558.6364		

* - Outlier for that well and constituent.
** - Non-outlier detected sample Result and / or CUSUM value exceeds limit.
*** - ND value replaced with median RL.
**** - ND value replaced with manual RL.
ND = Not detected, Result = detection limit.

Table 4

Dixon's Test Outliers
1% Significance Level

Constituent	Units	Well	Date	Result	ND Qualifier	Date Range	N	Critical Value
Calcium, Total	mg/L	CBL-301I	01/17/2019	156.0000		01/21/2016-07/23/2024	23	0.5065
Chloride	mg/L	CBL-301I	01/17/2019	619.0000		01/21/2016-07/23/2024	23	0.5065
Chloride	mg/L	CBL-306I	05/04/2016	20.0000		01/21/2016-07/23/2024	21	0.5381
Chloride	mg/L	CBL-306I	07/23/2024	10.2000		01/21/2016-07/23/2024	21	0.5381
Fluoride	mg/L	CBL-306I	03/22/2017	12.6000		01/21/2016-07/23/2024	22	0.5162
Fluoride	mg/L	CBL-308I	03/22/2017	9.0500		01/22/2016-07/22/2024	22	0.5162
Fluoride	mg/L	CBL-308I	01/26/2023	0.5000	< 0.5000	01/22/2016-07/22/2024	22	0.5162
Sulfate	mg/L	CBL-301I	01/25/2023	1370.0000		01/21/2016-07/23/2024	24	0.4969
Sulfate	mg/L	CBL-306I	05/04/2016	29.5000		01/21/2016-07/23/2024	22	0.5263
Sulfate	mg/L	CBL-306I	07/23/2024	70.7000		01/21/2016-07/23/2024	22	0.5263
Sulfate	mg/L	CBL-308I	01/26/2023	445.0000		01/22/2016-07/22/2024	22	0.5162
Total Dissolved Solids	mg/L	CBL-301I	01/17/2019	1460.0000		01/21/2016-07/23/2024	23	0.5065

N = Total number of independent measurements in background at each well.
Date Range = Dates of the first and last measurements included in background at each well.
Critical Value depends on the significance level and on N-1 when the two most extreme values are tested or N for the most extreme value.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Boron, Total (mg/L) at CBL-301I
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **1.739** / **27** = **0.064**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**0.124** - **3.024**/**27**) / (**27**-1))^{½} = **0.021**	Compute background sd.
3	SCL = $\bar{\mathbf{X}}$ + **F** * **S** = **0.064** + **4.0** * **0.021** = **0.15**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **27** * (**27**-1) / 2 = **351**	Number of sample pairs during trend detection period.
5	S = **0.002**	Sen's estimator of trend.
6	var(S) = **1710.667**	Variance estimate for slope.
7	M_1(S) = (**N'** - $\mathbf{Z}_{.99}$ * **var(S)**^{½}) / 2 = (**351** - **2.326** * **1710.667**^{½}) / 2 = **127.398**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **0.0**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Boron, Total (mg/L) at CBL-302I
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **1.903** / **23** = **0.083**	Compute background mean.
2	S = ((**sum[X^2] - sum[X]^2**/**N**) / (**N**-1))$^{1/2}$ = ((**0.242 - 3.623**/**23**) / (**23**-1))$^{1/2}$ = **0.062**	Compute background sd.
3	SCL = $\bar{\mathbf{X}}$ + **F** * **S** = **0.083** + **4.0** * **0.062** = **0.331**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **23** * (**23**-1) / 2 = **253**	Number of sample pairs during trend detection period.
5	S = **0.0**	Sen's estimator of trend.
6	var(S) = **940.333**	Variance estimate for slope.
7	M_1(S) = (**N' - $Z_{.99}$** * **var(S)**$^{1/2}$) / 2 = (**253** - **2.326** * **940.333**$^{1/2}$) / 2 = **90.837**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **0.0**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Boron, Total (mg/L) at CBL-306I
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N**	Compute background mean.
	= **1.652** / **22**	
	= **0.075**	
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½}	Compute background sd.
	= ((**0.142** - **2.73**/**22**) / (**22**-1))^{½}	
	= **0.03**	
3	SCL = $\bar{\mathbf{X}}$ + **F** * **S**	Compute combined Shewhart-CUSUM normal control limit.
	= **0.075** + **4.0** * **0.03**	
	= **0.193**	
4	N' = **N** * (**N**-1) / 2	Number of sample pairs during trend detection period.
	= **22** * (**22**-1) / 2	
	= **231**	
5	S = **0.002**	Sen's estimator of trend.
6	var(S) = **1192.333**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z**$_{.99}$ * **var(S)**^{½}) / 2	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
	= (**231** - **2.326** * **1192.333**^{½}) / 2	
	= **75.341**	
8	LCL(S) = **0.0**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Boron, Total (mg/L) at CBL-308I
Normal Control Limit

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{2.541} / \mathbf{22}$ $= \mathbf{0.115}$	Compute background mean.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{0.551} - \mathbf{6.456}/\mathbf{22}) / (\mathbf{22}-1))^{1/2}$ $= \mathbf{0.111}$	Compute background sd.
3	$SCL = \bar{\mathbf{X}} + \mathbf{F} * \mathbf{S}$ $= \mathbf{0.115} + \mathbf{4.0} * \mathbf{0.111}$ $= \mathbf{0.559}$	Compute combined Shewhart-CUSUM normal control limit.
4	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{22} * (\mathbf{22}-1) / 2$ $= \mathbf{231}$	Number of sample pairs during trend detection period.
5	$S = \mathbf{0.0}$	Sen's estimator of trend.
6	$var(S) = \mathbf{1132.667}$	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N'} - \mathbf{Z}_{.99} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{231} - \mathbf{2.326} * \mathbf{1132.667}^{1/2}) / 2$ $= \mathbf{76.359}$	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	$LCL(S) = \mathbf{-0.012}$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Boron, Total (mg/L) at CBL-341I
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **1.742** / **23** = **0.076**	Compute background mean.
2	S = ((**sum[X^2] - sum[X]^2**/**N**) / (**N**-1))$^{1/2}$ = ((**0.156 - 3.034**/**23**) / (**23**-1))$^{1/2}$ = **0.033**	Compute background sd.
3	SCL = **$\overline{X}$** + **F** * **S** = **0.076** + **4.0** * **0.033** = **0.208**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **23** * (**23**-1) / 2 = **253**	Number of sample pairs during trend detection period.
5	S = **0.006**	Sen's estimator of trend.
6	var(S) = **1268.667**	Variance estimate for slope.
7	M_1(S) = (**N' - $Z_{.99}$** * **var(S)**$^{1/2}$) / 2 = (**253** - **2.326** * **1268.667**$^{1/2}$) / 2 = **85.076**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **0.0**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Calcium, Total (mg/L) at CBL-301I
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **21568.0** / **22** = **980.364**	Compute background mean.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))$^{1/2}$ = ((**2.14x10^7 - 4.65x10^8/22**) / (**22**-1))$^{1/2}$ = **112.622**	Compute background sd.
3	SCL = **$\bar{X}$** + **F** * **S** = **980.364** + **4.0** * **112.622** = **1430.853**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **22** * (**22**-1) / 2 = **231**	Number of sample pairs during trend detection period.
5	S = **13.605**	Sen's estimator of trend.
6	var(S) = **1256.667**	Variance estimate for slope.
7	M_1(S) = (**N' - $Z_{.99}$** * **var(S)**$^{1/2}$) / 2 = (**231 - 2.326** * **1256.667**$^{1/2}$) / 2 = **74.272**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-10.751**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Calcium, Total (mg/L) at CBL-302I
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N**	Compute background mean.
	= **20879.0** / **22**	
	= **949.045**	
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$	Compute background sd.
	$= ((\mathbf{2.01 \times 10^7} - \mathbf{4.36 \times 10^8}/\mathbf{22}) / (\mathbf{22}-1))^{1/2}$	
	= **108.773**	
3	SCL = $\bar{X}$ + **F** * **S**	Compute combined Shewhart-CUSUM normal control limit.
	= **949.045** + **4.0** * **108.773**	
	= **1384.138**	
4	N' = **N** * (**N**-1) / 2	Number of sample pairs during trend detection period.
	= **22** * (**22**-1) / 2	
	= **231**	
5	S = **-29.058**	Sen's estimator of trend.
6	var(S) = **1255.667**	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N'} - \mathbf{Z_{.99}} * \mathbf{var(S)}^{1/2}) / 2$	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1 th largest slope estimate. When M_1 is not an integer, interpolation is used.
	$= (\mathbf{231} - \mathbf{2.326} * \mathbf{1255.667}^{1/2}) / 2$	
	= **74.289**	
8	LCL(S) = **-50.515**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Calcium, Total (mg/L) at CBL-306I
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **4147.0** / **20** = **207.35**	Compute background mean.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{895651.0} - \mathbf{1.72{\times}10^7}/\mathbf{20}) / (\mathbf{20}-1))^{1/2}$ = **43.39**	Compute background sd.
3	SCL = $\bar{\mathbf{X}}$ + **F** * **S** = **207.35** + **4.0** * **43.39** = **380.909**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **20** * (**20**-1) / 2 = **190**	Number of sample pairs during trend detection period.
5	S = **1.47**	Sen's estimator of trend.
6	var(S) = **949.0**	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N'} - \mathbf{Z}_{.99} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{190} - \mathbf{2.326} * \mathbf{949.0}^{1/2}) / 2$ = **59.173**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-10.298**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Calcium, Total (mg/L) at CBL-308I
Normal Control Limit

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{18221.0} / \mathbf{22}$ $= \mathbf{828.227}$	Compute background mean.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{1.53 \times 10^7} - \mathbf{3.32 \times 10^8/22}) / (\mathbf{22}-1))^{1/2}$ $= \mathbf{99.931}$	Compute background sd.
3	$SCL = \bar{\mathbf{X}} + \mathbf{F} * \mathbf{S}$ $= \mathbf{828.227} + \mathbf{4.0} * \mathbf{99.931}$ $= \mathbf{1227.953}$	Compute combined Shewhart-CUSUM normal control limit.
4	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{22} * (\mathbf{22}-1) / 2$ $= \mathbf{231}$	Number of sample pairs during trend detection period.
5	$S = \mathbf{-28.539}$	Sen's estimator of trend.
6	$var(S) = \mathbf{1257.667}$	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N'} - \mathbf{Z_{.99}} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{231} - \mathbf{2.326} * \mathbf{1257.667}^{1/2}) / 2$ $= \mathbf{74.256}$	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1 th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	$LCL(S) = \mathbf{-39.221}$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Calcium, Total (mg/L) at CBL-341I
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **18379.0** / **22** = **835.409**	Compute background mean.
2	S = ((**sum[X^2] - sum[X]^2**/**N**) / (**N**-1))$^{1/2}$ = ((**1.55x10^7** - **3.38x10^8/22**) / (**22**-1))$^{1/2}$ = **78.294**	Compute background sd.
3	SCL = **$\bar{X}$** + **F** * **S** = **835.409** + **4.0** * **78.294** = **1148.586**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **22** * (**22**-1) / 2 = **231**	Number of sample pairs during trend detection period.
5	S = **-13.77**	Sen's estimator of trend.
6	var(S) = **1257.667**	Variance estimate for slope.
7	M_1(S) = (**N' - $Z_{.99}$** * **var(S)**$^{1/2}$) / 2 = (**231** - **2.326** * **1257.667**$^{1/2}$) / 2 = **74.256**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-31.394**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Chloride (mg/L) at CBL-301I
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **50190.0** / **22** = **2281.364**	Compute background mean.
2	S = ((**sum[X^2] - sum[X]^2**/**N**) / (**N**-1))^{½} = ((**1.17**x**10^8** - **2.52**x**10^9**/**22**) / (**22**-1))^{½} = **343.349**	Compute background sd.
3	SCL = $\overline{\mathbf{X}}$ + **F** * **S** = **2281.364** + **4.0** * **343.349** = **3654.76**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **22** * (**22**-1) / 2 = **231**	Number of sample pairs during trend detection period.
5	S = **-4.828**	Sen's estimator of trend.
6	var(S) = **1255.667**	Variance estimate for slope.
7	M_1(S) = (**N' - Z$_{.99}$** * **var(S)**^{½}) / 2 = (**231** - **2.326** * **1255.667**^{½}) / 2 = **74.289**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-59.442**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Chloride (mg/L) at CBL-302I
Normal Control Limit

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{38850.0} / \mathbf{22}$ $= \mathbf{1765.909}$	Compute background mean.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{7.13{\times}10^7} - \mathbf{1.51{\times}10^9}/\mathbf{22}) / (\mathbf{22}-1))^{1/2}$ $= \mathbf{357.74}$	Compute background sd.
3	$SCL = \bar{\mathbf{X}} + \mathbf{F} * \mathbf{S}$ $= \mathbf{1765.909} + \mathbf{4.0} * \mathbf{357.74}$ $= \mathbf{3196.868}$	Compute combined Shewhart-CUSUM normal control limit.
4	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{22} * (\mathbf{22}-1) / 2$ $= \mathbf{231}$	Number of sample pairs during trend detection period.
5	$S = \mathbf{-113.865}$	Sen's estimator of trend.
6	$var(S) = \mathbf{1255.667}$	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N'} - \mathbf{Z}_{.99} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{231} - \mathbf{2.326} * \mathbf{1255.667}^{1/2}) / 2$ $= \mathbf{74.289}$	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	$LCL(S) = \mathbf{-163.058}$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Chloride (mg/L) at CBL-306I
Normal Control Limit

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{5447.0} / \mathbf{19}$ $= \mathbf{286.684}$	Compute background mean.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{½}$ $= ((\mathbf{1.71}\times\mathbf{10^6} - \mathbf{2.97}\times\mathbf{10^7}/\mathbf{19}) / (\mathbf{19}-1))^{½}$ $= \mathbf{89.353}$	Compute background sd.
3	$SCL = \bar{\mathbf{X}} + \mathbf{F} * \mathbf{S}$ $= \mathbf{286.684} + \mathbf{4.0} * \mathbf{89.353}$ $= \mathbf{644.095}$	Compute combined Shewhart-CUSUM normal control limit.
4	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{19} * (\mathbf{19}-1) / 2$ $= \mathbf{171}$	Number of sample pairs during trend detection period.
5	$S = \mathbf{3.59}$	Sen's estimator of trend.
6	$var(S) = \mathbf{817.0}$	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N'} - \mathbf{Z}_{.99} * \mathbf{var(S)}^{½}) / 2$ $= (\mathbf{171} - \mathbf{2.326} * \mathbf{817.0}^{½}) / 2$ $= \mathbf{52.258}$	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	$LCL(S) = \mathbf{-24.663}$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Chloride (mg/L) at CBL-308I
Normal Control Limit

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$	Compute background mean.
	$= \mathbf{52680.0} / \mathbf{22}$	
	$= \mathbf{2394.545}$	
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$	Compute background sd.
	$= ((\mathbf{1.29 \times 10^8} - \mathbf{2.78 \times 10^9/22}) / (\mathbf{22}-1))^{1/2}$	
	$= \mathbf{335.087}$	
3	$SCL = \bar{\mathbf{X}} + \mathbf{F} * \mathbf{S}$	Compute combined Shewhart-CUSUM normal control limit.
	$= \mathbf{2394.545} + \mathbf{4.0} * \mathbf{335.087}$	
	$= \mathbf{3734.892}$	
4	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$	Number of sample pairs during trend detection period.
	$= \mathbf{22} * (\mathbf{22}-1) / 2$	
	$= \mathbf{231}$	
5	$S = \mathbf{-89.526}$	Sen's estimator of trend.
6	$var(S) = \mathbf{1255.667}$	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N'} - \mathbf{Z}_{.99} * \mathbf{var(S)}^{1/2}) / 2$	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
	$= (\mathbf{231} - \mathbf{2.326} * \mathbf{1255.667}^{1/2}) / 2$	
	$= \mathbf{74.289}$	
8	$LCL(S) = \mathbf{-146.734}$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Chloride (mg/L) at CBL-341I
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **39390.0** / **22** = **1790.455**	Compute background mean.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))$^{1/2}$ = ((**7.09x10^7** - **1.55x10^9/22**) / (**22**-1))$^{1/2}$ = **139.846**	Compute background sd.
3	SCL = $\bar{X}$ + **F** * **S** = **1790.455** + **4.0** * **139.846** = **2349.839**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **22** * (**22**-1) / 2 = **231**	Number of sample pairs during trend detection period.
5	S = **-19.065**	Sen's estimator of trend.
6	var(S) = **1255.667**	Variance estimate for slope.
7	M_1(S) = (**N' - $Z_{.99}$ * var(S)$^{1/2}$**) / 2 = (**231** - **2.326** * **1255.667**$^{1/2}$) / 2 = **74.289**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-55.076**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Fluoride (mg/L) at CBL-301I
Normal Control Limit

Step	Equation	Description
1	$\bar{X} = \textbf{sum[X]} / \textbf{N}$ $= \textbf{13.434} / \textbf{25}$ $= \textbf{0.537}$	Compute background mean.
2	$S = ((\textbf{sum[X}^2\textbf{]} - \textbf{sum[X]}^2/\textbf{N}) / (\textbf{N}-1))^{1/2}$ $= ((\textbf{14.345} - \textbf{180.472/25}) / (\textbf{25}-1))^{1/2}$ $= \textbf{0.545}$	Compute background sd.
3	$SCL = \bar{\textbf{X}} + \textbf{F} * \textbf{S}$ $= \textbf{0.537} + \textbf{4.0} * \textbf{0.545}$ $= \textbf{2.717}$	Compute combined Shewhart-CUSUM normal control limit.
4	$N' = \textbf{N} * (\textbf{N}-1) / 2$ $= \textbf{25} * (\textbf{25}-1) / 2$ $= \textbf{300}$	Number of sample pairs during trend detection period.
5	$S = \textbf{0.0}$	Sen's estimator of trend.
6	$var(S) = \textbf{1340.0}$	Variance estimate for slope.
7	$M_1(S) = (\textbf{N'} - \textbf{Z}_{.99} * \textbf{var(S)}^{1/2}) / 2$ $= (\textbf{300} - \textbf{2.326} * \textbf{1340.0}^{1/2}) / 2$ $= \textbf{107.427}$	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
8	$LCL(S) = \textbf{0.0}$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Fluoride (mg/L) at CBL-302I
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **12.014** / **23** = **0.522**	Compute background mean.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))^{½} = ((**11.863 - 144.329/23**) / (**23**-1))^{½} = **0.504**	Compute background sd.
3	SCL = $\overline{\mathbf{X}}$ + **F** * **S** = **0.522** + **4.0** * **0.504** = **2.538**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **23** * (**23**-1) / 2 = **253**	Number of sample pairs during trend detection period.
5	S = **0.0**	Sen's estimator of trend.
6	var(S) = **1100.0**	Variance estimate for slope.
7	M_1(S) = (**N' - $Z_{.99}$** * **var(S)**^{½}) / 2 = (**253 - 2.326** * **1100.0**^{½}) / 2 = **87.928**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **0.0**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Fluoride (mg/L) at CBL-306I
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **47.623** / **21** = **2.268**	Compute background mean.
2	S = ((**sum[X²] - sum[X]²/N**) / (**N**-1))^{½} = ((**116.497** - **2267.95/21**) / (**21**-1))^{½} = **0.652**	Compute background sd.
3	SCL = $\overline{\mathbf{X}}$ + **F** * **S** = **2.268** + **4.0** * **0.652** = **4.875**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **21** * (**21**-1) / 2 = **210**	Number of sample pairs during trend detection period.
5	S = **0.011**	Sen's estimator of trend.
6	var(S) = **1095.667**	Variance estimate for slope.
7	M_1(S) = (**N' - $Z_{.99}$** * **var(S)**^{½}) / 2 = (**210** - **2.326** * **1095.667**^{½}) / 2 = **66.504**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-0.137**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Fluoride (mg/L) at CBL-308I
Normal Control Limit

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{32.384} / \mathbf{20}$ $= \mathbf{1.619}$	Compute background mean.
2	$S = ((\mathbf{sum[X^2] - sum[X]^2/N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{54.282 - 1048.723/20}) / (\mathbf{20}-1))^{1/2}$ $= \mathbf{0.312}$	Compute background sd.
3	$SCL = \bar{\mathbf{X}} + \mathbf{F} * \mathbf{S}$ $= \mathbf{1.619} + \mathbf{4.0} * \mathbf{0.312}$ $= \mathbf{2.866}$	Compute combined Shewhart-CUSUM normal control limit.
4	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{20} * (\mathbf{20}-1) / 2$ $= \mathbf{190}$	Number of sample pairs during trend detection period.
5	$S = \mathbf{-0.042}$	Sen's estimator of trend.
6	$var(S) = \mathbf{949.0}$	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N'} - \mathbf{Z}_{.99} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{190} - \mathbf{2.326} * \mathbf{949.0}^{1/2}) / 2$ $= \mathbf{59.173}$	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
8	$LCL(S) = \mathbf{-0.113}$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Fluoride (mg/L) at CBL-341I
Normal Control Limit

Step	Equation	Description
1	$\overline{X} = \textbf{sum[X]} / \textbf{N}$ $= \textbf{6.986} / \textbf{23}$ $= \textbf{0.304}$	Compute background mean.
2	$S = ((\textbf{sum[X}^{\textbf{2}}\textbf{]} - \textbf{sum[X]}^2/\textbf{N}) / (\textbf{N}-1))^{½}$ $= ((\textbf{3.899} - \textbf{48.799/23}) / (\textbf{23}-1))^{½}$ $= \textbf{0.284}$	Compute background sd.
3	$SCL = \overline{\textbf{X}} + \textbf{F} * \textbf{S}$ $= \textbf{0.304} + \textbf{4.0} * \textbf{0.284}$ $= \textbf{1.441}$	Compute combined Shewhart-CUSUM normal control limit.
4	$N' = \textbf{N} * (\textbf{N}-1) / 2$ $= \textbf{23} * (\textbf{23}-1) / 2$ $= \textbf{253}$	Number of sample pairs during trend detection period.
5	$S = \textbf{0.0}$	Sen's estimator of trend.
6	$var(S) = \textbf{1268.667}$	Variance estimate for slope.
7	$M_1(S) = (\textbf{N'} - \textbf{Z}_{.99} * \textbf{var(S)}^{½}) / 2$ $= (\textbf{253} - \textbf{2.326} * \textbf{1268.667}^{½}) / 2$ $= \textbf{85.076}$	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
8	$LCL(S) = \textbf{-0.018}$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
pH (S.U.) at CBL-301I
Normal Control Limit

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{161.78} / \mathbf{26}$ $= \mathbf{6.222}$	Compute background mean.
2	$S = ((\mathbf{sum[X^2] - sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{1007.943 - 26172.768/26}) / (\mathbf{26}-1))^{1/2}$ $= \mathbf{0.228}$	Compute background sd.
3	$SCL = \bar{\mathbf{X}} \pm \mathbf{F} * \mathbf{S}$ $= \mathbf{6.222} \pm \mathbf{4.0} * \mathbf{0.228}$ $= \mathbf{5.311}, \mathbf{7.134}$	Compute combined Shewhart-CUSUM normal control interval.
4	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{26} * (\mathbf{26}-1) / 2$ $= \mathbf{325}$	Number of sample pairs during trend detection period.
5	$S = \mathbf{0.012}$	Sen's estimator of trend.
6	$var(S) = \mathbf{2048.0}$	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N'} - \mathbf{Z}_{.99} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{325} - \mathbf{2.326} * \mathbf{2048.0}^{1/2}) / 2$ $= \mathbf{109.869}$	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
8	$LCL(S) = \mathbf{-0.017}$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
pH (S.U.) at CBL-302I
Normal Control Limit

Step	Equation	Description
1	$\bar{X} = \textbf{sum[X]} / \textbf{N}$ $= \textbf{140.53} / \textbf{23}$ $= \textbf{6.11}$	Compute background mean.
2	$S = ((\textbf{sum[X}^{\textbf{2}}\textbf{]} - \textbf{sum[X]}^2/\textbf{N}) / (\textbf{N}-1))^{½}$ $= ((\textbf{865.266} - \textbf{19748.681}/\textbf{23}) / (\textbf{23}-1))^{½}$ $= \textbf{0.549}$	Compute background sd.
3	$SCL = \bar{\mathbf{X}} \pm \textbf{F} * \textbf{S}$ $= \textbf{6.11} \pm \textbf{4.0} * \textbf{0.549}$ $= \textbf{3.915}, \textbf{8.305}$	Compute combined Shewhart-CUSUM normal control interval.
4	$N' = \textbf{N} * (\textbf{N}-1) / 2$ $= \textbf{23} * (\textbf{23}-1) / 2$ $= \textbf{253}$	Number of sample pairs during trend detection period.
5	$S = \textbf{0.043}$	Sen's estimator of trend.
6	$var(S) = \textbf{1425.333}$	Variance estimate for slope.
7	$M_1(S) = (\textbf{N'} - \textbf{Z}_{.99} * \textbf{var(S)}^{½}) / 2$ $= (\textbf{253} - \textbf{2.326} * \textbf{1425.333}^{½}) / 2$ $= \textbf{82.593}$	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	$LCL(S) = \textbf{-0.002}$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
pH (S.U.) at CBL-306I
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **146.54** / **22** = **6.661**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]^2**/**N**) / (**N**-1))$^{1/2}$ = ((**983.894** - **21473.972**/**22**) / (**22**-1))$^{1/2}$ = **0.61**	Compute background sd.
3	SCL = **$\bar{X}$** ± **F** * **S** = **6.661** ± **4.0** * **0.61** = **4.222**, **9.099**	Compute combined Shewhart-CUSUM normal control interval.
4	N' = **N** * (**N**-1) / 2 = **22** * (**22**-1) / 2 = **231**	Number of sample pairs during trend detection period.
5	S = **-0.024**	Sen's estimator of trend.
6	var(S) = **1255.667**	Variance estimate for slope.
7	M_1(S) = (**N'** - **$Z_{.99}$** * **var(S)**$^{1/2}$) / 2 = (**231** - **2.326** * **1255.667**$^{1/2}$) / 2 = **74.289**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-0.074**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
pH (S.U.) at CBL-308I
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **137.96** / **22** = **6.271**	Compute background mean.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))^{½} = ((**866.378** - **19032.962/22**) / (**22**-1))^{½} = **0.243**	Compute background sd.
3	SCL = $\bar{X}$ ± **F** * **S** = **6.271** ± **4.0** * **0.243** = **5.298**, **7.244**	Compute combined Shewhart-CUSUM normal control interval.
4	N' = **N** * (**N**-1) / 2 = **22** * (**22**-1) / 2 = **231**	Number of sample pairs during trend detection period.
5	S = **0.024**	Sen's estimator of trend.
6	var(S) = **1249.333**	Variance estimate for slope.
7	M_1(S) = (**N' - $Z_{.99}$** * **var(S)**^{½}) / 2 = (**231** - **2.326** * **1249.333**^{½}) / 2 = **74.393**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-0.009**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
pH (S.U.) at CBL-341I
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N**	Compute background mean.
	= **134.16** / **22**	
	= **6.098**	
2	S = ((**sum[X^2] - sum[X]^2**/**N**) / (**N**-1))$^{1/2}$	Compute background sd.
	= ((**819.348** - **17998.906/22**) / (**22**-1))$^{1/2}$	
	= **0.241**	
3	SCL = $\bar{X}$ ± **F** * **S**	Compute combined Shewhart-CUSUM normal control interval.
	= **6.098** ± **4.0** * **0.241**	
	= **5.136**, **7.061**	
4	N' = **N** * (**N**-1) / 2	Number of sample pairs during trend detection period.
	= **22** * (**22**-1) / 2	
	= **231**	
5	S = **0.067**	Sen's estimator of trend.
6	var(S) = **1255.667**	Variance estimate for slope.
7	M_1(S) = (**N'** - **$Z_{.99}$** * **var(S)**$^{1/2}$) / 2	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
	= (**231** - **2.326** * **1255.667**$^{1/2}$) / 2	
	= **74.289**	
8	LCL(S) = **0.015**	One-sided lower confidence limit for slope.
9	LCL(S) > 0	**Significant increasing trend.**

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Sulfate (mg/L) at CBL-301I
Normal Control Limit

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{7933.0} / \mathbf{23}$ $= \mathbf{344.913}$	Compute background mean.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{2.91 \times 10^6} - \mathbf{6.29 \times 10^7/23}) / (\mathbf{23}-1))^{1/2}$ $= \mathbf{87.829}$	Compute background sd.
3	$SCL = \mathbf{\bar{X}} + \mathbf{F} * \mathbf{S}$ $= \mathbf{344.913} + \mathbf{4.0} * \mathbf{87.829}$ $= \mathbf{696.228}$	Compute combined Shewhart-CUSUM normal control limit.
4	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{23} * (\mathbf{23}-1) / 2$ $= \mathbf{253}$	Number of sample pairs during trend detection period.
5	$S = \mathbf{8.921}$	Sen's estimator of trend.
6	$var(S) = \mathbf{1432.667}$	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N'} - \mathbf{Z}_{.99} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{253} - \mathbf{2.326} * \mathbf{1432.667}^{1/2}) / 2$ $= \mathbf{82.48}$	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
8	$LCL(S) = \mathbf{-3.864}$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Sulfate (mg/L) at CBL-302I
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **27333.0** / **22** = **1242.409**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**3.42x10^7** - **7.47x10^8**/**22**) / (**22**-1))^{½} = **114.243**	Compute background sd.
3	SCL = $\bar{X}$ + **F** * **S** = **1242.409** + **4.0** * **114.243** = **1699.382**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **22** * (**22**-1) / 2 = **231**	Number of sample pairs during trend detection period.
5	S = **33.641**	Sen's estimator of trend.
6	var(S) = **1253.667**	Variance estimate for slope.
7	M_1(S) = (**N'** - **$Z_{.99}$** * **var(S)**^{½}) / 2 = (**231** - **2.326** * **1253.667**^{½}) / 2 = **74.321**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **19.299**	One-sided lower confidence limit for slope.
9	LCL(S) > 0	**Significant increasing trend.**

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Sulfate (mg/L) at CBL-306I
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **7524.0** / **20** = **376.2**	Compute background mean.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))$^{1/2}$ = ((**3.08x10^6 - 5.66x10^7/20**) / (**20**-1))$^{1/2}$ = **113.509**	Compute background sd.
3	SCL = $\overline{\mathbf{X}}$ + **F** * **S** = **376.2** + **4.0** * **113.509** = **830.236**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **20** * (**20**-1) / 2 = **190**	Number of sample pairs during trend detection period.
5	S = **4.631**	Sen's estimator of trend.
6	var(S) = **949.0**	Variance estimate for slope.
7	M_1(S) = (**N' - $Z_{.99}$** * **var(S)**$^{1/2}$) / 2 = (**190 - 2.326** * **949.0**$^{1/2}$) / 2 = **59.173**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-23.396**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Sulfate (mg/L) at CBL-308I
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **29720.0** / **21** = **1415.238**	Compute background mean.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))$^{1/2}$ = ((**4.23x10^7 - 8.83x10^8/21**) / (**21**-1))$^{1/2}$ = **116.431**	Compute background sd.
3	SCL = $\bar{\mathbf{X}}$ + **F** * **S** = **1415.238** + **4.0** * **116.431** = **1880.962**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **21** * (**21**-1) / 2 = **210**	Number of sample pairs during trend detection period.
5	S = **-27.593**	Sen's estimator of trend.
6	var(S) = **1092.667**	Variance estimate for slope.
7	M_1(S) = (**N' - Z$_{.99}$** * **var(S)**$^{1/2}$) / 2 = (**210 - 2.326** * **1092.667**$^{1/2}$) / 2 = **66.556**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-50.059**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Sulfate (mg/L) at CBL-341I
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **7568.0** / **22** = **344.0**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**2.63**x**10^6** - **5.73**x**10^7/22**) / (**22**-1))^{½} = **36.433**	Compute background sd.
3	SCL = $\bar{\mathbf{X}}$ + **F** * **S** = **344.0** + **4.0** * **36.433** = **489.73**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **22** * (**22**-1) / 2 = **231**	Number of sample pairs during trend detection period.
5	S = **-7.766**	Sen's estimator of trend.
6	var(S) = **1255.667**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z$_{.99}$** * **var(S)**^{½}) / 2 = (**231** - **2.326** * **1255.667**^{½}) / 2 = **74.289**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-16.759**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Total Dissolved Solids (mg/L) at CBL-301I
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **117920.0** / **22** = **5360.0**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**6.43x10^8** - **1.39x10^{10}**/**22**) / (**22**-1))^{½} = **726.616**	Compute background sd.
3	SCL = $\bar{X}$ + **F** * **S** = **5360.0** + **4.0** * **726.616** = **8266.466**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **22** * (**22**-1) / 2 = **231**	Number of sample pairs during trend detection period.
5	S = **-50.231**	Sen's estimator of trend.
6	var(S) = **1257.667**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z**$_{.99}$ * **var(S)**^{½}) / 2 = (**231** - **2.326** * **1257.667**^{½}) / 2 = **74.256**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-222.523**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Total Dissolved Solids (mg/L) at CBL-302I
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **115480.0** / **22** = **5249.091**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**6.17**x**10^8** - **1.33**x**10^{10}**/**22**) / (**22**-1))^{½} = **703.203**	Compute background sd.
3	SCL = **$\bar{X}$** + **F** * **S** = **5249.091** + **4.0** * **703.203** = **8061.903**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **22** * (**22**-1) / 2 = **231**	Number of sample pairs during trend detection period.
5	S = **-128.85**	Sen's estimator of trend.
6	var(S) = **1256.667**	Variance estimate for slope.
7	M_1(S) = (**N' - $Z_{.99}$** * **var(S)**^{½}) / 2 = (**231** - **2.326** * **1256.667**^{½}) / 2 = **74.272**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-261.261**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Total Dissolved Solids (mg/L) at CBL-306I
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **29632.0** / **22** = **1346.909**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**4.29**x**10^7** - **8.78**x**10^8**/**22**) / (**22**-1))^{½} = **379.055**	Compute background sd.
3	SCL = **$\bar{X}$** + **F** * **S** = **1346.909** + **4.0** * **379.055** = **2863.128**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **22** * (**22**-1) / 2 = **231**	Number of sample pairs during trend detection period.
5	S = **39.851**	Sen's estimator of trend.
6	var(S) = **1254.667**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z**$_{.99}$ * **var(S)**^{½}) / 2 = (**231** - **2.326** * **1254.667**^{½}) / 2 = **74.305**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-41.807**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Total Dissolved Solids (mg/L) at CBL-308I
Normal Control Limit

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{143250.0} / \mathbf{22}$ $= \mathbf{6511.364}$	Compute background mean.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{9.69 \times 10^8} - \mathbf{2.05 \times 10^{10}}/\mathbf{22}) / (\mathbf{22}-1))^{1/2}$ $= \mathbf{1311.645}$	Compute background sd.
3	$SCL = \bar{\mathbf{X}} + \mathbf{F} * \mathbf{S}$ $= \mathbf{6511.364} + \mathbf{4.0} * \mathbf{1311.645}$ $= \mathbf{11757.943}$	Compute combined Shewhart-CUSUM normal control limit.
4	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{22} * (\mathbf{22}-1) / 2$ $= \mathbf{231}$	Number of sample pairs during trend detection period.
5	$S = \mathbf{-206.604}$	Sen's estimator of trend.
6	$var(S) = \mathbf{1256.667}$	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N'} - \mathbf{Z_{.99}} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{231} - \mathbf{2.326} * \mathbf{1256.667}^{1/2}) / 2$ $= \mathbf{74.272}$	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	$LCL(S) = \mathbf{-456.306}$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Total Dissolved Solids (mg/L) at CBL-341I
Normal Control Limit

Step	Equation	Description
1	$\overline{X} = \textbf{sum[X]} / \textbf{N}$ $= \textbf{100290.0} / \textbf{22}$ $= \textbf{4558.636}$	Compute background mean.
2	$S = ((\textbf{sum[X}^2\textbf{]} - \textbf{sum[X]}^2/\textbf{N}) / (\textbf{N}-1))^{1/2}$ $= ((\textbf{4.64}\times\textbf{10}^{8} - \textbf{1.01}\times\textbf{10}^{10}/\textbf{22}) / (\textbf{22}-1))^{1/2}$ $= \textbf{563.038}$	Compute background sd.
3	$SCL = \overline{\textbf{X}} + \textbf{F} * \textbf{S}$ $= \textbf{4558.636} + \textbf{4.0} * \textbf{563.038}$ $= \textbf{6810.79}$	Compute combined Shewhart-CUSUM normal control limit.
4	$N' = \textbf{N} * (\textbf{N}-1) / 2$ $= \textbf{22} * (\textbf{22}-1) / 2$ $= \textbf{231}$	Number of sample pairs during trend detection period.
5	$S = \textbf{-106.829}$	Sen's estimator of trend.
6	$var(S) = \textbf{1256.667}$	Variance estimate for slope.
7	$M_1(S) = (\textbf{N'} - \textbf{Z}_{.99} * \textbf{var(S)}^{1/2}) / 2$ $= (\textbf{231} - \textbf{2.326} * \textbf{1256.667}^{1/2}) / 2$ $= \textbf{74.272}$	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
8	$LCL(S) = \textbf{-260.149}$	One-sided lower confidence limit for slope.

Attachment D

Summary Tables and Graphs for the Intrawell Comparisons - Resamples

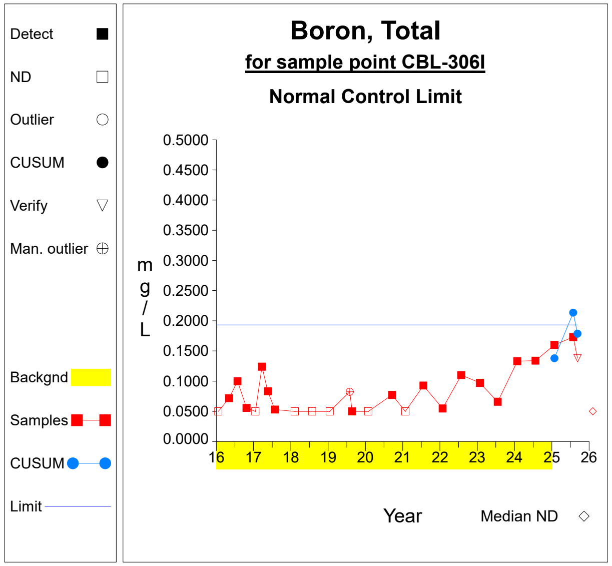
Table 1

Summary Statistics and Intermediate Computations for Combined Shewhart-CUSUM Control Charts

Constituent	Units	Well	N(back)	N(mon)	N(tot)	Mean	SD	R(i-1)	R(i)	S(i-1)	S(i)	Limit	Type	Conf
Boron, Total	mg/L	CBL-306I	22	3	26	0.0751	0.0295	0.1730	0.1380	0.2136	0.1786	0.1933	normal	

N(back) and N(mon) = Non-outlier measurements in the background and monitoring periods.
N(tot) = All independent measurements for that constituent and well.
For transformed data, mean and SD in transformed units and control limit in original units.
Conf = confidence level for passing initial test or one of two verification resamples (nonparametric test only).
*   - Insufficient Data.
** - Detection Frequency < 25%.
*** - Zero Variance.

Intra-Well Sublist Control Charts / Prediction Limits



Graph 1

Table 2

Analytical Data and CUSUM Summary

Constituent	Units	Well	Date	Background	Result		Outlier	CUSUM	Adjusted	
Boron, Total	mg/L	CBL-306I	01/21/2016	yes	0.0500	ND				
Boron, Total	mg/L	CBL-306I	05/04/2016	yes	0.0717					
Boron, Total	mg/L	CBL-306I	07/26/2016	yes	0.0998					
Boron, Total	mg/L	CBL-306I	10/24/2016	yes	0.0556					
Boron, Total	mg/L	CBL-306I	01/19/2017	yes	0.0500	ND				
Boron, Total	mg/L	CBL-306I	03/22/2017	yes	0.1240					
Boron, Total	mg/L	CBL-306I	05/18/2017	yes	0.0832					
Boron, Total	mg/L	CBL-306I	07/27/2017	yes	0.0531					
Boron, Total	mg/L	CBL-306I	02/08/2018	yes	0.0500	ND				
Boron, Total	mg/L	CBL-306I	07/27/2018	yes	0.0500	ND				
Boron, Total	mg/L	CBL-306I	01/16/2019	yes	0.0500	ND				
Boron, Total	mg/L	CBL-306I	07/31/2019	yes	0.0824		yes			*
Boron, Total	mg/L	CBL-306I	08/23/2019	yes	0.0500					
Boron, Total	mg/L	CBL-306I	01/29/2020	yes	0.0500	ND				
Boron, Total	mg/L	CBL-306I	09/19/2020	yes	0.0773					
Boron, Total	mg/L	CBL-306I	01/28/2021	yes	0.0500	ND				
Boron, Total	mg/L	CBL-306I	07/21/2021	yes	0.0927					
Boron, Total	mg/L	CBL-306I	01/27/2022	yes	0.0548					
Boron, Total	mg/L	CBL-306I	07/28/2022	yes	0.1100					
Boron, Total	mg/L	CBL-306I	01/26/2023	yes	0.0973					
Boron, Total	mg/L	CBL-306I	07/18/2023	yes	0.0659					
Boron, Total	mg/L	CBL-306I	01/29/2024	yes	0.1330					
Boron, Total	mg/L	CBL-306I	07/23/2024	yes	0.1340					
Boron, Total	mg/L	CBL-306I	01/27/2025		0.1600			0.1378		
Boron, Total	mg/L	CBL-306I	07/28/2025		0.1730			0.2136		**
Boron, Total	mg/L	CBL-306I	09/09/2025		0.1380			0.1786		

* - Outlier for that well and constituent.
** - Non-outlier detected sample Result and / or CUSUM value exceeds limit.
*** - ND value replaced with median RL.
**** - ND value replaced with manual RL.
ND = Not detected, Result = detection limit.

Worksheet 3 - Intra-Well Sublist Control Charts / Prediction Limits
Boron, Total (mg/L) at CBL-306I
Normal Control Limit

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{1.652} / \mathbf{22}$ $= \mathbf{0.075}$	Compute background mean.
2	$S = ((\mathbf{sum[X^2] - sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{0.142 - 2.73/22}) / (\mathbf{22}-1))^{1/2}$ $= \mathbf{0.03}$	Compute background sd.
3	$SCL = \bar{\mathbf{X}} + \mathbf{F} * \mathbf{S}$ $= \mathbf{0.075} + \mathbf{4.0} * \mathbf{0.03}$ $= \mathbf{0.193}$	Compute combined Shewhart-CUSUM normal control limit.
4	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{22} * (\mathbf{22}-1) / 2$ $= \mathbf{231}$	Number of sample pairs during trend detection period.
5	$S = \mathbf{0.002}$	Sen's estimator of trend.
6	$var(S) = \mathbf{1192.333}$	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N'} - \mathbf{Z}_{.99} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{231} - \mathbf{2.326} * \mathbf{1192.333}^{1/2}) / 2$ $= \mathbf{75.341}$	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	$LCL(S) = \mathbf{0.0}$	One-sided lower confidence limit for slope.

APPENDIX E

Analytical Data for Calendar Year 2025

February 05, 2025

Craig Bennett
BBA Engineering
165 N. Lampasas St.
Bertram, TX 78605

TEL: (512) 925-2549

FAX:

Order No.: 2501328

RE: FPP-CCR

Dear Craig Bennett:

DHL Analytical, Inc. received 9 samples on 01/30/2025 for the analyses presented in the following report.

There were no problems with the analyses and all data met requirements of NELAP except where noted in the Case Narrative. All non-NELAP methods will be identified accordingly in the case narrative and all estimated uncertainties of test results are within method or EPA specifications.

If you have any questions regarding these tests results, please feel free to call. Thank you for using DHL Analytical.

Sincerely,

Karyn Lane

Karyn Lane
Laboratory Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification Number: T104704211 - TX-C24-00120

Table of Contents

DHL ANALYTICAL

2300 Double Creek Dr. Round Rock, TX 78664
Phone 512.388.8222
Web: **www.dhlanalytical.com**
Email: **login@dhlanalytical.com**

CHAIN-OF-CUSTODY

CLIENT: BBA
ADDRESS: 165 N. LAMPASAS ST, BERTRAM, TX
PHONE:
EMAIL:
DATA REPORTED TO: CRAIG BENNETT
ADDITIONAL REPORT COPIES TO: CHARLIE MACON

DATE: 1-30-25
PO#: 24713-2-1
PROJECT LOCATION OR NAME: FPP - CCR
CLIENT PROJECT # 24713-2-1
COLLECTOR: JOHN BRAYON

LAB USE ONLY
DHL WORKORDER #: 2501328

Authorize 5% surcharge for TRRP report? ☐ Yes ☐ No

W=WATER, SE=SEDIMENT, L=LIQUID, P=PAINT, S=SOIL, SL=SLUDGE, SO=SOLID

PRESERVATION: HCL ☐, H_3PO_4 ☐, HNO_3, H_2SO_4, NaOH ☐, Zn Acetate ☐, ICE ☒, UNPRESERVED ☒

ANALYSES: BTEX ☐ MTBE ☐ [METHOD 8260]; TPH 1005 ☐ TPH 1006 ☐ HOLD 1006 ☐; GRO 8015 ☐ DRO 8015 ☐; VOC 8260 ☐ VOC 624.1 ☐; SVOC 8270 ☐ SVOC 625.1 ☐; PAH 8270 ☐ HOLD PAH ☐; PEST 8270 ☐ 625.1 ☐ O-P PEST 8270 ☐; PCB 8082 ☐ 608.3 ☐ PCB 8270 ☐ 625.1 ☐; HERB 8321 ☐ T PHOS ☐ AMMONIA ☐; METALS 6020 ☐ 200.8 ☐ DISS. METALS ☐; RCRA 8 ☐ TX11 ☐; pH ☐ HEX CHROM ☐ ALKALINITY ☐ COD ☐; ANIONS 300 ☐ 9056 ☐; TCLP-SVOC ☐ VOC ☐ PEST ☐ HERB ☐; TCLP-METALS ☐ RCRA 8 ☐ TX-11 ☐ Pb ☐; RCI ☐ IGN ☐ DGAS ☐ OIL&GREASE ☐; TDS ☐ TSS ☐ % MOIST ☐ CYANIDE ☐; METALS; ANIONS, TDS

Field Sample I.D.	DHL Lab #	Collection Date	Collection Time	Matrix	Container Type	# of Containers	HNO3	ICE/UNPRESERVED	METALS	ANIONS, TDS	FIELD NOTES
CBL-302I	01	1-27-25	1405	W	P	2	X	X	X	X	
DVP-1-CCR	02	↓	1405	W	P	2	X	X	X	X	
CBL-301I	03	↓	1455	W	P	2	X	X	X	X	
CBL-306I	04	↓	1600	W	P	2	X	X	X	X	
CBL-308I	05	↓	1700	W	P	2	X	X	X	X	
CBL-340I	06	1-28-25	0805	W	P	2	X	X	X	X	
EB-CCR	07	↓	0835	W	P	2	X	X	X	X	
FB-CCR	08	↓	0820	W	P	2	X	X	X	X	
CBL-341I	09	↓	0935	W	P	2	X	X	X	X	

Relinquished By: (Sign)	DATE/TIME	Received by:
[signature]	1-30-25 1141	[signature]
Relinquished By: (Sign)	DATE/TIME	Received by:
Relinquished By: (Sign)	DATE/TIME	Received by:

TURN AROUND TIME (CALL FIRST FOR RUSH)
RUSH-1 DAY ☐ RUSH-2 DAY ☐ RUSH-3 DAY ☐
NORMAL ☒ OTHER ☐
DUE DATE ______ ☐

LAB USE ONLY 1.3, 4.0, 4.0, 5.9°C **THERMO #:** 78
RECEIVING TEMP (°C):
IF >6°C, ARE SAMPLES ON ICE AND JUST COLLECTED? YES / NO
CUSTODY SEALS ON ICE CHEST: ☐ BROKEN ☐ INTACT ☒ NOT USED
CARRIER: ☐ LSO ☐ FEDEX ☐ UPS ☐ COURIER ☒ HAND DELIVERED

☐ **DHL DISPOSAL @ $10.00 each**

DHL COC REV 4 | MAR 2023

CCR Program	Arsenic	Boron	Calcium	Chloride	Chromium	Cobalt	Fluoride	Manganese	Mercury	Molybdenum	Nickel	Selenium	Sulfate	TDS	Field pH	
CBL-340I																2 metals, 3 major ions, TDS
CBL-301I																2 metals, 3 major ions, TDS
CBL-302I																2 metals, 3 major ions, TDS
CBL-306I																2 metals, 3 major ions, TDS
CBL-308I																2 metals, 3 major ions, TDS
CBL-341I																2 metals, 3 major ions, TDS
Equipment Blank																2 metals, 3 major ions, TDS
Field Blank																2 metals, 3 major ions, TDS
Duplicate																2 metals, 3 major ions, TDS

DHL Analytical, Inc.

Sample Receipt Checklist

Client Name: **BBA Engineering** Date Received: **1/30/2025**

Work Order Number: **2501328** Received by: **JS**

Checklist completed by: (Signature) 1/30/2025 (Date) Reviewed by: (Initials) 1/30/2025 (Date)

Carrier name: Hand Delivered

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑ NA ☐
Water - pH<2 acceptable upon receipt?	Yes ☑	No ☐	NA ☐ LOT # 13171
	Adjusted? NO		Checked by R.A.
Water - ph>9 (S) or ph>10 (CN) acceptable upon receipt?	Yes ☐	No ☐	NA ☑ LOT #
	Adjusted?		Checked by
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	

Cooler #	1	2	3	4
Temp °C	1.3	4.0	4.0	5.9
Seal Intact	NP	NP	NP	NP

Any No response must be detailed in the comments section below.

Client contacted: Date contacted: Person contacted:

Contacted by: Regarding:

Comments:

Corrective Action:

Page 1 of 1

Laboratory Name: DHL Analytical, Inc.

Laboratory Review Checklist: Reportable Data

Project Name: FPP-CCR	**LRC Date:** 2/5/2025
Reviewer Name: Angie O'Donnell	**Laboratory Work Order: 2501328**
Prep Batch Number(s): See Prep Dates Report	**Run Batch:** See Analytical Dates Report

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
		Chain-of-Custody (C-O-C)					
R1	OI	**1)** Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				**R1-01**
		2) Were all departures from standard conditions described in an exception report?			X		
R2	OI	**Sample and Quality Control (QC) Identification**					
		1) Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		2) Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	**Test Reports**					
		1) Were all samples prepared and analyzed within holding times?	X				
		2) Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		3) Were calculations checked by a peer or supervisor?	X				
		4) Were all analyte identifications checked by a peer or supervisor?	X				
		5) Were sample detection limits reported for all analytes not detected?	X				
		6) Were all results for soil and sediment samples reported on a dry weight basis?			X		
		7) Were % moisture (or solids) reported for all soil and sediment samples?			X		
		8) Were bulk soils/solids samples for volatile analysis extracted with methanol per EPA Method 5035?			X		
		9) If required for the project, TICs reported?			X		
R4	O	**Surrogate Recovery Data**					
		1) Were surrogates added prior to extraction?			X		
		2) Were surrogate percent recoveries in all samples within the laboratory QC limits?			X		
R5	OI	**Test Reports/Summary Forms for Blank Samples**					
		1) Were appropriate type(s) of blanks analyzed?	X				
		2) Were blanks analyzed at the appropriate frequency?	X				
		3) Where method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		4) Were blank concentrations < MDL?	X				
		5) For analyte(s) detected in a blank sample, was the concentration, unadjusted for sample specific factors, in all associated field samples, **greater** than 10 times the concentration in the blank sample?			X		
R6	OI	**Laboratory Control Samples (LCS):**					
		1) Were all COCs included in the LCS?	X				
		2) Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		3) Were LCSs analyzed at the required frequency?	X				
		4) Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		5) Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		6) Was the LCSD RPD within QC limits (if applicable)?	X				
R7	OI	**Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Data**					
		1) Were the project/method specified analytes included in the MS and MSD?	X				
		2) Were MS/MSD analyzed at the appropriate frequency?	X				
		3) Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?		X			**R7-03**
		4) Were MS/MSD RPDs within laboratory QC limits?	X				
R8	OI	**Analytical Duplicate Data**					
		1) Were appropriate analytical duplicates analyzed for each matrix?	X				
		2) Were analytical duplicates analyzed at the appropriate frequency?	X				
		3) Were RPDs or relative standard deviations within the laboratory QC limits?	X				
R9	OI	**Method Quantitation Limits (MQLs):**					
		1) Are the MQLs for each method analyte included in the laboratory data package?	X				
		2) Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		3) Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	**Other Problems/Anomalies**					
		1) Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				**R10-01**
		2) Was applicable and available technology used to lower the SDL to minimize the matrix interference affects on the sample results?	X				
		3) Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

Laboratory Name: DHL Analytical, Inc. Laboratory Review Checklist (continued): Supporting Data							
Project Name: FPP-CCR			**LRC Date:** 2/5/2025				
Reviewer Name: Angie O'Donnell			**Laboratory Work Order: 2501328**				
Prep Batch Number(s): See Prep Dates Report			**Run Batch:** See Analytical Dates Report				
#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
S1	OI	**Initial Calibration (ICAL)**					
		1) Were response factors and/or relative response factors for each analyte within QC limits?	X				
		2) Were percent RSDs or correlation coefficient criteria met?	X				
		3) Was the number of standards recommended in the method used for all analytes?	X				
		4) Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		5) Are ICAL data available for all instruments used?	X				
		6) Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	**Initial and Continuing calibration Verification (ICCV and CCV) and Continuing Calibration blank (CCB):**					
		1) Was the CCV analyzed at the method-required frequency?	X				
		2) Were percent differences for each analyte within the method-required QC limits?	X				
		3) Was the ICAL curve verified for each analyte?	X				
		4) Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
S3	O	**Mass Spectral Tuning:**					
		1) Was the appropriate compound for the method used for tuning?	X				
		2) Were ion abundance data within the method-required QC limits?	X				
S4	O	**Internal Standards (IS):**					
		1) Were IS area counts and retention times within the method-required QC limits?	X				
S5	OI	**Raw Data (NELAC Section 5.5.10)**					
		1) Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		2) Were data associated with manual integrations flagged on the raw data?	X				
S6	O	**Dual Column Confirmation**					
		1) Did dual column confirmation results meet the method-required QC?			X		
S7	O	**Tentatively Identified Compounds (TICs):**					
		1) If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	**Interference Check Sample (ICS) Results:**					
		1) Were percent recoveries within method QC limits?	X				
S9	I	**Serial Dilutions, Post Digestion Spikes, and Method of Standard Additions**					
		1) Were percent differences, recoveries, and the linearity within the QC limits specified in the method?	X				
S10	OI	**Method Detection Limit (MDL) Studies**					
		1) Was a MDL study performed for each reported analyte?	X				
		2) Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S11	OI	**Proficiency Test Reports:**					
		1) Was the lab's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	**Standards Documentation**					
		1) Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	**Compound/Analyte Identification Procedures**					
		1) Are the procedures for compound/analyte identification documented?	X				
S14	OI	**Demonstration of Analyst Competency (DOC)**					
		1) Was DOC conducted consistent with NELAC Chapter 5 – Appendix C?	X				
		2) Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	**Verification/Validation Documentation for Methods** (NELAC Chapter 5)					
		1) Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	**Laboratory Standard Operating Procedures (SOPs):**					
		1) Are laboratory SOPs current and on file for each method performed?	X				

1 Items identified by the letter "R" should be included in the laboratory data package submitted to the TCEQ in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2 O = organic analyses; I = inorganic analyses (and general chemistry, when applicable).
3 NA = Not applicable.
4 NR = Not Reviewed.
5 ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Laboratory Data Package Signature Page – RG-366/TRRP-13

This data package consists of:

This signature page, the laboratory review checklist, and the following reportable data:

R1 Field chain-of-custody documentation;
R2 Sample identification cross-reference;
R3 Test reports (analytical data sheets) for each environmental sample that includes:
- a) Items consistent with NELAC Chapter 5,
- b) dilution factors,
- c) preparation methods,
- d) cleanup methods, and
- e) if required for the project, tentatively identified compounds (TICs).

R4 Surrogate recovery data including:
- a) Calculated recovery (%R), and
- b) The laboratory's surrogate QC limits.

R5 Test reports/summary forms for blank samples;
R6 Test reports/summary forms for laboratory control samples (LCSs) including:
- a) LCS spiking amounts,
- b) Calculated %R for each analyte, and
- c) The laboratory's LCS QC limits.

R7 Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
- a) Samples associated with the MS/MSD clearly identified,
- b) MS/MSD spiking amounts,
- c) Concentration of each MS/MSD analyte measured in the parent and spiked samples,
- d) Calculated %Rs and relative percent differences (RPDs), and
- e) The laboratory's MS/MSD QC limits

R8 Laboratory analytical duplicate (if applicable) recovery and precision:
- a) The amount of analyte measured in the duplicate,
- b) The calculated RPD, and
- c) The laboratory's QC limits for analytical duplicates.

R9 List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix;
R10 Other problems or anomalies.

The Exception Report for each "No" or "Not Reviewed (NR)" item in the Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory is not accredited under the Texas Laboratory Accreditation Program.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge that all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information or data affecting the quality of the data has been knowingly withheld.

This laboratory was last inspected by TCEQ on May 30 - June 2, 2023. Any findings affecting the data in this laboratory data package are noted in the Exception Reports herein. The official signing the cover page of the report in which these data are used is responsible for releasing this data package and is by signature affirming the above release statement is true.

Name: Karyn Lane
Official Title: Laboratory Manager

Karyn Lane
Signature

2/5/2025
Date

Name: Don Winston
Official Title: Technical Director

DHL Analytical, Inc.

Date: *05-Feb-25*

CLIENT: BBA Engineering
Project: FPP-CCR
Lab Order: 2501328

CASE NARRATIVE

Samples were analyzed using the methods outlined in the following references:

Method SW6020B - Metals Analysis
Method M2540C - Total Dissolved Solids Analysis
Method E300 - Anions Analysis

Exception Report R1-01

The samples were received and log-in performed on 1/30/2025. A total of 9 samples were received and analyzed. The samples arrived in good condition and were properly packaged.

Exception Report R7-03

For Anions Analysis, the recovery of Chloride for the Matrix Spike and Matrix Spike Duplicate (2501328-02 MS/MSD) was slightly below the method control limits. This is flagged accordingly in the QC Summary Report. This anion was within method control limits in the associated LCS. No further corrective action was taken.

For Metals Analysis, the recovery of Calcium for the Matrix Spike and Matrix Spike Duplicate (2501328-01 MS/MSD) was outside of the method control limits. This is flagged accordingly in the QC Summary Report. This analyte was within method control limits in the associated LCS. No further corrective action was taken.

Exception Report R10-01

Per project specification, MS/MSD/Duplicates are from this workorder or project samples only.

DHL Analytical, Inc.

Date: *05-Feb-25*

CLIENT: BBA Engineering
Project: FPP-CCR
Lab Order: 2501328

Work Order Sample Summary

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
2501328-01	CBL-302I		01/27/25 02:05 PM	01/30/2025
2501328-02	DUP-1-CCR		01/27/25 02:05 PM	01/30/2025
2501328-03	CBL-301I		01/27/25 02:55 PM	01/30/2025
2501328-04	CBL-306I		01/27/25 04:00 PM	01/30/2025
2501328-05	CBL-308I		01/27/25 05:00 PM	01/30/2025
2501328-06	CBL-340I		01/28/25 08:05 AM	01/30/2025
2501328-07	EB-CCR		01/28/25 08:35 AM	01/30/2025
2501328-08	FB-CCR		01/28/25 08:20 AM	01/30/2025
2501328-09	CBL-341I		01/28/25 09:35 AM	01/30/2025

Lab Order: 2501328
Client: BBA Engineering
Project: FPP-CCR

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
2501328-01A	CBL-302I	01/27/25 02:05 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	01/31/25 09:51 AM	118905
	CBL-302I	01/27/25 02:05 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	01/31/25 09:51 AM	118905
2501328-01B	CBL-302I	01/27/25 02:05 PM	Aqueous	E300	Anion Preparation	01/31/25 09:00 AM	118912
	CBL-302I	01/27/25 02:05 PM	Aqueous	E300	Anion Preparation	01/31/25 09:00 AM	118912
	CBL-302I	01/27/25 02:05 PM	Aqueous	M2540C	TDS Preparation	02/03/25 09:30 AM	118930
2501328-02A	DUP-1-CCR	01/27/25 02:05 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	01/31/25 09:51 AM	118905
	DUP-1-CCR	01/27/25 02:05 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	01/31/25 09:51 AM	118905
2501328-02B	DUP-1-CCR	01/27/25 02:05 PM	Aqueous	E300	Anion Preparation	01/31/25 09:00 AM	118912
	DUP-1-CCR	01/27/25 02:05 PM	Aqueous	E300	Anion Preparation	01/31/25 09:00 AM	118912
	DUP-1-CCR	01/27/25 02:05 PM	Aqueous	M2540C	TDS Preparation	02/03/25 09:30 AM	118930
2501328-03A	CBL-301I	01/27/25 02:55 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	01/31/25 09:51 AM	118905
	CBL-301I	01/27/25 02:55 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	01/31/25 09:51 AM	118905
2501328-03B	CBL-301I	01/27/25 02:55 PM	Aqueous	E300	Anion Preparation	01/31/25 09:00 AM	118912
	CBL-301I	01/27/25 02:55 PM	Aqueous	E300	Anion Preparation	01/31/25 09:00 AM	118912
	CBL-301I	01/27/25 02:55 PM	Aqueous	M2540C	TDS Preparation	02/03/25 09:30 AM	118930
2501328-04A	CBL-306I	01/27/25 04:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	01/31/25 09:51 AM	118905
	CBL-306I	01/27/25 04:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	01/31/25 09:51 AM	118905
2501328-04B	CBL-306I	01/27/25 04:00 PM	Aqueous	E300	Anion Preparation	01/31/25 09:00 AM	118912
	CBL-306I	01/27/25 04:00 PM	Aqueous	E300	Anion Preparation	01/31/25 09:00 AM	118912
	CBL-306I	01/27/25 04:00 PM	Aqueous	M2540C	TDS Preparation	02/03/25 09:30 AM	118930
2501328-05A	CBL-308I	01/27/25 05:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	01/31/25 09:51 AM	118905
	CBL-308I	01/27/25 05:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	01/31/25 09:51 AM	118905
2501328-05B	CBL-308I	01/27/25 05:00 PM	Aqueous	E300	Anion Preparation	01/31/25 09:00 AM	118912
	CBL-308I	01/27/25 05:00 PM	Aqueous	E300	Anion Preparation	01/31/25 09:00 AM	118912
	CBL-308I	01/27/25 05:00 PM	Aqueous	M2540C	TDS Preparation	02/03/25 09:30 AM	118930
2501328-06A	CBL-340I	01/28/25 08:05 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	01/31/25 09:51 AM	118905
	CBL-340I	01/28/25 08:05 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	01/31/25 09:51 AM	118905
2501328-06B	CBL-340I	01/28/25 08:05 AM	Aqueous	E300	Anion Preparation	01/31/25 09:00 AM	118912

Lab Order: 2501328
Client: BBA Engineering
Project: FPP-CCR

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
2501328-06B	CBL-340I	01/28/25 08:05 AM	Aqueous	E300	Anion Preparation	01/31/25 09:00 AM	118912
	CBL-340I	01/28/25 08:05 AM	Aqueous	M2540C	TDS Preparation	02/03/25 09:30 AM	118930
2501328-07A	EB-CCR	01/28/25 08:35 AM	Equip Blank	SW3005A	Aq Prep Metals : ICP-MS	01/31/25 09:51 AM	118905
	EB-CCR	01/28/25 08:35 AM	Equip Blank	SW3005A	Aq Prep Metals : ICP-MS	01/31/25 09:51 AM	118905
2501328-07B	EB-CCR	01/28/25 08:35 AM	Equip Blank	E300	Anion Preparation	01/31/25 09:00 AM	118912
	EB-CCR	01/28/25 08:35 AM	Equip Blank	E300	Anion Preparation	01/31/25 09:00 AM	118912
	EB-CCR	01/28/25 08:35 AM	Equip Blank	E300	Anion Preparation	01/31/25 09:00 AM	118912
	EB-CCR	01/28/25 08:35 AM	Equip Blank	M2540C	TDS Preparation	02/03/25 09:30 AM	118930
2501328-08A	FB-CCR	01/28/25 08:20 AM	Field Blank	SW3005A	Aq Prep Metals : ICP-MS	01/31/25 09:51 AM	118905
2501328-08B	FB-CCR	01/28/25 08:20 AM	Field Blank	E300	Anion Preparation	01/31/25 09:00 AM	118912
	FB-CCR	01/28/25 08:20 AM	Field Blank	E300	Anion Preparation	01/31/25 09:00 AM	118912
	FB-CCR	01/28/25 08:20 AM	Field Blank	E300	Anion Preparation	01/31/25 09:00 AM	118912
	FB-CCR	01/28/25 08:20 AM	Field Blank	M2540C	TDS Preparation	02/03/25 09:30 AM	118930
2501328-09A	CBL-341I	01/28/25 09:35 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	01/31/25 09:51 AM	118905
	CBL-341I	01/28/25 09:35 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	01/31/25 09:51 AM	118905
2501328-09B	CBL-341I	01/28/25 09:35 AM	Aqueous	E300	Anion Preparation	01/31/25 09:00 AM	118912
	CBL-341I	01/28/25 09:35 AM	Aqueous	E300	Anion Preparation	01/31/25 09:00 AM	118912
	CBL-341I	01/28/25 09:35 AM	Aqueous	M2540C	TDS Preparation	02/03/25 09:30 AM	118930

DHL Analytical, Inc.

05-Feb-25

Lab Order: 2501328
Client: BBA Engineering
Project: FPP-CCR

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
2501328-01A	CBL-302I	Aqueous	SW6020B	Total Metals: ICP-MS - Water	118905	1	02/03/25 12:13 PM	ICP-MS5_250203B
	CBL-302I	Aqueous	SW6020B	Total Metals: ICP-MS - Water	118905	50	02/04/25 12:02 PM	ICP-MS4_250204A
2501328-01B	CBL-302I	Aqueous	E300	Anions by IC method - Water	118912	1	01/31/25 02:40 PM	IC4_250131A
	CBL-302I	Aqueous	E300	Anions by IC method - Water	118912	100	02/01/25 10:35 AM	IC4_250131A
	CBL-302I	Aqueous	M2540C	Total Dissolved Solids	118930	1	02/03/25 03:00 PM	WC_250203B
2501328-02A	DUP-1-CCR	Aqueous	SW6020B	Total Metals: ICP-MS - Water	118905	1	02/03/25 12:21 PM	ICP-MS5_250203B
	DUP-1-CCR	Aqueous	SW6020B	Total Metals: ICP-MS - Water	118905	50	02/03/25 01:40 PM	ICP-MS5_250203B
2501328-02B	DUP-1-CCR	Aqueous	E300	Anions by IC method - Water	118912	1	01/31/25 03:00 PM	IC4_250131A
	DUP-1-CCR	Aqueous	E300	Anions by IC method - Water	118912	100	02/01/25 11:35 AM	IC4_250131A
	DUP-1-CCR	Aqueous	M2540C	Total Dissolved Solids	118930	1	02/03/25 03:00 PM	WC_250203B
2501328-03A	CBL-301I	Aqueous	SW6020B	Total Metals: ICP-MS - Water	118905	1	02/03/25 12:24 PM	ICP-MS5_250203B
	CBL-301I	Aqueous	SW6020B	Total Metals: ICP-MS - Water	118905	50	02/03/25 01:43 PM	ICP-MS5_250203B
2501328-03B	CBL-301I	Aqueous	E300	Anions by IC method - Water	118912	100	02/01/25 12:35 PM	IC4_250131A
	CBL-301I	Aqueous	E300	Anions by IC method - Water	118912	1	01/31/25 03:20 PM	IC4_250131A
	CBL-301I	Aqueous	M2540C	Total Dissolved Solids	118930	1	02/03/25 03:00 PM	WC_250203B
2501328-04A	CBL-306I	Aqueous	SW6020B	Total Metals: ICP-MS - Water	118905	1	02/03/25 12:26 PM	ICP-MS5_250203B
	CBL-306I	Aqueous	SW6020B	Total Metals: ICP-MS - Water	118905	20	02/03/25 01:45 PM	ICP-MS5_250203B
2501328-04B	CBL-306I	Aqueous	E300	Anions by IC method - Water	118912	1	01/31/25 03:40 PM	IC4_250131A
	CBL-306I	Aqueous	E300	Anions by IC method - Water	118912	100	02/01/25 12:55 PM	IC4_250131A
	CBL-306I	Aqueous	M2540C	Total Dissolved Solids	118930	1	02/03/25 03:00 PM	WC_250203B
2501328-05A	CBL-308I	Aqueous	SW6020B	Total Metals: ICP-MS - Water	118905	1	02/03/25 12:29 PM	ICP-MS5_250203B
	CBL-308I	Aqueous	SW6020B	Total Metals: ICP-MS - Water	118905	50	02/03/25 01:48 PM	ICP-MS5_250203B
2501328-05B	CBL-308I	Aqueous	E300	Anions by IC method - Water	118912	100	02/01/25 01:15 PM	IC4_250131A
	CBL-308I	Aqueous	E300	Anions by IC method - Water	118912	1	02/01/25 07:35 AM	IC4_250131A
	CBL-308I	Aqueous	M2540C	Total Dissolved Solids	118930	1	02/03/25 03:00 PM	WC_250203B
2501328-06A	CBL-340I	Aqueous	SW6020B	Total Metals: ICP-MS - Water	118905	1	02/03/25 12:31 PM	ICP-MS5_250203B
	CBL-340I	Aqueous	SW6020B	Total Metals: ICP-MS - Water	118905	50	02/03/25 01:50 PM	ICP-MS5_250203B
2501328-06B	CBL-340I	Aqueous	E300	Anions by IC method - Water	118912	1	02/01/25 07:55 AM	IC4_250131A

Lab Order:	2501328
Client:	BBA Engineering
Project:	FPP-CCR

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
2501328-06B	CBL-340I	Aqueous	E300	Anions by IC method - Water	118912	100	02/01/25 01:35 PM	IC4_250131A
	CBL-340I	Aqueous	M2540C	Total Dissolved Solids	118930	1	02/03/25 03:00 PM	WC_250203B
2501328-07A	EB-CCR	Equip Blank	SW6020B	Total Metals: ICP-MS - Water	118905	1	02/03/25 12:34 PM	ICP-MS5_250203B
	EB-CCR	Equip Blank	SW6020B	Total Metals: ICP-MS - Water	118905	1	02/03/25 01:53 PM	ICP-MS5_250203B
2501328-07B	EB-CCR	Equip Blank	E300	Anions by IC method - Water	118912	100	02/01/25 01:55 PM	IC4_250131A
	EB-CCR	Equip Blank	E300	Anions by IC method - Water	118912	1	02/01/25 11:40 PM	IC4_250201A
	EB-CCR	Equip Blank	E300	Anions by IC method - Water	118912	1	02/01/25 08:15 AM	IC4_250131A
	EB-CCR	Equip Blank	M2540C	Total Dissolved Solids	118930	1	02/03/25 03:00 PM	WC_250203B
2501328-08A	FB-CCR	Field Blank	SW6020B	Total Metals: ICP-MS - Water	118905	1	02/03/25 12:36 PM	ICP-MS5_250203B
2501328-08B	FB-CCR	Field Blank	E300	Anions by IC method - Water	118912	1	02/01/25 08:35 AM	IC4_250131A
	FB-CCR	Field Blank	E300	Anions by IC method - Water	118912	100	02/01/25 02:15 PM	IC4_250131A
	FB-CCR	Field Blank	E300	Anions by IC method - Water	118912	1	02/02/25	IC4_250201A
	FB-CCR	Field Blank	M2540C	Total Dissolved Solids	118930	1	02/03/25 03:00 PM	WC_250203B
2501328-09A	CBL-341I	Aqueous	SW6020B	Total Metals: ICP-MS - Water	118905	1	02/03/25 12:39 PM	ICP-MS5_250203B
	CBL-341I	Aqueous	SW6020B	Total Metals: ICP-MS - Water	118905	50	02/03/25 01:55 PM	ICP-MS5_250203B
2501328-09B	CBL-341I	Aqueous	E300	Anions by IC method - Water	118912	1	02/01/25 08:55 AM	IC4_250131A
	CBL-341I	Aqueous	E300	Anions by IC method - Water	118912	100	02/01/25 02:35 PM	IC4_250131A
	CBL-341I	Aqueous	M2540C	Total Dissolved Solids	118930	1	02/03/25 03:00 PM	WC_250203B

DHL Analytical, Inc.

Date: *05-Feb-25*

CLIENT:	BBA Engineering	**Client Sample ID:**	CBL-302I
Project:	FPP-CCR	**Lab ID:**	2501328-01
Project No:	24713-2-1	**Collection Date:**	01/27/25 02:05 PM
Lab Order:	2501328	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Boron	0.210	0.0100	0.0300		mg/L	1	02/03/25 12:13 PM
Calcium	878	5.00	15.0		mg/L	50	02/04/25 12:02 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **KES**
Chloride	1730	30.0	100		mg/L	100	02/01/25 10:35 AM
Fluoride	0.171	0.100	0.400	J	mg/L	1	01/31/25 02:40 PM
Sulfate	1490	100	300		mg/L	100	02/01/25 10:35 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **KER**
Total Dissolved Solids (Residue, Filterable)	4710	50.0	50.0		mg/L	1	02/03/25 03:00 PM

Qualifiers:
ND - Not Detected at the SDL
J - Analyte detected between SDL and RL
B - Analyte detected in the associated Method Blank
DF- Dilution Factor
N - Parameter not NELAP certified
See Final Page of Report for MQLs and MDLs
S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.

Date: *05-Feb-25*

CLIENT:	BBA Engineering	**Client Sample ID:**	DUP-1-CCR
Project:	FPP-CCR	**Lab ID:**	2501328-02
Project No:	24713-2-1	**Collection Date:**	01/27/25 02:05 PM
Lab Order:	2501328	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Boron	0.213	0.0100	0.0300		mg/L	1	02/03/25 12:21 PM
Calcium	882	5.00	15.0		mg/L	50	02/03/25 01:40 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **KES**
Chloride	1600	30.0	100		mg/L	100	02/01/25 11:35 AM
Fluoride	0.170	0.100	0.400	J	mg/L	1	01/31/25 03:00 PM
Sulfate	1330	100	300		mg/L	100	02/01/25 11:35 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **KER**
Total Dissolved Solids (Residue, Filterable)	4690	50.0	50.0		mg/L	1	02/03/25 03:00 PM

Qualifiers:
ND - Not Detected at the SDL
J - Analyte detected between SDL and RL
B - Analyte detected in the associated Method Blank
DF- Dilution Factor
N - Parameter not NELAP certified
See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

CLIENT:	BBA Engineering	**Client Sample ID:**	CBL-301I
Project:	FPP-CCR	**Lab ID:**	2501328-03
Project No:	24713-2-1	**Collection Date:**	01/27/25 02:55 PM
Lab Order:	2501328	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Boron	0.106	0.0100	0.0300		mg/L	1	02/03/25 12:24 PM
Calcium	907	5.00	15.0		mg/L	50	02/03/25 01:43 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **KES**
Chloride	2270	30.0	100		mg/L	100	02/01/25 12:35 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	01/31/25 03:20 PM
Sulfate	467	100	300		mg/L	100	02/01/25 12:35 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **KER**
Total Dissolved Solids (Residue, Filterable)	3810	50.0	50.0		mg/L	1	02/03/25 03:00 PM

Qualifiers:

ND - Not Detected at the SDL
J - Analyte detected between SDL and RL
B - Analyte detected in the associated Method Blank
DF- Dilution Factor
N - Parameter not NELAP certified
See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

CLIENT:	BBA Engineering	**Client Sample ID:**	CBL-306I
Project:	FPP-CCR	**Lab ID:**	2501328-04
Project No:	24713-2-1	**Collection Date:**	01/27/25 04:00 PM
Lab Order:	2501328	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Boron	0.160	0.0100	0.0300		mg/L	1	02/03/25 12:26 PM
Calcium	206	2.00	6.00		mg/L	20	02/03/25 01:45 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **KES**
Chloride	286	30.0	100		mg/L	100	02/01/25 12:55 PM
Fluoride	2.20	0.100	0.400		mg/L	1	01/31/25 03:40 PM
Sulfate	433	100	300		mg/L	100	02/01/25 12:55 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **KER**
Total Dissolved Solids (Residue, Filterable)	1480	50.0	50.0		mg/L	1	02/03/25 03:00 PM

Qualifiers:

- ND - Not Detected at the SDL
- J - Analyte detected between SDL and RL
- B - Analyte detected in the associated Method Blank
- DF- Dilution Factor
- N - Parameter not NELAP certified
- See Final Page of Report for MQLs and MDLs
- S - Spike Recovery outside control limits
- C - Sample Result or QC discussed in Case Narrative
- RL - Reporting Limit (MQL adjusted for moisture and sample size)
- SDL - Sample Detection Limit
- E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.

Date: *05-Feb-25*

CLIENT:	BBA Engineering	**Client Sample ID:**	CBL-308I
Project:	FPP-CCR	**Lab ID:**	2501328-05
Project No:	24713-2-1	**Collection Date:**	01/27/25 05:00 PM
Lab Order:	2501328	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Boron	0.163	0.0100	0.0300		mg/L	1	02/03/25 12:29 PM
Calcium	698	5.00	15.0		mg/L	50	02/03/25 01:48 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **KES**
Chloride	2190	30.0	100		mg/L	100	02/01/25 01:15 PM
Fluoride	1.20	0.100	0.400		mg/L	1	02/01/25 07:35 AM
Sulfate	1360	100	300		mg/L	100	02/01/25 01:15 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **KER**
Total Dissolved Solids (Residue, Filterable)	5290	50.0	50.0		mg/L	1	02/03/25 03:00 PM

Qualifiers:

ND - Not Detected at the SDL
J - Analyte detected between SDL and RL
B - Analyte detected in the associated Method Blank
DF- Dilution Factor
N - Parameter not NELAP certified
See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.

Date: *05-Feb-25*

CLIENT:	BBA Engineering	**Client Sample ID:**	CBL-340I
Project:	FPP-CCR	**Lab ID:**	2501328-06
Project No:	24713-2-1	**Collection Date:**	01/28/25 08:05 AM
Lab Order:	2501328	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Boron	0.183	0.0100	0.0300		mg/L	1	02/03/25 12:31 PM
Calcium	556	5.00	15.0		mg/L	50	02/03/25 01:50 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **KES**
Chloride	2310	30.0	100		mg/L	100	02/01/25 01:35 PM
Fluoride	0.724	0.100	0.400		mg/L	1	02/01/25 07:55 AM
Sulfate	717	100	300		mg/L	100	02/01/25 01:35 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **KER**
Total Dissolved Solids (Residue, Filterable)	4730	50.0	50.0		mg/L	1	02/03/25 03:00 PM

Qualifiers:

ND - Not Detected at the SDL
J - Analyte detected between SDL and RL
B - Analyte detected in the associated Method Blank
DF- Dilution Factor
N - Parameter not NELAP certified
See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.

Date: *05-Feb-25*

CLIENT:	BBA Engineering	**Client Sample ID:**	EB-CCR
Project:	FPP-CCR	**Lab ID:**	2501328-07
Project No:	24713-2-1	**Collection Date:**	01/28/25 08:35 AM
Lab Order:	2501328	**Matrix:**	EQUIP BLANK

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Boron	0.0485	0.0100	0.0300		mg/L	1	02/03/25 12:34 PM
Calcium	<0.100	0.100	0.300		mg/L	1	02/03/25 01:53 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **KES**
Chloride	<0.300	0.300	1.00		mg/L	1	02/01/25 11:40 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	02/01/25 11:40 PM
Sulfate	<1.00	1.00	3.00		mg/L	1	02/01/25 11:40 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **KER**
Total Dissolved Solids (Residue, Filterable)	<10.0	10.0	10.0		mg/L	1	02/03/25 03:00 PM

Qualifiers:

- ND - Not Detected at the SDL
- J - Analyte detected between SDL and RL
- B - Analyte detected in the associated Method Blank
- DF- Dilution Factor
- N - Parameter not NELAP certified
- See Final Page of Report for MQLs and MDLs
- S - Spike Recovery outside control limits
- C - Sample Result or QC discussed in Case Narrative
- RL - Reporting Limit (MQL adjusted for moisture and sample size)
- SDL - Sample Detection Limit
- E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.

Date: *05-Feb-25*

CLIENT:	BBA Engineering	**Client Sample ID:**	FB-CCR
Project:	FPP-CCR	**Lab ID:**	2501328-08
Project No:	24713-2-1	**Collection Date:**	01/28/25 08:20 AM
Lab Order:	2501328	**Matrix:**	FIELD BLANK

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Boron	0.0488	0.0100	0.0300		mg/L	1	02/03/25 12:36 PM
Calcium	<0.100	0.100	0.300		mg/L	1	02/03/25 12:36 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **KES**
Chloride	<0.300	0.300	1.00		mg/L	1	02/02/25
Fluoride	<0.100	0.100	0.400		mg/L	1	02/02/25
Sulfate	<1.00	1.00	3.00		mg/L	1	02/02/25
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **KER**
Total Dissolved Solids (Residue, Filterable)	<10.0	10.0	10.0		mg/L	1	02/03/25 03:00 PM

Qualifiers:

ND - Not Detected at the SDL
J - Analyte detected between SDL and RL
B - Analyte detected in the associated Method Blank
DF- Dilution Factor
N - Parameter not NELAP certified
See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.

Date: *05-Feb-25*

CLIENT:	BBA Engineering	**Client Sample ID:**	CBL-341I
Project:	FPP-CCR	**Lab ID:**	2501328-09
Project No:	24713-2-1	**Collection Date:**	01/28/25 09:35 AM
Lab Order:	2501328	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Boron	0.138	0.0100	0.0300		mg/L	1	02/03/25 12:39 PM
Calcium	778	5.00	15.0		mg/L	50	02/03/25 01:55 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **KES**
Chloride	1780	30.0	100		mg/L	100	02/01/25 02:35 PM
Fluoride	0.128	0.100	0.400	J	mg/L	1	02/01/25 08:55 AM
Sulfate	369	100	300		mg/L	100	02/01/25 02:35 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **KER**
Total Dissolved Solids (Residue, Filterable)	4020	50.0	50.0		mg/L	1	02/03/25 03:00 PM

Qualifiers:

ND - Not Detected at the SDL
J - Analyte detected between SDL and RL
B - Analyte detected in the associated Method Blank
DF- Dilution Factor
N - Parameter not NELAP certified
See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc. **Date:** *05-Feb-25*

CLIENT:	BBA Engineering		
Work Order:	2501328		
Project:	FPP-CCR		

ANALYTICAL QC SUMMARY REPORT

RunID: **ICP-MS4_241212A**

Sample ID:	**DCS2-118237**	Batch ID:	**118237**	TestNo:	**SW6020B**	Units:	**mg/L**
SampType:	**DCS2**	Run ID:	**ICP-MS4_241212A**	Analysis Date:	**12/12/2024 10:18:00 A**	Prep Date:	**12/10/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	0.280	0.300	0.300	0	93.2	70	130	0	0	

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: BBA Engineering
Work Order: 2501328
Project: FPP-CCR

ANALYTICAL QC SUMMARY REPORT

RunID: **ICP-MS4_250204A**

The QC data in batch 118905 applies to the following samples: 2501328-01A, 2501328-02A, 2501328-03A, 2501328-04A, 2501328-05A, 2501328-06A, 2501328-07A, 2501328-08A, 2501328-09A

Sample ID: **2501328-01A SD** Batch ID: **118905** TestNo: **SW6020B** Units: **mg/L**
SampType: **SD** Run ID: **ICP-MS4_250204A** Analysis Date: **2/4/2025 12:04:00 PM** Prep Date: **1/31/2025**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	879	75.0	0	878				0.096	20	

Sample ID: **2501328-01A PDS** Batch ID: **118905** TestNo: **SW6020B** Units: **mg/L**
SampType: **PDS** Run ID: **ICP-MS4_250204A** Analysis Date: **2/4/2025 12:21:00 PM** Prep Date: **1/31/2025**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	1110	15.0	250	878	92.3	75	125			

Sample ID: **2501328-01A MS** Batch ID: **118905** TestNo: **SW6020B** Units: **mg/L**
SampType: **MS** Run ID: **ICP-MS4_250204A** Analysis Date: **2/4/2025 12:23:00 PM** Prep Date: **1/31/2025**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	863	15.0	5.00	878	-302	75	125			S

Sample ID: **2501328-01A MSD** Batch ID: **118905** TestNo: **SW6020B** Units: **mg/L**
SampType: **MSD** Run ID: **ICP-MS4_250204A** Analysis Date: **2/4/2025 12:25:00 PM** Prep Date: **1/31/2025**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	875	15.0	5.00	878	-61.5	75	125	1.38	15	S

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: BBA Engineering
Work Order: 2501328
Project: FPP-CCR

ANALYTICAL QC SUMMARY REPORT

RunID: **ICP-MS4_250204A**

Sample ID: **ICV-250204** Batch ID: **R137334** TestNo: **SW6020B** Units: **mg/L**
SampType: **ICV** Run ID: **ICP-MS4_250204A** Analysis Date: **2/4/2025 11:38:00 AM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	2.52	0.300	2.50	0	101	90	110			

Sample ID: **LCVL-250204** Batch ID: **R137334** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCVL** Run ID: **ICP-MS4_250204A** Analysis Date: **2/4/2025 11:44:00 AM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	0.0994	0.300	0.100	0	99.4	80	120			

Sample ID: **CCV1-250204** Batch ID: **R137334** TestNo: **SW6020B** Units: **mg/L**
SampType: **CCV** Run ID: **ICP-MS4_250204A** Analysis Date: **2/4/2025 12:28:00 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	4.77	0.300	5.00	0	95.4	90	110			

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT:	BBA Engineering
Work Order:	2501328
Project:	FPP-CCR

ANALYTICAL QC SUMMARY REPORT

RunID: **ICP-MS5_241211A**

Sample ID: **DCS2-118237** Batch ID: **118237** TestNo: **SW6020B** Units: **mg/L**
SampType: **DCS2** Run ID: **ICP-MS5_241211A** Analysis Date: **12/11/2024 10:02:00 A** Prep Date: **12/10/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	0.309	0.300	0.300	0	103	70	130	0	0	

Sample ID: **DCS4-118237** Batch ID: **118237** TestNo: **SW6020B** Units: **mg/L**
SampType: **DCS4** Run ID: **ICP-MS5_241211A** Analysis Date: **12/11/2024 10:11:00 A** Prep Date: **12/10/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.0297	0.0300	0.0300	0	99.0	70	130	0	0	

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: BBA Engineering
Work Order: 2501328
Project: FPP-CCR

ANALYTICAL QC SUMMARY REPORT

RunID: **ICP-MS5_250203B**

The QC data in batch 118905 applies to the following samples: 2501328-01A, 2501328-02A, 2501328-03A, 2501328-04A, 2501328-05A, 2501328-06A, 2501328-07A, 2501328-08A, 2501328-09A

Sample ID: **MB-118905** Batch ID: **118905** TestNo: **SW6020B** Units: **mg/L**
SampType: **MBLK** Run ID: **ICP-MS5_250203B** Analysis Date: **2/3/2025 12:03:00 PM** Prep Date: **1/31/2025**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	<0.0100	0.0300								
Calcium	<0.100	0.300								

Sample ID: **LCS-118905** Batch ID: **118905** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCS** Run ID: **ICP-MS5_250203B** Analysis Date: **2/3/2025 12:06:00 PM** Prep Date: **1/31/2025**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.188	0.0300	0.200	0	93.9	80	120			
Calcium	4.84	0.300	5.00	0	96.8	80	120			

Sample ID: **LCSD-118905** Batch ID: **118905** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCSD** Run ID: **ICP-MS5_250203B** Analysis Date: **2/3/2025 12:08:00 PM** Prep Date: **1/31/2025**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.191	0.0300	0.200	0	95.5	80	120	1.72	15	
Calcium	4.97	0.300	5.00	0	99.4	80	120	2.72	15	

Sample ID: **2501328-01A SD** Batch ID: **118905** TestNo: **SW6020B** Units: **mg/L**
SampType: **SD** Run ID: **ICP-MS5_250203B** Analysis Date: **2/3/2025 12:16:00 PM** Prep Date: **1/31/2025**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.241	0.150	0	0.210				13.8	20	

Sample ID: **2501328-01A PDS** Batch ID: **118905** TestNo: **SW6020B** Units: **mg/L**
SampType: **PDS** Run ID: **ICP-MS5_250203B** Analysis Date: **2/3/2025 12:44:00 PM** Prep Date: **1/31/2025**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.402	0.0300	0.200	0.210	95.9	75	125			

Sample ID: **2501328-01A MS** Batch ID: **118905** TestNo: **SW6020B** Units: **mg/L**
SampType: **MS** Run ID: **ICP-MS5_250203B** Analysis Date: **2/3/2025 12:46:00 PM** Prep Date: **1/31/2025**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.402	0.0300	0.200	0.210	96.1	75	125			

Sample ID: **2501328-01A MSD** Batch ID: **118905** TestNo: **SW6020B** Units: **mg/L**
SampType: **MSD** Run ID: **ICP-MS5_250203B** Analysis Date: **2/3/2025 12:49:00 PM** Prep Date: **1/31/2025**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: BBA Engineering
Work Order: 2501328
Project: FPP-CCR

ANALYTICAL QC SUMMARY REPORT

RunID: **ICP-MS5_250203B**

Sample ID: **2501328-01A MSD**	Batch ID: **118905**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **MSD**	Run ID: **ICP-MS5_250203B**	Analysis Date: **2/3/2025 12:49:00 PM**	Prep Date: **1/31/2025**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.399	0.0300	0.200	0.210	94.8	75	125	0.636	15	

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: BBA Engineering
Work Order: 2501328
Project: FPP-CCR

ANALYTICAL QC SUMMARY REPORT

RunID: **ICP-MS5_250203B**

Sample ID: **ICV-250203** Batch ID: **R137309** TestNo: **SW6020B** Units: **mg/L**
SampType: **ICV** Run ID: **ICP-MS5_250203B** Analysis Date: **2/3/2025 10:10:00 AM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.104	0.0300	0.100	0	104	90	110			
Calcium	2.50	0.300	2.50	0	100	90	110			

Sample ID: **LCVL-250203** Batch ID: **R137309** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCVL** Run ID: **ICP-MS5_250203B** Analysis Date: **2/3/2025 10:19:00 AM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.0227	0.0300	0.0200	0	113	80	120			
Calcium	0.0916	0.300	0.100	0	91.6	80	120			

Sample ID: **CCV2-250203** Batch ID: **R137309** TestNo: **SW6020B** Units: **mg/L**
SampType: **CCV** Run ID: **ICP-MS5_250203B** Analysis Date: **2/3/2025 11:49:00 AM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.199	0.0300	0.200	0	99.4	90	110			
Calcium	5.04	0.300	5.00	0	101	90	110			

Sample ID: **CCV3-250203** Batch ID: **R137309** TestNo: **SW6020B** Units: **mg/L**
SampType: **CCV** Run ID: **ICP-MS5_250203B** Analysis Date: **2/3/2025 12:55:00 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.208	0.0300	0.200	0	104	90	110			
Calcium	5.02	0.300	5.00	0	100	90	110			

Sample ID: **CCV4-250203** Batch ID: **R137309** TestNo: **SW6020B** Units: **mg/L**
SampType: **CCV** Run ID: **ICP-MS5_250203B** Analysis Date: **2/3/2025 1:31:00 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	4.94	0.300	5.00	0	98.7	90	110			

Sample ID: **CCV5-250203** Batch ID: **R137309** TestNo: **SW6020B** Units: **mg/L**
SampType: **CCV** Run ID: **ICP-MS5_250203B** Analysis Date: **2/3/2025 1:58:00 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	4.92	0.300	5.00	0	98.5	90	110			

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: BBA Engineering
Work Order: 2501328
Project: FPP-CCR

ANALYTICAL QC SUMMARY REPORT

RunID: **IC4_250124A**

Sample ID:	**DCS2-118813**	Batch ID:	**118813**	TestNo:	**E300**	Units:	**mg/L**
SampType:	**DCS2**	Run ID:	**IC4_250124A**	Analysis Date:	**1/24/2025 6:58:28 PM**	Prep Date:	**1/24/2025**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	0.561	1.00	0.5000	0	112	70	130	0	0	
Fluoride	0.242	0.400	0.2000	0	121	70	130	0	0	
Sulfate	1.55	3.00	1.500	0	103	70	130	0	0	

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: BBA Engineering
Work Order: 2501328
Project: FPP-CCR

ANALYTICAL QC SUMMARY REPORT

RunID: **IC4_250131A**

The QC data in batch 118912 applies to the following samples: 2501328-01B, 2501328-02B, 2501328-03B, 2501328-04B, 2501328-05B, 2501328-06B, 2501328-07B, 2501328-08B, 2501328-09B

Sample ID: **MB-118912** Batch ID: **118912** TestNo: **E300** Units: **mg/L**
SampType: **MBLK** Run ID: **IC4_250131A** Analysis Date: **1/31/2025 6:55:33 PM** Prep Date: **1/31/2025**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	<0.300	1.00								
Fluoride	<0.100	0.400								
Sulfate	<1.00	3.00								

Sample ID: **LCS-118912** Batch ID: **118912** TestNo: **E300** Units: **mg/L**
SampType: **LCS** Run ID: **IC4_250131A** Analysis Date: **1/31/2025 7:15:33 PM** Prep Date: **1/31/2025**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.50	1.00	10.00	0	95.0	90	110			
Fluoride	4.05	0.400	4.000	0	101	90	110			
Sulfate	29.8	3.00	30.00	0	99.2	90	110			

Sample ID: **LCSD-118912** Batch ID: **118912** TestNo: **E300** Units: **mg/L**
SampType: **LCSD** Run ID: **IC4_250131A** Analysis Date: **1/31/2025 7:35:33 PM** Prep Date: **1/31/2025**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.54	1.00	10.00	0	95.4	90	110	0.455	20	
Fluoride	4.09	0.400	4.000	0	102	90	110	1.02	20	
Sulfate	30.0	3.00	30.00	0	100	90	110	0.955	20	

Sample ID: **2501328-02BMS** Batch ID: **118912** TestNo: **E300** Units: **mg/L**
SampType: **MS** Run ID: **IC4_250131A** Analysis Date: **2/1/2025 11:55:32 AM** Prep Date: **1/31/2025**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	3360	100	2000	1602	87.8	90	110			S
Fluoride	2100	40.0	2000	0	105	90	110			
Sulfate	3280	300	2000	1329	97.6	90	110			

Sample ID: **2501328-02BMSD** Batch ID: **118912** TestNo: **E300** Units: **mg/L**
SampType: **MSD** Run ID: **IC4_250131A** Analysis Date: **2/1/2025 12:15:32 PM** Prep Date: **1/31/2025**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	3370	100	2000	1602	88.3	90	110	0.318	20	S
Fluoride	2110	40.0	2000	0	106	90	110	0.490	20	
Sulfate	3310	300	2000	1329	99.0	90	110	0.836	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

ANALYTICAL QC SUMMARY REPORT

RunID: IC4_250131A

Sample ID: **ICV-250131** Batch ID: **R137280** TestNo: **E300** Units: **mg/L**
SampType: **ICV** Run ID: **IC4_250131A** Analysis Date: **1/31/2025 1:37:05 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	24.7	1.00	25.00	0	98.9	90	110			
Fluoride	10.6	0.400	10.00	0	106	90	110			
Sulfate	77.7	3.00	75.00	0	104	90	110			

Sample ID: **CCV1-250131** Batch ID: **R137280** TestNo: **E300** Units: **mg/L**
SampType: **CCV** Run ID: **IC4_250131A** Analysis Date: **1/31/2025 11:35:33 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.43	1.00	10.00	0	94.3	90	110			
Fluoride	3.97	0.400	4.000	0	99.3	90	110			
Sulfate	29.3	3.00	30.00	0	97.7	90	110			

Sample ID: **CCV2-250131** Batch ID: **R137280** TestNo: **E300** Units: **mg/L**
SampType: **CCV** Run ID: **IC4_250131A** Analysis Date: **2/1/2025 5:15:32 AM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	4.05	0.400	4.000	0	101	90	110			

Sample ID: **CCV3-250131** Batch ID: **R137280** TestNo: **E300** Units: **mg/L**
SampType: **CCV** Run ID: **IC4_250131A** Analysis Date: **2/1/2025 9:55:32 AM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.63	1.00	10.00	0	96.3	90	110			
Fluoride	4.06	0.400	4.000	0	102	90	110			
Sulfate	30.3	3.00	30.00	0	101	90	110			

Sample ID: **CCV4-250131** Batch ID: **R137280** TestNo: **E300** Units: **mg/L**
SampType: **CCV** Run ID: **IC4_250131A** Analysis Date: **2/1/2025 2:55:32 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.42	1.00	10.00	0	94.2	90	110			
Fluoride	4.03	0.400	4.000	0	101	90	110			
Sulfate	29.8	3.00	30.00	0	99.3	90	110			

CLIENT: BBA Engineering
Work Order: 2501328
Project: FPP-CCR

ANALYTICAL QC SUMMARY REPORT

RunID: **IC4_250201A**

Sample ID: **ICV-250201** Batch ID: **R137292** TestNo: **E300** Units: **mg/L**
SampType: **ICV** Run ID: **IC4_250201A** Analysis Date: **2/1/2025 3:46:05 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	24.9	1.00	25.00	0	99.5	90	110			
Fluoride	10.8	0.400	10.00	0	108	90	110			
Sulfate	78.6	3.00	75.00	0	105	90	110			

Sample ID: **CCV1-250201** Batch ID: **R137292** TestNo: **E300** Units: **mg/L**
SampType: **CCV** Run ID: **IC4_250201A** Analysis Date: **2/2/2025 4:20:08 AM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.50	1.00	10.00	0	95.0	90	110			
Fluoride	4.09	0.400	4.000	0	102	90	110			
Sulfate	30.1	3.00	30.00	0	100	90	110			

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: BBA Engineering
Work Order: 2501328
Project: FPP-CCR

ANALYTICAL QC SUMMARY REPORT

RunID: **WC_250203B**

The QC data in batch 118930 applies to the following samples: 2501328-01B, 2501328-02B, 2501328-03B, 2501328-04B, 2501328-05B, 2501328-06B, 2501328-07B, 2501328-08B, 2501328-09B

Sample ID: **MB-118930** Batch ID: **118930** TestNo: **M2540C** Units: **mg/L**
SampType: **MBLK** Run ID: **WC_250203B** Analysis Date: **2/3/2025 3:00:00 PM** Prep Date: **2/3/2025**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	<10.0	10.0								

Sample ID: **LCS-118930** Batch ID: **118930** TestNo: **M2540C** Units: **mg/L**
SampType: **LCS** Run ID: **WC_250203B** Analysis Date: **2/3/2025 3:00:00 PM** Prep Date: **2/3/2025**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	734	10.0	745.6	0	98.4	90	113			

Sample ID: **2501328-01B-DUP** Batch ID: **118930** TestNo: **M2540C** Units: **mg/L**
SampType: **DUP** Run ID: **WC_250203B** Analysis Date: **2/3/2025 3:00:00 PM** Prep Date: **2/3/2025**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	4780	50.0	0	4705				1.58	5	

Sample ID: **2501328-02B-DUP** Batch ID: **118930** TestNo: **M2540C** Units: **mg/L**
SampType: **DUP** Run ID: **WC_250203B** Analysis Date: **2/3/2025 3:00:00 PM** Prep Date: **2/3/2025**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	4630	50.0	0	4690				1.29	5	

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: BBA Engineering
Work Order: 2501328
Project: FPP-CCR

MQL SUMMARY REPORT

TestNo: E300	MDL	MQL
Analyte	**mg/L**	**mg/L**
Chloride	0.300	1.00
Fluoride	0.100	0.400
Sulfate	1.00	3.00

TestNo: SW6020B	MDL	MQL
Analyte	**mg/L**	**mg/L**
Boron	0.0100	0.0300
Calcium	0.100	0.300

TestNo: M2540C	MDL	MQL
Analyte	**mg/L**	**mg/L**
Total Dissolved Solids (Residue, Filt	10.0	10.0

Qualifiers: MQL -Method Quantitation Limit as defined by TRRP
MDL -Method Detection Limit as defined by TRRP

DATA USABILITY SUMMARY – LCRA Analytical Report 2501328

Bullock, Bennett & Associates, LLC has reviewed the analytical data packages to be included in Appendix D of the Coal Combustion Residual Landfill 2025 Annual Groundwater Monitoring Report (Annual Groundwater Report) that was produced by DHL Analytical, Inc. for the analysis of groundwater samples collected in January 2025 at the Fayette Power Project (FPP) site. The Data were reviewed for conformance to the groundwater sampling and analysis requirements of 40 CFR § 257.93/30 TAC 352.931 and adherence to project objectives.

Objectives of the Data: To provide current data on concentrations of COCs in groundwater at the site for purposes of comparing Combustion Byproducts Landfill (CBL) compliance sample data to Appendix III Control Limits. To accomplish the stated data objectives, all field and laboratory procedures were performed in accordance with industry-established protocol, and the FPP Sampling and Analysis Plan. Appropriate quality assurance/quality control (QA/QC) measures were utilized. As described within the body of the Annual Groundwater Report, field QA/QC protocols integrated into this project followed industry standards and involved, among other factors:

- Use of sampling equipment decontamination protocol;
- Proper sample handling, preservation, and shipping procedures; and
- Maintenance of the sample chain of custody.

Also, as presented in the individual laboratory data packages, laboratory QA/QC procedures integrated into this project followed industry standards and involved, among others:

- Maintenance of sample custody;
- Application of laboratory cross references to field sample identifications and to specific QC samples;
- Use of laboratory control samples (LCSs);
- Use of matrix spike/matrix duplicate spikes (MS/MSDs);
- Use of appropriate method and method reporting limit (MRL);
- Reporting of non-detect results as less than the value of the MRL;
- Use of surrogate recoveries;
- Calculation of relative percent differences (RPDs);
- Use of method and preparation blanks; and
- The application of data qualifiers.

Data Reviewed: The data reviewed consisted of laboratory submittals and field data as follows:

- Project Objectives (i.e., recoveries and relative percent differences);
- Analytical Results, including, as applicable, data qualifiers;
- Documentation of preservation and holding times;
- Field and laboratory equipment calibrations;
- Laboratory blanks;
- Internal Laboratory Control Standards and Surrogate Recoveries;
- Laboratory Control Samples;
- Matrix Spike/Matrix Spike Duplicates;
- Field Precision as determined by duplicate samples collected in the field; and
- Field Procedures.

The results of the supporting quality control analyses for each of these QC factors were summarized in Quality Control narratives provided by the laboratory, and field/laboratory-completed chain of custody forms, the field forms, and the standard operational field procedures, and groundwater sampling procedures. A review of each of these was included in this Data Usability Summary.

Based on the Data Usability Review, the groundwater data are usable for their intended purpose. All samples were collected in the field using industry-standard operating procedures (SOPs), including decontamination protocol, sample preservation, and chain of custody.

Also, as presented in detail in the attached laboratory data packages, all appropriate QA/QC protocol were accomplished by the analytical laboratory. Where applicable, data have been appropriately qualified in the laboratory reports and the data, therefore, have been used accordingly.

Exception Reports, including Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Issues were identified as follows:

- January 2025 sampling event (Report 2501328)

    - <u>Exception Report R1-01</u>
      The samples were received and log-in performed on 1/30/2025. A total of 9 samples were received and analyzed. The samples arrived in good condition and were properly packaged.

    - <u>Exception Report R7-03</u>
      For Anions Analysis, the recovery of Chloride for the Matrix Spike and Matrix Spike Duplicate (2501328-02 MS/MSD) was slightly below the method control limits. This is flagged accordingly in the QC Summary Report. This anion was within method control limits in the associated LCS. No further corrective action was taken.
      For Metals Analysis, the recovery of Calcium for the Matrix Spike and Matrix Spike Duplicate (2501328-01 MS/MSD) was outside of the method control limits. This is flagged accordingly in the QC Summary Report. This analyte was within method control limits in the associated LCS. No further corrective action was taken.

    - <u>Exception Report R10-01</u>
      Per project specification, MS/MSD/Duplicates are from this workorder or project samples only.

All exceptions were documented and described in the Quality Control narratives and no conditions with regard to laboratory control samples, matrix spike/matrix spike duplicates, sample preservation and holding times, or equipment calibrations were identified that would cause any of the data not to be useable.

August 11, 2025

Charlie Macon
BBA Engineering
165 N. Lampasas St.
Bertram, TX 78605

TEL: (512) 585-7180

FAX:

Order No.: 2507400

RE: FPP-CCR

Dear Charlie Macon:

DHL Analytical, Inc. received 9 samples on 07/31/2025 for the analyses presented in the following report.

There were no problems with the analyses and all data met requirements of NELAP except where noted in the Case Narrative. All non-NELAP methods will be identified accordingly in the case narrative and all estimated uncertainties of test results are within method or EPA specifications.

If you have any questions regarding these tests results, please feel free to call. Thank you for using DHL Analytical.

Sincerely,

Karyn Lane

Karyn Lane
Laboratory Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification Number: T104704211 - TX-C25-00106

Table of Contents

DHL ANALYTICAL

2300 Double Creek Dr. Round Rock, TX 78664
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CHAIN-OF-CUSTODY

CLIENT: BBA
ADDRESS: 165 N. LAMPASAS ST. BETRAM, TX
PHONE:
EMAIL:
DATA REPORTED TO: CHARLIE MACON
ADDITIONAL REPORT COPIES TO:

DATE: 7-31-25
PO#: 24713-2-1
PROJECT LOCATION OR NAME: FPP- CCR
CLIENT PROJECT # 24713-2-1
COLLECTOR: JOHN BRAYTON

LAB USE ONLY
DHL WORKORDER #: 2507400

Authorize 5% surcharge for TRRP report? ☐ Yes ☐ No

Lab Use Only

W=WATER SE=SEDIMENT L=LIQUID P=PAINT S=SOIL SL=SLUDGE SO=SOLID

Field Sample I.D.	DHL Lab #	Collection Date	Collection Time	Matrix	Container Type	# of Containers	HCL ☐ H_3PO_4 ☐	HNO_3	H_2SO_4	NaOH ☐ Zn Acetate ☐	ICE ☒ UNPRESERVED ☒	ANALYSES	BTEX ☐ MTBE ☐ [METHOD 8260]	TPH 1005 ☐ TPH 1006 ☐ HOLD 1006 ☐	GRO 8015 ☐ DRO 8015 ☐	VOC 8260 ☐ VOC 624.1 ☐	SVOC 8270 ☐ SVOC 625.1 ☐	PAH 8270 ☐ HOLD PAH ☐	PEST 8270 ☐ 625.1 ☐ O-P PEST 8270 ☐	PCB 8082 ☐ 608.3 ☐ PCB 8270 ☐ 625.1 ☐	HERB 8321 ☐ T PHOS ☐ AMMONIA ☐	METALS 6020 ☐ 200.8 ☐ DISS. METALS ☐	RCRA 8 ☐ TX11 ☐ ___	pH ☐ HEX CHROM ☐ ALKALINITY ☐ COD ☐	ANIONS 300 ☐ 9056 ☐ ___	TCLP-SVOC ☐ VOC ☐ PEST ☐ HERB ☐	TCLP-METALS ☐ RCRA 8 ☐ TX-11 ☐ Pb ☐	RCI ☐ IGN ☐ DGAS ☐ OIL&GREASE ☐	TDS ☐ TSS ☐ % MOIST ☐ CYANIDE ☐	METALS	ANIONS - TDS		FIELD NOTES
CBL-302I	01	7-28-25	1345	W	P	2		X			X																			X	X		
DUP-1-CCR	02		1345	W	P	1		X			X																			X	X		
CBL-341I	03		1515	W	P	2		X			X																			X	X		
CBL-301I	04		1605	W	P	2		X			X																			X	X		
CBL-306I	05		1650	W	P	2		X			X																			X	X		
CBL-308I	06	7-29-25	0750	W	P	2		X			X																			X	X		
CBL-340I	07		0835	W	P	2		X			X																			X	X		
EB-CCR	08		0850	W	P	2		X			X																			X	X		
FB-CCR	09		0900	W	P	2		X			X																			X	X		

Relinquished By: (Sign)	DATE/TIME	Received by:
[signature]	7-31-25 1135	[signature]
Relinquished By: (Sign)	DATE/TIME	Received by:
Relinquished By: (Sign)	DATE/TIME	Received by:

TURN AROUND TIME (CALL FIRST FOR RUSH)
RUSH-1 DAY☐ RUSH-2 DAY☐
RUSH-3 DAY☐
NORMAL☒ OTHER ☐
DUE DATE ________ ☐

LAB USE ONLY
THERMO #: 78
RECEIVING TEMP (°C): 0.6°C
IF >6°C, ARE SAMPLES ON ICE AND JUST COLLECTED? YES / NO
CUSTODY SEALS ON ICE CHEST: ☐ BROKEN ☐ INTACT ☒ NOT USED
CARRIER: ☐ LSO ☐ FEDEX ☐ UPS ☐ COURIER ☒ HAND DELIVERED

☐ **DHL DISPOSAL @ $10.00 each**

GROUNDWATER SAMPLING AND ANALYTE PLAN
Fayette Power Project
July 2025

	Arsenic	Boron	Calcium	Chloride	Chromium	Cobalt	Fluoride	Manganese	Mercury	Molybdenum	Nickel	Selenium	Sulfate	TDS	Field pH
CCR Program (no filtration)															
CBL-340I		B	Ca	Cl			Fl						SO4	TDS	pH
CBL-301I		B	Ca	Cl			Fl						SO4	TDS	pH
CBL-302I		B	Ca	Cl			Fl						SO4	TDS	pH
CBL-306I		B	Ca	Cl			Fl						SO4	TDS	pH
CBL-308I		B	Ca	Cl			Fl						SO4	TDS	pH
CBL-341I		B	Ca	Cl			Fl						SO4	TDS	pH
Equipment Blank		B	Ca	Cl			Fl						SO4	TDS	pH
Field Blank		B	Ca	Cl			Fl						SO4	TDS	pH
Duplicate		B	Ca	Cl			Fl						SO4	TDS	pH
TPDES Program (10-micron filtration allowed if NTU ≥10)															
MW-500	As				Cr	Co		Mn	Hg	Mo	Ni	Se	SO4		
CBL-401	As				Cr	Co			Hg	Mo		Se	SO4		
CBL-120	As				Cr	Co			Hg	Mo		Se	SO4		
CBL-300M	As				Cr	Co			Hg	Mo		Se	SO4		
CBL-301I	As				Cr	Co			Hg	Mo		Se	SO4		
CBL-306I	As				Cr	Co			Hg	Mo		Se	SO4		
CBL-308I	As				Cr	Co			Hg	Mo		Se	SO4		
RP-1	As					Co		Mn	Hg	Mo	Ni	Se	SO4		
RP-2	As					Co		Mn	Hg	Mo	Ni	Se	SO4		
RP-67R	As					Co		Mn	Hg	Mo	Ni	Se	SO4		
RP-70	As					Co		Mn	Hg	Mo	Ni	Se	SO4		
Equipment Blank	As				Cr	Co		Mn	Hg	Mo	Ni	Se	SO4		
Field Blank	As				Cr	Co		Mn	Hg	Mo	Ni	Se	SO4		
Duplicate	As				Cr	Co		Mn	Hg	Mo	Ni	Se	SO4		
C2L-412	As														
C2L-413	As														
C2L-414	As														
TRRP Program (10-micron filtration allowed if NTU ≥10)															
AP-405								Mn		Mo					
AP-406								Mn		Mo					
AP-407												Se			
AP-508								Mn		Mo					
AP-509								Mn		Mo					
AP-510								Mn		Mo					
AP-511								Mn		Mo					
AP-512								Mn		Mo					
AP-513								Mn		Mo					
AP-514								Mn		Mo					
Equipment Blank								Mn		Mo		Se			
Field Blank								Mn		Mo		Se			
Duplicate								Mn		Mo		Se			

DHL Analytical, Inc.

Sample Receipt Checklist

Client Name: **BBA Engineering**

Work Order Number: **2507400**

Date Received: **7/31/2025**

Received by: **CWM**

Checklist completed by: [signature] 7/31/2025
Signature | Date

Reviewed by: JW 7/31/2025
Initials | Date

Carrier name: Hand Delivered

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑ NA ☐
Water - pH<2 acceptable upon receipt?	Yes ☑	No ☐	NA ☐ LOT # 17028
	Adjusted? no		Checked by EL
Water - ph>9 (S) or ph>10 (CN) acceptable upon receipt?	Yes ☐	No ☐	NA ☑ LOT #
	Adjusted?		Checked by
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	

Cooler #	1
Temp °C	0.6
Seal Intact	NP

Any No response must be detailed in the comments section below.

Client contacted: ______ Date contacted: ______ Person contacted: ______

Contacted by: ______ Regarding: ______

Comments: ______

Corrective Action: ______

Page 1 of 1

DHL Analytical, Inc.

Date: *11-Aug-25*

CLIENT:	BBA Engineering
Project:	FPP-CCR
Lab Order:	2507400

CASE NARRATIVE

Samples were analyzed using the methods outlined in the following references:

Method SW6020B - Metals Analysis
Method M2540C - Total Dissolved Solids Analysis
Method E300 - Anions Analysis

Exception Report R1-01

The samples were received and log-in performed on 7/31/2025. A total of 9 samples were received and analyzed. The samples arrived in good condition and were properly packaged.

Exception Report R10-01

Per project specification, MS/MSD/Duplicates are from this workorder or project samples only.

DHL Analytical, Inc.

Date: *11-Aug-25*

CLIENT: BBA Engineering
Project: FPP-CCR
Lab Order: 2507400

Work Order Sample Summary

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
2507400-01	CBL-302I		07/28/25 01:45 PM	07/31/2025
2507400-02	DUP-1-CCR		07/28/25 01:45 PM	07/31/2025
2507400-03	CBL-341I		07/28/25 03:15 PM	07/31/2025
2507400-04	CBL-301I		07/28/25 04:05 PM	07/31/2025
2507400-05	CBL-306I		07/28/25 04:50 PM	07/31/2025
2507400-06	CBL-308I		07/29/25 07:50 AM	07/31/2025
2507400-07	CBL-340I		07/29/25 08:35 AM	07/31/2025
2507400-08	EB-CCR		07/29/25 08:50 AM	07/31/2025
2507400-09	FB-CCR		07/29/25 09:00 AM	07/31/2025

DHL Analytical, Inc.

11-Aug-25

Lab Order: 2507400
Client: BBA Engineering
Project: FPP-CCR

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
2507400-01A	CBL-302I	07/28/25 01:45 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/04/25 06:30 AM	121738
	CBL-302I	07/28/25 01:45 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/04/25 06:30 AM	121738
2507400-01B	CBL-302I	07/28/25 01:45 PM	Aqueous	E300	Anion Preparation	08/04/25 12:00 PM	121781
	CBL-302I	07/28/25 01:45 PM	Aqueous	E300	Anion Preparation	08/04/25 12:00 PM	121781
	CBL-302I	07/28/25 01:45 PM	Aqueous	M2540C	TDS Preparation	08/04/25 02:44 PM	121763
2507400-02A	DUP-1-CCR	07/28/25 01:45 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/04/25 06:30 AM	121738
	DUP-1-CCR	07/28/25 01:45 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/04/25 06:30 AM	121738
2507400-02B	DUP-1-CCR	07/28/25 01:45 PM	Aqueous	E300	Anion Preparation	08/04/25 12:00 PM	121781
	DUP-1-CCR	07/28/25 01:45 PM	Aqueous	E300	Anion Preparation	08/04/25 12:00 PM	121781
	DUP-1-CCR	07/28/25 01:45 PM	Aqueous	M2540C	TDS Preparation	08/04/25 02:44 PM	121763
2507400-03A	CBL-341I	07/28/25 03:15 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/04/25 06:30 AM	121738
	CBL-341I	07/28/25 03:15 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/04/25 06:30 AM	121738
2507400-03B	CBL-341I	07/28/25 03:15 PM	Aqueous	E300	Anion Preparation	08/04/25 12:00 PM	121781
	CBL-341I	07/28/25 03:15 PM	Aqueous	E300	Anion Preparation	08/04/25 12:00 PM	121781
	CBL-341I	07/28/25 03:15 PM	Aqueous	M2540C	TDS Preparation	08/04/25 02:44 PM	121763
2507400-04A	CBL-301I	07/28/25 04:05 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/04/25 06:30 AM	121738
	CBL-301I	07/28/25 04:05 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/04/25 06:30 AM	121738
2507400-04B	CBL-301I	07/28/25 04:05 PM	Aqueous	E300	Anion Preparation	08/04/25 12:00 PM	121781
	CBL-301I	07/28/25 04:05 PM	Aqueous	E300	Anion Preparation	08/04/25 12:00 PM	121781
	CBL-301I	07/28/25 04:05 PM	Aqueous	M2540C	TDS Preparation	08/04/25 02:44 PM	121763
2507400-05A	CBL-306I	07/28/25 04:50 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/04/25 06:30 AM	121738
	CBL-306I	07/28/25 04:50 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/04/25 06:30 AM	121738
2507400-05B	CBL-306I	07/28/25 04:50 PM	Aqueous	E300	Anion Preparation	08/04/25 12:00 PM	121781
	CBL-306I	07/28/25 04:50 PM	Aqueous	E300	Anion Preparation	08/04/25 12:00 PM	121781
	CBL-306I	07/28/25 04:50 PM	Aqueous	E300	Anion Preparation	08/04/25 12:00 PM	121781
	CBL-306I	07/28/25 04:50 PM	Aqueous	M2540C	TDS Preparation	08/04/25 02:44 PM	121763
2507400-06A	CBL-308I	07/29/25 07:50 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/04/25 06:30 AM	121738
	CBL-308I	07/29/25 07:50 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/04/25 06:30 AM	121738

DHL Analytical, Inc.

11-Aug-25

Lab Order: 2507400
Client: BBA Engineering
Project: FPP-CCR

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
2507400-06B	CBL-308I	07/29/25 07:50 AM	Aqueous	E300	Anion Preparation	08/04/25 12:00 PM	121781
	CBL-308I	07/29/25 07:50 AM	Aqueous	E300	Anion Preparation	08/04/25 12:00 PM	121781
	CBL-308I	07/29/25 07:50 AM	Aqueous	E300	Anion Preparation	08/04/25 12:00 PM	121781
	CBL-308I	07/29/25 07:50 AM	Aqueous	E300	Anion Preparation	08/04/25 12:00 PM	121781
	CBL-308I	07/29/25 07:50 AM	Aqueous	M2540C	TDS Preparation	08/04/25 02:44 PM	121763
2507400-07A	CBL-340I	07/29/25 08:35 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/04/25 06:30 AM	121738
	CBL-340I	07/29/25 08:35 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/04/25 06:30 AM	121738
2507400-07B	CBL-340I	07/29/25 08:35 AM	Aqueous	E300	Anion Preparation	08/04/25 12:00 PM	121781
	CBL-340I	07/29/25 08:35 AM	Aqueous	E300	Anion Preparation	08/04/25 12:00 PM	121781
	CBL-340I	07/29/25 08:35 AM	Aqueous	E300	Anion Preparation	08/04/25 12:00 PM	121781
	CBL-340I	07/29/25 08:35 AM	Aqueous	E300	Anion Preparation	08/04/25 12:00 PM	121781
	CBL-340I	07/29/25 08:35 AM	Aqueous	M2540C	TDS Preparation	08/04/25 02:44 PM	121763
2507400-08A	EB-CCR	07/29/25 08:50 AM	Equip Blank	SW3005A	Aq Prep Metals : ICP-MS	08/04/25 06:30 AM	121738
	EB-CCR	07/29/25 08:50 AM	Equip Blank	SW3005A	Aq Prep Metals : ICP-MS	08/04/25 06:30 AM	121738
2507400-08B	EB-CCR	07/29/25 08:50 AM	Equip Blank	E300	Anion Preparation	08/04/25 12:00 PM	121781
	EB-CCR	07/29/25 08:50 AM	Equip Blank	M2540C	TDS Preparation	08/04/25 02:44 PM	121763
2507400-09A	FB-CCR	07/29/25 09:00 AM	Field Blank	SW3005A	Aq Prep Metals : ICP-MS	08/04/25 06:30 AM	121738
2507400-09B	FB-CCR	07/29/25 09:00 AM	Field Blank	E300	Anion Preparation	08/04/25 12:00 PM	121781
	FB-CCR	07/29/25 09:00 AM	Field Blank	M2540C	TDS Preparation	08/04/25 02:44 PM	121763

DHL Analytical, Inc.

11-Aug-25

Lab Order: 2507400
Client: BBA Engineering
Project: FPP-CCR

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
2507400-01A	CBL-302I	Aqueous	SW6020B	Total Metals: ICP-MS - Water	121738	50	08/05/25 11:44 AM	ICP-MS5_250805B
	CBL-302I	Aqueous	SW6020B	Total Metals: ICP-MS - Water	121738	1	08/05/25 10:26 AM	ICP-MS5_250805B
2507400-01B	CBL-302I	Aqueous	E300	Anions by IC method - Water	121781	100	08/04/25 06:51 PM	IC4_250804B
	CBL-302I	Aqueous	E300	Anions by IC method - Water	121781	1	08/05/25 07:41 AM	IC4_250804B
	CBL-302I	Aqueous	M2540C	Total Dissolved Solids	121763	1	08/04/25 04:10 PM	WC_250804C
2507400-02A	DUP-1-CCR	Aqueous	SW6020B	Total Metals: ICP-MS - Water	121738	1	08/05/25 10:29 AM	ICP-MS5_250805B
	DUP-1-CCR	Aqueous	SW6020B	Total Metals: ICP-MS - Water	121738	50	08/05/25 11:46 AM	ICP-MS5_250805B
2507400-02B	DUP-1-CCR	Aqueous	E300	Anions by IC method - Water	121781	100	08/04/25 07:57 PM	IC4_250804B
	DUP-1-CCR	Aqueous	E300	Anions by IC method - Water	121781	1	08/05/25 08:03 AM	IC4_250804B
	DUP-1-CCR	Aqueous	M2540C	Total Dissolved Solids	121763	1	08/04/25 04:10 PM	WC_250804C
2507400-03A	CBL-341I	Aqueous	SW6020B	Total Metals: ICP-MS - Water	121738	1	08/05/25 10:31 AM	ICP-MS5_250805B
	CBL-341I	Aqueous	SW6020B	Total Metals: ICP-MS - Water	121738	50	08/05/25 11:49 AM	ICP-MS5_250805B
2507400-03B	CBL-341I	Aqueous	E300	Anions by IC method - Water	121781	1	08/05/25 08:25 AM	IC4_250804B
	CBL-341I	Aqueous	E300	Anions by IC method - Water	121781	100	08/04/25 08:19 PM	IC4_250804B
	CBL-341I	Aqueous	M2540C	Total Dissolved Solids	121763	1	08/04/25 04:10 PM	WC_250804C
2507400-04A	CBL-301I	Aqueous	SW6020B	Total Metals: ICP-MS - Water	121738	1	08/05/25 10:34 AM	ICP-MS5_250805B
	CBL-301I	Aqueous	SW6020B	Total Metals: ICP-MS - Water	121738	10	08/05/25 11:51 AM	ICP-MS5_250805B
2507400-04B	CBL-301I	Aqueous	E300	Anions by IC method - Water	121781	100	08/04/25 08:41 PM	IC4_250804B
	CBL-301I	Aqueous	E300	Anions by IC method - Water	121781	1	08/05/25 08:47 AM	IC4_250804B
	CBL-301I	Aqueous	M2540C	Total Dissolved Solids	121763	1	08/04/25 04:10 PM	WC_250804C
2507400-05A	CBL-306I	Aqueous	SW6020B	Total Metals: ICP-MS - Water	121738	1	08/05/25 10:36 AM	ICP-MS5_250805B
	CBL-306I	Aqueous	SW6020B	Total Metals: ICP-MS - Water	121738	10	08/05/25 11:54 AM	ICP-MS5_250805B
2507400-05B	CBL-306I	Aqueous	E300	Anions by IC method - Water	121781	1	08/05/25 09:09 AM	IC4_250804B
	CBL-306I	Aqueous	E300	Anions by IC method - Water	121781	100	08/04/25 09:03 PM	IC4_250804B
	CBL-306I	Aqueous	E300	Anions by IC method - Water	121781	10	08/08/25 12:54 PM	IC2_250808A
	CBL-306I	Aqueous	M2540C	Total Dissolved Solids	121763	1	08/04/25 04:10 PM	WC_250804C
2507400-06A	CBL-308I	Aqueous	SW6020B	Total Metals: ICP-MS - Water	121738	1	08/05/25 10:39 AM	ICP-MS5_250805B
	CBL-308I	Aqueous	SW6020B	Total Metals: ICP-MS - Water	121738	50	08/05/25 11:56 AM	ICP-MS5_250805B

Lab Order: 2507400
Client: BBA Engineering
Project: FPP-CCR

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
2507400-06B	CBL-308I	Aqueous	E300	Anions by IC method - Water	121781	10	08/08/25 12:33 PM	IC2_250808A
	CBL-308I	Aqueous	E300	Anions by IC method - Water	121781	100	08/08/25 03:38 PM	IC2_250808A
	CBL-308I	Aqueous	E300	Anions by IC method - Water	121781	100	08/04/25 09:25 PM	IC4_250804B
	CBL-308I	Aqueous	E300	Anions by IC method - Water	121781	1	08/05/25 09:31 AM	IC4_250804B
	CBL-308I	Aqueous	M2540C	Total Dissolved Solids	121763	1	08/04/25 04:10 PM	WC_250804C
2507400-07A	CBL-340I	Aqueous	SW6020B	Total Metals: ICP-MS - Water	121738	50	08/05/25 11:59 AM	ICP-MS5_250805B
	CBL-340I	Aqueous	SW6020B	Total Metals: ICP-MS - Water	121738	1	08/05/25 10:42 AM	ICP-MS5_250805B
2507400-07B	CBL-340I	Aqueous	E300	Anions by IC method - Water	121781	100	08/08/25 05:11 PM	IC4_250807B
	CBL-340I	Aqueous	E300	Anions by IC method - Water	121781	1	08/05/25 09:53 AM	IC4_250804B
	CBL-340I	Aqueous	E300	Anions by IC method - Water	121781	10	08/08/25 12:12 PM	IC2_250808A
	CBL-340I	Aqueous	E300	Anions by IC method - Water	121781	100	08/04/25 09:47 PM	IC4_250804B
	CBL-340I	Aqueous	M2540C	Total Dissolved Solids	121763	1	08/04/25 04:10 PM	WC_250804C
2507400-08A	EB-CCR	Equip Blank	SW6020B	Total Metals: ICP-MS - Water	121738	1	08/05/25 10:44 AM	ICP-MS5_250805B
	EB-CCR	Equip Blank	SW6020B	Total Metals: ICP-MS - Water	121738	1	08/05/25 12:02 PM	ICP-MS5_250805B
2507400-08B	EB-CCR	Equip Blank	E300	Anions by IC method - Water	121781	1	08/04/25 06:07 PM	IC4_250804B
	EB-CCR	Equip Blank	M2540C	Total Dissolved Solids	121763	1	08/04/25 04:10 PM	WC_250804C
2507400-09A	FB-CCR	Field Blank	SW6020B	Total Metals: ICP-MS - Water	121738	1	08/05/25 10:47 AM	ICP-MS5_250805B
2507400-09B	FB-CCR	Field Blank	E300	Anions by IC method - Water	121781	1	08/04/25 06:29 PM	IC4_250804B
	FB-CCR	Field Blank	M2540C	Total Dissolved Solids	121763	1	08/04/25 04:10 PM	WC_250804C

DHL Analytical, Inc.

Date: *11-Aug-25*

CLIENT:	BBA Engineering	**Client Sample ID:**	CBL-302I
Project:	FPP-CCR	**Lab ID:**	2507400-01
Project No:	24713-2-1	**Collection Date:**	07/28/25 01:45 PM
Lab Order:	2507400	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Boron	0.240	0.0100	0.0300		mg/L	1	08/05/25 10:26 AM
Calcium	959	5.00	15.0		mg/L	50	08/05/25 11:44 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **KES**
Chloride	1630	30.0	100		mg/L	100	08/04/25 06:51 PM
Fluoride	0.194	0.100	0.400	J	mg/L	1	08/05/25 07:41 AM
Sulfate	1270	100	300		mg/L	100	08/04/25 06:51 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **DYA**
Total Dissolved Solids (Residue, Filterable)	5000	50.0	50.0		mg/L	1	08/04/25 04:10 PM

Qualifiers:

ND - Not Detected at the SDL
J - Analyte detected between SDL and RL
B - Analyte detected in the associated Method Blank
DF- Dilution Factor
N - Parameter not NELAP certified
See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.

Date: *11-Aug-25*

CLIENT:	BBA Engineering	**Client Sample ID:**	DUP-1-CCR
Project:	FPP-CCR	**Lab ID:**	2507400-02
Project No:	24713-2-1	**Collection Date:**	07/28/25 01:45 PM
Lab Order:	2507400	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Boron	0.243	0.0100	0.0300		mg/L	1	08/05/25 10:29 AM
Calcium	947	5.00	15.0		mg/L	50	08/05/25 11:46 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **KES**
Chloride	1560	30.0	100		mg/L	100	08/04/25 07:57 PM
Fluoride	0.186	0.100	0.400	J	mg/L	1	08/05/25 08:03 AM
Sulfate	1210	100	300		mg/L	100	08/04/25 07:57 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **DYA**
Total Dissolved Solids (Residue, Filterable)	4940	50.0	50.0		mg/L	1	08/04/25 04:10 PM

Qualifiers:

ND - Not Detected at the SDL
J - Analyte detected between SDL and RL
B - Analyte detected in the associated Method Blank
DF- Dilution Factor
N - Parameter not NELAP certified
See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

CLIENT:	BBA Engineering	**Client Sample ID:**	CBL-341I
Project:	FPP-CCR	**Lab ID:**	2507400-03
Project No:	24713-2-1	**Collection Date:**	07/28/25 03:15 PM
Lab Order:	2507400	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Boron	0.151	0.0100	0.0300		mg/L	1	08/05/25 10:31 AM
Calcium	781	5.00	15.0		mg/L	50	08/05/25 11:49 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **KES**
Chloride	1850	30.0	100		mg/L	100	08/04/25 08:19 PM
Fluoride	0.306	0.100	0.400	J	mg/L	1	08/05/25 08:25 AM
Sulfate	344	100	300		mg/L	100	08/04/25 08:19 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **DYA**
Total Dissolved Solids (Residue, Filterable)	3700	50.0	50.0		mg/L	1	08/04/25 04:10 PM

Qualifiers:

ND - Not Detected at the SDL
J - Analyte detected between SDL and RL
B - Analyte detected in the associated Method Blank
DF- Dilution Factor
N - Parameter not NELAP certified
See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

CLIENT:	BBA Engineering	**Client Sample ID:**	CBL-301I
Project:	FPP-CCR	**Lab ID:**	2507400-04
Project No:	24713-2-1	**Collection Date:**	07/28/25 04:05 PM
Lab Order:	2507400	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Boron	0.108	0.0100	0.0300		mg/L	1	08/05/25 10:34 AM
Calcium	145	1.00	3.00		mg/L	10	08/05/25 11:51 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **KES**
Chloride	499	30.0	100		mg/L	100	08/04/25 08:41 PM
Fluoride	0.351	0.100	0.400	J	mg/L	1	08/05/25 08:47 AM
Sulfate	149	1.00	3.00		mg/L	1	08/05/25 08:47 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **DYA**
Total Dissolved Solids (Residue, Filterable)	1420	50.0	50.0		mg/L	1	08/04/25 04:10 PM

Qualifiers:

ND - Not Detected at the SDL
J - Analyte detected between SDL and RL
B - Analyte detected in the associated Method Blank
DF- Dilution Factor
N - Parameter not NELAP certified
See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

CLIENT:	BBA Engineering	**Client Sample ID:**	CBL-306I
Project:	FPP-CCR	**Lab ID:**	2507400-05
Project No:	24713-2-1	**Collection Date:**	07/28/25 04:50 PM
Lab Order:	2507400	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Boron	0.173	0.0100	0.0300		mg/L	1	08/05/25 10:36 AM
Calcium	120	1.00	3.00		mg/L	10	08/05/25 11:54 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **KES**
Chloride	39.7	0.300	1.00		mg/L	1	08/05/25 09:09 AM
Fluoride	1.99	0.100	0.400		mg/L	1	08/05/25 09:09 AM
Sulfate	139	10.0	30.0		mg/L	10	08/08/25 12:54 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **DYA**
Total Dissolved Solids (Residue, Filterable)	841	10.0	10.0		mg/L	1	08/04/25 04:10 PM

Qualifiers:
- ND - Not Detected at the SDL
- J - Analyte detected between SDL and RL
- B - Analyte detected in the associated Method Blank
- DF- Dilution Factor
- N - Parameter not NELAP certified
- See Final Page of Report for MQLs and MDLs
- S - Spike Recovery outside control limits
- C - Sample Result or QC discussed in Case Narrative
- RL - Reporting Limit (MQL adjusted for moisture and sample size)
- SDL - Sample Detection Limit
- E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.

Date: *11-Aug-25*

CLIENT:	BBA Engineering	**Client Sample ID:**	CBL-308I
Project:	FPP-CCR	**Lab ID:**	2507400-06
Project No:	24713-2-1	**Collection Date:**	07/29/25 07:50 AM
Lab Order:	2507400	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Boron	0.180	0.0100	0.0300		mg/L	1	08/05/25 10:39 AM
Calcium	676	5.00	15.0		mg/L	50	08/05/25 11:56 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **KES**
Chloride	1930	30.0	100		mg/L	100	08/08/25 03:38 PM
Fluoride	1.26	0.100	0.400		mg/L	1	08/05/25 09:31 AM
Sulfate	1400	10.0	30.0		mg/L	10	08/08/25 12:33 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **DYA**
Total Dissolved Solids (Residue, Filterable)	5530	50.0	50.0		mg/L	1	08/04/25 04:10 PM

Qualifiers:

ND - Not Detected at the SDL
J - Analyte detected between SDL and RL
B - Analyte detected in the associated Method Blank
DF- Dilution Factor
N - Parameter not NELAP certified
See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc. **Date:** *11-Aug-25*

CLIENT:	BBA Engineering	**Client Sample ID:**	CBL-340I
Project:	FPP-CCR	**Lab ID:**	2507400-07
Project No:	24713-2-1	**Collection Date:**	07/29/25 08:35 AM
Lab Order:	2507400	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Boron	0.191	0.0100	0.0300		mg/L	1	08/05/25 10:42 AM
Calcium	579	5.00	15.0		mg/L	50	08/05/25 11:59 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **KES**
Chloride	2650	30.0	100		mg/L	100	08/08/25 05:11 PM
Fluoride	0.741	0.100	0.400		mg/L	1	08/05/25 09:53 AM
Sulfate	785	10.0	30.0		mg/L	10	08/08/25 12:12 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **DYA**
Total Dissolved Solids (Residue, Filterable)	5120	50.0	50.0		mg/L	1	08/04/25 04:10 PM

Qualifiers:

ND - Not Detected at the SDL
J - Analyte detected between SDL and RL
B - Analyte detected in the associated Method Blank
DF- Dilution Factor
N - Parameter not NELAP certified
See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

CLIENT:	BBA Engineering	**Client Sample ID:**	EB-CCR
Project:	FPP-CCR	**Lab ID:**	2507400-08
Project No:	24713-2-1	**Collection Date:**	07/29/25 08:50 AM
Lab Order:	2507400	**Matrix:**	EQUIP BLANK

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Boron	0.0537	0.0100	0.0300		mg/L	1	08/05/25 10:44 AM
Calcium	<0.100	0.100	0.300		mg/L	1	08/05/25 12:02 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **KES**
Chloride	<0.300	0.300	1.00		mg/L	1	08/04/25 06:07 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	08/04/25 06:07 PM
Sulfate	<1.00	1.00	3.00		mg/L	1	08/04/25 06:07 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **DYA**
Total Dissolved Solids (Residue, Filterable)	<50.0	50.0	50.0		mg/L	1	08/04/25 04:10 PM

Qualifiers:

- ND - Not Detected at the SDL
- J - Analyte detected between SDL and RL
- B - Analyte detected in the associated Method Blank
- DF- Dilution Factor
- N - Parameter not NELAP certified
- See Final Page of Report for MQLs and MDLs
- S - Spike Recovery outside control limits
- C - Sample Result or QC discussed in Case Narrative
- RL - Reporting Limit (MQL adjusted for moisture and sample size)
- SDL - Sample Detection Limit
- E - TPH pattern not Gas or Diesel Range Pattern

CLIENT:	BBA Engineering	**Client Sample ID:**	FB-CCR
Project:	FPP-CCR	**Lab ID:**	2507400-09
Project No:	24713-2-1	**Collection Date:**	07/29/25 09:00 AM
Lab Order:	2507400	**Matrix:**	FIELD BLANK

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Boron	0.0576	0.0100	0.0300		mg/L	1	08/05/25 10:47 AM
Calcium	<0.100	0.100	0.300		mg/L	1	08/05/25 10:47 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **KES**
Chloride	<0.300	0.300	1.00		mg/L	1	08/04/25 06:29 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	08/04/25 06:29 PM
Sulfate	<1.00	1.00	3.00		mg/L	1	08/04/25 06:29 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **DYA**
Total Dissolved Solids (Residue, Filterable)	<10.0	10.0	10.0		mg/L	1	08/04/25 04:10 PM

Qualifiers:
ND - Not Detected at the SDL
J - Analyte detected between SDL and RL
B - Analyte detected in the associated Method Blank
DF- Dilution Factor
N - Parameter not NELAP certified
See Final Page of Report for MQLs and MDLs
S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

CLIENT: BBA Engineering
Work Order: 2507400
Project: FPP-CCR

ANALYTICAL QC SUMMARY REPORT

RunID: **ICP-MS5_250616A**

Sample ID: **DCS2-120948** Batch ID: **120948** TestNo: **SW6020B** Units: **mg/L**
SampType: **DCS2** Run ID: **ICP-MS5_250616A** Analysis Date: **6/16/2025 10:46:00 AM** Prep Date: **6/13/2025**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	0.280	0.300	0.300	0	93.4	70	130	0	0	

Sample ID: **DCS4-120948** Batch ID: **120948** TestNo: **SW6020B** Units: **mg/L**
SampType: **DCS4** Run ID: **ICP-MS5_250616A** Analysis Date: **6/16/2025 10:52:00 AM** Prep Date: **6/13/2025**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.0286	0.0300	0.0300	0	95.3	70	130	0	0	

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: BBA Engineering
Work Order: 2507400
Project: FPP-CCR

ANALYTICAL QC SUMMARY REPORT

RunID: **ICP-MS5_250805B**

The QC data in batch 121738 applies to the following samples: 2507400-01A, 2507400-02A, 2507400-03A, 2507400-04A, 2507400-05A, 2507400-06A, 2507400-07A, 2507400-08A, 2507400-09A

Sample ID: **MB-121738** Batch ID: **121738** TestNo: **SW6020B** Units: **mg/L**
SampType: **MBLK** Run ID: **ICP-MS5_250805B** Analysis Date: **8/5/2025 10:11:00 AM** Prep Date: **8/4/2025**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	<0.0100	0.0300								
Calcium	<0.100	0.300								

Sample ID: **LCS-121738** Batch ID: **121738** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCS** Run ID: **ICP-MS5_250805B** Analysis Date: **8/5/2025 10:14:00 AM** Prep Date: **8/4/2025**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.195	0.0300	0.200	0	97.5	80	120			
Calcium	5.26	0.300	5.00	0	105	80	120			

Sample ID: **LCSD-121738** Batch ID: **121738** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCSD** Run ID: **ICP-MS5_250805B** Analysis Date: **8/5/2025 10:16:00 AM** Prep Date: **8/4/2025**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.199	0.0300	0.200	0	99.3	80	120	1.81	15	
Calcium	5.19	0.300	5.00	0	104	80	120	1.32	15	

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT:	BBA Engineering		
Work Order:	2507400		
Project:	FPP-CCR	**RunID:**	**ICP-MS5_250805B**

ANALYTICAL QC SUMMARY REPORT

Sample ID: **ICV-250805** Batch ID: **R140788** TestNo: **SW6020B** Units: **mg/L**
SampType: **ICV** Run ID: **ICP-MS5_250805B** Analysis Date: **8/5/2025 9:53:00 AM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.0978	0.0300	0.100	0	97.8	90	110			
Calcium	2.49	0.300	2.50	0	99.6	90	110			

Sample ID: **LCVL-250805** Batch ID: **R140788** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCVL** Run ID: **ICP-MS5_250805B** Analysis Date: **8/5/2025 10:03:00 AM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.0225	0.0300	0.0200	0	112	80	120			
Calcium	0.0987	0.300	0.100	0	98.7	80	120			

Sample ID: **CCV1-250805** Batch ID: **R140788** TestNo: **SW6020B** Units: **mg/L**
SampType: **CCV** Run ID: **ICP-MS5_250805B** Analysis Date: **8/5/2025 11:00:00 AM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.202	0.0300	0.200	0	101	90	110			
Calcium	5.02	0.300	5.00	0	100	90	110			

Sample ID: **CCV2-250805** Batch ID: **R140788** TestNo: **SW6020B** Units: **mg/L**
SampType: **CCV** Run ID: **ICP-MS5_250805B** Analysis Date: **8/5/2025 11:35:00 AM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	5.02	0.300	5.00	0	100	90	110			

Sample ID: **CCV3-250805** Batch ID: **R140788** TestNo: **SW6020B** Units: **mg/L**
SampType: **CCV** Run ID: **ICP-MS5_250805B** Analysis Date: **8/5/2025 12:07:00 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	4.94	0.300	5.00	0	98.9	90	110			

Qualifiers:				
B	Analyte detected in the associated Method Blank	DF	Dilution Factor	
J	Analyte detected between MDL and RL	MDL	Method Detection Limit	
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits	
RL	Reporting Limit	S	Spike Recovery outside control limits	
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified	

CLIENT: BBA Engineering
Work Order: 2507400
Project: FPP-CCR

ANALYTICAL QC SUMMARY REPORT

RunID: **IC2_250724B**

Sample ID: **DCS2-121582**	Batch ID: **121582**	TestNo: **E300**	Units: **mg/L**
SampType: **DCS2**	Run ID: **IC2_250724B**	Analysis Date: **7/24/2025 10:54:44 AM**	Prep Date: **7/24/2025**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	0.502	1.00	0.5000	0	100	70	130	0	0	
Sulfate	1.61	3.00	1.500	0	108	70	130	0	0	

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: BBA Engineering
Work Order: 2507400
Project: FPP-CCR

ANALYTICAL QC SUMMARY REPORT

RunID: **IC2_250808A**

Sample ID: **ICV-250808** Batch ID: **R140890** TestNo: **E300** Units: **mg/L**
SampType: **ICV** Run ID: **IC2_250808A** Analysis Date: **8/8/2025 10:51:16 AM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	24.4	1.00	25.00	0	97.5	90	110			
Sulfate	76.4	3.00	75.00	0	102	90	110			

Sample ID: **CCV1-250808** Batch ID: **R140890** TestNo: **E300** Units: **mg/L**
SampType: **CCV** Run ID: **IC2_250808A** Analysis Date: **8/8/2025 1:15:09 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.37	1.00	10.00	0	93.7	90	110			
Sulfate	30.3	3.00	30.00	0	101	90	110			

Sample ID: **CCV2-250808** Batch ID: **R140890** TestNo: **E300** Units: **mg/L**
SampType: **CCV** Run ID: **IC2_250808A** Analysis Date: **8/8/2025 3:59:29 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.37	1.00	10.00	0	93.7	90	110			

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: BBA Engineering
Work Order: 2507400
Project: FPP-CCR

ANALYTICAL QC SUMMARY REPORT

RunID: **IC4_250801B**

Sample ID: **DCS2-121754**	Batch ID: **121754**	TestNo: **E300**	Units: **mg/L**
SampType: **DCS2**	Run ID: **IC4_250801B**	Analysis Date: **8/1/2025 9:10:08 PM**	Prep Date: **8/1/2025**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	0.583	1.00	0.5000	0	117	70	130	0	0	
Fluoride	0.205	0.400	0.2000	0	102	70	130	0	0	
Sulfate	1.63	3.00	1.500	0	109	70	130	0	0	

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

ANALYTICAL QC SUMMARY REPORT

RunID: **IC4_250804B**

The QC data in batch 121781 applies to the following samples: 2507400-01B, 2507400-02B, 2507400-03B, 2507400-04B, 2507400-05B, 2507400-06B, 2507400-07B, 2507400-08B, 2507400-09B

Sample ID: **MB-121781** Batch ID: **121781** TestNo: **E300** Units: **mg/L**
SampType: **MBLK** Run ID: **IC4_250804B** Analysis Date: **8/4/2025 5:01:41 PM** Prep Date: **8/4/2025**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	<0.300	1.00								
Fluoride	<0.100	0.400								
Sulfate	<1.00	3.00								

Sample ID: **LCS-121781** Batch ID: **121781** TestNo: **E300** Units: **mg/L**
SampType: **LCS** Run ID: **IC4_250804B** Analysis Date: **8/4/2025 5:23:41 PM** Prep Date: **8/4/2025**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.8	1.00	10.00	0	108	90	110			
Fluoride	4.21	0.400	4.000	0	105	90	110			
Sulfate	31.6	3.00	30.00	0	105	90	110			

Sample ID: **LCSD-121781** Batch ID: **121781** TestNo: **E300** Units: **mg/L**
SampType: **LCSD** Run ID: **IC4_250804B** Analysis Date: **8/4/2025 5:45:42 PM** Prep Date: **8/4/2025**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.7	1.00	10.00	0	107	90	110	0.459	20	
Fluoride	4.20	0.400	4.000	0	105	90	110	0.244	20	
Sulfate	31.4	3.00	30.00	0	105	90	110	0.516	20	

Sample ID: **2507400-01BMS** Batch ID: **121781** TestNo: **E300** Units: **mg/L**
SampType: **MS** Run ID: **IC4_250804B** Analysis Date: **8/4/2025 7:13:41 PM** Prep Date: **8/4/2025**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	3760	100	2000	1629	107	90	110			
Fluoride	2160	40.0	2000	0	108	90	110			
Sulfate	3280	300	2000	1266	101	90	110			

Sample ID: **2507400-01BMSD** Batch ID: **121781** TestNo: **E300** Units: **mg/L**
SampType: **MSD** Run ID: **IC4_250804B** Analysis Date: **8/4/2025 7:35:41 PM** Prep Date: **8/4/2025**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	3760	100	2000	1629	106	90	110	0.105	20	
Fluoride	2150	40.0	2000	0	108	90	110	0.098	20	
Sulfate	3290	300	2000	1266	101	90	110	0.184	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: BBA Engineering
Work Order: 2507400
Project: FPP-CCR

ANALYTICAL QC SUMMARY REPORT

RunID: **IC4_250804B**

Sample ID: **2507401-01BMS** Batch ID: **121781** TestNo: **E300** Units: **mg/L**
SampType: **MS** Run ID: **IC4_250804B** Analysis Date: **8/4/2025 10:31:41 PM** Prep Date: **8/4/2025**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	552	10.0	200.0	362.9	94.7	90	110			
Fluoride	214	4.00	200.0	0	107	90	110			
Sulfate	289	30.0	200.0	83.17	103	90	110			

Sample ID: **2507401-01BMSD** Batch ID: **121781** TestNo: **E300** Units: **mg/L**
SampType: **MSD** Run ID: **IC4_250804B** Analysis Date: **8/4/2025 10:53:41 PM** Prep Date: **8/4/2025**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	550	10.0	200.0	362.9	93.8	90	110	0.334	20	
Fluoride	212	4.00	200.0	0	106	90	110	1.28	20	
Sulfate	286	30.0	200.0	83.17	101	90	110	1.11	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: BBA Engineering
Work Order: 2507400
Project: FPP-CCR

ANALYTICAL QC SUMMARY REPORT

RunID: **IC4_250804B**

Sample ID: **ICV-250804** Batch ID: **R140783** TestNo: **E300** Units: **mg/L**
SampType: **ICV** Run ID: **IC4_250804B** Analysis Date: **8/4/2025 11:59:28 AM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	27.6	1.00	25.00	0	110	90	110			
Fluoride	10.8	0.400	10.00	0	108	90	110			
Sulfate	80.2	3.00	75.00	0	107	90	110			

Sample ID: **CCV1-250804** Batch ID: **R140783** TestNo: **E300** Units: **mg/L**
SampType: **CCV** Run ID: **IC4_250804B** Analysis Date: **8/4/2025 4:17:42 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.8	1.00	10.00	0	108	90	110			
Fluoride	4.23	0.400	4.000	0	106	90	110			
Sulfate	31.7	3.00	30.00	0	106	90	110			

Sample ID: **CCV2-250804** Batch ID: **R140783** TestNo: **E300** Units: **mg/L**
SampType: **CCV** Run ID: **IC4_250804B** Analysis Date: **8/4/2025 11:59:40 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.9	1.00	10.00	0	109	90	110			
Fluoride	4.25	0.400	4.000	0	106	90	110			
Sulfate	31.9	3.00	30.00	0	106	90	110			

Sample ID: **CCV3-250804** Batch ID: **R140783** TestNo: **E300** Units: **mg/L**
SampType: **CCV** Run ID: **IC4_250804B** Analysis Date: **8/5/2025 5:07:40 AM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.9	1.00	10.00	0	109	90	110			
Fluoride	4.27	0.400	4.000	0	107	90	110			
Sulfate	32.0	3.00	30.00	0	107	90	110			

Sample ID: **CCV4-250804** Batch ID: **R140783** TestNo: **E300** Units: **mg/L**
SampType: **CCV** Run ID: **IC4_250804B** Analysis Date: **8/5/2025 10:59:39 AM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.3	1.00	10.00	0	103	90	110			
Fluoride	4.07	0.400	4.000	0	102	90	110			
Sulfate	30.3	3.00	30.00	0	101	90	110			

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

ANALYTICAL QC SUMMARY REPORT

RunID: IC4_250807B

Sample ID: **ICV-250807**	Batch ID: **R140879**	TestNo: **E300**	Units: **mg/L**
SampType: **ICV**	Run ID: **IC4_250807B**	Analysis Date: **8/7/2025 10:17:16 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	27.5	1.00	25.00	0	110	90	110			

Sample ID: **CCV5-250807**	Batch ID: **R140879**	TestNo: **E300**	Units: **mg/L**
SampType: **CCV**	Run ID: **IC4_250807B**	Analysis Date: **8/8/2025 1:41:50 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.8	1.00	10.00	0	108	90	110			

Sample ID: **CCV6-250807**	Batch ID: **R140879**	TestNo: **E300**	Units: **mg/L**
SampType: **CCV**	Run ID: **IC4_250807B**	Analysis Date: **8/8/2025 5:33:17 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.9	1.00	10.00	0	109	90	110			

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: BBA Engineering
Work Order: 2507400
Project: FPP-CCR

ANALYTICAL QC SUMMARY REPORT

RunID: **WC_250804C**

The QC data in batch 121763 applies to the following samples: 2507400-01B, 2507400-02B, 2507400-03B, 2507400-04B, 2507400-05B, 2507400-06B, 2507400-07B, 2507400-08B, 2507400-09B

Sample ID: **MB-121763** Batch ID: **121763** TestNo: **M2540C** Units: **mg/L**
SampType: **MBLK** Run ID: **WC_250804C** Analysis Date: **8/4/2025 4:10:00 PM** Prep Date: **8/4/2025**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	<10.0	10.0								

Sample ID: **LCS-121763** Batch ID: **121763** TestNo: **M2540C** Units: **mg/L**
SampType: **LCS** Run ID: **WC_250804C** Analysis Date: **8/4/2025 4:10:00 PM** Prep Date: **8/4/2025**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	740	10.0	745.6	0	99.2	90	113			

Sample ID: **2507400-04B-DUP** Batch ID: **121763** TestNo: **M2540C** Units: **mg/L**
SampType: **DUP** Run ID: **WC_250804C** Analysis Date: **8/4/2025 4:10:00 PM** Prep Date: **8/4/2025**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	1430	50.0	0	1415				1.05	5	

Sample ID: **2507400-08B-DUP** Batch ID: **121763** TestNo: **M2540C** Units: **mg/L**
SampType: **DUP** Run ID: **WC_250804C** Analysis Date: **8/4/2025 4:10:00 PM** Prep Date: **8/4/2025**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	<50.0	50.0	0	0				0	5	

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT:	BBA Engineering
Work Order:	2507400
Project:	FPP-CCR

MQL SUMMARY REPORT

TestNo: E300	**MDL**	**MQL**
Analyte	**mg/L**	**mg/L**
Chloride	0.300	1.00
Fluoride	0.100	0.400
Sulfate	1.00	3.00

TestNo: SW6020B	**MDL**	**MQL**
Analyte	**mg/L**	**mg/L**
Boron	0.0100	0.0300
Calcium	0.100	0.300

TestNo: M2540C	**MDL**	**MQL**
Analyte	**mg/L**	**mg/L**
Total Dissolved Solids (Residue, Filt	10.0	10.0

Qualifiers: MQL -Method Quantitation Limit as defined by TRRP
MDL -Method Detection Limit as defined by TRRP

DATA USABILITY SUMMARY – LCRA Analytical Report 2507400

Bullock, Bennett & Associates, LLC has reviewed the analytical data packages to be included in Appendix D of the Coal Combustion Residual Landfill 2025 Annual Groundwater Monitoring Report (Annual Groundwater Report) that was produced by DHL Analytical, Inc. for the analysis of groundwater samples collected in July 2025 at the Fayette Power Project (FPP) site. The Data were reviewed for conformance to the groundwater sampling and analysis requirements of 40 CFR § 257.93/30 TAC 352.931 and adherence to project objectives.

Objectives of the Data: To provide current data on concentrations of COCs in groundwater at the site for purposes of comparing Combustion Byproducts Landfill (CBL) compliance sample data to Appendix III Control Limits. To accomplish the stated data objectives, all field and laboratory procedures were performed in accordance with industry-established protocol, and the FPP Sampling and Analysis Plan. Appropriate quality assurance/quality control (QA/QC) measures were utilized. As described within the body of the Annual Groundwater Report, field QA/QC protocols integrated into this project followed industry standards and involved, among other factors:

- Use of sampling equipment decontamination protocol;
- Proper sample handling, preservation, and shipping procedures; and
- Maintenance of the sample chain of custody.

Also, as presented in the individual laboratory data packages, laboratory QA/QC procedures integrated into this project followed industry standards and involved, among others:

- Maintenance of sample custody;
- Application of laboratory cross references to field sample identifications and to specific QC samples;
- Use of laboratory control samples (LCSs);
- Use of matrix spike/matrix duplicate spikes (MS/MSDs);
- Use of appropriate method and method reporting limit (MRL);
- Reporting of non-detect results as less than the value of the MRL;
- Use of surrogate recoveries;
- Calculation of relative percent differences (RPDs);
- Use of method and preparation blanks; and
- The application of data qualifiers.

Data Reviewed: The data reviewed consisted of laboratory submittals and field data as follows:

- Project Objectives (i.e., recoveries and relative percent differences);
- Analytical Results, including, as applicable, data qualifiers;
- Documentation of preservation and holding times;
- Field and laboratory equipment calibrations;
- Laboratory blanks;
- Internal Laboratory Control Standards and Surrogate Recoveries;
- Laboratory Control Samples;
- Matrix Spike/Matrix Spike Duplicates;
- Field Precision as determined by duplicate samples collected in the field; and
- Field Procedures.

The results of the supporting quality control analyses for each of these QC factors were summarized in Quality Control narratives provided by the laboratory, and field/laboratory-completed chain of custody forms, the field forms, and the standard operational field procedures, and groundwater sampling procedures. A review of each of these was included in this Data Usability Summary.

Based on the Data Usability Review, the groundwater data are usable for their intended purpose. All samples were collected in the field using industry-standard operating procedures (SOPs), including decontamination protocol, sample preservation, and chain of custody.

Also, as presented in detail in the attached laboratory data packages, all appropriate QA/QC protocol were accomplished by the analytical laboratory. Where applicable, data have been appropriately qualified in the laboratory reports and the data, therefore, have been used accordingly.

Exception Reports, including Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Issues were identified as follows:

- DHL Analytical Report 2507400 (August 11, 2025)
    - Exception Report R1-01
      The samples were received and log-in performed on 7/31/2025. A total of 9 samples were received and analyzed. The samples arrived in good condition and were properly packaged.
    - Exception Report R10-01
      Per project specification, MS/MSD/Duplicates are from this workorder or project samples only.

All exceptions were documented and described in the Quality Control narratives and no conditions with regard to laboratory control samples, matrix spike/matrix spike duplicates, sample preservation and holding times, or equipment calibrations were identified that would cause any of the data not to be useable.

September 12, 2025

Charlie Macon
BBA Engineering
165 N. Lampasas St.
Bertram, TX 78605
TEL: (512) 585-7180
FAX:

Order No.: 2509069

RE: FPP - CCR

Dear Charlie Macon:

DHL Analytical, Inc. received 3 samples on 09/09/2025 for the analyses presented in the following report.

There were no problems with the analyses and all data met requirements of NELAP except where noted in the Case Narrative. All non-NELAP methods will be identified accordingly in the case narrative and all estimated uncertainties of test results are within method or EPA specifications.

If you have any questions regarding these tests results, please feel free to call. Thank you for using DHL Analytical.

Sincerely,

Karyn Lane

Karyn Lane
Laboratory Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification Number: T104704211 - TX-C25-00106

Table of Contents

DHL ANALYTICAL

2300 Double Creek Dr. Round Rock, TX 78664
Phone 512.388.8222
Web: www.dhlanalytical.com
Email: login@dhlanalytical.com

CHAIN-OF-CUSTODY

CLIENT: BBA	DATE: 9-9-25
ADDRESS: 165 N. LAMPASAS ST. BETRAM, TX	PO#: 24713-2-1
PHONE: EMAIL:	PROJECT LOCATION OR NAME: FPP-CCR
DATA REPORTED TO: CHARLIE MACON	
ADDITIONAL REPORT COPIES TO:	CLIENT PROJECT # 24713-2-1 COLLECTOR: JOHN BRAYTON

LAB USE ONLY
DHL WORKORDER #: 2509069

Authorize 5% surcharge for TRRP report? ☐ Yes ☐ No

W=WATER SE=SEDIMENT L=LIQUID P=PAINT S=SOIL SL=SLUDGE SO=SOLID

Field Sample I.D.	Lab Use Only DHL Lab #	Collection Date	Collection Time	Matrix	Container Type	# of Containers	HCL ☐ H3PO4 ☐	HNO3	H2SO4	NaOH ☐ Zn Acetate ☐	ICE ☒ UNPRESERVED ☒	BTEX ☐ MTBE ☐ [METHOD 8260]	TPH 1005 ☐ TPH 1006 ☐ HOLD 1006 ☐	GRO 8015 ☐ DRO 8015 ☐	VOC 8260 ☐ VOC 624.1 ☐	SVOC 8270 ☐ SVOC 625.1 ☐	PAH 8270 ☐ HOLD PAH ☐	PEST 8270 ☐ 625.1 ☐ O-P PEST 8270 ☐	PCB 8082 ☐ 608.3 ☐ PCB 8270 ☐ 625.1 ☐	HERB 8321 ☐ T PHOS ☐ AMMONIA ☐	METALS 6020 ☐ 200.8 ☐ DISS. METALS ☐	RCRA 8 ☐ TX11 ☐ ___	pH ☐ HEX CHROM ☐ ALKALINITY ☐ COD ☐	ANIONS 300 ☐ 9056 ☐ ___	TCLP-SVOC ☐ VOC ☐ PEST ☐ HERB ☐	TCLP-METALS ☐ RCRA 8 ☐ TX-11 ☐ Pb ☐	RCI ☐ IGN ☐ DGAS ☐ OIL&GREASE ☐	TDS ☐ TSS ☐ % MOIST ☐ CYANIDE ☐	BORON			FIELD NOTES
CBL-306I	01	9-9-25	0905	W	P	1		X			X																		X			
EB-CCR	02	↓	0915	W	P	1		X			X																		X			
FB-CCR	03	↓	0920	W	P	1		X			X																		X			

Relinquished By: (Sign)	DATE/TIME	Received by:
[signature]	9-9-25 1225	[signature]
Relinquished By: (Sign)	DATE/TIME	Received by:
Relinquished By: (Sign)	DATE/TIME	Received by:

TURN AROUND TIME (CALL FIRST FOR RUSH)
RUSH-1 DAY ☐ RUSH-2 DAY ☐ RUSH-3 DAY ☐
NORMAL ☒ OTHER ☐
DUE DATE ________ ☐

LAB USE ONLY **THERMO #:** 78
RECEIVING TEMP (°C): 0.2
IF >6°C, ARE SAMPLES ON ICE AND JUST COLLECTED? YES / NO
CUSTODY SEALS ON ICE CHEST: ☐ BROKEN ☐ INTACT ☒ NOT USED
CARRIER: ☐ LSO ☐ FEDEX ☐ UPS ☐ COURIER ☒ HAND DELIVERED

☐ **DHL DISPOSAL @ $10.00 each**

DHL Analytical, Inc.

Sample Receipt Checklist

Client Name: **BBA Engineering**

Date Received: **9/9/2025**

Work Order Number: **2509069**

Received by: **EL**

Checklist completed by: [signature] ~~9/9/2025~~
Signature | Date

Reviewed by: [initials] 9/9/2025
Initials | Date

Carrier name: Hand Delivered

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑ NA ☐
Water - pH<2 acceptable upon receipt?	Yes ☑	No ☐	NA ☐ LOT # 17781
	Adjusted? No		Checked by [initials]
Water - ph>9 (S) or ph>10 (CN) acceptable upon receipt?	Yes ☐	No ☐	NA ☑ LOT #
	Adjusted?		Checked by
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	

Cooler #	1
Temp °C	0.2
Seal Intact	NP

Any No response must be detailed in the comments section below.

Client contacted: Date contacted: Person contacted:

Contacted by: Regarding:

Comments:

Corrective Action:

Page 1 of 1

Laboratory Name: DHL Analytical, Inc.
Laboratory Review Checklist: Reportable Data

Project Name:	FPP - CCR	**LRC Date:**	9/12/2025
Reviewer:	Angie O Donnell	**Laboratory Work Order:**	2509069
Prep Batch #s:	See Prep Dates Report	**Analytical Batch #s:**	See Analytical Dates Report

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER #[5]
R1	OI	**Chain-of-Custody (C-O-C)**					
		1) Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				**R1-01**
		2) Were all departures from standard conditions described in an exception report?			X		
R2	OI	**Sample and Quality Control (QC) Identification**					
		1) Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		2) Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	**Test Reports**					
		1) Were all samples prepared and analyzed within holding times?	X				
		2) Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		3) Were calculations checked by a peer or supervisor?	X				
		4) Were all analyte identifications checked by a peer or supervisor?	X				
		5) Were sample detection limits reported for all analytes not detected?	X				
		6) Were all results for soil and sediment samples reported on a dry weight basis?			X		
		7) Were % moisture (or solids) reported for all soil and sediment samples?			X		
		8) Were bulk soils/solids samples for volatile analysis extracted with methanol per EPA Method 5035?			X		
		9) If required for the project, TICs reported?			X		
R4	O	**Surrogate Recovery Data**					
		1) Were surrogates added prior to extraction?			X		
		2) Were surrogate percent recoveries in all samples within the laboratory QC limits?			X		
R5	OI	**Test Reports/Summary Forms for Blank Samples**					
		1) Were appropriate type(s) of blanks analyzed?	X				
		2) Were blanks analyzed at the appropriate frequency?	X				
		3) Where method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		4) Were blank concentrations < MDL?	X				
		5) For analyte(s) detected in a blank sample, was the concentration, unadjusted for sample specific factors, in all associated field samples, greater than 10 times the concentration in the blank sample?			X		
R6	OI	**Laboratory Control Samples (LCS):**					
		1) Were all COCs included in the LCS?	X				
		2) Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		3) Were LCSs analyzed at the required frequency?	X				
		4) Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		5) Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		6) Was the LCSD RPD within QC limits (if applicable)?	X				
R7	OI	**Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Data**					
		1) Were the project/method specified analytes included in the MS and MSD?	X				
		2) Were MS/MSD analyzed at the appropriate frequency?	X				
		3) Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?	X				
		4) Were MS/MSD RPDs within laboratory QC limits?	X				
R8	OI	**Analytical Duplicate Data**					
		1) Were appropriate analytical duplicates analyzed for each matrix?			X		
		2) Were analytical duplicates analyzed at the appropriate frequency?			X		
		3) Were RPDs or relative standard deviations within the laboratory QC limits?			X		
R9	OI	**Method Quantitation Limits (MQLs):**					
		1) Are the MQLs for each method analyte included in the laboratory data package?	X				
		2) Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		3) Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	**Other Problems/Anomalies**					
		1) Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		2) Was applicable and available technology used to lower the SDL to minimize the matrix interference affects on the sample results?	X				
		3) Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

Laboratory Name: DHL Analytical, Inc.
Laboratory Review Checklist (continued): Supporting Data

Project Name:	FPP - CCR	**LRC Date:**	9/12/2025
Reviewer:	Angie O Donnell	**Laboratory Work Order:**	2509069
Prep Batch #s:	See Prep Dates Report	**Analytical Batch #s:**	See Analytical Dates Report

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER #[5]
S1	OI	**Initial Calibration (ICAL)**					
		1) Were response factors and/or relative response factors for each analyte within QC limits?	X				
		2) Were percent RSDs or correlation coefficient criteria met?	X				
		3) Was the number of standards recommended in the method used for all analytes?	X				
		4) Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		5) Are ICAL data available for all instruments used?	X				
		6) Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	**Initial and Continuing calibration Verification (ICCV and CCV) and Continuing Calibration blank (CCB):**					
		1) Was the CCV analyzed at the method-required frequency?	X				
		2) Were percent differences for each analyte within the method-required QC limits?	X				
		3) Was the ICAL curve verified for each analyte?	X				
		4) Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
S3	O	**Mass Spectral Tuning:**					
		1) Was the appropriate compound for the method used for tuning?	X				
		2) Were ion abundance data within the method-required QC limits?	X				
S4	O	**Internal Standards (IS):**					
		1) Were IS area counts and retention times within the method-required QC limits?	X				
S5	OI	**Raw Data (NELAC Section 5.5.10)**					
		1) Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		2) Were data associated with manual integrations flagged on the raw data?	X				
S6	O	**Dual Column Confirmation**					
		1) Did dual column confirmation results meet the method-required QC?			X		
S7	O	**Tentatively Identified Compounds (TICs):**					
		1) If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	O	**Interference Check Sample (ICS) Results:**					
		1) Were percent recoveries within method QC limits?	X				
S9	O	**Serial Dilutions, Post Digestion Spikes, and Method of Standard Additions**					
		1) Were percent differences, recoveries, and the linearity within the QC limits specified in the method?	X				
S10	OI	**Method Detection Limit (MDL) Studies**					
		1) Was a MDL study performed for each reported analyte?	X				
		2) Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S11	OI	**Proficiency Test Reports:**					
		1) Was the lab's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	**Standards Documentation**					
		1) Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	**Compound/Analyte Identification Procedures**					
		1) Are the procedures for compound/analyte identification documented?	X				
S14	OI	**Demonstration of Analyst Competency (DOC)**					
		1) Was DOC conducted consistent with NELAC Chapter 5 - Appendix C?	X				
		2) Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	**Verification/Validation Documentation for Methods (NELAC Chapter 5)**					
		1) Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	**Laboratory Standard Operating Procedures (SOPs):**					
		1) Are laboratory SOPs current and on file for each method performed?	X				

1. Items identified by the letter "R" should be included in the laboratory data package submitted to the TCEQ in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable).
3. NA = Not applicable.
4. NR = Not Reviewed.
5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Laboratory Data Package Signature Page - RG-366/TRRP-13

This data package consists of:

This signature page, the laboratory review checklist, and the following reportable data:

R1 Field chain-of-custody documentation;
R2 Sample identification cross-reference;
R3 Test reports (analytical data sheets) for each environmental sample that includes:
  a) Items consistent with NELAC Chapter 5,
  b) dilution factors,
  c) preparation methods,
  d) cleanup methods, and
  e) if required for the project, tentatively identified compounds (TICs).
R4 Surrogate recovery data including:
  a) Calculated recovery (%R), and
  b) The laboratory's surrogate QC limits.
R5 Test reports/summary forms for blank samples;
R6 Test reports/summary forms for laboratory control samples (LCSs) including:
  a) LCS spiking amounts,
  b) Calculated %R for each analyte, and
  c) The laboratory's LCS QC limits.
R7 Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
  a) Samples associated with the MS/MSD clearly identified,
  b) MS/MSD spiking amounts,
  c) Concentration of each MS/MSD analyte measured in the parent and spiked samples,
  d) Calculated %Rs and relative percent differences (RPDs), and
  e) The laboratory's MS/MSD QC Limits.
R8 Laboratory analytical duplicate (if applicable) recovery and precision:
  a) The amount of analyte measured in the duplicate,
  b) The calculated RPD, and
  c) The laboratory's QC limits for analytical duplicates.
R9 List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix;
R10 Other problems or anomalies.

The Exception Report for each "No" or "Not Reviewed (NR)" item in the Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory is not accredited under the Texas Laboratory Accreditation Program.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge that all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information or data affecting the quality of the data has been knowingly withheld.

This laboratory was last inspected by TCEQ on May 30 - June 2, 2023. Any findings affecting the data in this laboratory data package are noted in the Exception Reports herein. The official signing the cover page of the report in which these data are used is responsible for releasing this data package and is by signature affirming the above release statement is true.

Name: Karyn Lane
Official Title: General Manager

Name: Don Winston
Official Title: Technical Director

Karyn Lane — Signature

9/12/2025 — Date

DHL Analytical, Inc.

Date: *12-Sep-25*

CLIENT:	BBA Engineering
Project:	FPP - CCR
Lab Order:	2509069

CASE NARRATIVE

Samples were analyzed using the methods outlined in the following references:

Method SW6020B - Metals Analysis

Exception Report R1-01

The samples were received and log-in performed on 9/9/2025. A total of 3 samples were received and analyzed. The samples arrived in good condition and were properly packaged.

DHL Analytical, Inc.

Date: *12-Sep-25*

CLIENT: BBA Engineering
Project: FPP - CCR
Lab Order: 2509069

Work Order Sample Summary

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
2509069-01	CBL-306I		09/09/25 09:05 AM	09/09/2025
2509069-02	EB-CCR		09/09/25 09:15 AM	09/09/2025
2509069-03	FB-CCR		09/09/25 09:20 AM	09/09/2025

Lab Order: 2509069
Client: BBA Engineering
Project: FPP - CCR

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
2509069-01A	CBL-306I	09/09/25 09:05 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/11/25 07:08 AM	122387
2509069-02A	EB-CCR	09/09/25 09:15 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/11/25 07:08 AM	122387
2509069-03A	FB-CCR	09/09/25 09:20 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	09/11/25 07:08 AM	122387

Lab Order: 2509069
Client: BBA Engineering
Project: FPP - CCR

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
2509069-01A	CBL-306I	Aqueous	SW6020B	Total Metals: ICP-MS - Water	122387	1	09/11/25 01:51 PM	ICP-MS5_250911B
2509069-02A	EB-CCR	Aqueous	SW6020B	Total Metals: ICP-MS - Water	122387	1	09/11/25 01:54 PM	ICP-MS5_250911B
2509069-03A	FB-CCR	Aqueous	SW6020B	Total Metals: ICP-MS - Water	122387	1	09/11/25 01:56 PM	ICP-MS5_250911B

DHL Analytical, Inc.

Date: *12-Sep-25*

CLIENT:	BBA Engineering	**Client Sample ID:**	CBL-306I
Project:	FPP - CCR	**Lab ID:**	2509069-01
Project No:	24713-2-1	**Collection Date:**	09/09/25 09:05 AM
Lab Order:	2509069	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Boron	0.138	0.0100	0.0300		mg/L	1	09/11/25 01:51 PM

Qualifiers:

ND - Not Detected at the SDL
J - Analyte detected between SDL and RL
B - Analyte detected in the associated Method Blank
DF- Dilution Factor
N - Parameter not NELAP certified
See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.

Date: *12-Sep-25*

CLIENT:	BBA Engineering	**Client Sample ID:**	EB-CCR
Project:	FPP - CCR	**Lab ID:**	2509069-02
Project No:	24713-2-1	**Collection Date:**	09/09/25 09:15 AM
Lab Order:	2509069	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Boron	0.0336	0.0100	0.0300		mg/L	1	09/11/25 01:54 PM

Qualifiers:

ND - Not Detected at the SDL
J - Analyte detected between SDL and RL
B - Analyte detected in the associated Method Blank
DF- Dilution Factor
N - Parameter not NELAP certified
See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc. **Date:** *12-Sep-25*

CLIENT:	BBA Engineering	**Client Sample ID:**	FB-CCR
Project:	FPP - CCR	**Lab ID:**	2509069-03
Project No:	24713-2-1	**Collection Date:**	09/09/25 09:20 AM
Lab Order:	2509069	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Boron	0.0222	0.0100	0.0300	J	mg/L	1	09/11/25 01:56 PM

Qualifiers:

ND - Not Detected at the SDL
J - Analyte detected between SDL and RL
B - Analyte detected in the associated Method Blank
DF- Dilution Factor
N - Parameter not NELAP certified
See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc. **Date:** *12-Sep-25*

CLIENT: BBA Engineering
Work Order: 2509069
Project: FPP - CCR

ANALYTICAL QC SUMMARY REPORT

RunID: **ICP-MS5_250616A**

Sample ID:	**DCS4-120948**	Batch ID:	**120948**	TestNo:	**SW6020B**	Units:	**mg/L**
SampType:	**DCS4**	Run ID:	**ICP-MS5_250616A**	Analysis Date:	**6/16/2025 10:52:00 AM**	Prep Date:	**6/13/2025**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.0286	0.0300	0.0300	0	95.3	70	130	0	0	

Qualifiers:				
	B	Analyte detected in the associated Method Blank	DF	Dilution Factor
	J	Analyte detected between MDL and RL	MDL	Method Detection Limit
	ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
	RL	Reporting Limit	S	Spike Recovery outside control limits
	J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: BBA Engineering
Work Order: 2509069
Project: FPP - CCR

ANALYTICAL QC SUMMARY REPORT

RunID: **ICP-MS5_250911B**

The QC data in batch 122387 applies to the following samples: 2509069-01A, 2509069-02A, 2509069-03A

Sample ID: **MB-122387** Batch ID: **122387** TestNo: **SW6020B** Units: **mg/L**
SampType: **MBLK** Run ID: **ICP-MS5_250911B** Analysis Date: **9/11/2025 1:24:00 PM** Prep Date: **9/11/2025**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	<0.0100	0.0300								

Sample ID: **LCS-122387** Batch ID: **122387** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCS** Run ID: **ICP-MS5_250911B** Analysis Date: **9/11/2025 1:27:00 PM** Prep Date: **9/11/2025**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.197	0.0300	0.200	0	98.5	80	120			

Sample ID: **LCSD-122387** Batch ID: **122387** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCSD** Run ID: **ICP-MS5_250911B** Analysis Date: **9/11/2025 1:30:00 PM** Prep Date: **9/11/2025**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.201	0.0300	0.200	0	101	80	120	2.16	15	

Sample ID: **2509067-01A SD** Batch ID: **122387** TestNo: **SW6020B** Units: **mg/L**
SampType: **SD** Run ID: **ICP-MS5_250911B** Analysis Date: **9/11/2025 1:37:00 PM** Prep Date: **9/11/2025**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.105	0.150	0	0.0883				17.5	20	

Sample ID: **2509067-01A PDS** Batch ID: **122387** TestNo: **SW6020B** Units: **mg/L**
SampType: **PDS** Run ID: **ICP-MS5_250911B** Analysis Date: **9/11/2025 2:04:00 PM** Prep Date: **9/11/2025**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.301	0.0300	0.200	0.0883	106	75	125			

Sample ID: **2509067-01A MS** Batch ID: **122387** TestNo: **SW6020B** Units: **mg/L**
SampType: **MS** Run ID: **ICP-MS5_250911B** Analysis Date: **9/11/2025 2:06:00 PM** Prep Date: **9/11/2025**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.303	0.0300	0.200	0.0883	108	75	125			

Sample ID: **2509067-01A MSD** Batch ID: **122387** TestNo: **SW6020B** Units: **mg/L**
SampType: **MSD** Run ID: **ICP-MS5_250911B** Analysis Date: **9/11/2025 2:09:00 PM** Prep Date: **9/11/2025**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.297	0.0300	0.200	0.0883	104	75	125	2.09	15	

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: BBA Engineering
Work Order: 2509069
Project: FPP - CCR

ANALYTICAL QC SUMMARY REPORT

RunID: **ICP-MS5_250911B**

Sample ID: **ICV-250911** Batch ID: **R141501** TestNo: **SW6020B** Units: **mg/L**
SampType: **ICV** Run ID: **ICP-MS5_250911B** Analysis Date: **9/11/2025 11:39:00 AM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.100	0.0300	0.100	0	100	90	110			

Sample ID: **LCVL-250911** Batch ID: **R141501** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCVL** Run ID: **ICP-MS5_250911B** Analysis Date: **9/11/2025 11:49:00 AM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.0233	0.0300	0.0200	0	116	80	120			

Sample ID: **CCV1-250911** Batch ID: **R141501** TestNo: **SW6020B** Units: **mg/L**
SampType: **CCV** Run ID: **ICP-MS5_250911B** Analysis Date: **9/11/2025 12:33:00 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.211	0.0300	0.200	0	106	90	110			

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: BBA Engineering
Work Order: 2509069
Project: FPP - CCR

MQL SUMMARY REPORT

TestNo: SW6020B Analyte	MDL mg/L	MQL mg/L
Boron	0.0100	0.0300

Qualifiers: MQL -Method Quantitation Limit as defined by TRRP
MDL -Method Detection Limit as defined by TRRP

DATA USABILITY SUMMARY – LCRA Analytical Report 2509069

Bullock, Bennett & Associates, LLC has reviewed the analytical data packages to be included in Appendix D of the Coal Combustion Residual Landfill 2025 Annual Groundwater Monitoring Report (Annual Groundwater Report) that was produced by DHL Analytical, Inc. for the analysis of groundwater samples collected in September 2025 at the Fayette Power Project (FPP) site. The Data were reviewed for conformance to the groundwater sampling and analysis requirements of 40 CFR § 257.93/30 TAC 352.931 and adherence to project objectives.

Objectives of the Data: To provide current data on concentrations of COCs in groundwater at the site for purposes of comparing Combustion Byproducts Landfill (CBL) compliance sample data to Appendix III Control Limits. To accomplish the stated data objectives, all field and laboratory procedures were performed in accordance with industry-established protocol, and the FPP Sampling and Analysis Plan. Appropriate quality assurance/quality control (QA/QC) measures were utilized. As described within the body of the Annual Groundwater Report, field QA/QC protocols integrated into this project followed industry standards and involved, among other factors:

- Use of sampling equipment decontamination protocol;
- Proper sample handling, preservation, and shipping procedures; and
- Maintenance of the sample chain of custody.

Also, as presented in the individual laboratory data packages, laboratory QA/QC procedures integrated into this project followed industry standards and involved, among others:

- Maintenance of sample custody;
- Application of laboratory cross references to field sample identifications and to specific QC samples;
- Use of laboratory control samples (LCSs);
- Use of matrix spike/matrix duplicate spikes (MS/MSDs);
- Use of appropriate method and method reporting limit (MRL);
- Reporting of non-detect results as less than the value of the MRL;
- Use of surrogate recoveries;
- Calculation of relative percent differences (RPDs);
- Use of method and preparation blanks; and
- The application of data qualifiers.

Data Reviewed: The data reviewed consisted of laboratory submittals and field data as follows:

- Project Objectives (i.e., recoveries and relative percent differences);
- Analytical Results, including, as applicable, data qualifiers;
- Documentation of preservation and holding times;
- Field and laboratory equipment calibrations;
- Laboratory blanks;
- Internal Laboratory Control Standards and Surrogate Recoveries;
- Laboratory Control Samples;
- Matrix Spike/Matrix Spike Duplicates;
- Field Precision as determined by duplicate samples collected in the field; and
- Field Procedures.

The results of the supporting quality control analyses for each of these QC factors were summarized in Quality Control narratives provided by the laboratory, and field/laboratory-completed chain of custody forms, the field forms, and the standard operational field procedures, and groundwater sampling procedures. A review of each of these was included in this Data Usability Summary.

Based on the Data Usability Review, the groundwater data are usable for their intended purpose. All samples were collected in the field using industry-standard operating procedures (SOPs), including decontamination protocol, sample preservation, and chain of custody.

Also, as presented in detail in the attached laboratory data packages, all appropriate QA/QC protocol were accomplished by the analytical laboratory. Where applicable, data have been appropriately qualified in the laboratory reports and the data, therefore, have been used accordingly.

Exception Reports, including Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Issues were identified as follows:

- DHL Analytical Report 2509069 (September 12, 2025)
    - Exception Report R1-01
      The samples were received and log-in performed on 9/9/2025. A total of 3 samples were received and analyzed. The samples arrived in good condition and were properly packaged.

All exceptions were documented and described in the Quality Control narratives and no conditions with regard to laboratory control samples, matrix spike/matrix spike duplicates, sample preservation and holding times, or equipment calibrations were identified that would cause any of the data not to be useable.