CORRESPONDENCE COVER SHEET
WASTE PERMITS DIVISION
TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Date: 30 January 2024
Facility Name: Calaveras Plant Site
Permit or Registration No.: CCR102

Nature of Correspondence:
☒ Initial/New
☐ Response/Revision*

*If Response/Revision, please provide previous TCEQ Tracking No.:
(Previous TCEQ Tracking No. can be found in the Subject line of the TCEQ's response letter to your original submittal.)

This cover sheet should accompany all correspondences submitted to the Waste Permits Division and should be affixed to the front of your submittal as a cover page. Please check the appropriate box for the type of correspondence being submitted. For questions regarding this form, please contact the Waste Permits Division at (512) 239-2335.

Table 1 - Municipal Solid Waste

APPLICATIONS	REPORTS and RESPONSES
☐ New Notification	☐ Closure Report
☐ New Permit (including Subchapter T)	☐ Groundwater Alternate SRC Demonstration
☐ New Registration (including Subchapter T)	☐ Groundwater Corrective Action
☐ Major Amendment	☐ Groundwater Monitoring Report
☐ Minor Amendment	☐ Groundwater Statistical Evaluation
☐ Limited Scope Major Amendment	☐ Landfill Gas Corrective Action
☐ Notice Modification	☐ Landfill Gas Monitoring
☐ Non-Notice Modification	☐ Liner Evaluation Report
☐ Transfer/Name Change Modification	☐ Soil Boring Plan
☐ Temporary Authorization	☐ Special Waste Request
☐ Voluntary Revocation	☐ Other:
☐ Subchapter T Workplan	
☐ Other:	

Table 2 - Industrial & Hazardous Waste

APPLICATIONS	REPORTS and RESPONSES
☐ New	☐ Annual/Biennial Site Activity Report
☐ Renewal	☐ CfPT Plan/Result
☐ Post-Closure Order	☐ Closure Certification/Report
☐ Major Amendment	☐ Construction Certification/Report
☐ Minor Amendment	☐ CPT Plan/Result
☐ Class 3 Modification	☐ Extension Request
☐ Class 2 Modification	☒ Groundwater Monitoring Report - BA Ponds
☐ Class 1 ED Modification	☐ Interim Status Change
☐ Class 1 Modification	☐ Interim Status Closure Plan
☐ Endorsement	☐ Soil Core Monitoring Report
☐ Temporary Authorization	☐ Treatability Study
☐ Voluntary Revocation	☐ Trial Burn Plan/Result
☐ 335.6 Notification	☐ Unsaturated Zone Monitoring Report
☐ Other:	☐ Waste Minimization Report
	☐ Other:

Annual Groundwater Monitoring and Corrective Action Report

Calaveras Power Station – Bottom Ash Ponds
San Antonio, Texas

PREPARED FOR
CPS Energy

DATE
30 January 2024

REFERENCE
0681818

SIGNATURE PAGE

Annual Groundwater Monitoring and Corrective Action Report

Calaveras Power Station –
Bottom Ash Ponds
San Antonio, Texas
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CONTENTS

1. CURRENT STATUS SUMMARY

As required in Title 40, Code of Federal Regulations (CFR), Part 257.90 and Title 30, Texas Administrative Code (TAC), Chapter 352.901, this section provides an overview of the current status of the groundwater monitoring and corrective action program for the Bottom Ash Ponds (BAPs) located at the CPS Energy Calaveras Power Station:

- At the start of the 2023 annual reporting period, the BAPs were operating under the detection monitoring program, as defined in 40 CFR §257.94 and 30 TAC §352.941.
- At the end of the 2023 annual reporting period, the BAPs were operating under the detection monitoring program, as defined in 40 CFR §257.94 and 30 TAC §352.941.
- An *Alternative Source Demonstration* was prepared and submitted pursuant to 40 CFR §257.94(e) and 30 TAC §352.941 during the 2023 annual reporting period.
- At this time, there was no confirmed statistically significant increase over background for one or more constituents listed in Appendix III pursuant to 40 CFR §257.94(e) and 30 TAC §352.941(a); however, CPS Energy will continue to evaluate additional data collected from JKS-70 and re-sample data collected from other wells in the monitoring network and will prepare an *Alternative Source Demonstration*.
- An assessment monitoring program was not required or initiated for the BAPs.
- A remedy was not required or selected pursuant to 40 CFR §257.97 and 30 TAC §352.971 during the 2023 annual reporting period.
- No remedial activities were initiated or are ongoing pursuant to 40 CFR §257.98 and 30 TAC §352.981 during the 2023 annual reporting period.

2. INTRODUCTION

CPS Energy owns and operates the Calaveras Power Station which consists of two power plants [J.T. Deely (ceased operation at the end of December 2018) and J.K. Spruce] that are subject to regulation under Title 40, Code of Federal Regulations, Part 257 (40 CFR §257) Subpart D (a.k.a. the Federal CCR Rule) and Title 30, Texas Administrative Code, Chapter 352 (30 TAC §352), Subchapter H (a.k.a. the Texas CCR Rule), collectively referred to as the CCR Rules. The Power Station is located in unincorporated Bexar County, Texas, approximately 13 miles southeast of San Antonio. Currently, two CCR units [Fly Ash Landfill (FAL) and Plant Drains Pond (PDP)] are in operation and three CCR units [Bottom Ash Ponds (BAPs), Evaporation Pond (EP) and Sludge Recycle Holding Pond (SRHP)] are undergoing closure. This *Annual Groundwater Monitoring and Corrective Action Report* (Report) addresses only the BAPs.

This Report was produced by Environmental Resource Management, Inc. (ERM), on behalf of CPS Energy, and summarizes the groundwater monitoring activities for the BAPs in 2023 and provides a statistical summary of the findings for samples collected in October 2023. Consistent with the notification requirements of the CCR Rules, this Report will be posted to the operational record and notification will be made to the State of Texas. Additionally, this Report will be placed on the publicly accessible internet site. The table below cross references the reporting requirements under the CCR Rules with the contents of this Report.

Regulatory Requirement Cross-Reference

Regulatory Citation	Requirement (paraphrased)	Where Addressed in this Report
40 CFR §257.90(e) and 30 TAC §352.901	Status of the groundwater monitoring and corrective action program	Sections 1 and 3
40 CFR §257.90(e) and 30 TAC §352.901	Summarize key actions completed	Section 3
40 CFR §257.90(e) and 30 TAC §352.901	Describe any problems encountered and actions to resolve problems	Section 3
40 CFR §257.90(e) and 30 TAC §352.901	Key activities for upcoming year	Section 5
40 CFR §257.90(e)(1) and 30 TAC §352.901	Map or aerial image of CCR unit and monitoring wells	Figure 1
40 CFR §257.90(e)(2) and 30 TAC §352.901	Identification of new monitoring wells installed or decommissioned during the preceding year	Section 3
40 CFR §257.90(e)(3) and 30 TAC §352.901	Summary of groundwater data, monitoring wells and dates sampled, and whether sample was required under detection or assessment monitoring	Sections 3 and 4, Tables 1 through 3, and Figures 2A and 2B

Regulatory Citation	Requirement (paraphrased)	Where Addressed in this Report
40 CFR §257.90(e)(4) and 30 TAC §352.901	Narrative discussion of any transition between monitoring programs	Section 5

The BAPs are located east of the Power Station generating units and are adjacent to and immediately east of the SRHP. The BAPs consist of two separate, but adjacent, ponds (oriented north and south) that contained sluiced bottom ash material. The BAPs were constructed in 1977 as part of the original plant construction. The CCR unit location is shown on Figure 1.

3. PROGRAM STATUS

From December 2016 through October 2017, groundwater samples were collected as part of background sampling. After October 2017, groundwater samples were collected as part of detection monitoring. The samples were collected from the groundwater monitoring well network certified for use in determining compliance with the CCR Rules.

Historically, the groundwater monitoring well network consisted of two upgradient monitor wells (JKS-49 and JKS-51) and five downgradient monitor wells (JKS-48, JKS-50R, JKS-52, JKS-55, and JKS-56). As documented in the *2020 Annual Groundwater Monitoring and Corrective Action Report – Bottom Ash Ponds* (ERM, 2021), non-proportional changes in water levels were observed during the 2020 monitoring events and a site-wide water level study (Study) was recommended to understand temporal changes in hydrogeology. ERM completed this Study by collecting five rounds of water level measurements at each CCR Unit, which included observations from other on-site monitor wells, from February to October 2021.

As documented in the Study, JKS-49 and JKS-51 no longer appeared to be viable background wells and ERM recommended the installation of one or two new monitor wells located northwest of the BAPs. One monitor well (JKS-70) was installed in July 2022 and was designated as a background well for the BAPs. As such, the revised groundwater monitoring well network consists of two upgradient monitor wells (JKS-70 and JKS-51) and six downgradient monitor wells (JKS-48, JKS-49, JKS-50R, JKS-52, JKS-55, and JKS-56). This revision to the groundwater monitoring network is documented in the updated *Groundwater Monitoring System* (ERM, 2023) and the updated *Groundwater Sampling and Analysis Program* (*GSAP*) (ERM, 2023).

All monitor wells are screened within the uppermost groundwater bearing unit (GWBU) in the vicinity of the North and South BAPs. The uppermost GWBU varies in thickness from approximately 9.5 to 21.5 feet thick and is comprised of clayey/silty sand to moderately-sorted sand. The uppermost GWBU is located below semi-confining units (i.e., clay, sandy clay, or silty clay), and above a sandstone bedrock unit.

The monitor well locations are shown in Figure 1. No problems were encountered in the data collection or in well performance, and no action was required to resolve any issues. No monitor wells were installed or decommissioned at the BAPs in 2023.

Although the J.T. Deely Power Plant ceased operation at the end of December 2018 and sluiced bottom ash is no longer being received at the BAPs, the BAPs will continue to be monitored until the units have completed closure.

3.1 GROUNDWATER OBSERVATIONS

Depth to groundwater surface measurements were made at each monitor well prior to each sampling event. Groundwater elevations were calculated by subtracting the depth to ground-water measurement from the surveyed reference elevation for each well.

Groundwater elevations collected during all the monitoring events are summarized in Table 1. Groundwater elevations and the potentiometric surface for the April and October 2023 monitoring events are shown on Figure 2A and Figure 2B, respectively. For both sampling events, groundwater appears to flow southeast towards the northern portion of the BAPs with an apparent

groundwater mound in the southwestern portion of the BAPs. The horizontal gradient is approximately, 0.001 feet/foot and 0.002 feet/foot for the April and October 2023 monitoring events, respectively.

As previously documented, non-proportional changes in water levels have been observed since the 2020 monitoring events and these changes are evident in the 2023 monitoring events. CPS Energy will continue to monitor and evaluate these changes to understand temporal changes in hydrogeology.

3.2 SAMPLING SUMMARY

A summary of the total number of samples collected from each monitor well is provided in Table 2. Groundwater analytical results for Appendix III constituents for all the monitoring events are summarized in Table 3. Laboratory data packages are provided in Appendix A.

The BAPs monitor wells were sampled by CPS Energy using low flow sampling techniques during the monitoring events. No data gaps were identified during the 2023 semi-annual groundwater monitoring events.

3.3 DATA QUALITY

ERM reviewed field and laboratory documentation to assess the validity, reliability and usability of the analytical results. Samples were sent to San Antonio Testing Laboratory (SATL), located in San Antonio, Texas for analysis. Chain-of-Custody procedures were followed throughout the sample handling process. Data quality information reviewed for these results included field sampling forms, chain-of-custody documentation, holding times, lab methods, cooler temperatures, laboratory method blanks, laboratory control sample recoveries, field duplicate samples, matrix spikes / matrix spike duplicates, quantitation limits, and equipment blanks following data quality review guidance from the Environmental Protection Agency and the Texas Commission on Environmental Quality. A summary of the data usability qualifiers is included in Table 3. The data quality review found the results to be valid, reliable, and useable for decision making purposes with the listed qualifiers. No analytical results were rejected.

4. STATISTICAL ANALYSIS AND RESULTS

Consistent with the CCR Rules and with the updated *GSAP*, a prediction limit approach (40 CFR §257.93(f)) was used to identify potential impacts to groundwater. The steps outlined in the decision framework in the *GSAP* include:

- Interwell versus intrawell comparisons;
- Establishment of the upgradient dataset;
- Calculating prediction limits; and
- Conclusions.

Tables and figures generated as part of the statistical analysis, including updating of prediction limits are provided in Appendix B. The remaining sections of the Report are focused on evaluation of the most recent October 2023 data. Note the April 2023 sampling results were evaluated as discussed in Appendix C. The April 2023 sampling results were evaluated relative to the pre-updated prediction limits.

4.1 INTERWELL VERSUS INTRAWELL COMPARISONS

When multiple upgradient wells were available within the same unit, concentrations were compared among these wells to determine if they could be pooled to create a single, interwell, upgradient dataset. For each analyte, Boxplots (Appendix B, Figure 1) and Kruskal-Wallis test results (Appendix B, Table 1) are provided for upgradient wells. The statistical tests indicate that:

- All analytes were found to follow intrawell analysis.

As discussed in the *GSAP* and presented in the following sections, analytes for intrawell analysis utilize individual, separate datasets from each upgradient well.

4.2 ESTABLISHMENT OF UPGRADIENT DATASET

When evaluating the concentrations of analytes in groundwater, USEPA guidance (2009) recommends performing a careful quality check of the data to identify any anomalies. In addition to the data validation that was performed, descriptive statistics, outlier testing, and temporal stationarity checks were completed to finalize the upgradient dataset.

4.2.1 DESCRIPTIVE STATISTICS

Descriptive statistics were calculated for the upgradient wells and analytes at the site (Appendix B, Table 2). The descriptive statistics highlight a number of relevant characteristics about the upgradient datasets including:

- There are two upgradient monitor wells and seven Appendix III constituents for Detection Monitoring.
- There are a total of 14 well-analyte combinations after accounting for interwell versus intrawell analysis.
    - 14 well-analyte combinations have detection rates greater than or equal to 50 percent.
    - 13 well-analyte combinations have 100 percent detects.

- 12 well-analyte combinations follow a normal distribution (using Shapiro-Wilks Normality Test).
- The remaining well-analyte combinations have no discernible distribution.

4.2.2 OUTLIER DETERMINATION

Both statistical and visual outlier tests were performed on the upgradient datasets. A total of two outliers were initially flagged in the upgradient datasets. Data points identified as both statistical and visual outliers (Appendix B, Table 3 and Appendix B, Figure 2) were reviewed prior to exclusion from the dataset.

Of the two data points that were flagged as outliers, both were retained in the dataset. After review, it was determined that these values were consistent with natural fluctuations and concentrations detected in other upgradient wells in the area. No analytical or sampling issues were identified during data review; therefore, the two outlier values were considered valid and were retained in the upgradient datasets.

4.2.3 CHECK FOR TEMPORAL STABILITY

A trend test was performed for all values in the upgradient wells with at least eight detected data points and at least 50 percent detection rate. Time series figures of upgradient wells are provided in Appendix B, Figure 3. Additionally, the Mann Kendall trend test results are provided in Appendix B, Table 4. The results of the trend analysis indicate that:

- There are a total of 14 well-analyte combinations in the upgradient dataset.
  - Seven well-analyte combinations meet the data requirements of the trend test.
  - Two well-analyte combinations had a significant increasing trend.
  - Five well-analyte combinations had no significant trend (i.e., concentrations were stable over time).

4.3 ESTABLISHING UPPER PREDICTION LIMITS

A multi-part assessment of the monitoring wells was performed to determine what type of upper prediction limit (UPL) to calculate as a compliance point. A decision framework was applied for each upgradient well based on interwell/intrawell analysis, data availability, and presence of temporal trends. A summary of the prediction limits and the methods used to calculate them are provided in Appendix B, Table 5.

If the upgradient wells had fewer than eight detected values for an analyte, then the UPL was based off the maximum concentration of the upgradient dataset. The seven well-analyte combinations that did not meet the minimum data requirements for a calculated UPL are listed below:

Analyte	Well
Boron	JKS-70
Calcium	JKS-70

Analyte	Well
Chloride	JKS-70
Fluoride	JKS-70
pH	JKS-70
Sulfate	JKS-70
TDS	JKS-70

A total of two well-analyte combinations were found to have either increasing or decreasing trends. For these well-analyte pairs, a bootstrapped UPL calculated around a Theil Sen trend was used to derive a more accurate UPL.

The remaining five well-analyte combinations were found to have no significant trend. ProUCL v5.2 was used to calculate static UPLs using an annual site-wide false positive rate of 0.1 with a 1-of-2 re-testing approach.

A final UPL was selected for each analyte and compared to the most recent sample result in each downgradient well. For pH, a final lower prediction limit (LPL) was also identified and used for comparison. For the seven analytes with intrawell analysis, a UPL value was calculated for each of the upgradient wells. For these wells and analytes, the maximum UPL was selected as the representative UPL for each analyte, to capture the possible range of values found in upgradient wells. A similar approach was used to determine the LPL for pH; however, the minimum LPL was selected in the case of intrawell analysis. All final UPL and LPL values are shown in the table below. Full upgradient well prediction limit calculations are provided in Appendix B, Table 5).

Final UPLs and LPLs Values

Analysis Type	Analyte	LPL	UPL	Unit
Intrawell	Boron	–	0.766	mg/L
Intrawell	Calcium	–	372	mg/L
Intrawell	Chloride	–	726	mg/L
Intrawell	Fluoride	–	0.8	mg/L
Intrawell	pH	6.05	7.43	SU
Intrawell	Sulfate	–	472	mg/L
Intrawell	TDS	–	2,560	mg/L

4.4 CONCLUSIONS

The downgradient samples collected during the October 2023 sampling event were used for compliance comparisons. All downgradient wells were below the UPLs and above the LPLs with the following exceptions shown on the table below. Full downgradient results are provided in Appendix B, Table 6.

Potential Exceedances

Analyte	Well	LPL	UPL	Sample Date	Value	Unit
Boron	JKS-48	–	0.766	2023-10-17	2.0	mg/L
Boron	JKS-49	–	0.766	2023-10-17	2.58	mg/L
Boron	JKS-50R	–	0.766	2023-10-17	6.11	mg/L
Boron	JKS-52	–	0.766	2023-10-17	2.66	mg/L
Boron	JKS-55	–	0.766	2023-10-17	0.928	mg/L
Boron	JKS-56	–	0.766	2023-10-17	3.35	mg/L
Fluoride	JKS-48	–	0.80	2023-10-17	1.06	mg/L
Fluoride	JKS-55	–	0.80	2023-10-17	0.822	mg/L

Initial exceedances of the UPL may be confirmed with re-testing of the downgradient wells per the 1-of-2 retesting scheme. If the initial exceedance is confirmed with re-testing results in the same well, the well-analyte pair will be declared a statistically significant increase (SSI) above background. If an SSI is found, a notification or alternate source demonstration will be prepared within 90 days. Any wells with re-testing results at or below the UPL, and at or greater than the LPL, will be considered in compliance and will not require further action. These re-testing results will be reported in the subsequent *Alternative Source Demonstration*.

Some upgradient datasets did not meet the minimum data requirements (eight detected values) for UPL calculations: JKS-48 Fluoride, JKS-55 Fluoride. These downgradient well-analyte pairs that exceeded these UPLs will need to be re-evaluated when more data is available for calculating UPLs.

All downgradient wells with initial exceedances were examined for trends to assess the stability of concentrations. A summary of these trend test results can be found in Appendix B, Table 6. Of the wells with potential SSIs, these wells have increasing trends:

- Boron: JKS-50R, JKS-52, and JKS-55.

and these wells have decreasing trends:

- Boron: JKS-49; and
- Fluoride: JKS-48.

All wells with potential SSIs are plotted in Appendix B, Figure 4. All potential SSIs are within one order of magnitude of their UPLs. Trends in these wells relative to UPLs will be monitored closely in future sampling events.

5. RECOMMENDATIONS

As noted above, JKS-70 was recently added to the groundwater monitoring network as an upgradient well for the BAPs. By incorporating the JKS-70 analytical results into the statistical analysis, the results lowered the previously determined UPLs for the BAPs and as such, additional potential exceedances were identified. However, there are only five data points from JKS-70 and additional analytical results from JKS-70 are needed to better assess and evaluate to potential for exceedances. CPS Energy will continue to evaluate additional data collected from JKS-70 and re-sample data collected from other wells in the monitoring network. Following the data evaluation, CPS Energy will prepare an *Alternative Source Demonstration* and will make a determination as to next steps.

Currently, there are no plans to transition between Detection Monitoring and Assessment Monitoring. Consistent with the 1-of-2 retesting approach described in the Unified Guidance (USEPA 2009) and the *GSAP*, initial exceedances may be retested within 90 days. Based on these findings, Detection Monitoring and/or Assessment Monitoring will be initiated as appropriate under 40 CFR §257.94 and 30 TAC §352.941, and 40 CFR §257.95 and 30 TAC §352.951.

6. REFERENCES

ERM, 2023. *Groundwater Monitoring System*. CPS Energy, Calaveras Power Station, San Antonio, Texas.

ERM, 2023. *Groundwater Sampling and Analysis Program*. CPS Energy, Calaveras Power Station, San Antonio, Texas.

USEPA. 2009. *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities*. Unified Guidance. USEPA/530/R/09/007. Office of Resource Conservation and Recovery. Washington, D.C.

TABLES

TABLE 1
Groundwater Elevations Summary
CPS Energy - Calaveras Power Station
Bottom Ash Ponds

		JKS-49 Downgradient		JKS-51 Upgradient		JKS-48 Downgradient		JKS-50R Downgradient	
		TOC Elevation	498.63	TOC Elevation	496.92	TOC Elevation	497.19	TOC Elevation	498.48
Sampling Event	Sampling Event Dates	Depth to Water (feet btoc)	Water Level (msl)	Depth to Water (feet btoc)	Water Level (msl)	Depth to Water (feet btoc)	Water Level (msl)	Depth to Water (feet btoc)	Water Level (msl)
1	12/6/16 to 12/8/16	8.81	489.82	10.76	486.16	11.47	485.72	12.50	485.98
2	2/21/17 to 2/23/17	8.56	490.07	10.80	486.12	11.80	485.39	12.70	485.78
3	3/28/17 to 3/30/17	8.90	489.73	10.59	486.33	11.64	485.55	12.32	486.16
4	5/2/17 to 5/4/17	8.85	489.78	10.56	486.36	11.72	485.47	12.49	485.99
5	6/20/17 to 6/21/17	8.75	489.88	10.56	486.36	12.00	485.19	12.81	485.67
6	7/25/17 to 7/26/17	8.46	490.17	10.68	486.24	11.91	485.28	12.78	485.70
7	8/29/17 to 8/30/17	7.21	491.42	10.48	486.44	11.77	485.42	12.53	485.95
8	10/10/17 to 10/11/17	11.17	487.46	10.98	485.94	12.24	484.95	13.44	485.04
9	4/4/18 to 4/5/18	9.00	489.63	10.93	485.99	12.15	485.04	14.03	484.45
10	10/30/18 to 10/31/18	6.88	491.75	10.45	486.47	11.73	485.46	12.08	486.40
11	4/9/19 to 4/10/19	12.52	486.11	11.02	485.90	11.80	485.39	13.10	485.38
12	10/22/19 to 10/23/19	14.84	483.79	12.00	484.92	12.57	484.62	14.10	484.38
13	4/28/20 to 4/29/20	13.58	485.05	11.79	485.13	12.41	484.78	13.66	484.82
14	10/20/20 to 10/21/20	14.42	484.21	12.11	484.81	12.39	484.80	13.98	484.50
15	4/13/21 to 4/14/21	13.60	485.03	11.80	485.12	12.33	484.86	13.73	484.75
16	10/19/21 to 10/20/21	13.33	485.30	11.67	485.25	12.20	484.99	12.77	485.71
17	4/13/22 to 4/14/22	14.16	484.47	12.25	484.67	12.60	484.59	14.19	484.29
18	10/25/22 to 10/26/22	14.81	483.82	12.53	484.39	12.48	484.71	14.17	484.31
18R	2/15/23 to 2/16/23	13.95	484.68	12.25	484.67	12.55	484.64	14.01	484.47
19	4/13/23 to 4/19/23	13.67	484.96	12.00	484.92	12.36	484.83	13.84	484.64
20	10/10/2023	14.11	484.52	12.05	484.87	12.40	484.79	14.07	484.41

		JKS-52 Downgradient		JKS-55 Downgradient		JKS-56 Downgradient		JKS-70 Downgradient	
		TOC Elevation	493.15	TOC Elevation	493.81	TOC Elevation	496.66	TOC Elevation	496.29
Sampling Event	Sampling Event Dates	Depth to Water (feet btoc)	Water Level (msl)	Depth to Water (feet btoc)	Water Level (msl)	Depth to Water (feet btoc)	Water Level (msl)	Depth to Water (feet btoc)	Water Level (msl)
1	12/6/16 to 12/8/16	7.53	485.62	8.15	485.66	11.12	485.54	-	-
2	2/21/17 to 2/23/17	7.43	485.72	8.51	485.30	10.90	485.76	-	-
3	3/28/17 to 3/30/17	7.33	485.82	8.25	485.56	10.50	486.16	-	-
4	5/2/17 to 5/4/17	7.35	485.80	8.40	485.41	10.65	486.01	-	-
5	6/20/17 to 6/21/17	7.46	485.69	8.79	485.02	11.00	485.66	-	-
6	7/25/17 to 7/26/17	7.50	485.65	8.77	485.04	10.95	485.71	-	-
7	8/29/17 to 8/30/17	7.40	485.75	8.59	485.22	10.72	485.94	-	-
8	10/10/17 to 10/11/17	7.53	485.62	8.92	484.89	11.61	485.05	-	-
9	4/4/18 to 4/5/18	8.48	484.67	8.90	484.91	11.13	485.53	-	-
10	10/30/18 to 10/31/18	8.33	484.82	8.25	485.56	10.27	486.39	-	-
11	4/9/19 to 4/10/19	7.65	485.50	8.60	485.21	11.30	485.36	-	-
12	10/22/19 to 10/23/19	9.40	483.75	9.64	484.17	12.34	484.32	-	-
13	4/28/20 to 4/29/20	8.20	484.95	9.19	484.62	11.78	484.88	-	-
14	10/20/20 to 10/21/20	8.07	485.08	9.49	484.32	12.10	484.56	-	-
15	4/13/21 to 4/14/21	8.04	485.11	9.19	484.62	11.85	484.81	-	-
16	10/19/21 to 10/20/2021	7.99	485.16	9.13	484.68	11.77	484.89	-	-
17	4/13/22 to 4/14/22	8.34	484.81	9.61	484.20	12.42	484.24	-	-
18	10/25/22 to 10/26/22	8.19	484.96	9.62	484.19	12.60	484.06	-	-
18R	2/15/23 to 2/16/23	8.20	484.95	9.45	484.36	12.15	484.51	11.20	485.09
19	4/13/23 to 4/19/23	8.02	485.13	9.22	484.59	11.95	484.71	11.02	485.27
20	10/10/2023	7.95	485.20	9.41	484.40	12.19	484.47	11.28	485.01

NOTES:
btoc = below top of casing
msl = mean sea level

TABLE 2
Groundwater Sampling Summary
CPS Energy - Calaveras Power Station
Bottom Ash Ponds

CCR Unit	Well ID	Well Function	Number of Samples Collected in 2016 - 2023	2016 - 2023 Sample Dates																					Monitoring Program
				12/6/16 to 12/8/16	2/21/17 to 2/23/17	3/28/17 to 3/30/17	5/2/17 to 5/4/17	6/20/17 to 6/21/17	7/25/17 to 7/26/17	8/29/17 to 8/30/17	10/10/17 to 10/11/17	4/4/18 to 4/5/18	10/30/18 to 10/31/18	4/9/19 to 4/10/19	10/22/19 to 10/23/19	4/28/20 to 4/29/20	10/20/20 to 10/21/20	4/13/21 to 4/14/21	10/19/21 to 10/20/21	4/13/22 to 4/14/22	10/25/22 to 10/26/22	2/15/23 to 2/22/23	4/13/23 to 4/19/23	8/13/23 to 8/23/23	10/10/23 to 10/18/23	
Bottom Ash Ponds	JKS-48	Downgradient Monitoring	18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	(2)	X	(2)	X	Detection
	JKS-49	Downgradient Monitoring	18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	(2)	X	(2)	X	Detection
	JKS-50R	Downgradient Monitoring	18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	(2)	X	(2)	X	Detection
	JKS-51	Upgradient Monitoring	18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	(2)	X	(2)	X	Detection
	JKS-52	Downgradient Monitoring	18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	(2)	X	(2)	X	Detection
	JKS-55	Downgradient Monitoring	18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	(2)	X	(2)	X	Detection
	JKS-56	Downgradient Monitoring	18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	(2)	X	(2)	X	Detection
	JKS-70	Upgradient Monitoring	5	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	X	X	X	X	X	Detection

NOTES:
X = Indicates that a sample was collected.
(1) = Well was installed in July 2022.
(2) = Not a routine sampling event for these wells.

TABLE 3
Groundwater Analytical Results Summary
CPS Energy - Calaveras Power Station
Bottom Ash Ponds

	JKS-49 Downgradient																			
Sample Date	**12/7/16**	**2/22/17**	**3/28/17**	**5/3/17**	**6/20/17**	**7/25/17**	**8/29/17**	**10/10/17**	**4/4/18**	**10/30/18**	**4/9/19**	**10/22/19**	**4/28/20**	**10/21/20**	**4/13/21**	**10/19/21**	**4/13/22**	**10/25/22**	**04/18/23**	**10/17/23**
Task	**Event 1**	**Event 2**	**Event 3**	**Event 4**	**Event 5**	**Event 6**	**Event 7**	**Event 8**	**Event 9**	**Event 10**	**Event 11**	**Event 12**	**Event 13**	**Event 14**	**Event 15**	**Event 16**	**Event 17**	**Event 18**	**Event 19**	**Event 20**
Constituents	**Dec 2016**	**Feb 2017**	**Mar 2017**	**May 2017**	**Jun 2017**	**Jul 2017**	**Aug 2017**	**Oct 2017**	**Apr 2018**	**Oct 2018**	**Apr 2019**	**Oct 2019**	**Apr 2020**	**Oct 2020**	**Apr 2021**	**Oct 2021**	**Apr 2022**	**Oct 2022**	**Apr 2023**	**Oct 2023**
Appendix III - Detection Monitoring																				
Boron	3.24	3.28	3.28	3.03 X	3.04 J	2.76	2.85	2.87	2.71	2.70	2.05	2.58	2.47	2.81	2.59	2.50	2.50	2.60	2.24	2.58
Calcium	130	146	173	113	127	120	145	147	135	117 D	154 D	127 D	114 J	132	133	119	117	117	106	120
Chloride	295 D	383 D	372 D	326	414 D	448 D	459 D	424	446 D	408	449	429	452	435	449	437	455	471	404 JH	437
Fluoride	0.715	0.643 JH	0.665 JH	0.809	0.627 JH	0.617 JH	0.525	0.712	0.697	0.719	0.749	0.793	0.894	0.656	0.729	0.018 U	0.561	0.018 U	0.289	0.753
Sulfate	211 D	232 D	234 D	194	218 D	227	265 D	219 X	237	237	240	205	217	193	211	232	228	225	202	226
pH - Field Collected	7.19	7.12	7.12	7.02	7.06	6.16	7.05	6.89	7.12	7.12	7.31	6.43	7.15	7.14	7.12	7.06	7.26	7.18	7.16	7.17
Total dissolved solids	1250	1240	1190	1100	1450	1440	1490	1730	1310	1210	1290	1380	1240	1380	1290	1300	1380	1340	1380	1320
Appendix IV - Assessment Monitoring																				
Antimony	0.00120 U	0.000240 U	0.000240 U	0.00173 J	0.00120 U	0.000240 U	0.000240 U	0.000240 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Arsenic	0.00123 U	0.000676 J	0.000729 J	0.00123 U	0.00123 U	0.000544 J	0.000538 J	0.000478 J	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Barium	0.0607	0.0575	0.0503	0.0554	0.0783	0.0721	0.0788	0.0735	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Beryllium	0.000654 U	0.000131 U	0.000131 U	0.000654 U	0.000654 U	0.000131 U	0.000131 U	0.000131 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Cadmium	0.000734 U	0.000147 U	0.000147 U	0.000734 U	0.000734 U	0.000147 U	0.000147 U	0.000147 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Chromium	0.00262 U	0.000859 J	0.000572 J	0.00262 U	0.00262 U	0.000963 J	0.000997 J	0.00113 J	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Cobalt	0.00102 J	0.00109 J	0.00124 J	0.00155 J	0.00133 J	0.00153 J	0.00155 J	0.00146 J	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Fluoride	0.715	0.643 JH	0.665 JH	0.809	0.627 JH	0.617 JH	0.525	0.712	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Lead	0.000758 U	0.000152 U	0.000152 U	0.000758 U	0.000758 U	0.000155 J	0.000152 U	0.000152 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Lithium	0.000476 U	0.000476 U	0.00238 U	0.0137 J	0.0341	0.0295	0.0427	0.0252	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Mercury	0.0000263 U	0.0000263 U	0.0000263 U	0.0000690 J	0.0000263 U	0.0000490 J	0.0000263 U	0.0000263 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Molybdenum	0.00779 J	0.00846	0.00875	0.0106	0.00908 J	0.00938	0.0107	0.0111	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Selenium	0.00992 J	0.00597	0.00479	0.00521 J	0.00370 J	0.00235	0.00188 J	0.00141 J	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Thallium	0.00166 U	0.000332 U	0.000332 U	0.00166 U	0.00166 U	0.000332 U	0.000332 U	0.000332 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Radium-226	0.198 ± 0.197	0.615 ± 0.272	0.747 ± 0.323	0.195 ± 0.167	0.294 ± 0.192	0.241 ± 0.193	0.159 ± 0.191	0.746 ± 0.274	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Radium-228	2.1 ± 0.907	-1.37 ± 1.37	0.854 ± 0.724	1.08 ± 1.72	2.23 ± 0.949	0.658 ± 0.636	0.812 ± 0.604	1.43 ± 0.898	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Radium-226/228 Combined	2.298 ± 1.104	-0.755 ± 1.642	1.601 ± 1.047	1.275 ± 1.887	2.524 ± 1.141	0.899 ± 0.829	0.971 ± 0.795	2.176 ± 1.172	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR

NOTES:
mg/L: Miligrams per Liter
SU: Standard Units
pCi/L: Picocuries per Liter.
'-- : Laboratory did not analyze sample for indicated constituent.
R: Resample event.
D: Sample diluted due to targets detected over highest point of calibration curve or due to matrix interference.
H: Bias in sample result likely to be high.
J: Analyte detected above method (sample) detection limit but below method quantitation limit.
L: Bias in sample result likely to be low.
NR: Analysis of this constituent not required for detection monitoring.
U: Analyte not detected at laboratory reporting limit (Sample Detection Limit).
X: Matrix Spike/Matrix Spike Duplicate recoveries were found to be outside of the laboratory control limits.

TABLE 3
Groundwater Analytical Results Summary
CPS Energy - Calaveras Power Station
Bottom Ash Ponds

	JKS-51 Upgradient																		
Sample Date	**12/8/16**	**2/22/17**	**3/28/17**	**5/3/17**	**6/21/17**	**7/25/17**	**8/29/17**	**10/10/17**	**4/4/18**	**10/30/18**	**4/9/19**	**10/22/19**	**4/28/20**	**10/20/20**	**4/13/21**	**10/20/21**	**4/13/22**	**10/25/22**	**04/19/23**	**10/18/23**
Task	**Event 1**	**Event 2**	**Event 3**	**Event 4**	**Event 5**	**Event 6**	**Event 7**	**Event 8**	**Event 9**	**Event 10**	**Event 11**	**Event 12**	**Event 13**	**Event 14**	**Event 15**	**Event 16**	**Event 17**	**Event 18**	**Event 19**	**Event 20**
Constituents	**Dec 2016**	**Feb 2017**	**Mar 2017**	**May 2017**	**Jun 2017**	**Jul 2017**	**Aug 2017**	**Oct 2017**	**Apr 2018**	**Oct 2018**	**Apr 2019**	**Oct 2019**	**Apr 2020**	**Oct 2020**	**Apr 2021**	**Oct 2021**	**Apr 2022**	**Oct 2022**	**Apr 2023**	**Oct 2023**
Appendix III - Detection Monitoring																				
Boron	0.512	0.517	0.473	0.565	0.512	0.525	0.453	0.509	0.465	0.347	0.489	0.648	0.627	0.668	0.579	0.665	0.634	0.711	0.52	0.656 JH
Calcium	267	292	322	266	261 X	232	236	256	246	149 D	328	336 D	334 J	298	314	321	362	316	211	236 J
Chloride	403 D	331 D	414 D	447	424 D	455 D	384 D	375	395 D	301	559	574 D	555	493	522	543	549	620	403 JH	437
Fluoride	0.247	0.341 JH	0.415 JH	0.534	0.354	0.391	0.0960 U	0.407 JH	0.305 J	0.291 J	0.329 J	0.405 J	0.470	0.018 U	0.292	0.018 U	0.224	0.295	0.283	<0.018
Sulfate	293 D	330 D	348 D	359	342 D	330 D	314 D	302	354 D	260	428	405 D	439	376	382	421	445	503	295	310
pH - Field Collected	6.59	6.51	6.48	6.56	6.40	5.48	6.38	6.20	6.44	6.70	6.66	5.73	6.43	6.47	6.42	6.32	6.54	6.44	6.36	6.39
Total dissolved solids	1650	1650	1490	1980	1530	1580	1390	1650	1320	916	1890	2150	2010	1930	2190	2260	2720	2490	1620	1550
Appendix IV - Assessment Monitoring																				
Antimony	0.00120 U	0.000240 U	0.000240 U	0.00120 U	0.000953 J	0.000240 U	0.000240 U	0.000240 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Arsenic	0.00123 U	0.000412 J	0.000390 J	0.00123 U	0.000392 J	0.000344 J	0.000395 J	0.000418 J	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Barium	0.0655	0.0563	0.0517	0.0512	0.0534	0.0520	0.0520	0.0564	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Beryllium	0.000654 U	0.000131 U	0.000131 U	0.000654 U	0.000212 J	0.000131 U	0.000131 U	0.000131 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Cadmium	0.000734 U	0.000147 U	0.000147 U	0.000734 U	0.000147 U	0.000147 U	0.000147 U	0.000147 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Chromium	0.00262 U	0.000941 J	0.000525 U	0.00262 U	0.000657 J	0.000874 J	0.00113 J	0.00133 J	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Cobalt	0.000350 U	0.0000770 J	0.0000920 J	0.000350 U	0.000124 J	0.0000940 J	0.0000800 J	0.000108 J	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Fluoride	0.247	0.341 JH	0.415 JH	0.534	0.354	0.391	0.0960 U	0.407 JH	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Lead	0.000758 U	0.000152 U	0.000152 U	0.000758 U	0.000152 U	0.000152 U	0.000152 U	0.000152 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Lithium	0.000476 U	0.000476 U	0.00238 U	0.0322	0.0874	0.0790	0.0958 JX	0.0718	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Mercury	0.0000263 U	0.0000263 U	0.0000263 U	0.0000263 U	0.0000263 U	0.000199 J	0.0000263 U	0.0000263 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Molybdenum	0.00128 U	0.000255 U	0.000255 U	`	0.000255 U	0.000255 U	0.000255 U	0.000255 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Selenium	0.00227 U	0.000454 U	0.000454 U	0.00227 U	0.000454 U	0.000454 U	0.000454 U	0.000454 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Thallium	0.00166 U	0.000332 U	0.000332 U	0.00166 U	0.000332 U	0.000332 U	0.000332 U	0.000332 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Radium-226	1.09 ± 0.376	0.104 ± 0.122	0.618 ± 0.247	0.197 ± 0.145	0.328 ± 0.195	0.0847 ± 0.186	4.83 ± 0.763	0.682 ± 0.309	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Radium-228	0.312 ± 0.688	1.09 ± 1.37	2.32 ± 1.45	-1.26 ± 1.37	-0.799 ± 0.928	1.57 ± 0.786	0.762 ± 0.706	0.963 ± 0.954	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Radium-226/228 Combined	1.402 ± 1.064	1.194 ± 1.492	2.938 ± 1.697	-1.063 ± 1.515	-0.471 ± 1.123	1.6547 ± 0.972	5.592 ± 1.469	1.645 ± 1.263	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR

NOTES:
mg/L: Miligrams per Liter
SU: Standard Units
pCi/L: Picocuries per Liter.
'-- : Laboratory did not analyze sample for indicated constituent.
R: Resample event.
D: Sample diluted due to targets detected over highest point of calibration curve or due to matrix interference.
H: Bias in sample result likely to be high.
J: Analyte detected above method (sample) detection limit but below method quantitation limit.
L: Bias in sample result likely to be low.
NR: Analysis of this constituent not required for detection monitoring.
U: Analyte not detected at laboratory reporting limit (Sample Detection Limit).
X: Matrix Spike/Matrix Spike Duplicate recoveries were found to be outside of the laboratory control limits.

TABLE 3
Groundwater Analytical Results Summary
CPS Energy - Calaveras Power Station
Bottom Ash Ponds

	JKS-48 Downgradient																		
Sample Date	**12/7/16**	**2/22/17**	**3/30/17**	**5/2/17**	**6/20/17**	**7/25/17**	**8/29/17**	**10/10/17**	**4/4/18**	**10/30/18**	**4/9/19**	**10/22/19**	**4/28/20**	**10/21/20**	**4/13/21**	**10/20/21**	**4/13/22**	**10/25/22**	**04/19/23**	**10/17/23**
Task	**Event 1**	**Event 2**	**Event 3**	**Event 4**	**Event 5**	**Event 6**	**Event 7**	**Event 8**	**Event 9**	**Event 10**	**Event 11**	**Event 12**	**Event 13**	**Event 14**	**Event 15**	**Event 16**	**Event 17**	**Event 18**	**Event 19**	**Event 20**
Constituents	**Dec 2016**	**Feb 2017**	**Mar 2017**	**May 2017**	**Jun 2017**	**Jul 2017**	**Aug 2017**	**Oct 2017**	**Apr 2018**	**Oct 2018**	**Apr 2019**	**Oct 2019**	**Apr 2020**	**Oct 2020**	**Apr 2021**	**Oct 2021**	**Apr 2022**	**Oct 2022**	**Apr 2023**	**Oct 2023**
Appendix III - Detection Monitoring																				
Boron	2.21	2.14	--	2.08	2.13	2.15 X	2.02	2.23	2.03	2.13	2.22	2.27	2.36	2.36	2.19	2.33	2.23	2.22	1.93	2.00
Calcium	130	139	125	NR	111	136 X	134	147	143	128 D	166 D	135 D	130 J	142	140	130	124	128	118	139
Chloride	395 D	408 D	435 D	427	440 D	465 D	166 D	427	433 D	438	467	446	485	446	477	458	481	497	434 JH	467
Fluoride	1.43	1.21 JH	1.62	1.41 JH	1.07	1.62	0.0960 U	1.22	1.35	1.31	1.46	1.25	0.051 JH	1.05	1.06	0.018 U	0.810	0.821	0.964	1.06
Sulfate	239 D	251 D	266 D	259	253 D	244	140 D	257	282 D	266	271	213	206	170	187	224	199	208	182	212
pH - Field Collected	7.06	6.92	6.86	6.99	6.88	5.92	6.90	6.74	6.91	6.92	7.06	6.12	6.89	6.83	6.8	6.72	6.94	6.8	6.72	6.82
Total dissolved solids	1400	1270	1440	1490	1540	1380 J	850	1470	1400	1410	1420	1520	1400	1300	1420	1470	1480	1430	1370	1420
Appendix IV - Assessment Monitoring																				
Antimony	0.00120 U	0.000240 U	--	0.000240 U	0.00120 U	0.00129 J	0.000240 U	0.000240 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Arsenic	0.00123 U	0.000538 J	--	0.000424 J	0.00123 U	0.000452 J	0.000459 J	0.000475 J	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Barium	0.0717	0.0699	--	0.0659	0.0686	0.0769	0.0725	0.0761	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Beryllium	0.000654 U	0.000131 U	--	0.000131 U	0.000654 U	0.000233 J	0.000131 U	0.000131 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Cadmium	0.000734 U	0.000147 U	--	0.000147 U	0.000734 U	0.000147 U	0.000147 U	0.000147 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Chromium	0.00262 U	0.000608 J	--	0.000525 U	0.00262 U	0.000525 U	0.000863 J	0.00130 J	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Cobalt	0.00111 J	0.000844 J	--	0.000920 J	0.000987 J	0.00137 J	0.000917 J	0.00106 J	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Fluoride	1.43	1.21 JH	1.62	1.41	1.07	1.62	0.0960 U	1.22	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Lead	0.000758 U	0.000152 U	--	0.000152 U	0.000758 U	0.000152 U	0.000152 U	0.000203 J	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Lithium	0.000476 U	0.000476 U	0.00238 U	NR	0.0536	0.0501	0.0700	0.0551	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Mercury	0.0000263 U	0.0000263 U	0.0000263 U	0.0000310 JX	0.0000263 U	0.0000263 UX	0.0000263 U	0.0000263 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Molybdenum	0.00128 U	0.000422 J	--	0.000263 J	0.00128 U	0.000344 J	0.000255 U	0.000255 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Selenium	0.00227 U	0.000454 U	--	0.000454 U	0.00227 U	0.000454 U	0.000454 U	0.000454 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Thallium	0.00166 U	0.000332 U	--	0.000332 U	0.00166 U	0.000332 U	0.000332 U	0.000332 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Radium-226	0.139 ± 0.250	0.251 ± 0.149	0.0232 ± 0.136	0.357 ± 0.174	0.46 ± 0.235	0.544 ± 0.259	0.562 ± 0.283	0.26 ± 0.241	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Radium-228	0.847 ± 1.14	0.317 ± 1.15	1.1 ± 0.737	-0.109 ± 1.35	0.284 ± 0.662	0.273 ± 0.867	0.459 ± 0.649	0.772 ± 0.931	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Radium-226/228 Combined	0.986 ± 1.39	0.568 ± 1.299	1.1232 ± 0.873	0.248 ± 1.524	0.744 ± 0.897	0.817 ± 1.126	1.021 ± 0.932	1.032 ± 1.172	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR

NOTES:
mg/L: Miligrams per Liter
SU: Standard Units
pCi/L: Picocuries per Liter.
'-- : Laboratory did not analyze sample for indicated constituent.
R: Resample event.
D: Sample diluted due to targets detected over highest point of calibration curve or due to matrix interference.
H: Bias in sample result likely to be high.
J: Analyte detected above method (sample) detection limit but below method quantitation limit.
L: Bias in sample result likely to be low.
NR: Analysis of this constituent not required for detection monitoring.
U: Analyte not detected at laboratory reporting limit (Sample Detection Limit).
X: Matrix Spike/Matrix Spike Duplicate recoveries were found to be outside of the laboratory control limits.

TABLE 3
Groundwater Analytical Results Summary
CPS Energy - Calaveras Power Station
Bottom Ash Ponds

	JKS-50R Downgradient																						
Sample Date	**12/7/16**	**2/22/17**	**3/28/17**	**5/3/17**	**6/20/17**	**7/25/17**	**8/29/17**	**10/10/17**	**4/4/18**	**10/30/18**	**4/9/19**	**10/22/19**	**2/25/20**	**4/28/20**	**10/21/20**	**2/24/21**	**4/13/21**	**10/19/21**	**2/22/22**	**4/14/22**	**10/25/22**	**2/22/23**	**04/18/23**	**10/17/23**
Task	**Event 1**	**Event 2**	**Event 3**	**Event 4**	**Event 5**	**Event 6**	**Event 7**	**Event 8**	**Event 9**	**Event 10**	**Event 11**	**Event 12**	**Event 12R**	**Event 13**	**Event 14**	**Event 14R**	**Event 15**	**Event 16**	**Event 16R**	**Event 17**	**Event 18**	**Event 18R**	**Event 19**	**Event 20**
Constituents	**Dec 2016**	**Feb 2017**	**Mar 2017**	**May 2017**	**Jun 2017**	**Jul 2017**	**Aug 2017**	**Oct 2017**	**Apr 2018**	**Oct 2018**	**Apr 2019**	**Oct 2019**	**Feb 2020**	**Apr 2020**	**Oct 2020**	**Feb 2021**	**Apr 2021**	**Oct 2021**	**Feb 2022**	**Apr 2022**	**Oct 2022**	**Feb 2023**	**Apr 2023**	**Oct 2023**
Appendix III - Detection Monitoring																								
Boron	4.70	5.18	5.87	5.92	4.87	4.38	4.18	4.54	3.52	5.17	5.85	6.93	6.36	5.52	6.79	5.62	5.18	6.87	6.59	6.28	7.00	6.15	5.15	6.11
Calcium	126	134	189	120	125	108	130	132	127	116 D	159 D	135 D	--	126 J	140	--	139	126	--	128	129	--	119	131
Chloride	47.7 X	49.0 J	63.9	81.3	111	123	141 D	100	170	87.9	70.0	60.3	--	102	69.8	--	110	57.4	--	70.0	64.8	--	84.8 JH	79.8
Fluoride	0.316	0.331 JH	0.447 JH	0.528	0.387 JH	0.390 JH	0.0960 U	0.427 JH	0.335 J	0.392 J	0.319 J	0.380 J	--	0.510	0.332	--	0.336	0.018 U	--	0.284	0.378	--	0.31	0.312
Sulfate	137 X	146	156	160	146	148	195 D	144	131	141	168	172	--	194	171	--	182	181	--	189	190	--	171	188
pH - Field Collected	6.83	6.77	NR	6.80	6.63	5.69	6.62	6.43	6.67	6.61	6.80	5.85	5.84	6.65	6.63	6.62	6.70	6.53	6.74	6.66	6.51	6.54	6.60	6.57
Total dissolved solids	737	808	789	902	914	856	992	947	883	688	842	899	--	918	863	--	942	838	--	887	693	--	1030	942
Appendix IV - Assessment Monitoring																								
Antimony	0.00120 U	0.000240 U	0.000240 U	0.00120 U	0.00120 U	0.000240 U	0.000240 U	0.000240 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Arsenic	0.00123 U	0.00111 J	0.000735 J	0.00123 U	0.00123 U	0.000520 J	0.000545 J	0.000596 J	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Barium	0.133	0.128	0.113	0.117	0.125	0.117	0.123	0.118	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Beryllium	0.000654 U	0.000147 J	0.000187 J	0.000654 U	0.000654 U	0.000131 U	0.000131 U	0.000174 J	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Cadmium	0.000734 U	0.000147 U	0.000147 U	0.000734 U	0.000734 U	0.000147 U	0.000147 U	0.000189 J	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Chromium	0.00262 U	0.00251 J	0.00169 J	0.00262 U	0.00262 U	0.000788 J	0.000759 J	0.00108 J	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Cobalt	0.00305 J	0.00345	0.00251	0.00215 J	0.00191 J	0.00216	0.00233	0.00285	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Fluoride	0.316	0.331 JH	0.447 JH	0.528	0.387 JH	0.390 JH	0.0960 U	0.427 JH	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Lead	0.000796 J	0.000988 J	0.000627 J	0.000758 U	0.000758 U	0.000178 J	0.000152 U	0.000168 J	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Lithium	0.000476 U	0.000476 U	0.00238 U	0.000476 U	0.00209 J	0.000476 U	0.00621 J	0.000476 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Mercury	0.0000263 U	0.0000263 U	0.0000263 U	0.0000263 U	0.0000263 U	0.0000263 U	0.0000263 U	0.0000263 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Molybdenum	0.00150 J	0.00153 J	0.00125 J	0.00128 U	0.00128 U	0.00102 J	0.00104 J	0.00108 J	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Selenium	0.00227 U	0.000514 J	0.000454 U	0.00227 U	0.00227 U	0.000454 U	0.000454 U	0.000454 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Thallium	0.00166 U	0.000332 U	0.000332 U	0.00166 U	0.00166 U	0.000332 U	0.000332 U	0.000332 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Radium-226	0.102 ± 0.173	0.479 ± 0.216	-0.0714 ± 0.168	0.197 ± 0.183 U	0.245 ± 0.204	0.408 ± 0.226	0 ± 0.176	0.815 ± 0.292	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Radium-228	1.99 ± 1.31	-0.428 ± 1.24	0.665 ± 1.14	0.00273 ± 1.33 U	0.783 ± 0.638	1.08 ± 0.832	0.0172 ± 1.12	1.5 ± 0.842	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Radium-226/228 Combined	2.092 ± 1.483	0.051 ± 1.456	0.594 ± 1.308	0.200 ± 1.46 U	1.028 ± 0.842	1.488 ± 1.058	0.0172±1.296	2.315 ± 1.134	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR

NOTES:
mg/L: Miligrams per Liter
SU: Standard Units
pCi/L: Picocuries per Liter.
'-- : Laboratory did not analyze sample for indicated constituent.
R: Resample event.
D: Sample diluted due to targets detected over highest point of calibration curve or due to matrix interference.
H: Bias in sample result likely to be high.
J: Analyte detected above method (sample) detection limit but below method quantitation limit.
L: Bias in sample result likely to be low.
NR: Analysis of this constituent not required for detection monitoring.
U: Analyte not detected at laboratory reporting limit (Sample Detection Limit).
X: Matrix Spike/Matrix Spike Duplicate recoveries were found to be outside of the laboratory control limits.

TABLE 3
Groundwater Analytical Results Summary
CPS Energy - Calaveras Power Station
Bottom Ash Ponds

	JKS-52 Downgradient																			
Sample Date	**12/7/16**	**2/21/17**	**3/28/17**	**5/2/17**	**6/21/17**	**7/25/17**	**8/29/17**	**10/10/17**	**4/4/18**	**10/30/18**	**4/9/19**	**10/22/19**	**4/28/20**	**10/21/20**	**4/13/21**	**10/20/21**	**4/13/22**	**10/25/22**	**2/22/23**	**04/19/23**	**10/17/23**
Task	**Event 1**	**Event 2**	**Event 3**	**Event 4**	**Event 5**	**Event 6**	**Event 7**	**Event 8**	**Event 9**	**Event 10**	**Event 11**	**Event 12**	**Event 13**	**Event 14**	**Event 15**	**Event 16**	**Event 17**	**Event 18**	**Event 18R**	**Event 19**	**Event 20**
Constituents	**Dec 2016**	**Feb 2017**	**Mar 2017**	**May 2017**	**Jun 2017**	**Jul 2017**	**Aug 2017**	**Oct 2017**	**Apr 2018**	**Oct 2018**	**Apr 2019**	**Oct 2019**	**Apr 2020**	**Oct 2020**	**Apr 2021**	**Oct 2021**	**Apr 2022**	**Oct 2022**	**Feb 2023**	**Apr 2023**	**Oct 2023**
Appendix III - Detection Monitoring																					
Boron	1.66	2.11	1.63	1.51	1.33	1.43	1.46	1.71 X	1.95	1.54	1.46 X	1.65	2.05	2.21	2.51	1.69	1.84	2.37	2.69	2.47	2.66
Calcium	169	181	189	--	145	140	162	168	175	153 D	195 DX	171 D	174 J	199	209	171	161	192	NS	179	208
Chloride	331 D	377 D	323 DX	320	326 D	343 D	417 D	355	360 D	326	336	320	433	408	470	336	381	467	NS	412 JH	438
Fluoride	0.796	0.665	0.718 JH	0.915 JH	0.705	0.996 JH	0.0960 U	0.740	0.720	0.710	0.831	0.808	0.908	0.659	0.601	0.440 U	0.418	0.686	NS	0.626	0.018 U
Sulfate	277 D	318 D	299 DX	290	287 D	292 D	171 D	289	278 D	292	268	288 D	315	282	292	282	299	319	NS	256	287
pH - Field Collected	7.01	6.47	6.91	6.94	6.87	5.87	6.81	6.63	6.79	6.76	6.91	6.00	6.83	6.78	6.70	6.71	6.97	6.80	6.74	6.74	6.78
Total dissolved solids	1290	1380	1100	1250	1280	1250	1250	1220	1240	1210	1170	1270	1470	1430	1590	1290	1470	1540	NS	1650	1520
Appendix IV - Assessment Monitoring																					
Antimony	0.00120 U	0.000240 U	0.000240 U	0.000240 U	0.000240 U	0.000240 U	0.000240 U	0.000240 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Arsenic	0.00123 U	0.000565 J	0.000398 J	0.000425 J	0.000427 J	0.000392 J	0.000412 J	0.000448 J	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Barium	0.0646	0.0583	0.0519	0.0483	0.0527	0.0558	0.0565	0.0616	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Beryllium	0.000654 U	0.000131 U	0.000131 U	0.000131 U	0.000131 U	0.000131 U	0.000131 U	0.000153 J	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Cadmium	0.000734 U	0.000147 U	0.000147 U	0.000147 U	0.000147 U	0.000147 U	0.000147 U	0.000147 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Chromium	0.00262 U	0.000525 U	0.000525 U	0.000525 U	0.000841 J	0.000860 J	0.00123 J	0.00108 J	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Cobalt	0.00188 J	0.00233	0.00112 J	0.00119 J	0.00211	0.00183 J	0.00159 J	0.00189 J	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Fluoride	0.796	0.665	0.718 JH	0.915 JH	0.705	0.996 JH	0.0960 U	0.740	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Lead	0.000758 U	0.000152 U	0.000152 U	0.000152 U	0.000292 J	0.000152 U	0.000152 U	0.000163 J	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Lithium	0.000476 U	0.0471	0.000476 U	--	0.0616	0.0605	0.0827	0.0588	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Mercury	0.0000263 U	0.000234	0.0000263 U	0.0000263 U	0.0000263 U	0.0000810 J	0.0000263 U	0.0000263 UX	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Molybdenum	0.00128 U	0.00128 J	0.00115 J	0.00102 J	0.000911 J	0.000865 J	0.000843 J	0.000914 J	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Selenium	0.00227 U	0.000454 U	0.000454 U	0.000454 U	0.000454 U	0.000454 U	0.000454 U	0.000454 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Thallium	0.00166 U	0.000332 U	0.000332 U	0.000332 U	0.000332 U	0.000332 U	0.000332 U	0.000332 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Radium-226	1.71 ± 0.465	0.608 ± 0.289	0.296 ± 0.169	0 ± 0.150	0.435 ± 0.241	0.449 ± 0.196	0.194 ± 0.194	0.704 ± 0.319	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Radium-228	2.65 ± 1.12	0.744 ± 0.833	0.0645 ± 0.649	0.53 ± 1.10	0.928 ± 0.784	1.16 ± 0.867	0.716 ± 0.767	1.54 ± 1.22	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Radium-226/228 Combined	4.36 ± 1.585	1.352 ± 1.122	0.3605 ± 0.818	0.53 ± 1.250	1.363 ± 1.025	1.609 ± 1.063	0.91 ± 0.961	2.244 ± 1.539	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR

NOTES:
mg/L: Miligrams per Liter
SU: Standard Units
pCi/L: Picocuries per Liter.
'-- : Laboratory did not analyze sample for indicated constituent.
R: Resample event.
D: Sample diluted due to targets detected over highest point of calibration curve or due to matrix interference.
H: Bias in sample result likely to be high.
J: Analyte detected above method (sample) detection limit but below method quantitation limit.
L: Bias in sample result likely to be low.
NR: Analysis of this constituent not required for detection monitoring.
U: Analyte not detected at laboratory reporting limit (Sample Detection Limit).
X: Matrix Spike/Matrix Spike Duplicate recoveries were found to be outside of the laboratory control limits.

TABLE 3
Groundwater Analytical Results Summary
CPS Energy - Calaveras Power Station
Bottom Ash Ponds

	JKS-55 Downgradient																			
Sample Date	**12/7/16**	**2/22/17**	**3/28/17**	**5/3/17**	**6/20/17**	**7/25/17**	**8/29/17**	**10/10/17**	**4/4/18**	**10/30/18**	**4/9/19**	**10/22/19**	**4/28/20**	**10/21/20**	**4/13/21**	**10/19/21**	**4/14/22**	**10/25/22**	**04/18/23**	**10/17/23**
Task	**Event 1**	**Event 2**	**Event 3**	**Event 4**	**Event 5**	**Event 6**	**Event 7**	**Event 8**	**Event 9**	**Event 10**	**Event 11**	**Event 12**	**Event 13**	**Event 14**	**Event 15**	**Event 16**	**Event 17**	**Event 18**	**Event 19**	**Event 20**
Constituents	**Dec 2016**	**Feb 2017**	**Mar 2017**	**May 2017**	**Jun 2017**	**Jul 2017**	**Aug 2017**	**Oct 2017**	**Apr 2018**	**Oct 2018**	**Apr 2019**	**Oct 2019**	**Apr 2020**	**Oct 2020**	**Apr 2021**	**Oct 2021**	**Apr 2022**	**Oct 2022**	**Apr 2023**	**Oct 2023**
Appendix III - Detection Monitoring																				
Boron	0.716	0.716	0.785	0.710	0.787	0.651	0.687	0.759	0.645	0.611	0.740	0.771	0.779	0.815	0.762	0.826	0.778	0.850	0.794	0.928
Calcium	143	153	181	133	133	118	136	146	134	119 D	165 D	145 D	137 J	154	146	139	131	133	126	131
Chloride	384 DX	50.5	403 D	388	395 D	400 D	168 D	386	387 D	429	438	432	452	431	440	424	443 JH	456	406	430
Fluoride	0.857	0.352 JH	0.746 JH	0.891	1.14	1.08 JH	0.0960 U	0.864	0.791	0.820	0.822	0.832	1.01	0.727	0.857	0.880 U	0.557	0.868	0.844	0.822
Sulfate	164 X	147	172	173	164	166	139 D	157	168	155	168	159	177	164	173	182	178	180	173	194
pH - Field Collected	6.85	6.80	6.81	6.82	6.72	5.77	6.72	6.53	6.75	6.70	6.90	5.96	6.81	6.77	6.78	6.68	6.84	6.73	6.80	6.74
Total dissolved solids	1430	1380	1290	1310	1500	1270	826	1470	1300	1190	1420	1370	1350	1380	1390	1440	1370	1540	1380	1360
Appendix IV - Assessment Monitoring																				
Antimony	0.00120 U	0.000240 U	0.000240 U	0.00120 U	0.00120 U	0.000240 U	0.000240 U	0.000240 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Arsenic	0.00123 U	0.000650 J	0.000520 J	0.00123 U	0.00123 U	0.000507 J	0.000582 J	0.000599 J	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Barium	0.103	0.0876	0.0823	0.0758	0.0828	0.0780	0.0801	0.0816	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Beryllium	0.000654 U	0.000131 U	0.000134 J	0.000654 U	0.000654 U	0.000131 U	0.000131 U	0.000131 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Cadmium	0.000734 U	0.000147 U	0.000147 U	0.000734 U	0.000734 U	0.000147 U	0.000147 U	0.000147 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Chromium	0.00262 U	0.000625 J	0.000525 U	0.00262 U	0.00262 U	0.000525 U	0.000797 J	0.000903 J	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Cobalt	0.00702 J	0.00516	0.00579	0.00750 J	0.00642 J	0.00562	0.00565	0.00565	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Fluoride	0.857	0.352 JH	0.746 JH	0.891	1.14	1.08 JH	0.0960 U	0.864	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Lead	0.000758 U	0.000152 U	0.000152 U	0.000758 U	0.000758 U	0.000152 U	0.000152 U	0.000152 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Lithium	0.000476 U	0.000476 U	0.00238 U	0.0136 J	0.0425	0.0354	0.0495	0.0338	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Mercury	0.0000263 U	0.0000263 U	0.0000263 UX	0.0000263 U	0.0000263 UX	0.0000263 U	0.0000263 U	0.0000263 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Molybdenum	0.00130 J	0.00123 J	0.00108 J	0.00128 U	0.00128 U	0.000804 J	0.000898 J	0.000837 J	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Selenium	0.00227 U	0.000454 U	0.000454 U	0.00227 U	0.00227 U	0.000454 U	0.000454 U	0.000454 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Thallium	0.00166 U	0.000332 U	0.000332 U	0.00166 U	0.00166 U	0.000332 U	0.000332 U	0.000332 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Radium-226	0.694 ± 0.358	0.721 ± 0.320	0.745 ± 0.258	0.576 ± 0.261	0.305 ± 0.190	0.0212 ± 0.171	0.327 ± 0.233	0.588 ± 0.314	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Radium-228	3.76 ± 1.33	1.87 ± 1.01	-0.0356 ± 1.09	1.01 ± 1.02	0.591 ± 0.843	0.532 ± 0.795	0.234 ± 0.821	1.24 ± 0.848	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Radium-226/228 Combined	4.454 ± 1.688	2.591 ± 1.33	0.709 ± 1.348	1.586 ± 1.281	0.896 ± 1.033	0.5532 ± 0.966	0.561 ± 1.054	1.828 ± 1.162	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR

NOTES:
mg/L: Miligrams per Liter
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pCi/L: Picocuries per Liter.
'-- : Laboratory did not analyze sample for indicated constituent.
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NR: Analysis of this constituent not required for detection monitoring.
U: Analyte not detected at laboratory reporting limit (Sample Detection Limit).
X: Matrix Spike/Matrix Spike Duplicate recoveries were found to be outside of the laboratory control limits.

TABLE 3
Groundwater Analytical Results Summary
CPS Energy - Calaveras Power Station
Bottom Ash Ponds

	JKS-56 Downgradient																				
Sample Date	**12/7/16**	**2/22/17**	**3/30/17**	**5/3/17**	**6/20/17**	**7/25/17**	**8/29/17**	**10/10/17**	**4/4/18**	**10/30/18**	**4/9/19**	**10/22/19**	**2/25/20**	**4/28/20**	**10/21/20**	**4/13/21**	**10/19/21**	**2/22/22**	**4/23/22**	**10/25/22**	**04/19/23**	**10/17/23**
Task	**Event 1**	**Event 2**	**Event 3**	**Event 4**	**Event 5**	**Event 6**	**Event 7**	**Event 8**	**Event 9**	**Event 10**	**Event 11**	**Event 12**	**Event 12R**	**Event 13**	**Event 14**	**Event 15**	**Event 16**	**Event 16R**	**Event 17**	**Event 18**	**Event 19**	**Event 20**
Constituents	**Dec 2016**	**Feb 2017**	**Mar 2017**	**May 2017**	**Jun 2017**	**Jul 2017**	**Aug 2017**	**Oct 2017**	**Apr 2018**	**Oct 2018**	**Apr 2019**	**Oct 2019**	**Feb 2020**	**Apr 2020**	**Oct 2020**	**Apr 2021**	**Oct 2021**	**Feb 2022**	**Apr 2022**	**Oct 2022**	**Apr 2023**	**Oct 2023**
Appendix III - Detection Monitoring																						
Boron	3.97	4.13	--	4.60	3.98	3.60	3.60 X	3.48	3.95	3.95	3.85	4.47	4.04	3.55	4.00	3.16	4.31	4.06	3.83	3.92	2.86	3.35
Calcium	137	143	127	124	136	116	137	146	126	121 D	150 D	131 D	NS	103 J	120	111	120	--	110	109	92	106
Chloride	131	95.7	96.3	95.6	114	126	146 D	150	121	108 JL	81.0	81.2	NS	101	77.2	176	71.3	--	100	97.2	138 JH	133
Fluoride	0.344	0.354 JH	0.333	0.564	0.407 JH	0.401 JH	0.0960 U	0.448 JH	0.37 J	0.428 J	0.372 J	0.452 J	NS	0.552	0.418	0.403	0.992	0.178	0.367	0.475	0.398	0.448
Sulfate	193	190	188	183	186	194	201 D	200	193	192	193	194	NS	138	140	64.0	181	--	121	111	39.80	0.62
pH - Field Collected	6.73	6.63	6.56	6.71	6.56	5.63	6.57	6.38	6.64	6.55	6.76	5.84	5.98	6.72	6.63	6.7	6.59	6.8	6.81	6.54	6.68	6.68
Total dissolved solids	1100	969	1020	997	1060	1060	986	1240	992	976	918	968	NS	904	847	838	870	--	838	861	791	840
Appendix IV - Assessment Monitoring																						
Antimony	0.00120 U	0.000240 U	--	0.00120 U	0.00120 U	0.000240 U	0.00104 J	0.000240 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Arsenic	0.00527 J	0.00425	--	0.00350 J	0.00435 J	0.00373	0.00517	0.00451	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Barium	0.126	0.0974	--	0.0890	0.0921	0.0897	0.103	0.0909	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Beryllium	0.000654 U	0.000131 U	--	0.000654 U	0.000654 U	0.000131 U	0.000136 J	0.000131 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Cadmium	0.000734 U	0.000147 U	--	0.000734 U	0.000734 U	0.000147 U	0.000147 U	0.000147 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Chromium	0.00262 U	0.000654 J	--	0.00276 J	0.00262 U	0.000525 U	0.00498	0.00141 J	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Cobalt	0.00560 J	0.00564	--	0.00641 J	0.00687 J	0.00668	0.00771	0.00746	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Fluoride	0.344	0.354 JH	0.333	0.564	0.407 JH	0.401 JH	0.0960 U	0.448 JH	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Lead	0.000758 U	0.000152 U	--	0.000758 U	0.000758 U	0.000152 U	0.000211 J	0.000152 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Lithium	0.000476 U	0.000476 U	0.000476 U	0.000476 U	0.00156 J	0.000476 U	0.00598 J	0.000476 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Mercury	0.0000263 U	0.0000263 U	0.0000263 U	0.0000700 J	0.0000263 UX	0.0000263 U	0.0000263 UX	0.0000263 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Molybdenum	0.00360 J	0.00190 J	--	0.00168 J	0.00152 J	0.00156 J	0.00160 J	0.00155 J	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Selenium	0.00227 U	0.000454 U	--	0.00227 U	0.00227 U	0.000454 U	0.000454 U	0.000454 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Thallium	0.00166 U	0.000332 U	--	0.00166 U	0.00166 U	0.000332 U	0.000332 U	0.000332 U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Radium-226	1.23 ± 0.430	0.254 ± 0.175	0.372 ± 0.215	0.138 ± 0.166	0.273 ± 0.253	0.177 ± 0.213	0.441 ± 0.225	0.397 ± 0.252	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Radium-228	0.949 ± 1.38	3.07 ± 1.28	1.09 ± 0.897	1.97 ± 1.35	1.27 ± 0.994	1.16 ± 0.862	1.45 ± 0.895	3.36 ± 1.42	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Radium-226/228 Combined	2.179 ± 1.81	3.324 ± 1.455	1.462 ± 1.112	2.108 ± 1.516	1.543 ± 1.247	1.337 ± 1.075	1.891 ± 1.12	3.757 ± 1.672	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR

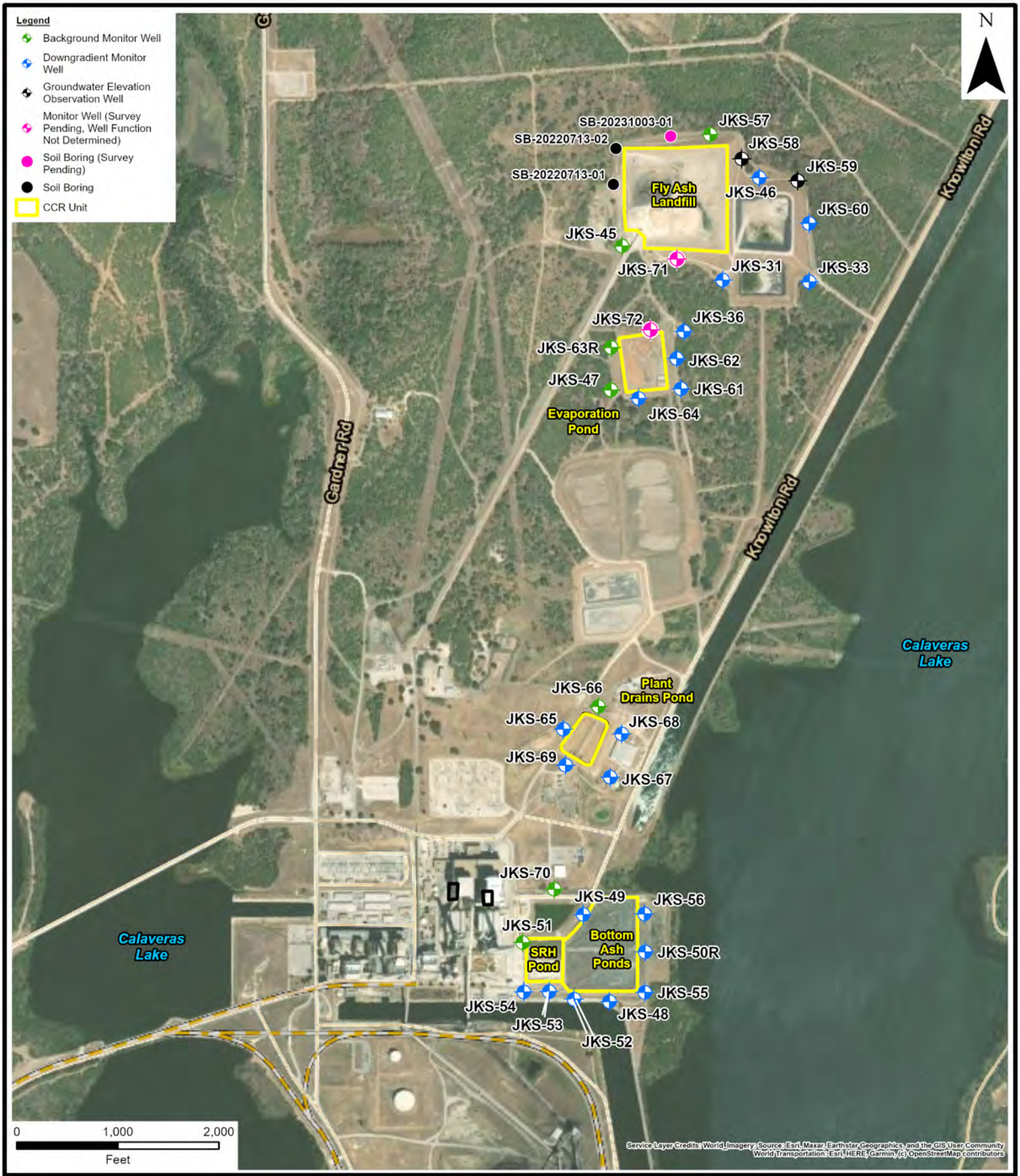
NOTES:
mg/L: Miligrams per Liter
SU: Standard Units
pCi/L: Picocuries per Liter.
'-- : Laboratory did not analyze sample for indicated constituent.
R: Resample event.
D: Sample diluted due to targets detected over highest point of calibration curve or due to matrix interference.
H: Bias in sample result likely to be high.
J: Analyte detected above method (sample) detection limit but below method quantitation limit.
L: Bias in sample result likely to be low.
NR: Analysis of this constituent not required for detection monitoring.
U: Analyte not detected at laboratory reporting limit (Sample Detection Limit).
X: Matrix Spike/Matrix Spike Duplicate recoveries were found to be outside of the laboratory control limits.

TABLE 3
Groundwater Analytical Results Summary
CPS Energy - Calaveras Power Station
Bottom Ash Ponds

	JKS-70 Upgradient				
Sample Date	**10/25/22**	**2/22/23**	**4/19/23**	**8/23/23**	**10/18/23**
Task	**Event 1**	**Event 2**	**Event 3**	**Event 4**	**Event 5**
Constituents	**Oct 2022**	**Feb 2023**	**Apr 2023**	**Aug 2023**	**Oct 2023**
Appendix III - Detection Monitoring					
Boron	0.316	0.256	0.233	0.269	0.243
Calcium	47.7	69.4	67.2	62.8	71.7
Chloride	116	119	102 JH	111	115
Fluoride	0.250	0.800	0.617	0.668	0.642
Sulfate	83.3	24.2 J	32.4	41.8	0.56 U
pH - Field Collected	7.16	6.82	6.79	7.43	6.68
Total dissolved solids	912	692	619	668	635
Appendix IV - Assessment Monitoring					
Antimony	NR	0.002 U	0.002 U	0.002 U	0.002 U
Arsenic	NR	0.005 J	0.006 JH	0.0009 J	0.008 J
Barium	NR	0.053	0.048	0.056	0.05
Beryllium	NR	0.0003 U	0.0003 U	0.0003 U	0.0007 J
Cadmium	NR	0.0003 J	0.0003 U	0.0008 J	0.001 JH
Chromium	NR	0.0004 UJ	0.0006 J	0.0008 J	0.0004 J
Cobalt	NR	0.0003 U	0.0003 U	0.0003 U	0.0003 U
Fluoride	NR	0.8	0.617	0.668	0.642
Lead	NR	0.004 J	0.003 J	0.009 J	0.011
Lithium	NR	0.015 J	NS	NS	22 J
Mercury	NR	0.0002 J	0.0001 U	0.0001 U	0.0001 U
Molybdenum	NR	0.005 J	0.005 J	0.005 J	0.003 J
Selenium	NR	0.008 J	0.006 J	0.004 J	0.004 JH
Thallium	NR	0.0009 U	0.0009 U	0.0009 U	0.0009 U
Radium-226	NR	0.456 ± 0.148 JL	0.263 ± 0.120 JL	0.242 ± 0.128 JL	0.361 ± 0.136
Radium-228	NR	1.32 ± 0.537 JL	0.860 ± 0.434	1.76 ± 0.538 JL	0.723 ± 0.443
Radium-226/228 Combined		1.776 ± 0.683	1.12 ± 0.451 JL	2.00 ± 0.553 JL	1.08 ± 0.463

NOTES:
mg/L: Miligrams per Liter
SU: Standard Units
pCi/L: Picocuries per Liter.
'-- : Laboratory did not analyze sample for indicated constituent.
R: Resample event.
D: Sample diluted due to targets detected over highest point of calibration curve or due to matrix interference.
H: Bias in sample result likely to be high.
J: Analyte detected above method (sample) detection limit but below method quantitation limit.
L: Bias in sample result likely to be low.
NR: Analysis of this constituent not required for detection monitoring.
U: Analyte not detected at laboratory reporting limit (Sample Detection Limit).
X: Matrix Spike/Matrix Spike Duplicate recoveries were found to be outside of the laboratory control limits.

FIGURES



Environmental Resources Management

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DATE:	1/9/2024	SCALE:	AS SHOWN	REVISION:	0

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FIGURE 1
CCR WELL NETWORK LOCATION MAP
CPS Energy - Calaveras Power Station
San Antonio, Texas

ERM

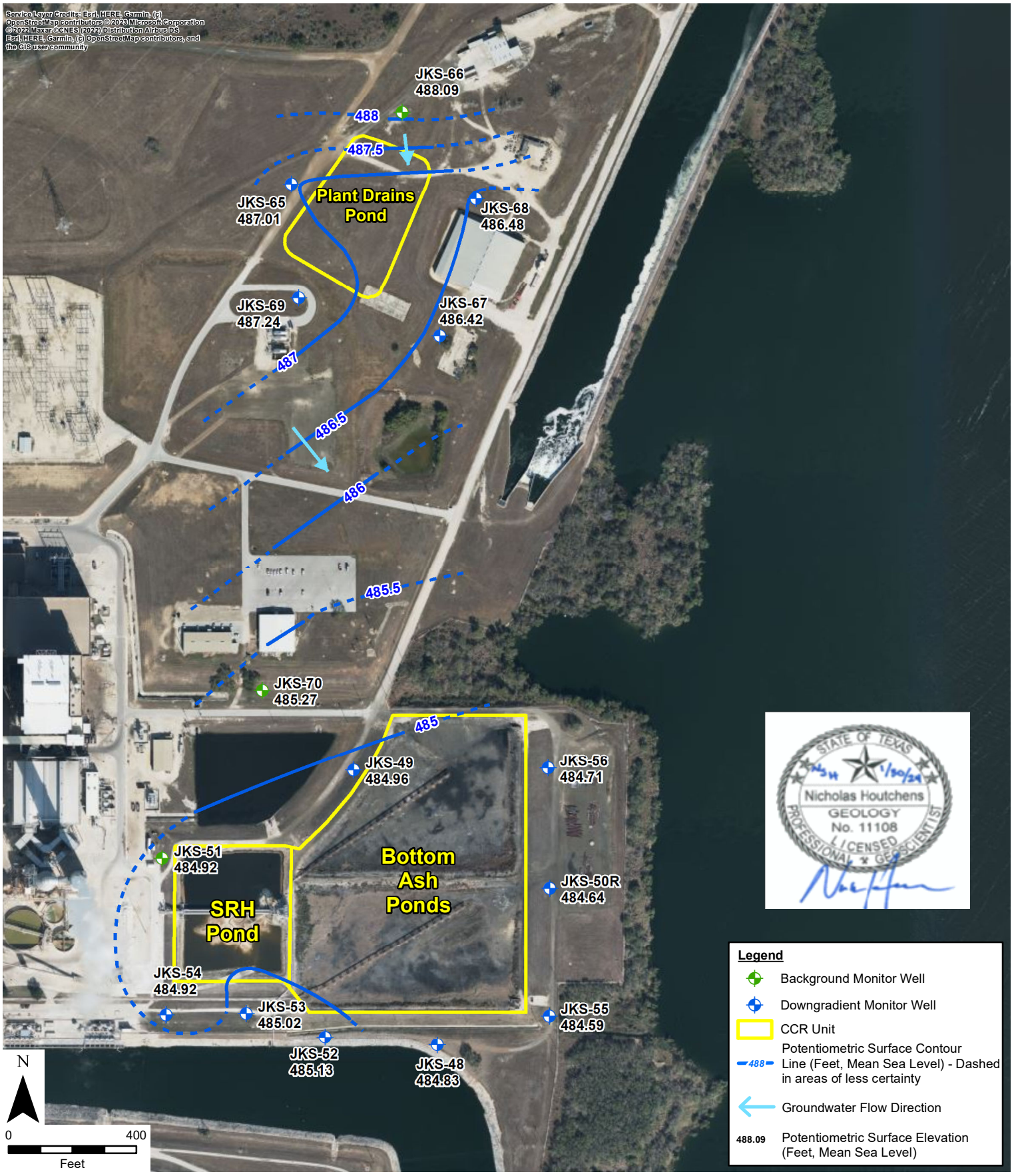

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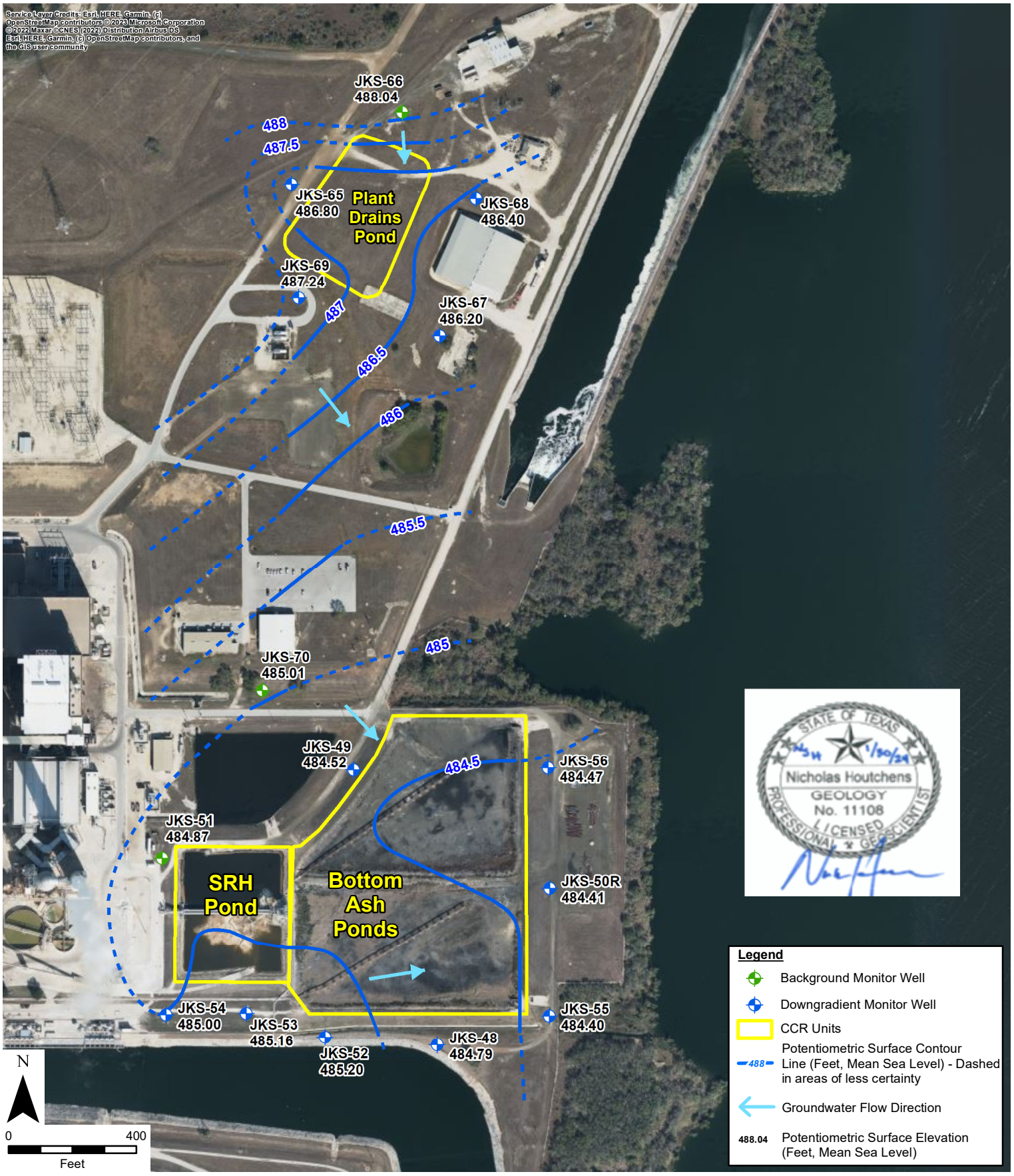
FIGURE 2A
POTENTIOMETRIC SURFACE MAP - April 2023
Central and Southern CCR Units
CPS Energy - Calaveras Power Station
San Antonio, Texas

ERM



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DATE:	1/11/2024	SCALE:	AS SHOWN	REVISION:	0

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FIGURE 2B
POTENTIOMETRIC SURFACE MAP - October 2023
Central and Southern CCR Units
CPS Energy - Calaveras Power Station
San Antonio, Texas

ERM

APPENDIX A LABORATORY DATA PACKAGES

JANUARY 2024

Data Usability Summary
Sampling Event/April 2023

CPS Energy Calaveras Power Station
Coal Combustion Residuals (CCR) Units
San Antonio, Texas

This data usability summary (DUS) was prepared in general accordance with the following key documents:

1) *Groundwater Sampling and Analysis Program*, CPS Energy, Calaveras Power Station (ERM, January 2022);
2) Texas Commission on Environmental Quality's (TCEQ's) *Review and Reporting of COC Concentration Data Under TRRP* (RG-366/TRRP-13, May 2010); and
3) Environmental Protection Agency's (EPA's) *National Functional Guidelines for Inorganic Superfund Methods Data Review* (EPA-540-R-2017-001, January 2017).

Environmental Resources Management (ERM) reviewed four laboratory analytical data packages (2304292, 2304293, 2304294, and 2304295) from San Antonio Testing Laboratory (SATL) of San Antonio, Texas for the analysis of ground water samples collected on 18 April to 19 April 2023 at the CPS Energy Calaveras Power Station in San Antonio, Texas. Analytes Radium-226, Radium-228, and Lithium were subbed to Eurofins of St. Louis by SATL for analysis. Data were reviewed to assess conformance with the requirements of the above-referenced documents.

SATL and Eurofins are NELAC-accredited under the Texas Laboratory Accreditation Program for the matrices, analytes, and methods of analysis requested on the chain-of-custody documentation. SATL and Eurofins National Environmental Laboratory Accreditation Program (NELAP) certificates applicable to the period during which the laboratories generated the data in these reports is referenced in the laboratory reports.

Intended Use of Data: To provide concentration data on Appendix III Coal Combustion Residuals (CCR) Rule parameters in ground water at the CPS Energy Calaveras Facility.

Analyses requested for the laboratory packages include the following:

- EPA 300.0 – Inorganic Anions (Chloride, Fluoride, Sulfate) by Ion Chromatography (IC)
- EPA 6010B – Total Metals by Inductively Coupled Plasma-Atomic Emission Spectroscopy (ICP-AES)
- EPA 903.0 and 904.0 – Radium-226 and Radium-228 (GFPC)
- EPA 6010A – Total Metals (Lithium) ICP
- SW846 7470A – Mercury (CVAA)

Data were reviewed and validated as described in the above-referenced documents, and the results of the review/validation are discussed in this Data Usability Summary (DUS). The following laboratory submittals and field data were examined:

- The reportable data;
- The laboratory review checklist (LRC) and associated exception report (ER); and
- The Quality Assurance/Quality Control (QA/QC) data supplied by the laboratory.

The results of supporting QC analyses are summarized on the LRC and ER, which are included in this review. The LRC, associated ER, QA/QC data, and reportable data covered by this review are included in the laboratory reports.

The Laboratory Data Package Cover Pages and Laboratory Review Checklists provided in the analytical data packages are outdated and inconsistent with current TRRP-13 guidance (May 2010). It is highly recommended that required items in the current TRRP-13 guidance be followed for laboratory data packages generated to satisfy corrective action program requirements. Data were not qualified based on this deficiency.

Introduction

Twenty-five (25) groundwater samples, three (3) duplicate samples, two (2) field blanks, and one (1) equipment blank were analyzed for select metals and anions. Six (6) groundwater samples, one duplicate sample, and one field blank was also analyzed for Radium and Lithium. Table 1 lists the sample identifications cross-referenced to laboratory identifications.

Project Data Quality Objectives (DQO)

The quantitative project DQO limits specified in the *Groundwater Sampling and Analysis Program* were utilized as follows:

- Recovery (%R)
  - Spike samples 75-125%
  - Non-spike samples 70-130%
- Relative Percent Difference (RPD) <20%

Data were qualified in accordance with the TCEQ's TRRP-13 guidance document, including data qualifier codes and data qualifier code definitions.

Data Review / Validation Results

Analytical Results

Ground water analytical results were reported in milligrams per liter (mg/L) for metals and anions. Analytical results from Eurofins was reported in micrograms per liter (µg/L) for metals and in picocurries per liter (pCi/L) for radiological analysis. Non-detect results are reported as less than the value of the sample detection limits (SDLs). The method quantitation limits (MQLs) are also reported.

Preservation and Holding Times

The samples were evaluated for agreement with the chain-of-custody forms. The samples were received in the appropriate containers and in good condition with the paperwork properly completed.

Sample receipt temperature of the cooler at SATL were within or less than the acceptance criteria of 4 +/- 2 degrees Celsius. Sample receipt temperature for lab reports 2304292, 2304293, 2304294, and 2304295 were 2.2°C, 2.2°C, 0.4°C, and 1.4°C, respectively. No qualifiers were added to the data. Samples were prepared and analyzed within holding times as specified by the methods. The samples were preserved in the field as specified by the methods, with the following exception.

For radium analysis, the reference method required samples to be preserved to a pH of <2. If samples are collected without preservation, they must be received by the laboratory within 5 days for preservation according to Method 904 specifications. All the samples in lab report 2304295 and one sample, JKS-70-20230419-CCR, in lab report 2304294 was received by the laboratory unpreserved 6-7 days after the samples were collected. The sample was preserved to the appropriate pH in the laboratory; however, the analytical results were still qualified as JL, estimated low, for detected results and UJL, non-detect and estimated low for non-detect results for radium.

Calibrations

According to the LRC, initial calibrations, continuing calibrations, and calibration verifications data met method requirements for metals and anions, as applicable.

Mass Spectral Tuning

As documented in the LRC, mass spectrometry instrument performance tunes were either not applicable (appropriate compound for the method) or met specific requirements for the requested analytical methods (ion abundance data within limits).

Internal Standards

As documented in the LRC, internal standard area counts and retention times were within or not applicable for the requested analytical methods.

Percent Yield

Ba and Y Carrier percent yields for radium analysis were within laboratory acceptance limits.

Blanks

Metals and anions were not detected in the method blanks.

Laboratory Control Samples

Laboratory control sample and duplicate (LCS/LCSD) precision and accuracy results (*i.e.,* percent recoveries and RPDs) for all analyses were within project DQO acceptance limits, with the following exception.

In laboratory packages 2304294 and 2304295, the LCS percent recovery in prep batch 610073 were above DQO acceptance limits for Radium-228 (135%). Affected samples in batch 610073 (all samples in laboratory package 2304295 and JKS-70-20230419-CCR) with detected results would typically be qualified as JH, estimated with high bias. However, as the samples were previously qualified as JL for insufficient preservation, the affected sample results were qualified as J, estimated.

Matrix Spike / Matrix Spike Duplicates

Matrix spike/matrix spike duplicate (MS/MSD) precision and accuracy results (*i.e.,* percent recoveries and RPDs) using project samples were within project DQO acceptance limits, with the following exceptions.

In laboratory packages 2304292 and 2304293, matrix spike/matrix spike duplicate (MS/MSD) analysis was performed on project samples JKS-45-20230418-CCR for anions and JKS-36-20230418-CCR and JKS-60-20230419-CCR for metals. The MS and MSD had recoveries above laboratory and DQO limits for chloride and below laboratory and DQO limits for boron. The parent concentration for chloride, calcium, and sulfate were greater than four times the amount spiked into it; therefore, no qualifiers were required for high MS/MSD recoveries for chloride or for NR-flagged recoveries for calcium and sulfate. The MS and MSD recoveries for metals were run on two project-related samples in the same batch. The MS/MSD recoveries for boron were below DQO limits associated with sample JKS-36-20230418-CCR; however, MS/MSD recoveries were within DQO limits associated with sample JKS-60-20230419-CCR in the same batch. As such, only the parent sample, JKS-36-20230418-CCR, was qualified as estimated with low bias (JL) for boron due to low MS/MSD recoveries.

In laboratory packages 2304294 and 2304295, matrix spike/matrix spike duplicate (MS/MSD) analysis was performed on project samples JKS-65-20230418-FPDP and JKS-66-20230419-FPDP for anions, JKS-70-20230419-CCR for mercury, JKS-36-20230418-CCR and JKS-60-20230419-CCR for select metals (boron and calcium), and JKS-56-20230419-CCR and FB-003-20230419 for all metals. The MS and MSD had recoveries above DQO limits for chloride, calcium (Batch B317141), and sulfate and below DQO limits for boron and calcium (Batch B317142). The parent concentration for calcium (both batches), and sulfate were greater than four times the amount spiked into it; therefore, no qualifiers were required for high or low MS/MSD recoveries for sulfate and calcium or for NR-flagged recoveries for calcium. In batch B318130 MS/MSD recoveries for chloride using project-related sample JKS-66-20230419-FPDP was higher than DQO acceptance limits and the spiking amount was not greater than four times the amount spiked into it; as such, samples in the batch were qualified as estimated with high bias (JH) for chloride due to high MS/MSD recoveries. The MS and MSD recoveries for metals (boron and calcium) were run on two project-related samples in the same batch. The MS/MSD recoveries for boron were below DQO limits associated with sample JKS-36-20230418-CCR; however, MS/MSD recoveries were within DQO limits associated with sample JKS-60-20230419-CCR in the same batch. As such, only the parent sample, JKS-36-20230418-CCR was qualified as estimated with low bias (JL) for boron due to low MS/MSD recoveries.

Post Digestion Spike

According to the LRC, post digestion spike (PDS) recoveries were within method acceptance limits.

Serial Dilution

According to the LRC, serial dilution (SD) percent differences (%D) were within method acceptance limits.

Laboratory Precision

Laboratory duplicate RPD using project samples were within project DQO acceptance limits, with the following exception.

In laboratory packages 2304294 and 2304295, the laboratory duplicate RPD for arsenic in batch B317142, performed on project sample JKS-56-20230419-CCR, was higher than DQO acceptance limits. The analyte concentration was less than five times the MQL and all affected sample results were less than the value of the MQL; as such, no qualifiers were required.

Field Precision

Three pairs of field precision samples were collected during the April 2023 event (JKS-33-20230419-CCR / DUP-001-20230419; JKS-48-20230419-CCR / DUP-002-20230419; JKS-68-20230418-FPDP / DUP-001-20230418). RPD calculations for detected analytes for each field precision pair are shown in Table 2. All RPD were within DQO limits or had sample concentrations less than two times the value of the MQL; as such, no qualifiers were required.

Field Procedures

Sample collection procedures were in accordance with EPA ground water sampling protocols and the *Ground Water Sampling and Analysis Program*, dated January 2022.

SUMMARY

Ground water analytical results are useable for the purpose of provide concentration data on Appendix III Coal Combustion Residuals (CCR) Rule parameters in ground water at the CPS Energy Calaveras Power Station. Table 2 lists qualified data.

Tables

TABLE 1
Sample Cross-Reference

CPS Energy
Calaveras Power Station

Lab Report	Lab Identification	Field Identification	Sample Date	Sample Type
2304292	2304292-01	JKS-36-20230418-CCR	4/18/2023	Groundwater
2304292	2304292-02	JKS-47-20230419-CCR	4/19/2023	Groundwater
2304292	2304292-03	JKS-61-20230419-CCR	4/19/2023	Groundwater
2304292	2304292-04	JKS-63R-20230418-CCR	4/18/2023	Groundwater
2304292	2304292-05	JKS-64-20230419-CCR	4/19/2023	Groundwater
2304292	2304292-06	EB-001-20230419	4/19/2023	Equipment Blank
2304293	2304293-01	JKS-31-20230418-CCR	4/18/2023	Groundwater
2304293	2304293-02	JKS-33-20230419-CCR	4/19/2023	Groundwater
2304293	2304293-03	JKS-45-20230418-CCR	4/18/2023	Groundwater
2304293	2304293-04	JKS-46-20230418-CCR	4/18/2023	Groundwater
2304293	2304293-05	JKS-60-20230419-CCR	4/19/2023	Groundwater
2304293	2304293-06	DUP-001-20230419	4/19/2023	Duplicate Sample
2304293	2304293-07	FB-001-20230419	4/19/2023	Field Blank
2304294	2304294-01	JKS-48-20230419-CCR	4/19/2023	Groundwater
2304294	2304294-02	JKS-49-20230418-CCR	4/18/2023	Groundwater
2304294	2304294-03	JKS-50R-20230418-CCR	4/18/2023	Groundwater
2304294	2304294-04	JKS-51-20230419-CCR	4/19/2023	Groundwater
2304294	2304294-05	JKS-52-20230419-CCR	4/19/2023	Groundwater
2304294	2304294-06	JKS-53-20230419-CCR	4/19/2023	Groundwater
2304294	2304294-07	JKS-54-20230419-CCR	4/19/2023	Groundwater
2304294	2304294-08	JKS-55-20230418-CCR	4/18/2023	Groundwater
2304294	2304294-09	JKS-56-20230419-CCR	4/19/2023	Groundwater
2304294	2304294-10	JKS-70-20230419-CCR	4/19/2023	Groundwater
2304294	2304294-11	DUP-002-20230419	4/19/2023	Duplicate Sample
2304294	2304294-12	FB-002-20230419	4/19/2023	Field Blank
2304295	2304295-01	JKS-65-20230418-FPDP	4/18/2023	Groundwater
2304295	2304295-02	JKS-66-20230419-FPDP	4/19/2023	Groundwater
2304295	2304295-03	JKS-67-20230418-FPDP	4/18/2023	Groundwater
2304295	2304295-04	JKS-68-20230418-FPDP	4/18/2023	Groundwater
2304295	2304295-05	JKS-69-20230418-FPDP	4/18/2023	Groundwater
2304295	2304295-06	DUP-001-20230418	4/18/2023	Duplicate Sample
2304295	2304295-07	FB-003-20230419	4/19/2023	Field Blank

TABLE 2
Data Usability Qualifiers

CPS Energy
Calaveras Power Station

Lab Report	Field ID	Parameter	Qualification	Rationale
2304292	JKS-36-20230418-CCR	Boron	JL	Low MS/MSD Recovery
2304294	JKS-70-20230419-CCR	Arsenic	JH	High Field Precision RPD
2304294	JKS-48-20230419-CCR	Chloride	JH	High MS/MSD Recovery
2304294	JKS-49-20230418-CCR	Chloride	JH	High MS/MSD Recovery
2304294	JKS-50R-20230418-CCR	Chloride	JH	High MS/MSD Recovery
2304294	JKS-51-20230419-CCR	Chloride	JH	High MS/MSD Recovery
2304294	JKS-52-20230419-CCR	Chloride	JH	High MS/MSD Recovery
2304294	JKS-53-20230419-CCR	Chloride	JH	High MS/MSD Recovery
2304294	JKS-54-20230419-CCR	Chloride	JH	High MS/MSD Recovery
2304294	JKS-55-20230418-CCR	Chloride	JH	High MS/MSD Recovery
2304294	JKS-56-20230419-CCR	Chloride	JH	High MS/MSD Recovery
2304294	JKS-70-20230419-CCR	Chloride	JH	High MS/MSD Recovery
2304294	DUP-002-20230419	Chloride	JH	High MS/MSD Recovery
2304295	JKS-65-20230418-FPDP	Chloride	JH	High MS/MSD Recovery
2304295	JKS-66-20230419-FPDP	Chloride	JH	High MS/MSD Recovery
2304295	JKS-67-20230418-FPDP	Chloride	JH	High MS/MSD Recovery
2304295	JKS-68-20230418-FPDP	Chloride	JH	High MS/MSD Recovery
2304295	JKS-69-20230418-FPDP	Chloride	JH	High MS/MSD Recovery
2304295	DUP-001-20230418	Chloride	JH	High MS/MSD Recovery
2304295	JKS-65-20230418-FPDP	Radium-226	JL	Outside Preservation Holding Time
2304295	JKS-66-20230419-FPDP	Radium-226	JL	Outside Preservation Holding Time
2304295	JKS-67-20230418-FPDP	Radium-226	JL	Outside Preservation Holding Time
2304295	JKS-68-20230418-FPDP	Radium-226	UJL	Outside Preservation Holding Time
2304295	JKS-69-20230418-FPDP	Radium-226	JL	Outside Preservation Holding Time
2304295	DUP-001-20230418	Radium-226	JL	Outside Preservation Holding Time
2304295	FB-003-20230419	Radium-226	UJL	Outside Preservation Holding Time
2304294	JKS-70-20230419-CCR	Radium-226	JL	Outside Preservation Holding Time
2304295	JKS-65-20230418-FPDP	Radium-228	J	Outside Preservation Holding Time and High LCS
2304295	JKS-66-20230419-FPDP	Radium-228	J	Outside Preservation Holding Time
2304295	JKS-67-20230418-FPDP	Radium-228	UJL	Outside Preservation Holding Time
2304295	JKS-68-20230418-FPDP	Radium-228	J	Outside Preservation Holding Time and High LCS
2304295	JKS-69-20230418-FPDP	Radium-228	J	Outside Preservation Holding Time and High LCS
2304295	DUP-001-20230418	Radium-228	J	Outside Preservation Holding Time and High LCS
2304295	FB-003-20230419	Radium-228	UJL	Outside Preservation Holding Time
2304294	JKS-70-20230419-CCR	Combined Radium	JL	Outside Preservation Holding Time and High LCS
2304295	JKS-65-20230418-FPDP	Combined Radium	JL	Outside Preservation Holding Time
2304295	JKS-66-20230419-FPDP	Combined Radium	JL	Outside Preservation Holding Time
2304295	JKS-67-20230418-FPDP	Combined Radium	JL	Outside Preservation Holding Time
2304295	JKS-68-20230418-FPDP	Combined Radium	JL	Outside Preservation Holding Time
2304295	JKS-69-20230418-FPDP	Combined Radium	JL	Outside Preservation Holding Time
2304295	DUP-001-20230418	Combined Radium	JL	Outside Preservation Holding Time
2304295	FB-003-20230419	Combined Radium	UJL	Outside Preservation Holding Time
2304294	JKS-70-20230419-CCR	Combined Radium	JL	Outside Preservation Holding Time

Notes:
J = Estimated
UJ = Non-detect Estimated

TABLE 3
Field Precision

CPS Energy
Calaveras Power Station

Lab Report	Field Duplicate Pair	Parameter	Sample Result		Duplicate Result		RPD	Qualifier
2304293	JKS-33-20230419-CCR / DUP-001-20230419	TDS	3680		3630		1.37	A
		Chloride	732		752		2.70	A
		Sulfate	1550		1600		3.17	A
		Boron	0.988		0.996		0.81	A
		Calcium	376		386		2.62	A
2304294	JKS-48-20230419-CCR / DUP-002-20230419	TDS	1370		1400		2.17	A
		Chloride	434		470		7.96	A
		Fluoride	0.964		0.975		1.13	A
		Sulfate	182		197		7.92	A
		Boron	1.93		1.97		2.05	A
		Calcium	118		120		1.68	A
2304295	JKS-68-20230418-FPDP / DUP-001-20230418	TDS	4080		3970		2.73	A
		Chloride	861		866		0.58	A
		Fluoride	0.864		0.959		10.42	A
		Sulfate	1290		1230		4.76	A
		Boron	1.29		1.24		3.95	A
		Calcium	244		239		2.07	A
		Arsenic	0.002	J	0.0006	U	107.69	A*
		Barium	0.029		0.028		3.51	A
		Cadmium	0.0008	J	0.001	J	22.22	A*
		Chromium	0.002	J	0.002	J	0.00	A
		Molybdenum	0.0005	J	0.0004	J	22.22	A*
		Selenium	0.039		0.043		9.76	A
		Radium-226	0.108	U	0.165		41.76	A*
		Radium-228	1.41		0.749		61.23	A*
		Combined Radium-226 and 228	1.51		0.914		49.17	A*

Notes:
RPD - Relative Percent Difference
RPD = (Sample Result - Duplicate Result) x 200 / (Sample Result + Duplicate Result)
Qualifier: A = Acceptable (no qualification necessary)
A* = Acceptable data based on sample concentrations less than two times the MQL
J = Estimated

SAN ANTONIO TESTING LABORATORY

June 23, 2023

Chelsey Vasbinder
CPS Energy - Environmental Dept.
P.O. Box 1771
San Antonio, TX 78296-1771

SATL Report No.: 2304294
RE: Calaveras Power Station-CCR SRH/Bottom Ash Pond

Dear Chelsey Vasbinder

SATL received 12 Sample(s) on 04/20/2023 for analyses identified on the chain of custody. The analyses were performed using methods indicated on the laboratory report. Any deviations observed at sample receiving are notated on the Sample Receipt Checklist and/or Chain of Custody documents attached as part of this analytical report.

Sincerely,

For San Antonio Testing Laboratory, Inc.

Richard Hawk,
General Manager

Appendix A Laboratory Data Package Cover Page

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 5.13 or ISO/IEC 17025 Section 5.10
  - 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) for each analyte for each method and matrix;
- ☑ R10 Other problems or anomalies.
- ☑ The Exception Report for every "No" or "Not Reviewed (NR)" item in laboratory review checklist.

Release Statement: I am responsible for the release of this laboratory data package. This data package has been reviewed by the laboratory and is complete and technically compliant with the requirements of the methods used, except where noted by the laboratory in the attached exception reports. By my signature below, I affirm to the best of my knowledge, all problems/anomalies, observed by the laboratory as having the potential to affect the quality of the data, have been identified by the laboratory in the Laboratory Review Checklist, and no information or data have been knowingly withheld that would affect the quality of the data.

Aimee Landon For Marcela Gracia Hawk, President

Richard Hawk, General Manager

06/23/23 11:58

Date/Time

Project Name:	Calaveras Power Station-CCR SRH/Bottom Ash Pond	Reviewer Name:	JA,SG,XE
Laboratory Job Number:	2304294	Matrix :	

RG-366/TRRP-13 December 2002

Appendix A (cont'd): Laboratory Review Checklist: Reportable Data

Laboratory Name:	San Antonio Testing Laboratory Inc.	LRC Date:	12/30/99 to 05/03/23
Project Name:	Calaveras Power Station-CCR SRH/Bottom Ash	Laboratory Job Number:	2304294
Reviewer Name:	JA,SG,XE	Prep Batch Number(s):	B317141,B317142,B317179,B317253,B317276,B317278,B318130

# [1]	A [2]	Description	Yes	No	NA [3]	NR [4]	ER# [5]
R1		**Chain-of-custody (C-O-C)**					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		Were all departures from standard conditions described in an exception report?	X				
R2		**Sample and quality control (QC) identification**					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3		**Test reports**					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample quantitation limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?			X		
		Were % moisture (or solids) reported for all soil and sediment samples?			X		
		If required for the project, TICs reported?			X		
R4		**Surrogate recovery data**					
		Were surrogates added prior to extraction?			X		
		Were surrogate percent recoveries in all samples within the laboratory QC limits?			X		
R5		**Test reports/summary forms for blank samples**					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6		**Laboratory control samples (LCS):**					
		Were all COCs included in the LCS?	X				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SQLs?	X				
		Was the LCSD RPD within QC limits?	X				
R7		**Matrix spike (MS) and matrix spike duplicate (MSD) data**					
		Were the project/method specified analytes included in the MS and MSD?	X				
		Were MS/MSD analyzed at the appropriate frequency?	X				
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?		X			S001
		Were MS/MSD RPDs within laboratory QC limits?		X			S002
R8		**Analytical duplicate data**					
		Were appropriate analytical duplicates analyzed for each matrix?	X				
		Were analytical duplicates analyzed at the appropriate frequency?	X				
		Were RPDs or relative standard deviations within the laboratory QC limits?	X				
R9		**Method quantitation limits (MQLs):**					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs included in the laboratory data package?	X				
R10		**Other problems/anomalies**					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Were all necessary corrective actions performed for the reported data?	X				
		Was applicable and available technology used to lower the SQL minimize the matrix interference affects on the sample results?	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted 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).

RG-366/TRRP-13 December 2002

Appendix A (cont'd): Laboratory Review Checklist: Reportable Data

Laboratory Name:	San Antonio Testing Laboratory Inc.	LRC Date:	12/30/99 to 05/03/23
Project Name:	Calaveras Power Station-CCR SRH/Bottom Ash	Laboratory Job Number:	2304294
Reviewer Name:	JA,SG,XE	Prep Batch Number(s):	B317141,B317142,B317179,B317253,B317276,B317278,B318130

# [1]	A [2]	Description	Yes	No	NA [3]	NR [4]	ER# [5]
S1		**Initial calibration (ICAL)**					
		Were response factors and/or relative response factors for each analyte within QC limits?	X				
		Were percent RSDs or correlation coefficient criteria met?	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2		**Initial and continuing calibration verification (ICCV and CCV) and continuing calibration**					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?					
S3		**Mass spectral tuning:**					
		Was the appropriate compound for the method used for tuning?					
		Were ion abundance data within the method-required QC limits?			X		
S4		**Internal standards (IS):**					
		Were IS area counts and retention times within the method-required QC limits?					
S5		**Raw data (NELAC section 1 appendix A glossary, and section 5.12 or ISO/IEC 17025 section**					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?	X				
S6		**Dual column confirmation**					
		Did dual column confirmation results meet the method-required QC?			X		
S7		**Tentatively identified compounds (TICs):**					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?					
S8		**Interference Check Sample (ICS) results:**					
		Were percent recoveries within method QC limits?					
S9		**Serial dilutions, post digestion spikes, and method of standard additions**					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?					
S10		**Method detection limit (MDL) studies**					
		Was a MDL study performed for each reported analyte?	X				
		Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S11		**Proficiency test reports:**					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12		**Standards documentation**					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13		**Compound/analyte identification procedures**					
		Are the procedures for compound/analyte identification documented?	X				
S14		**Demonstration of analyst competency (DOC)**					
		Was DOC conducted consistent with NELAC Chapter 5C or ISO/IEC 4?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15		**Verification/validation documentation for methods (NELAC Chap 5 or ISO/IEC 17025 Section 5)**					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16		**Laboratory standard operating procedures (SOPs):**					
		Are laboratory SOPs current and on file for each method performed?	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted 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).

RG-366/TRRP-13 December 2002

Appendix A (cont'd): Laboratory Review Checklist: Exception Reports			
Laboratory Name:	San Antonio Testing Laboratory Inc.	LRC Date:	12/30/99 to 05/03/23
Project Name:	Calaveras Power Station-CCR SRH/Bottom Ash	Laboratory Job Number:	2304294
Reviewer Name:	JA,SG,XE	Prep Batch Number(s):	B317141,B317142,B317179,B317253,B317276,B317278,B318130

ER#[1]	Description
S001	Matrix spike recoveries outside the QC acceptance criteria, due to matrix interferences, are flagged on the analytical report.
S002	RPD values above the acceptance limits are flagged on the analytical report.

1. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked on the LRC)

RG-366/TRRP-13 December 2002

CPS Energy - Environmental Dept.
P.O. Box 1771
San Antonio TX, 78296-1771

Project: Calaveras Power Station-CCR SRH/Bottom Ash Pond
Project Number: [none]
Project Manager: Chelsey Vasbinder

Reported:
06/23/23 11:58
Received:
04/20/23 11:10

Notes:
This supersedes the last report (2304294_1 2-SATL1_TRRP 06 21 23 1703) issued. Reason: To include Rads, 06/23/23.

Report No. 2304294

SAMPLE SUMMARY

Total Samples received in this work order: **12**

Sample ID	Laboratory ID	Matrix	Sampling Method	Date Sampled	Date Received
JKS-48-20230419-CCR	2304294-01	Non-potable Water	Grab	04/19/23 10:14	04/20/23 11:10
JKS-49-20230418-CCR	2304294-02	Non-potable Water	Grab	04/18/23 13:27	04/20/23 11:10
JKS-50R-20230418-CCR	2304294-03	Non-potable Water	Grab	04/18/23 14:31	04/20/23 11:10
JKS-51-20230419-CCR	2304294-04	Non-potable Water	Grab	04/19/23 13:00	04/20/23 11:10
JKS-52-20230419-CCR	2304294-05	Non-potable Water	Grab	04/19/23 11:16	04/20/23 11:10
JKS-53-20230419-CCR	2304294-06	Non-potable Water	Grab	04/19/23 14:25	04/20/23 11:10
JKS-54-20230419-CCR	2304294-07	Non-potable Water	Grab	04/19/23 13:39	04/20/23 11:10
JKS-55-20230418-CCR	2304294-08	Non-potable Water	Grab	04/18/23 15:23	04/20/23 11:10
JKS-56-20230419-CCR	2304294-09	Non-potable Water	Grab	04/19/23 09:25	04/20/23 11:10
JKS-70-20230419-CCR	2304294-10	Non-potable Water	Grab	04/19/23 12:08	04/20/23 11:10
DUP-002-20230419	2304294-11	Non-potable Water	Grab	04/19/23 15:09	04/20/23 11:10
FB-002-20230419	2304294-12	Non-potable Water	Grab	04/19/23 09:22	04/20/23 11:10

Notes

All quality control samples and checks are within acceptance limits unless otherwise indciated.
Test results pertain only to those items tested.
All samples were in good condition when received by the laboratory unless otherwise noted.

CPS Energy - Environmental Dept.
P.O. Box 1771
San Antonio TX, 78296-1771

Project: Calaveras Power Station-CCR SRH/Bottom Ash Pond
Project Number: [none]
Project Manager: Chelsey Vasbinder

Reported:
06/23/23 11:58
Received:
04/20/23 11:10

Notes:
This supersedes the last report (2304294_1 2-SATL1_TRRP 06 21 23 1703) issued. Reason: To include Rads, 06/23/23.

Report No. 2304294

Sample ID #: JKS-48-20230419-CCR **Sampling Method: Grab** **Lab Sample ID #: 2304294-01**

Sample Matrix: Non-potable Water **Date/Time Collected: 04/19/23 10:14**

Analyte	Result	MQL	Flag	MDL	SQL[SDL]	Units	PrepMethod	Method	Analyzed	Analyst	Notes
General Chemistry			***Batch ID >*** *B317278*								
Total Dissolved Solids *	1370	3.12		2.50	3.12	mg/L	SM2540C	SM2540C	04/25/23	JA	
Anions by Ion Chromatography			***Batch ID >*** *B318130*								
Chloride *	434	2.50		0.052	1.30	mg/L	EPA 300.0	EPA 300.0	04/28/23	SG	
Fluoride	0.964	0.020		0.018	0.018	mg/L	EPA 300.0	EPA 300.0	04/27/23	SG	
Sulfate *	182	2.50		0.06	1.40	mg/L	EPA 300.0	EPA 300.0	04/28/23	SG	
Total Metals By ICP			***Batch ID >*** *B317141*								
Boron	1.93	0.010		0.0006	0.0006	mg/L	EPA 6010B	EPA 6010B	04/24/23	XE	
Calcium *	118	1.00		0.009	0.009	mg/L	EPA 6010B	EPA 6010B	04/24/23	XE	

CPS Energy - Environmental Dept.
P.O. Box 1771
San Antonio TX, 78296-1771

Project: Calaveras Power Station-CCR SRH/Bottom Ash Pond
Project Number: [none]
Project Manager: Chelsey Vasbinder

Reported:
06/23/23 11:58
Received:
04/20/23 11:10

Notes:
This supersedes the last report (2304294_1 2-SATL1_TRRP 06 21 23 1703) issued. Reason: To include Rads, 06/23/23.

Report No. 2304294

Sample ID #: JKS-49-20230418-CCR **Sampling Method: Grab** **Lab Sample ID #: 2304294-02**

Sample Matrix: Non-potable Water **Date/Time Collected: 04/18/23 13:27**

Analyte	Result	MQL	Flag	MDL	SQL[SDL]	Units	PrepMethod	Method	Analyzed	Analyst	Notes
General Chemistry			***Batch ID >*** *B317276*								
Total Dissolved Solids *	1380	2.78		2.50	2.78	mg/L	SM2540C	SM2540C	04/24/23	JA	
Anions by Ion Chromatography			***Batch ID >*** *B318130*								
Chloride *	404	2.50		0.052	1.30	mg/L	EPA 300.0	EPA 300.0	04/28/23	SG	
Fluoride	0.289	0.020		0.018	0.018	mg/L	EPA 300.0	EPA 300.0	04/28/23	SG	
Sulfate *	202	2.50		0.06	1.40	mg/L	EPA 300.0	EPA 300.0	04/28/23	SG	
Total Metals By ICP			***Batch ID >*** *B317141*								
Boron	2.24	0.010		0.0006	0.0006	mg/L	EPA 6010B	EPA 6010B	04/24/23	XE	
Calcium *	106	1.00		0.009	0.009	mg/L	EPA 6010B	EPA 6010B	04/24/23	XE	

CPS Energy - Environmental Dept.
P.O. Box 1771
San Antonio TX, 78296-1771

Project: Calaveras Power Station-CCR SRH/Bottom Ash Pond
Project Number: [none]
Project Manager: Chelsey Vasbinder

Reported:
06/23/23 11:58
Received:
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Notes:
This supersedes the last report (2304294_1 2-SATL1_TRRP 06 21 23 1703) issued. Reason: To include Rads, 06/23/23.

Report No. 2304294

Sample ID #: JKS-50R-20230418-CCR **Sampling Method: Grab** **Lab Sample ID #: 2304294-03**

Sample Matrix: Non-potable Water **Date/Time Collected: 04/18/23 14:31**

Analyte	Result	MQL	Flag	MDL	SQL[SDL]	Units	PrepMethod	Method	Analyzed	Analyst	Notes
General Chemistry			***Batch ID >*** *B317276*								
Total Dissolved Solids *	1030	2.50		2.50	2.50	mg/L	SM2540C	SM2540C	04/24/23	JA	
Anions by Ion Chromatography			***Batch ID >*** *B318130*								
Chloride *	84.8	2.50		0.052	1.30	mg/L	EPA 300.0	EPA 300.0	04/28/23	SG	
Fluoride	0.310	0.020		0.018	0.018	mg/L	EPA 300.0	EPA 300.0	04/28/23	SG	
Sulfate *	171	2.50		0.06	1.40	mg/L	EPA 300.0	EPA 300.0	04/28/23	SG	
Total Metals By ICP			***Batch ID >*** *B317141*								
Boron	5.15	0.010		0.0006	0.0006	mg/L	EPA 6010B	EPA 6010B	04/24/23	XE	
Calcium *	119	1.00		0.009	0.009	mg/L	EPA 6010B	EPA 6010B	04/24/23	XE	

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Project: Calaveras Power Station-CCR SRH/Bottom Ash Pond
Project Number: [none]
Project Manager: Chelsey Vasbinder

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Notes:
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Report No. 2304294

Sample ID #: JKS-51-20230419-CCR **Sampling Method: Grab** **Lab Sample ID #: 2304294-04**

Sample Matrix: Non-potable Water **Date/Time Collected: 04/19/23 13:00**

Analyte	Result	MQL	Flag	MDL	SQL[SDL]	Units	PrepMethod	Method	Analyzed	Analyst	Notes
General Chemistry			***Batch ID >*** *B317278*								
Total Dissolved Solids *	1620	2.78		2.50	2.78	mg/L	SM2540C	SM2540C	04/25/23	JA	
Anions by Ion Chromatography			***Batch ID >*** *B318130*								
Chloride *	403	2.50		0.052	1.30	mg/L	EPA 300.0	EPA 300.0	04/28/23	SG	
Fluoride	0.283	0.020		0.018	0.018	mg/L	EPA 300.0	EPA 300.0	04/28/23	SG	
Sulfate *	295	2.50		0.06	1.40	mg/L	EPA 300.0	EPA 300.0	04/28/23	SG	
Total Metals By ICP			***Batch ID >*** *B317141*								
Boron	0.516	0.010		0.0006	0.0006	mg/L	EPA 6010B	EPA 6010B	04/24/23	XE	
Calcium *	211	1.00		0.009	0.009	mg/L	EPA 6010B	EPA 6010B	04/24/23	XE	

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Project: Calaveras Power Station-CCR SRH/Bottom Ash Pond
Project Number: [none]
Project Manager: Chelsey Vasbinder

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Notes:
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Report No. 2304294

Sample ID #: JKS-52-20230419-CCR **Sampling Method: Grab** **Lab Sample ID #: 2304294-05**

Sample Matrix: Non-potable Water **Date/Time Collected: 04/19/23 11:16**

Analyte	Result	MQL	Flag	MDL	SQL[SDL]	Units	PrepMethod	Method	Analyzed	Analyst	Notes
General Chemistry			***Batch ID >*** *B317278*								
Total Dissolved Solids *	1650	3.12		2.50	3.12	mg/L	SM2540C	SM2540C	04/25/23	JA	
Anions by Ion Chromatography			***Batch ID >*** *B318130*								
Chloride *	412	2.50		0.052	1.30	mg/L	EPA 300.0	EPA 300.0	04/28/23	SG	
Fluoride	0.626	0.020		0.018	0.018	mg/L	EPA 300.0	EPA 300.0	04/28/23	SG	
Sulfate *	256	2.50		0.06	1.40	mg/L	EPA 300.0	EPA 300.0	04/28/23	SG	
Total Metals By ICP			***Batch ID >*** *B317141*								
Boron	2.47	0.010		0.0006	0.0006	mg/L	EPA 6010B	EPA 6010B	04/24/23	XE	
Calcium *	179	1.00		0.009	0.009	mg/L	EPA 6010B	EPA 6010B	04/24/23	XE	

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Project: Calaveras Power Station-CCR SRH/Bottom Ash Pond
Project Number: [none]
Project Manager: Chelsey Vasbinder

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Report No. 2304294

Sample ID #: JKS-53-20230419-CCR **Sampling Method: Grab** **Lab Sample ID #: 2304294-06**

Sample Matrix: Non-potable Water **Date/Time Collected: 04/19/23 14:25**

Analyte	Result	MQL	Flag	MDL	SQL[SDL]	Units	PrepMethod	Method	Analyzed	Analyst	Notes
General Chemistry			***Batch ID >*** *B317278*								
Total Dissolved Solids *	1580	3.12		2.50	3.12	mg/L	SM2540C	SM2540C	04/25/23	JA	
Anions by Ion Chromatography			***Batch ID >*** *B318130*								
Chloride *	450	5.00		0.052	2.60	mg/L	EPA 300.0	EPA 300.0	04/28/23	SG	
Fluoride	0.345	0.020		0.018	0.018	mg/L	EPA 300.0	EPA 300.0	04/28/23	SG	
Sulfate *	312	5.00		0.06	2.80	mg/L	EPA 300.0	EPA 300.0	04/28/23	SG	
Total Metals By ICP			***Batch ID >*** *B317141*								
Boron	1.72	0.010		0.0006	0.0006	mg/L	EPA 6010B	EPA 6010B	04/24/23	XE	
Calcium *	140	1.00		0.009	0.009	mg/L	EPA 6010B	EPA 6010B	04/24/23	XE	

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Project: Calaveras Power Station-CCR SRH/Bottom Ash Pond
Project Number: [none]
Project Manager: Chelsey Vasbinder

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Notes:
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Report No. 2304294

Sample ID #: JKS-54-20230419-CCR **Sampling Method: Grab** **Lab Sample ID #: 2304294-07**

Sample Matrix: Non-potable Water **Date/Time Collected: 04/19/23 13:39**

Analyte	Result	MQL	Flag	MDL	SQL[SDL]	Units	PrepMethod	Method	Analyzed	Analyst	Notes
General Chemistry			***Batch ID >*** *B317278*								
Total Dissolved Solids *	1570	3.12		2.50	3.12	mg/L	SM2540C	SM2540C	04/25/23	JA	
Anions by Ion Chromatography			***Batch ID >*** *B318130*								
Chloride *	440	2.50		0.052	1.30	mg/L	EPA 300.0	EPA 300.0	04/28/23	SG	
Fluoride	0.635	0.020		0.018	0.018	mg/L	EPA 300.0	EPA 300.0	04/28/23	SG	
Sulfate *	437	2.50		0.06	1.40	mg/L	EPA 300.0	EPA 300.0	04/28/23	SG	
Total Metals By ICP			***Batch ID >*** *B317141*								
Boron	1.07	0.010		0.0006	0.0006	mg/L	EPA 6010B	EPA 6010B	04/24/23	XE	
Calcium *	144	1.00		0.009	0.009	mg/L	EPA 6010B	EPA 6010B	04/24/23	XE	

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Project: Calaveras Power Station-CCR SRH/Bottom Ash Pond
Project Number: [none]
Project Manager: Chelsey Vasbinder

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Report No. 2304294

Sample ID #: JKS-55-20230418-CCR **Sampling Method: Grab** **Lab Sample ID #: 2304294-08**

Sample Matrix: Non-potable Water **Date/Time Collected: 04/18/23 15:23**

Analyte	Result	MQL	Flag	MDL	SQL[SDL]	Units	PrepMethod	Method	Analyzed	Analyst	Notes
General Chemistry			***Batch ID >*** *B317276*								
Total Dissolved Solids *	1380	2.78		2.50	2.78	mg/L	SM2540C	SM2540C	04/24/23	JA	
Anions by Ion Chromatography			***Batch ID >*** *B318130*								
Chloride *	406	2.50		0.052	1.30	mg/L	EPA 300.0	EPA 300.0	04/28/23	SG	
Fluoride	0.844	0.020		0.018	0.018	mg/L	EPA 300.0	EPA 300.0	04/28/23	SG	
Sulfate *	173	2.50		0.06	1.40	mg/L	EPA 300.0	EPA 300.0	04/28/23	SG	
Total Metals By ICP			***Batch ID >*** *B317142*								
Boron	0.794	0.010		0.0006	0.0006	mg/L	EPA 6010B	EPA 6010B	04/24/23	XE	
Calcium *	126	1.00		0.009	0.009	mg/L	EPA 6010B	EPA 6010B	04/24/23	XE	

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Project: Calaveras Power Station-CCR SRH/Bottom Ash Pond
Project Number: [none]
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Report No. 2304294

Sample ID #: JKS-56-20230419-CCR **Sampling Method: Grab** **Lab Sample ID #: 2304294-09**

Sample Matrix: Non-potable Water **Date/Time Collected: 04/19/23 09:25**

Analyte	Result	MQL	Flag	MDL	SQL[SDL]	Units	PrepMethod	Method	Analyzed	Analyst	Notes
General Chemistry			***Batch ID >*** *B317278*								
Total Dissolved Solids *	791	2.50		2.50	2.50	mg/L	SM2540C	SM2540C	04/25/23	JA	
Anions by Ion Chromatography			***Batch ID >*** *B318130*								
Chloride *	138	2.50		0.052	1.30	mg/L	EPA 300.0	EPA 300.0	04/28/23	SG	
Fluoride	0.398	0.020		0.018	0.018	mg/L	EPA 300.0	EPA 300.0	04/28/23	SG	
Sulfate *	39.8	2.50		0.06	1.40	mg/L	EPA 300.0	EPA 300.0	04/28/23	SG	
Total Metals By ICP			***Batch ID >*** *B317142*								
Boron	2.86	0.010		0.0006	0.0006	mg/L	EPA 6010B	EPA 6010B	04/24/23	XE	
Calcium *	92.0	1.00		0.009	0.009	mg/L	EPA 6010B	EPA 6010B	04/24/23	XE	

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Project: Calaveras Power Station-CCR SRH/Bottom Ash Pond
Project Number: [none]
Project Manager: Chelsey Vasbinder

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Report No. 2304294

Sample ID #: JKS-70-20230419-CCR **Sampling Method: Grab** **Lab Sample ID #: 2304294-10**

Sample Matrix: Non-potable Water **Date/Time Collected: 04/19/23 12:08**

Analyte	Result	MQL	Flag	MDL	SQL[SDL]	Units	PrepMethod	Method	Analyzed	Analyst	Notes
General Chemistry				***Batch ID >*** *B317278*							
Total Dissolved Solids *	619	2.50		2.50	2.50	mg/L	SM2540C	SM2540C	04/25/23	JA	
Anions by Ion Chromatography				***Batch ID >*** *B318130*							
Chloride *	102	2.50		0.052	1.30	mg/L	EPA 300.0	EPA 300.0	04/28/23	SG	
Fluoride	0.617	0.020		0.018	0.018	mg/L	EPA 300.0	EPA 300.0	04/28/23	SG	
Sulfate *	32.4	2.50		0.06	1.40	mg/L	EPA 300.0	EPA 300.0	04/28/23	SG	
Total Mercury				***Batch ID >*** *B317179*							
Mercury	< 0.0001	0.0002		0.0001	0.0001	mg/L	EPA 7470A	EPA 7470A	04/25/23	AO	
Total Metals By ICP				***Batch ID >*** *B317142*							
Arsenic	0.006	0.010	J	0.0006	0.0006	mg/L	EPA 6010B	EPA 6010B	04/24/23	XE	
Boron	0.233	0.010		0.0006	0.0006	mg/L	EPA 6010B	EPA 6010B	04/24/23	XE	
Barium	0.048	0.010		0.003	0.003	mg/L	EPA 6010B	EPA 6010B	04/24/23	XE	
Beryllium	< 0.0003	0.004		0.0003	0.0003	mg/L	EPA 6010B	EPA 6010B	04/24/23	XE	
Calcium *	67.2	1.00		0.009	0.009	mg/L	EPA 6010B	EPA 6010B	04/24/23	XE	
Cadmium	< 0.0003	0.005		0.0003	0.0003	mg/L	EPA 6010B	EPA 6010B	04/24/23	XE	
Cobalt	< 0.0003	0.010		0.0003	0.0003	mg/L	EPA 6010B	EPA 6010B	04/24/23	XE	
Chromium	0.0006	0.010	J	0.0003	0.0003	mg/L	EPA 6010B	EPA 6010B	04/24/23	XE	
Molybdenum	0.005	0.010	J	0.0003	0.0003	mg/L	EPA 6010B	EPA 6010B	04/24/23	XE	
Lead	0.003	0.010	J	0.0003	0.0003	mg/L	EPA 6010B	EPA 6010B	04/24/23	XE	
Antimony	< 0.002	0.010		0.002	0.002	mg/L	EPA 6010B	EPA 6010B	04/24/23	XE	
Selenium	0.006	0.010	J	0.002	0.002	mg/L	EPA 6010B	EPA 6010B	04/24/23	XE	
Thallium	< 0.0009	0.010		0.0009	0.0009	mg/L	EPA 6010B	EPA 6010B	04/24/23	XE	

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Project: Calaveras Power Station-CCR SRH/Bottom Ash Pond
Project Number: [none]
Project Manager: Chelsey Vasbinder

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Report No. 2304294

Sample ID #: DUP-002-20230419 **Sampling Method: Grab** **Lab Sample ID #: 2304294-11**

Sample Matrix: Non-potable Water **Date/Time Collected: 04/19/23 15:09**

Analyte	Result	MQL	Flag	MDL	SQL[SDL]	Units	PrepMethod	Method	Analyzed	Analyst	Notes
General Chemistry			***Batch ID >*** *B317278*								
Total Dissolved Solids *	1400	3.12		2.50	3.12	mg/L	SM2540C	SM2540C	04/25/23	JA	
Anions by Ion Chromatography			***Batch ID >*** *B318130*								
Chloride *	470	2.50		0.052	1.30	mg/L	EPA 300.0	EPA 300.0	04/28/23	SG	
Fluoride	0.975	0.020		0.018	0.018	mg/L	EPA 300.0	EPA 300.0	04/28/23	SG	
Sulfate *	197	2.50		0.06	1.40	mg/L	EPA 300.0	EPA 300.0	04/28/23	SG	
Total Metals By ICP			***Batch ID >*** *B317142*								
Boron	1.97	0.010		0.0006	0.0006	mg/L	EPA 6010B	EPA 6010B	04/24/23	XE	
Calcium *	120	1.00		0.009	0.009	mg/L	EPA 6010B	EPA 6010B	04/24/23	XE	

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Project: Calaveras Power Station-CCR SRH/Bottom Ash Pond
Project Number: [none]
Project Manager: Chelsey Vasbinder

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Report No. 2304294

Sample ID #: FB-002-20230419 **Sampling Method: Grab** **Lab Sample ID #: 2304294-12**

Sample Matrix: Non-potable Water **Date/Time Collected: 04/19/23 09:22**

Analyte	Result	MQL	Flag	MDL	SQL[SDL]	Units	PrepMethod	Method	Analyzed	Analyst	Notes
General Chemistry				***Batch ID >*** *B317278*							
Total Dissolved Solids *	< 2.50	2.50		2.50	2.50	mg/L	SM2540C	SM2540C	04/25/23	JA	
Anions by Ion Chromatography				***Batch ID >*** *B318130*							
Chloride *	< 0.052	0.100		0.052	0.052	mg/L	EPA 300.0	EPA 300.0	04/28/23	SG	
Fluoride	< 0.018	0.020		0.018	0.018	mg/L	EPA 300.0	EPA 300.0	04/28/23	SG	
Sulfate *	< 0.06	0.10		0.06	0.06	mg/L	EPA 300.0	EPA 300.0	04/28/23	SG	
Total Metals By ICP				***Batch ID >*** *B317142*							
Boron	0.004	0.010	J	0.0006	0.0006	mg/L	EPA 6010B	EPA 6010B	04/24/23	XE	
Calcium *	0.536	1.00	J	0.009	0.009	mg/L	EPA 6010B	EPA 6010B	04/24/23	XE	

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Project: Calaveras Power Station-CCR SRH/Bottom Ash Pond
Project Number: [none]
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Report No. 2304294

General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B317276 - SM2540C									
Blank (B317276-BLK1)				Prepared: 04/24/23 15:30		Analyzed: 04/24/23 16:50			
Total Dissolved Solids	<2.50	2.50	mg/L				–		
LCS (B317276-BS1)				Prepared: 04/24/23 15:30		Analyzed: 04/24/23 16:50			
Total Dissolved Solids	108	2.50	mg/L	100		108	80–120		
LCS Dup (B317276-BSD1)				Prepared: 04/24/23 15:30		Analyzed: 04/24/23 16:50			
Total Dissolved Solids	95.0	2.50	mg/L	100		95	80–120	13	20
Duplicate (B317276-DUP1)		**Source: 2304293-01**		Prepared: 04/24/23 15:30		Analyzed: 04/24/23 16:50			
Total Dissolved Solids	2200	3.57	mg/L		2120		–	4	20
Duplicate (B317276-DUP2)		**Source: 2304295-06**		Prepared: 04/24/23 15:30		Analyzed: 04/24/23 16:50			
Total Dissolved Solids	4060	8.33	mg/L		3970		–	2	20
Batch B317278 - SM2540C									
Blank (B317278-BLK1)				Prepared: 04/25/23 15:00		Analyzed: 04/25/23 16:45			
Total Dissolved Solids	<2.50	2.50	mg/L				–		
LCS (B317278-BS1)				Prepared: 04/25/23 15:00		Analyzed: 04/25/23 16:45			
Total Dissolved Solids	108	2.50	mg/L	100		108	80–120		
LCS Dup (B317278-BSD1)				Prepared: 04/25/23 15:00		Analyzed: 04/25/23 16:45			
Total Dissolved Solids	95.0	2.50	mg/L	100		95	80–120	13	20
Duplicate (B317278-DUP1)		**Source: 2304293-05**		Prepared: 04/25/23 15:00		Analyzed: 04/25/23 16:45			
Total Dissolved Solids	2480	3.57	mg/L		2310		–	7	20

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Project: Calaveras Power Station-CCR SRH/Bottom Ash Pond
Project Number: [none]
Project Manager: Chelsey Vasbinder

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Report No. 2304294

General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B317278 - SM2540C									
Duplicate (B317278-DUP2)		**Source: 2304294-11**		Prepared: 04/25/23 15:00 Analyzed: 04/25/23 16:45					
Total Dissolved Solids	1440	3.12	mg/L		1400		–	2	20

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Project: Calaveras Power Station-CCR SRH/Bottom Ash Pond
Project Number: [none]
Project Manager: Chelsey Vasbinder

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Report No. 2304294

Anions by Ion Chromatography - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B317253 - EPA 300.0									
Blank (B317253-BLK1)				Prepared: 04/27/23 16:00		Analyzed: 04/27/23 18:01			
Fluoride	<0.020	0.020	mg/L				–		
LCS (B317253-BS1)				Prepared: 04/27/23 16:00		Analyzed: 04/27/23 18:19			
Fluoride	1.07	0.020	mg/L	1.00		107	90–110		
LCS Dup (B317253-BSD1)				Prepared: 04/27/23 16:00		Analyzed: 04/27/23 18:37			
Fluoride	1.01	0.020	mg/L	1.00		101	90–110	5	20
Duplicate (B317253-DUP1)		**Source: 2304294-03**		Prepared: 04/27/23 16:00		Analyzed: 04/28/23 01:10			
Fluoride	0.323	0.020	mg/L		0.310		–	4	20
Duplicate (B317253-DUP2)		**Source: 2304295-01**		Prepared: 04/27/23 16:00		Analyzed: 04/28/23 05:20			
Fluoride	0.549	0.020	mg/L		0.549		–	0.09	20
Matrix Spike (B317253-MS1)		**Source: 2304294-03**		Prepared: 04/27/23 16:00		Analyzed: 04/28/23 01:28			
Fluoride	1.19	0.020	mg/L	1.00	0.310	88	80–120		
Matrix Spike (B317253-MS2)		**Source: 2304295-01**		Prepared: 04/27/23 16:00		Analyzed: 04/28/23 05:38			
Fluoride	1.42	0.020	mg/L	1.00	0.549	87	80–120		
Matrix Spike Dup (B317253-MSD1)		**Source: 2304294-03**		Prepared: 04/27/23 16:00		Analyzed: 04/28/23 01:46			
Fluoride	1.19	0.020	mg/L	1.00	0.310	88	80–120	0.5	20
Matrix Spike Dup (B317253-MSD2)		**Source: 2304295-01**		Prepared: 04/27/23 16:00		Analyzed: 04/28/23 05:56			
Fluoride	1.42	0.020	mg/L	1.00	0.549	87	80–120	0.2	20
Batch B318130 - EPA 300.0									
Blank (B318130-BLK1)				Prepared: 04/28/23 10:00		Analyzed: 04/28/23 10:39			
Chloride	<0.100	0.100	mg/L				–		
Sulfate	<0.10	0.10	mg/L				–		

CPS Energy - Environmental Dept.
P.O. Box 1771
San Antonio TX, 78296-1771

Project: Calaveras Power Station-CCR SRH/Bottom Ash Pond
Project Number: [none]
Project Manager: Chelsey Vasbinder

Reported:
06/23/23 11:58
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04/20/23 11:10

Notes:
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Report No. 2304294

Anions by Ion Chromatography - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	
Batch B318130 - EPA 300.0										
Blank (B318130-BLK2)				Prepared: 04/28/23 10:00		Analyzed: 04/28/23 11:33				
Chloride	<0.100	0.100	mg/L				–			
Sulfate	<0.10	0.10	mg/L				–			
LCS (B318130-BS1)				Prepared: 04/28/23 10:00		Analyzed: 04/28/23 10:57				
Chloride	5.16	0.100	mg/L	5.00		103	90–110			
Sulfate	5.28	0.10	mg/L	5.00		106	90–110			
LCS (B318130-BS2)				Prepared: 04/28/23 10:00		Analyzed: 04/28/23 11:50				
Chloride	5.27	0.100	mg/L	5.00		105	90–110			
Sulfate	5.39	0.10	mg/L	5.00		108	90–110			
LCS Dup (B318130-BSD1)				Prepared: 04/28/23 10:00		Analyzed: 04/28/23 11:15				
Chloride	5.05	0.100	mg/L	5.00		101	90–110	2	20	
Sulfate	5.23	0.10	mg/L	5.00		105	90–110	0.9	20	
LCS Dup (B318130-BSD2)				Prepared: 04/28/23 10:00		Analyzed: 04/28/23 12:08				
Chloride	5.23	0.100	mg/L	5.00		105	90–110	0.7	20	
Sulfate	5.40	0.10	mg/L	5.00		108	90–110	0.3	20	
Duplicate (B318130-DUP1)		**Source: 2304295-01**		Prepared: 04/28/23 16:00		Analyzed: 04/28/23 22:27				
Chloride	111	1.00	mg/L		111		–	0.03	20	
Sulfate	57.3	1.00	mg/L		57.2		–	0.1	20	
Duplicate (B318130-DUP2)		**Source: 2304295-02**		Prepared: 04/28/23 16:00		Analyzed: 04/28/23 23:56				
Chloride	17.6	0.500	mg/L		17.7		–	0.4	20	
Sulfate	70.0	0.50	mg/L		70.2		–	0.4	20	
Matrix Spike (B318130-MS1)		**Source: 2304295-01**		Prepared: 04/28/23 16:00		Analyzed: 04/28/23 22:45				
Chloride	147	0.100	mg/L	5.00	111	701	80–120			M
Sulfate	70.3	0.10	mg/L	5.00	57.2	263	80–120			M

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Project Manager: Chelsey Vasbinder

Reported:
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Report No. 2304294

Anions by Ion Chromatography - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	
Batch B318130 - EPA 300.0										
Matrix Spike (B318130-MS2)		**Source: 2304295-02**		Prepared: 04/28/23 16:00		Analyzed: 04/29/23 00:14				
Chloride	26.2	0.100	mg/L	5.00	17.7	171	80–120			M
Sulfate	86.4	0.10	mg/L	5.00	70.2	323	80–120			M
Matrix Spike Dup (B318130-MSD1)		**Source: 2304295-01**		Prepared: 04/28/23 16:00		Analyzed: 04/28/23 23:02				
Chloride	146	0.100	mg/L	5.00	111	699	80–120	0.07	20	M
Sulfate	70.3	0.10	mg/L	5.00	57.2	263	80–120	0.02	20	M
Matrix Spike Dup (B318130-MSD2)		**Source: 2304295-02**		Prepared: 04/28/23 16:00		Analyzed: 04/29/23 00:32				
Chloride	26.2	0.100	mg/L	5.00	17.7	170	80–120	0.2	20	M
Sulfate	86.5	0.10	mg/L	5.00	70.2	325	80–120	0.09	20	M

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Report No. 2304294

Total Mercury - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B317179 - EPA 7470A									
Blank (B317179-BLK1)				Prepared: 04/25/23 12:30	Analyzed: 04/25/23 16:07				
Mercury	<0.0002	0.0002	mg/L				–		
LCS (B317179-BS1)				Prepared: 04/25/23 12:30	Analyzed: 04/25/23 16:09				
Mercury	0.00972	0.0002	mg/L	0.0100		97	85–115		
LCS Dup (B317179-BSD1)				Prepared: 04/25/23 12:30	Analyzed: 04/25/23 16:11				
Mercury	0.0103	0.0002	mg/L	0.0100		103	85–115	6	25
Duplicate (B317179-DUP1)		**Source: 2304294-10**		Prepared: 04/25/23 12:30	Analyzed: 04/25/23 16:31				
Mercury	<0.0002	0.0002	mg/L		<0.0002		–		25
Matrix Spike (B317179-MS1)		**Source: 2304294-10**		Prepared: 04/25/23 12:30	Analyzed: 04/25/23 16:33				
Mercury	0.00923	0.0002	mg/L	0.0100	<0.0002	92	75–125		
Matrix Spike Dup (B317179-MSD1)		**Source: 2304294-10**		Prepared: 04/25/23 12:30	Analyzed: 04/25/23 16:35				
Mercury	0.00900	0.0002	mg/L	0.0100	<0.0002	90	75–125	3	25

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Report No. 2304294

Total Metals By ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	
Batch B317141 - EPA 6010B										
Blank (B317141-BLK1)				Prepared: 04/24/23 13:00		Analyzed: 04/24/23 17:14				
Boron	<0.010	0.010	mg/L				–			
Calcium	<1.00	1.00	mg/L				–			
LCS (B317141-BS1)				Prepared: 04/24/23 13:00		Analyzed: 04/24/23 17:25				
Boron	1.90	0.010	mg/L	2.00		95	85–115			
Calcium	1.87	1.00	mg/L	2.00		94	85–115			
LCS Dup (B317141-BSD1)				Prepared: 04/24/23 13:00		Analyzed: 04/24/23 17:31				
Boron	1.88	0.010	mg/L	2.00		94	85–115	0.9	20	
Calcium	1.86	1.00	mg/L	2.00		93	85–115	0.5	20	
Duplicate (B317141-DUP1)		**Source: 2304292-01**		Prepared: 04/24/23 13:00		Analyzed: 04/24/23 17:53				
Boron	0.392	0.010	mg/L		0.415		–	6	20	
Calcium	160	1.00	mg/L		166		–	4	20	
Duplicate (B317141-DUP2)		**Source: 2304293-05**		Prepared: 04/24/23 13:00		Analyzed: 04/24/23 19:40				
Boron	0.561	0.010	mg/L		0.579		–	3	20	
Calcium	352	1.00	mg/L		358		–	2	20	
Matrix Spike (B317141-MS1)		**Source: 2304292-01**		Prepared: 04/24/23 13:00		Analyzed: 04/24/23 17:59				
Boron	1.72	0.010	mg/L	2.00	0.415	65	75–125			M
Calcium	159	1.00	mg/L	2.00	166	NR	75–125			M
Matrix Spike (B317141-MS2)		**Source: 2304293-05**		Prepared: 04/24/23 13:00		Analyzed: 04/24/23 19:46				
Boron	2.62	0.010	mg/L	2.00	0.579	102	75–125			
Calcium	352	1.00	mg/L	2.00	358	NR	75–125			M
Matrix Spike Dup (B317141-MSD1)		**Source: 2304292-01**		Prepared: 04/24/23 13:00		Analyzed: 04/24/23 18:05				
Boron	1.69	0.010	mg/L	2.00	0.415	64	75–125	2	20	M
Calcium	163	1.00	mg/L	2.00	166	NR	75–125	3	20	M

CPS Energy - Environmental Dept.
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Report No. 2304294

Total Metals By ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	
Batch B317141 - EPA 6010B										
Matrix Spike Dup (B317141-MSD2)		**Source: 2304293-05**		Prepared: 04/24/23 13:00		Analyzed: 04/24/23 19:52				
Boron	2.62	0.010	mg/L	2.00	0.579	102	75-125	0.08	20	
Calcium	336	1.00	mg/L	2.00	358	NR	75-125	5	20	M
Batch B317142 - EPA 6010B										
Blank (B317142-BLK1)				Prepared: 04/24/23 13:00		Analyzed: 04/24/23 17:20				
Antimony	<0.010	0.010	mg/L				-			
Arsenic	<0.010	0.010	mg/L				-			
Barium	<0.010	0.010	mg/L				-			
Beryllium	<0.004	0.004	mg/L				-			
Boron	<0.010	0.010	mg/L				-			
Cadmium	<0.005	0.005	mg/L				-			
Calcium	<1.00	1.00	mg/L				-			
Chromium	<0.010	0.010	mg/L				-			
Cobalt	<0.010	0.010	mg/L				-			
Lead	<0.010	0.010	mg/L				-			
Molybdenum	<0.010	0.010	mg/L				-			
Selenium	<0.010	0.010	mg/L				-			
Thallium	<0.010	0.010	mg/L				-			
LCS (B317142-BS1)				Prepared: 04/24/23 13:00		Analyzed: 04/24/23 17:36				
Antimony	1.91	0.010	mg/L	2.00		96	85-115			
Arsenic	1.88	0.010	mg/L	2.00		94	85-115			
Barium	1.84	0.010	mg/L	2.00		92	85-115			
Beryllium	1.90	0.004	mg/L	2.00		95	85-115			
Boron	1.90	0.010	mg/L	2.00		95	85-115			
Cadmium	1.85	0.005	mg/L	2.00		93	85-115			
Calcium	1.88	1.00	mg/L	2.00		94	85-115			
Chromium	1.81	0.010	mg/L	2.00		91	85-115			
Cobalt	1.86	0.010	mg/L	2.00		93	85-115			
Lead	1.87	0.010	mg/L	2.00		94	85-115			
Molybdenum	1.94	0.010	mg/L	2.00		97	85-115			
Selenium	1.90	0.010	mg/L	2.00		95	85-115			
Thallium	1.88	0.010	mg/L	2.00		94	85-115			

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Project: Calaveras Power Station-CCR SRH/Bottom Ash Pond
Project Number: [none]
Project Manager: Chelsey Vasbinder

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Report No. 2304294

Total Metals By ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	
Batch B317142 - EPA 6010B										
LCS Dup (B317142-BSD1)				Prepared: 04/24/23 13:00 Analyzed: 04/24/23 17:42						
Antimony	1.90	0.010	mg/L	2.00		95	85–115	0.6	20	
Arsenic	1.87	0.010	mg/L	2.00		93	85–115	0.5	20	
Barium	1.81	0.010	mg/L	2.00		91	85–115	1	20	
Beryllium	1.89	0.004	mg/L	2.00		95	85–115	0.6	20	
Boron	1.88	0.010	mg/L	2.00		94	85–115	1	20	
Cadmium	1.84	0.005	mg/L	2.00		92	85–115	0.6	20	
Calcium	1.87	1.00	mg/L	2.00		93	85–115	0.9	20	
Chromium	1.80	0.010	mg/L	2.00		90	85–115	0.6	20	
Cobalt	1.84	0.010	mg/L	2.00		92	85–115	0.9	20	
Lead	1.85	0.010	mg/L	2.00		92	85–115	1	20	
Molybdenum	1.92	0.010	mg/L	2.00		96	85–115	0.8	20	
Selenium	1.88	0.010	mg/L	2.00		94	85–115	0.8	20	
Thallium	1.86	0.010	mg/L	2.00		93	85–115	0.9	20	
Duplicate (B317142-DUP1)		**Source: 2304294-09**		Prepared: 04/24/23 13:00 Analyzed: 04/24/23 21:17						
Antimony	<0.010	0.010	mg/L		<0.010		–		20	
Arsenic	0.00420	0.010	mg/L		0.00540		–	25	20	S
Barium	0.183	0.010	mg/L		0.180		–	2	20	
Beryllium	<0.004	0.004	mg/L		<0.004		–		20	
Boron	2.92	0.010	mg/L		2.86		–	2	20	
Cadmium	0.000400	0.005	mg/L		0.000400		–	0	20	
Calcium	94.7	1.00	mg/L		92.0		–	3	20	
Chromium	<0.010	0.010	mg/L		<0.010		–		20	
Cobalt	0.00240	0.010	mg/L		0.00230		–	4	20	
Lead	0.00170	0.010	mg/L		<0.010		–		20	
Molybdenum	0.000600	0.010	mg/L		0.000600		–	0	20	
Selenium	<0.010	0.010	mg/L		<0.010		–		20	

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Total Metals By ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B317142 - EPA 6010B									
Duplicate (B317142-DUP2)		**Source: 2304295-07**		Prepared: 04/24/23 13:00 Analyzed: 04/25/23 09:58					
Antimony	<0.010	0.010	mg/L		<0.010		–		20
Arsenic	<0.010	0.010	mg/L		<0.010		–		20
Barium	<0.010	0.010	mg/L		<0.010		–		20
Beryllium	0.000300	0.004	mg/L		<0.004		–		20
Boron	<0.010	0.010	mg/L		0.00150		–		20
Cadmium	0.000300	0.005	mg/L		<0.005		–		20
Calcium	0.473	1.00	mg/L		0.548		–	15	20
Chromium	<0.010	0.010	mg/L		0.000400		–		20
Cobalt	<0.010	0.010	mg/L		<0.010		–		20
Lead	<0.010	0.010	mg/L		<0.010		–		20
Molybdenum	<0.010	0.010	mg/L		<0.010		–		20
Selenium	0.00180	0.010	mg/L		<0.010		–		20
Thallium	0.00170	0.010	mg/L		<0.010		–		20
Matrix Spike (B317142-MS1)		**Source: 2304294-09**		Prepared: 04/24/23 13:00 Analyzed: 04/24/23 21:22					
Antimony	1.99	0.010	mg/L	2.00	<0.010	100	75–125		
Arsenic	1.99	0.010	mg/L	2.00	0.00540	99	75–125		
Barium	1.98	0.010	mg/L	2.00	0.180	90	75–125		
Beryllium	1.95	0.004	mg/L	2.00	<0.004	97	75–125		
Boron	4.94	0.010	mg/L	2.00	2.86	104	75–125		
Cadmium	1.88	0.005	mg/L	2.00	0.000400	94	75–125		
Calcium	94.0	1.00	mg/L	2.00	92.0	101	75–125		
Chromium	1.84	0.010	mg/L	2.00	<0.010	92	75–125		
Cobalt	1.80	0.010	mg/L	2.00	0.00230	90	75–125		
Lead	1.88	0.010	mg/L	2.00	<0.010	94	75–125		
Molybdenum	1.95	0.010	mg/L	2.00	0.000600	98	75–125		
Selenium	1.98	0.010	mg/L	2.00	<0.010	99	75–125		

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Total Metals By ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	
Batch B317142 - EPA 6010B										
Matrix Spike (B317142-MS2)		**Source: 2304295-07**		Prepared: 04/24/23 13:00		Analyzed: 04/24/23 22:51				
Antimony	2.00	0.010	mg/L	2.00	<0.010	100	75–125			
Arsenic	1.98	0.010	mg/L	2.00	<0.010	99	75–125			
Barium	1.92	0.010	mg/L	2.00	<0.010	96	75–125			
Beryllium	2.00	0.004	mg/L	2.00	<0.004	100	75–125			
Boron	1.99	0.010	mg/L	2.00	0.00150	100	75–125			
Cadmium	1.91	0.005	mg/L	2.00	<0.005	96	75–125			
Calcium	2.52	1.00	mg/L	2.00	0.548	98	75–125			
Chromium	1.97	0.010	mg/L	2.00	0.000400	99	75–125			
Cobalt	1.92	0.010	mg/L	2.00	<0.010	96	75–125			
Lead	1.89	0.010	mg/L	2.00	<0.010	94	75–125			
Molybdenum	2.01	0.010	mg/L	2.00	<0.010	100	75–125			
Selenium	1.96	0.010	mg/L	2.00	<0.010	98	75–125			
Thallium	1.99	0.010	mg/L	2.00	<0.010	99	75–125			
Matrix Spike Dup (B317142-MSD1)		**Source: 2304294-09**		Prepared: 04/24/23 13:00		Analyzed: 04/24/23 21:28				
Antimony	2.07	0.010	mg/L	2.00	<0.010	103	75–125	4	20	
Arsenic	2.06	0.010	mg/L	2.00	0.00540	103	75–125	4	20	
Barium	2.06	0.010	mg/L	2.00	0.180	94	75–125	4	20	
Beryllium	2.02	0.004	mg/L	2.00	<0.004	101	75–125	4	20	
Boron	4.96	0.010	mg/L	2.00	2.86	105	75–125	0.5	20	
Cadmium	1.96	0.005	mg/L	2.00	0.000400	98	75–125	4	20	
Calcium	93.1	1.00	mg/L	2.00	92.0	59	75–125	0.9	20	M
Chromium	1.89	0.010	mg/L	2.00	<0.010	95	75–125	3	20	
Cobalt	1.87	0.010	mg/L	2.00	0.00230	94	75–125	4	20	
Lead	1.95	0.010	mg/L	2.00	<0.010	98	75–125	4	20	
Molybdenum	2.03	0.010	mg/L	2.00	0.000600	102	75–125	4	20	
Selenium	2.06	0.010	mg/L	2.00	<0.010	103	75–125	4	20	

CPS Energy - Environmental Dept.
P.O. Box 1771
San Antonio TX, 78296-1771

Project: Calaveras Power Station-CCR SRH/Bottom Ash Pond
Project Number: [none]
Project Manager: Chelsey Vasbinder

Reported:
06/23/23 11:58
Received:
04/20/23 11:10

Notes:
This supersedes the last report (2304294_1 2-SATL1_TRRP 06 21 23 1703) issued. Reason: To include Rads, 06/23/23.

Report No. 2304294

Total Metals By ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B317142 - EPA 6010B									
Matrix Spike Dup (B317142-MSD2)		**Source: 2304295-07**		Prepared: 04/24/23 13:00 Analyzed: 04/24/23 22:57					
Antimony	2.04	0.010	mg/L	2.00	<0.010	102	75-125	2	20
Arsenic	2.02	0.010	mg/L	2.00	<0.010	101	75-125	2	20
Barium	1.94	0.010	mg/L	2.00	<0.010	97	75-125	1	20
Beryllium	2.03	0.004	mg/L	2.00	<0.004	101	75-125	2	20
Boron	2.01	0.010	mg/L	2.00	0.00150	101	75-125	0.9	20
Cadmium	1.94	0.005	mg/L	2.00	<0.005	97	75-125	2	20
Calcium	2.53	1.00	mg/L	2.00	0.548	99	75-125	0.6	20
Chromium	2.02	0.010	mg/L	2.00	0.000400	101	75-125	2	20
Cobalt	1.94	0.010	mg/L	2.00	<0.010	97	75-125	1	20
Lead	1.90	0.010	mg/L	2.00	<0.010	95	75-125	0.7	20
Molybdenum	2.05	0.010	mg/L	2.00	<0.010	102	75-125	2	20
Selenium	2.00	0.010	mg/L	2.00	<0.010	100	75-125	2	20
Thallium	2.02	0.010	mg/L	2.00	<0.010	101	75-125	2	20

CPS Energy - Environmental Dept.
P.O. Box 1771
San Antonio TX, 78296-1771

Project: Calaveras Power Station-CCR SRH/Bottom Ash Pond
Project Number: [none]
Project Manager: Chelsey Vasbinder

Reported:
06/23/23 11:58
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04/20/23 11:10

Notes:
This supersedes the last report (2304294_1 2-SATL1_TRRP 06 21 23 1703) issued. Reason: To include Rads, 06/23/23.

Report No. 2304294

DEFINITIONS

*	TNI / NELAC accredited analyte
PQL	Practical Quantitation Limit
MCL	Maximum Contaminant Level
mg/Kg	Milligrams per Kilogram (Parts per Million)
mg/L	Milligrams per Liter (Parts per Million)
PPM	Parts per Million
ND	This qualifier indicates that the analyte was analyzed but not detected above the MDL
J	This qualifier indicates that the analyte is an estimate value between MQL and MDL
SQL	Sample Quantitation Limit
MQL	Method Quantitation Limit
MDL	Method Detection Limit
L	LCS/LCSD recovery is outside QC limits, the results may have a slight bias.
M	MS/MSD recovery is outside QC limits due to possible matrix interferences, results may have a slight bias .
S	RPD is outside QC limits.
RMCCL	Recommended Maximum Concentration of Contaminants Level
µR/hr	MicroRoentgens per hour (Measure of Radioactivity Level)
HT	Sample received past holdtime
IC	Improper Container for this analyte(s)
IT	Improper Temperature
IP	Improper preservation for this analyte(s)
V	Insufficient Volume
B	Sample collected in Bulk
AB	VOA Vial contained air bubbles.
OP	ortho-Phosphate was not filtered in the field within 15minutes of collection.
CCV	Continuing Calibration Verification Standard.
ICV	Initial Calibration Verification Standard.
Surr L	Surrogate recovery is low outside QC limits.
Surr H	Surrogate recovery is high outside QC limits.
NR	Not Recovered due to source sample concentration exceeds spiked concentration.

Test Methods followed by the laboratory are referenced in the following approved methodology, unless otherwise specified.

Standard Methods for the Examination of Water and Wastewater, 23rd Edition, 2017
Methods for Chemical Analysis of Water and Wastes, EPA 600/4-79-020, Rev. March 1983
EPA SW Test Methods for the Examination of Solid Waste, SW-846, 1996

Subcontracted Analyses

Subcontractor Lab	Lab Number	Analysis
Eurofins - St. Louis	2304294-10	Li_T
Eurofins - St. Louis	2304294-10	Radium 226_SUB
Eurofins - St. Louis	2304294-10	Radium 228_SUB

CPS Energy - Environmental Dept.
P.O. Box 1771
San Antonio TX, 78296-1771

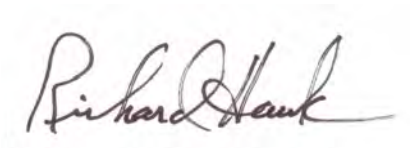
Project: Calaveras Power Station-CCR SRH/Bottom Ash Pond
Project Number: [none]
Project Manager: Chelsey Vasbinder

Reported:
06/23/23 11:58
Received:
04/20/23 11:10

Notes:
This supersedes the last report (2304294_1 2-SATL1_TRRP 06 21 23 1703) issued. Reason: To include Rads, 06/23/23.

Report No. 2304294

Aimee Landon For Marcela Gracia Hawk, President For



Richard Hawk, General Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

A

Client Information	Project Information	Laboratory Information	COC Information
CPS Energy - Environmental Dept. P.O. Box 1771 San Antonio TX 78296-1771 Phone: (210) 353-4719 Fax: (210) 353-4271	Calaveras Power Station-CCR SRH/Bottom Ash Pond Number: [none] Sample count: 12 TAT: 7	San Antonio Testing Laboratory 1610 S. Laredo St San Antonio TX 78207 Phone: 210-229-9920 Fax: 210-229-9921	Shipped via: Hand Delivered

		Analyses	Containers
#1	JKS-48-20230419-CCR 04/19/2023 10:14 Grab / Liquid	B_T TAT: 7 Ca_T TAT: 7 Chloride_IC TAT: 7 Fluoride_IC TAT: 7 Sulfate_IC TAT: 7 TDS TAT: 7	1 L Plastic Unpreserved (1) 250 mL Plastic HNO3 (1)
	Comments: TRRP REPORTING		
#2	JKS-49-20230418-CCR 04/18/2023 13:27 Grab / Liquid	B_T TAT: 7 Ca_T TAT: 7 Chloride_IC TAT: 7 Fluoride_IC TAT: 7 Sulfate_IC TAT: 7 TDS TAT: 7	1 L Plastic Unpreserved (1) 250 mL Plastic HNO3 (1)
	Comments: TRRP REPORTING		
#3	JKS-50R-20230418-CCR 04/18/2023 14:31 Grab / Liquid	B_T TAT: 7 Ca_T TAT: 7 Chloride_IC TAT: 7 Fluoride_IC TAT: 7 Sulfate_IC TAT: 7 TDS TAT: 7	1 L Plastic Unpreserved (1) 250 mL Plastic HNO3 (1)
	Comments: TRRP REPORTING		
#4	JKS-51-20230419-CCR 04/19/2023 13:00 Grab / Liquid	B_T TAT: 7 Ca_T TAT: 7 Chloride_IC TAT: 7 Fluoride_IC TAT: 7 Sulfate_IC TAT: 7 TDS TAT: 7	1 L Plastic Unpreserved (1) 250 mL Plastic HNO3 (1)
	Comments: TRRP REPORTING		
#5	JKS-52-20230419-CCR 04/19/2023 11:16 Grab / Liquid	B_T TAT: 7 Ca_T TAT: 7 Chloride_IC TAT: 7 Fluoride_IC TAT: 7 Sulfate_IC TAT: 7 TDS TAT: 7	1 L Plastic Unpreserved (1) 250 mL Plastic HNO3 (1)
	Comments: TRRP REPORTING		
#6	JKS-53-20230419-CCR 04/19/2023 14:25 Grab / Liquid	B_T TAT: 7 Ca_T TAT: 7 Chloride_IC TAT: 7 Fluoride_IC TAT: 7 Sulfate_IC TAT: 7 TDS TAT: 7	1 L Plastic Unpreserved (1) 250 mL Plastic HNO3 (1)
	Comments: TRRP REPORTING		

#7	JKS-54-20230419-CCR 04/19/2023 13:39 Grab / Liquid	**Analyses** B_T TAT: 7 Ca_T TAT: 7 Chloride_IC TAT: 7 Fluoride_IC TAT: 7 Sulfate_IC TAT: 7 TDS TAT: 7	**Containers** 1 L Plastic Unpreserved (1) 250 mL Plastic HNO3 (1)
	Comments: TRRP REPORTING		
#8	JKS-55-20230418-CCR 04/18/2023 15:23 Grab / Liquid	**Analyses** B_T TAT: 7 Ca_T TAT: 7 Chloride_IC TAT: 7 Fluoride_IC TAT: 7 Sulfate_IC TAT: 7 TDS TAT: 7	**Containers** 1 L Plastic Unpreserved (1) 250 mL Plastic HNO3 (1)
	Comments: TRRP REPORTING		
#9	JKS-56-20230419-CCR 04/19/2023 09:25 Grab / Liquid	**Analyses** B_T TAT: 7 Ca_T TAT: 7 Chloride_IC TAT: 7 Fluoride_IC TAT: 7 Sulfate_IC TAT: 7 TDS TAT: 7	**Containers** 1 L Plastic Unpreserved (1) 250 mL Plastic HNO3 (1)
	Comments: TRRP REPORTING		
#10	JKS-70-20230419-CCR 04/19/2023 12:08 Grab / Liquid	**Analyses** As_T TAT: 7 B_T TAT: 7 Ba_T TAT: 7 Be_T TAT: 7 Ca_T TAT: 7 Cd_T TAT: 7 Chloride_IC TAT: 7 Co_T TAT: 7 Cr_T TAT: 7 Fluoride_IC TAT: 7 Hg_T TAT: 7 Li_T TAT: 7 (Subcontracted to Eurofins - St. Louis) Mo_T TAT: 7 Pb_T TAT: 7 Sb_T TAT: 7 Se_T TAT: 7 Sulfate_IC TAT: 7 TDS TAT: 7 Tl_T TAT: 7	**Containers** 1 L Plastic Unpreserved (1) 250 mL Plastic HNO3 (1) 1 Gallon Plastic (1)
	Comments: TERP REPORTING - Radium 226 & 228 Combined		
#11	DUP-002-20230419 04/19/2023 15:09 Grab / Liquid	**Analyses** B_T TAT: 7 Ca_T TAT: 7 Chloride_IC TAT: 7 Fluoride_IC TAT: 7 Sulfate_IC TAT: 7 TDS TAT: 7	**Containers** 1 L Plastic Unpreserved (1) 250 mL Plastic HNO3 (1)
	Comments: TRRP REPORTING		
#12	FB-002-20230419 04/19/2023 09:22 Grab / Liquid	**Analyses** B_T TAT: 7 Ca_T TAT: 7 Chloride_IC TAT: 7 Fluoride_IC TAT: 7 Sulfate_IC TAT: 7 TDS TAT: 7	**Containers** 1 L Plastic Unpreserved (1) 250 mL Plastic HNO3 (1)
	Comments: TRRP REPORTING		

TRRP

2304394

Sub Laboratory:	Eurofins - St. Louis 13715 Rider Trail North Earth City MO 63045 Number: (314) 298-8566 Laboratory: -

0.4°C | 0.4°C Tb #7

Relinquished by	Date/Time	Accepted by	Date/Time
Alvin Medina	4-20-23 1020	Lance Simmons	10:20 4-20-23
Lance Simmons	4-20-23 1110	[illegible]	APR 20 2023 1110

SAN ANTONIO TESTING LABORATORY

Sample Receipt Checklist

Client: CPS Energy - Environmental Dept.	**Project Manager: Marcela Gracia Hawk**
Project: Calaveras Power Station-CCR SRH/Bottom A	**Project Number: [none]**

Report To:
Chelsey Vasbinder

SATL Report Number: 2304294

Work Order Due by: 05/04/23 17:00 (10 day TAT)
Received By: Aimee Landon
Date Received: 04/20/23 11:10
Logged In By: Aimee Landon
Date Logged In: 04/20/23 11:41

Sample(s) Received on ICE/evidence of Ice (cooler with melted ice,etc):	*Yes*
Sample temperature at receipt *:	*0.4°C*
Custody Seals Present:	*No*
All containers intact:	*Yes*
Sample labels/COC agree:	*Yes*
Samples Received within Holding time :	*Yes*
Samples appropriately preserved **:	*Yes*
Containers received broken/damaged/leaking:	*No*
Air bubbles present in VOA vials for VOC/TPH analyses, if applicable:	*Not Applicable*
TRRP 13 Reporting requested?	*Yes*
BacT Sample bottles filled to volume (100mL mark), if applicable:	*Not Applicable*
LCR Sample bottles filled to volume (1 Liter mark), if applicable:	*Not Applicable*
Subcontracting required for any analyses:	*Yes*
RUSH turnaround time requested:	*Yes*
Requested Turnaround Time:	*10 Business days*
Samples delivered via :	*Hand Delivered*
Air bill included if Samples were shipped:	*No*
Other deviations not meeting SATL sample acceptance criteria notated on CoC:	*None*

Notes:
** Samples delivered to the laboratory on the same day that they are collected may not meet thermal preservation criteria (>0°C but <6°C) but are acceptable, if they arrive on ice.*
*** If improperly preserved, notate client authorization on CoC to proceed with analysis.*

Checked By : *Aimee Landon*
Date : *04/20/23 11:10*

SATL#FO001
Revised 09/15/2022

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Marcela Hawk
San Antonio Testing Laboratory, Inc.
1610 S Laredo Street
San Antonio, Texas 78207

Generated 5/30/2023 4:34:00 PM

JOB DESCRIPTION

Radiological Sampling

JOB NUMBER

160-49777-1

Eurofins St. Louis
13715 Rider Trail North
Earth City MO 63045

See page two for job notes and contact information.

Eurofins St. Louis

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins TestAmerica Project Manager.

Authorization

Generated
5/30/2023 4:34:00 PM

Authorized for release by
Rhonda Ridenhower, Business Unit Manager
Rhonda.Ridenhower@et.eurofinsus.com
(314)298-8566

Table of Contents

Job ID: 160-49777-1

Laboratory: Eurofins St. Louis

Narrative

Job Narrative
160-49777-1

Receipt
The samples were received on 4/25/2023 11:15 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved. The temperatures of the 3 coolers at receipt time were 12.1º C, 12.2º C and 12.5º C.

Receipt Exceptions
The reference method requires samples to be preserved to a pH of <2. The following samples were received with insufficient preservation at a pH of 7: 2304294-10 (JKS-70-20230419-CCR) (160-49777-1). The samples were preserved to the appropriate pH in the laboratory.

RAD
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

Radium-228 Prep batch 610073
The Ra-228 laboratory control sample (LCS) associated with the following samples recovered at 131%: (LCS 160-610073/2-A). The limits in our LIMS system at (75-125%) reflect the requirements of a regulatory agency that represents a large amount of our work. However the samples associated with this LCS are not from this agency and are therefore held to our in-house statistical limits of (63-154%) per method requirements. The LCS is within criteria and no further action is required.

Insufficient sample volume was available to perform a sample duplicate for the following samples: 2304294-10 (JKS-70-20230419-CCR) (160-49777-1). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

Radium-226 Prep Batch 610058
Insufficient sample volume was available to perform a sample duplicate for the following samples: 2304294-10 (JKS-70-20230419-CCR) (160-49777-1). A laboratory control sample/ laboratory control sample duplicate (LCS/LCSD) were prepared instead to demonstrate batch precision.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

CHAIN-OF-CUSTODY RECORD

SAN ANTONIO TESTING LABORATORY, LLC
1610 S. Laredo Street, San Antonio, Texas 78207
(210) 229-9920 • Fax (210) 229-9921
www.satestinglab.com

REPORT TO:	INVOICE TO:	P.O. #
COMPANY SATL	COMPANY SATL	REPORT NUMBER
ADDRESS	ADDRESS	
CITY STATE ZIP	CITY — STATE ZIP	E-MAIL
ATTN Aimee Landon PHONE # 210-229-9920	ATTN Elizabeth PHONE #	

PROJECT NAME/LOCATION/SITE

PROJECT NO.

SAMPLED BY

REQUESTED TURNAROUND TIME IN BUSINESS DAYS & SURCHARGE: ❑ 7-10 Days REG ❑ 5 Days +25% ❑ 4 Days +50% ❑ 3 DAYS +75% ❑ 2 DAYS +100% ❑ Next Day +150% ❑ SAME DAY WHEN POSSIBLE +300%

THE TURNAROUND TIME FOR SAMPLES RECEIVED AFTER 3:00 PM SHALL BEGIN AT 8:00 AM THE FOLLOWING BUSINESS DAY / SPECIAL REQ.:

DATA TO TCEQ ❑ RRC ❑ Other (Specify) ❑ | Field: pH: ____ ; Temp: ____ °C; LCS/D: ____ / ____ ; Dup: ____

SAMPLE TEMPERATURE WITHIN COMPLIANCE (> 0°C ≤ 6°C) ❑ YES ❑ NO
PROPER CONTAINERS INTACT ❑ YES ❑ NO
INSUFFICIENT SAMPLE FOR (TCLP/SPLP/OTHER) ❑ YES ❑ NO
IF NO, INITIAL HERE TO AUTHORIZE ANALYSIS ____ AUTHORIZE TO PROCEED ____

OBSERVED TEMP / CORRECTED TEMP / TEMP. I.R GUN # ____ | SAMPLE ICED ❑ YES ❑ NO | TRRP 13 APPENDIX A ❑ | PST PCLS SIM/LOW LEVEL ❑ | TSDF Class 2 PERMIT ❑

ANALYSIS REQUESTED

SAMPLE NUMBER	DATE	TIME	DRINKING WATER	NON POTABLE WATER	PAINT CHIPS	OIL	ORGANIC LIQUID	SOLID / SLUDGE	WIPE	OTHER	COMPOSITE	GRAB	CORE	OTHER	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	SAMPLE AMOUNT	CONTAINER SIZE	BTEX/MTBE 8260 / TPH TX1005/TX1006	Metals 8 / 11 / 12 / 13 / TCLP / SPLP / Total	PAH / SVOC / 8270 / 625.1 / TCLP / SPLP / Total	VOC / 8260 / 624.1 / TCLP / SPLP / Total	Water Quality - Drinking / Livestock / Irrigation	Coli / TC / FC / HPC / ECoil / Enterococci / Q-Tray	Br / Cl / F / NO3 / NO2/O-P / SO4	Herb 8151A	PCB/8082A - Pest / 608.3 / 8081A / TCLP / SPLP / Total (Pest 226, 228 Comb)	PRESERVE WITH: NONE / HNO3 / H2SO4 / NaOH / HCL / ICE / PRESERVED IN THE LAB / COMPOSITED IN THE LAB / FILTERED IN THE LAB / FILTERED IN THE FIELD / VOA AIR BUBBLES	REMARKS
1	4/19/23	1200	X									X			JKS-70-20230419-CCR	1	Gal	Gal									X		2304294-10

TRRP Reporting and Equis 5X EDD Needed
LIE 210427

RELINQUISHED BY (SIGNATURE)	DATE / TIME	RECEIVED BY (SIGNATURE)	DATE / TIME	RELINQUISHED BY (SIGNATURE)	DATE / TIME	RECEIVED BY (SIGNATURE)	DATE / TIME
[signature]	4/21/23						
RELINQUISHED BY (PRINT NAME): Aimee Landon	1630	RECEIVED BY (PRINT NAME): UPS		RELINQUISHED BY (PRINT NAME)		RECEIVED BY (PRINT NAME)	
RELINQUISHED BY (SIGNATURE): UPS		RECEIVED BY (SIGNATURE): Briana Gonzalez	4/25/23 11:15	METHOD OF SHIPMENT		SUBCONTRACTED ❑ YES ❑ NO	
RELINQUISHED BY (PRINT NAME)		RECEIVED BY (PRINT NAME)		BULK ❑ (Initial) 5035 ❑ N/A ❑		CUSTODY SEAL IN PLACE & INTACT ❑ YES ❑ NO	

FORM: COC REV 09/2022 WHITE - LAB CANARY - CL

Login Sample Receipt Checklist

Client: San Antonio Testing Laboratory, Inc.

Job Number: 160-49777-1

Login Number: 49777
List Number: 1
Creator: Sharkey-Gonzalez, Briana L

List Source: Eurofins St. Louis

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	preserved upon arrival
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Definitions/Glossary

Client: San Antonio Testing Laboratory, Inc.
Project/Site: Radiological Sampling

Job ID: 160-49777-1

Qualifiers

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
SDL	Sample Detection Limit
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Method Summary

Client: San Antonio Testing Laboratory, Inc.
Project/Site: Radiological Sampling

Job ID: 160-49777-1

Method	Method Description	Protocol	Laboratory
903.0	Radium-226 (GFPC)	EPA	EET SL
904.0	Radium-228 (GFPC)	EPA	EET SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	EET SL
PrecSep_0	Preparation, Precipitate Separation	None	EET SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	EET SL

Protocol References:

EPA = US Environmental Protection Agency

None = None

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: San Antonio Testing Laboratory, Inc.
Project/Site: Radiological Sampling

Job ID: 160-49777-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
160-49777-1	2304294-10 (JKS-70-20230419-CCR)	Water	04/19/23 12:08	04/25/23 11:15

Client Sample Results

Client: San Antonio Testing Laboratory, Inc.
Project/Site: Radiological Sampling

Job ID: 160-49777-1

Client Sample ID: 2304294-10 (JKS-70-20230419-CCR)

Date Collected: 04/19/23 12:08
Date Received: 04/25/23 11:15

Lab Sample ID: 160-49777-1

Matrix: Water

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	MQL	MDL	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.263		0.120	a7 22	1.00	0.133	pCi/L	05/04/23 10:36	05/29/23 14:47	

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*82.7*		*30 - 110*	*05/04/23 10:36*	*05/29/23 14:47*	*1*

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	MQL	MDL	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.860		0.427	0.434	1.00	0.589	pCi/L	05/04/23 11:29	05/24/23 15:52	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*82.7*		*30 - 110*	*05/04/23 11:29*	*05/24/23 15:52*	*1*
Y Carrier	*78.5*		*30 - 110*	*05/04/23 11:29*	*05/24/23 15:52*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	MQL	MDL	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.12		0.444	0.451	5.00	0.589	pCi/L		05/30/23 14:51	1

Method: 903.0 - Radium-226 (GFPC)

Lab Sample ID: MB 160-610058/1-A
Matrix: Water
Analysis Batch: 613627

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 610058

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	MQL	MDL	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.03154	U	0.0763	0.0764	1.00	0.164	pCi/L	05/04/23 10:36	05/29/23 12:54	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.4*		*30 - 110*	*05/04/23 10:36*	*05/29/23 12:54*	*1*

Lab Sample ID: LCS 160-610058/2-A
Matrix: Water
Analysis Batch: 613627

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 610058

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	MQL	MDL	Unit	%Rec	%Rec Limits		
Radium-226			11.3	10.51		1.15	1.00	0.154	pCi/L	93	75 - 113		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*80.8*		*30 - 110*

Lab Sample ID: LCSD 160-610058/3-A
Matrix: Water
Analysis Batch: 613627

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 610058

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	MQL	MDL	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-226			11.3	10.02		1.11	1.00	0.166	pCi/L	88	75 - 113	0.21	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*77.9*		*30 - 110*

Method: 904.0 - Radium-228 (GFPC)

Lab Sample ID: MB 160-610073/1-A
Matrix: Water
Analysis Batch: 613059

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 610073

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	MQL	MDL	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.4225	U	0.303	0.305	1.00	0.453	pCi/L	05/04/23 11:29	05/24/23 15:50	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.4*		*30 - 110*	*05/04/23 11:29*	*05/24/23 15:50*	*1*
Y Carrier	*80.4*		*30 - 110*	*05/04/23 11:29*	*05/24/23 15:50*	*1*

Method: 904.0 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCS 160-610073/2-A
Matrix: Water
Analysis Batch: 613059

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 610073

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	MQL	MDL	Unit	%Rec	%Rec Limits		
Radium-228			8.18	10.72		1.44	1.00	0.553	pCi/L	131	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*80.8*		*30 - 110*
Y Carrier	*82.2*		*30 - 110*

Lab Sample ID: LCSD 160-610073/3-A
Matrix: Water
Analysis Batch: 613059

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 610073

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	MQL	MDL	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-228			8.18	9.463		1.35	1.00	0.577	pCi/L	116	75 - 125	0.45	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*77.9*		*30 - 110*
Y Carrier	*78.1*		*30 - 110*

QC Association Summary

Client: San Antonio Testing Laboratory, Inc.
Project/Site: Radiological Sampling

Job ID: 160-49777-1

Rad

Prep Batch: 610058

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-49777-1	2304294-10 (JKS-70-20230419-CCR)	Total/NA	Water	PrecSep-21	
MB 160-610058/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-610058/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-610058/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 610073

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-49777-1	2304294-10 (JKS-70-20230419-CCR)	Total/NA	Water	PrecSep_0	
MB 160-610073/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-610073/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-610073/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Tracer/Carrier Summary

Client: San Antonio Testing Laboratory, Inc.
Project/Site: Radiological Sampling

Job ID: 160-49777-1

Method: 903.0 - Radium-226 (GFPC)

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)
		Ba
Lab Sample ID	Client Sample ID	(30-110)
160-49777-1	2304294-10 (JKS-70-20230419-	82.7
LCS 160-610058/2-A	Lab Control Sample	80.8
LCSD 160-610058/3-A	Lab Control Sample Dup	77.9
MB 160-610058/1-A	Method Blank	94.4

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 904.0 - Radium-228 (GFPC)

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
		Ba	Y
Lab Sample ID	Client Sample ID	(30-110)	(30-110)
160-49777-1	2304294-10 (JKS-70-20230419-	82.7	78.5
LCS 160-610073/2-A	Lab Control Sample	80.8	82.2
LCSD 160-610073/3-A	Lab Control Sample Dup	77.9	78.1
MB 160-610073/1-A	Method Blank	94.4	80.4

Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

Appendix A
Laboratory Data Package Cover Page - Page 1 of 4

This data package is for Eurofins St. Louis job number 160-49777-1 and consists of:

- ☑ 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 Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is NELAC 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 all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Rhonda E Ridenhower		5/30/2023
Name (printed)	Signature	Date

Business Unit Manager
Official Title (printed)

Laboratory Review Checklist: Reportable Data - Page 2 of 4

Laboratory Name:	Eurofins St. Louis	LRC Date:	5/30/2023
Project Name:	Radiological Sampling	Laboratory Job Number:	160-49777-1
Reviewer Name:	Rhonda E Ridenhower		

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
R1	OI	**Chain-of-custody (C-O-C)**					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?		X			R01A
		Were all departures from standard conditions described in an exception report?	X				
R2	OI	**Sample and quality control (QC) identification**					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	**Test reports**					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?			X		
		Were % moisture (or solids) reported for all soil and sediment samples?			X		
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?			X		
		If required for the project, are TICs reported?			X		
R4	O	**Surrogate recovery data**					
		Were surrogates added prior to extraction?			X		
		Were surrogate percent recoveries in all samples within the laboratory QC limits?			X		
R5	OI	**Test reports/summary forms for blank samples**					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6	OI	**Laboratory control samples (LCS):**					
		Were all COCs included in the LCS?	X				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		Was the LCSD RPD within QC limits?	X				
R7	OI	**Matrix spike (MS) and matrix spike duplicate (MSD) data**					
		Were the project/method specified analytes included in the MS and MSD?			X		
		Were MS/MSD analyzed at the appropriate frequency?			X		
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?			X		
		Were MS/MSD RPDs within laboratory QC limits?			X		
R8	OI	**Analytical duplicate data**					
		Were appropriate analytical duplicates analyzed for each matrix?			X		
		Were analytical duplicates analyzed at the appropriate frequency?			X		
		Were RPDs or relative standard deviations within the laboratory QC limits?			X		
R9	OI	**Method quantitation limits (MQLs):**					
		Are the MQLs for each method analyte included in the laboratory data package?			X		
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?			X		
		Are unadjusted MQLs and DCSs included in the laboratory data package?			X		
R10	OI	**Other problems/anomalies**					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?	X				
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted 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 Review checklist: Supporting Data - Page 3 of 4

Laboratory Name:	Eurofins St. Louis	LRC Date:	5/30/2023
Project Name:	Radiological Sampling	Laboratory Job Number:	160-49777-1
Reviewer Name:	Rhonda E Ridenhower		

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
S1	OI	**Initial calibration (ICAL)**					
		Were response factors and/or relative response factors for each analyte within QC limits?	X				
		Were percent RSDs or correlation coefficient criteria met?	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	**Initial and continuing calibration verification (ICV and CCV) and continuing calibration blank (CCB):**					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
S3	O	**Mass spectral tuning**					
		Was the appropriate compound for the method used for tuning?			X		
		Were ion abundance data within the method-required QC limits?			X		
S4	O	**Internal standards (IS)**					
		Were IS area counts and retention times within the method-required QC limits?			X		
S5	OI	**Raw data (NELAC Section 5.5.10)**					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?	X				
S6	O	**Dual column confirmation**					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	**Tentatively identified compounds (TICs)**					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	**Interference Check Sample (ICS) results**					
		Were percent recoveries within method QC limits?			X		
S9	I	**Serial dilutions, post digestion spikes, and method of standard additions**					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X		
S10	OI	**Method detection limit (MDL) studies**					
		Was a MDL study performed for each reported analyte?			X		
		Is the MDL either adjusted or supported by the analysis of DCSs?			X		
S11	OI	**Proficiency test reports**					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	**Standards documentation**					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	**Compound/analyte identification procedures**					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	**Demonstration of analyst competency (DOC)**					
		Was DOC conducted consistent with NELAC Chapter 5?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	**Verification/validation documentation for methods (NELAC Chapter 5)**					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	**Laboratory standard operating procedures (SOPs)**					
		Are laboratory SOPs current and on file for each method performed?	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted 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);
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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 Review Checklist: Exception Reports - Page 4 of 4

Laboratory Name:	Eurofins St. Louis	LRC Date:	5/30/2023
Project Name:	Radiological Sampling	Laboratory Job Number:	160-49777-1
Reviewer Name:	Rhonda E Ridenhower		

ER #[1]	Description
R01A	The reference method requires samples to be preserved to a pH of <2. The following samples were received with insufficient preservation at a pH of 7: 2304295-01 (JKS-65-20230418-FPDP) (160-49776-1), 2304295-02 (JKS-66-20230419-FPDP) (160-49776-2), 2304295-03 (JKS-67-20230418-FPDP) (160-49776-3), 2304295-04 (JKS-68-20230418-FPDP) (160-49776-4), 2304295-05 (JKS-69-20230418-FPDP) (160-49776-5), 2304295-06 (DUP-001-20230418) (160-49776-6), 2304295-07 (FB-003-20230419) (160-49776-7) and 2304294-10 (JKS-70-20230419-CCR) (160-49777-1). The samples were preserved to the appropriate pH in the laboratory.
Misc	Method 903.0: Radium-226 prep batch 160-610058:Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.2304294-10 (JKS-70-20230419-CCR) (160-49777-1), (LCS 160-610058/2-A), (LCSD 160-610058/3-A) and (MB 160-610058/1-A) Method 904.0: Radium-228 prep batch 160-610073:Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.2304294-10 (JKS-70-20230419-CCR) (160-49777-1), (LCS 160-610073/2-A), (LCSD 160-610073/3-A) and (MB 160-610073/1-A) Method 904.0: Radium-228 prep batch 160-610073:The Ra-228 laboratory control sample (LCS) associated with the following samples recovered at 131%: (LCS 160-610073/2-A). The limits in our LIMS system at (75-125%) reflect the requirements of a regulatory agency that represents a large amount of our work. However the samples associated with this LCS are not from this agency and are therefore held to our in-house statistical limits of (63-154%) per method requirements. The LCS is within criteria and no further action is required.

1. Items identified by the letter “R” must be included in the laboratory data package submitted 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).

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ANALYTICAL REPORT

PREPARED FOR

Attn: Marcela Hawk
San Antonio Testing Laboratory, Inc.
1610 S Laredo Street
San Antonio, Texas 78207

Generated 6/20/2023 6:19:21 PM

JOB DESCRIPTION

Radiological Sampling

JOB NUMBER

160-49777-2

Eurofins St. Louis
13715 Rider Trail North
Earth City MO 63045

See page two for job notes and contact information.

Eurofins St. Louis

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins TestAmerica Project Manager.

Authorization

Generated
6/20/2023 6:19:21 PM

Authorized for release by
Rhonda Ridenhower, Business Unit Manager
Rhonda.Ridenhower@et.eurofinsus.com
(314)298-8566

Table of Contents

Case Narrative

Client: San Antonio Testing Laboratory, Inc.
Project/Site: Radiological Sampling

Job ID: 160-49777-2

Job ID: 160-49777-2

Laboratory: Eurofins St. Louis

Narrative

Job Narrative
160-49777-2

Receipt
The samples were received on 4/25/2023 11:15 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved. The temperatures of the 3 coolers at receipt time were 12.1º C, 12.2º C and 12.5º C.

Receipt Exceptions

Analysis is not listed on COC, additional request from the client.

The reference method requires samples to be preserved to a pH of <2. The following samples were received with insufficient preservation at a pH of 7: 2304294-10 (JKS-70-20230419-CCR) (160-49777-1). The samples were preserved to the appropriate pH in the laboratory.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

CHAIN-OF-CUSTODY RECORD

SAN ANTONIO TESTING LABORATORY, LLC

1610 S. Laredo Street, San Antonio, Texas 78207
(210) 229-9920 • Fax (210) 229-9921
www.satestinglab.com

REPORT TO:	INVOICE TO:	P.O. #
COMPANY SAL	COMPANY SAL	REPORT NUMBER
ADDRESS	ADDRESS	
CITY STATE ZIP	CITY — STATE ZIP	E-MAIL
ATTN Aimee Landon PHONE # 210-229-9920	ATTN Elizabeth PHONE #	

REQUESTED TURNAROUND TIME IN BUSINESS DAYS & SURCHARGE: ❑ 7-10 Days REG ❑ 5 Days +25% ❑ 4 Days +50% ❑ 3 DAYS +75% ❑ 2 DAYS +100% ❑ Next Day +150% ❑ SAME DAY WHEN POSSIBLE +300%

PROJECT NAME/LOCATION/SITE

THE TURNAROUND TIME FOR SAMPLES RECEIVED AFTER 3:00 PM SHALL BEGIN AT 8:00 AM THE FOLLOWING BUSINESS DAY

SPECIAL REQ.:

DATA TO TCEQ ❑ RRC ❑ Other (Specify) ❑

Field: pH: ______ Temp: ______ °C; LCS/D: ______ / ______; Dup: ______

PROJECT NO.

SAMPLE TEMPERATURE WITHIN COMPLIANCE (> 0°C ≤ 6°C) ❑ YES ❑ NO
PROPER CONTAINERS INTACT ❑ YES ❑ NO

INSUFFICIENT SAMPLE FOR (TCLP/SPLP/OTHER) ❑ YES ❑ NO
IF NO, INITIAL HERE TO AUTHORIZE ANALYSIS ______

AUTHORIZE TO PROCEED ______

SAMPLED BY

OBSERVED TEMP / CORRECTED TEMP / TEMP. I.R GUN # ______ / SAMPLE ICED ❑ YES ❑ NO

TRRP 13 APPENDIX A ❑ | PST PCLS SIM/LOW LEVEL ❑ | TSDF Class 2 PERMIT ❑

ANALYSIS REQUESTED

Columns: BTEX/MTBE 8260 / TPH TX1005/TX1006; Metals 8 / 11 / 12 / 13 / TCLP / SPLP / Total; PAH / SVOC / 8270 / 625.1 / TCLP / SPLP / Total; VOC / 8260 / 624.1 / TCLP / SPLP / Total; Water Quality - Drinking / Livestock / Irrigation; Coli / TC / FC / HPC / EColi / Enterococci / Q-Tray; Br / Cl / F / NO3 / NO2/O-P / SO4; Herb 8151A; PCB/8082A - Pest / 608.3 / 8081A / TCLP / SPLP / Total; Perchlorate 328 Combined

PRESERVE WITH: NONE; HNO_3; H_2SO_4; NaOH; HCL; $NaHSO_4$; PRESERVED IN THE LAB; COMPOSITED IN THE LAB; FILTERED IN THE LAB; FILTERED IN THE FIELD; VOA AIR BUBBLES

Matrix: DRINKING WATER / NON-POTABLE WATER / PAINT CHIPS / OIL / ORGANIC LIQUID / SOLID/SLUDGE / WIPE / OTHER; COMPOSITE / GRAB / CORE / OTHER

SAMPLE NUMBER	DATE	TIME	Matrix	Type	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	SAMPLE AMOUNT	CONTAINER SIZE	Analysis	REMARKS
1	4/19/23	1208	X (Drinking Water)	X (Grab)	JKS-70-20230419-CCR	1	Gal	Gal	X	2304294-1D

160-49777 Chain of Custody

TRRP Reporting and ~~EQ~~ Equis 5X EDD Needed
LIL 2104227.

RELINQUISHED BY (SIGNATURE)	DATE / TIME	RECEIVED BY (SIGNATURE)	DATE / TIME	RELINQUISHED BY (SIGNATURE)	DATE / TIME	RECEIVED BY (SIGNATURE)	DATE / TIME
[signature]	4/20/23						
RELINQUISHED BY (PRINT NAME): Aimee Landon	DATE / TIME: 1630	RECEIVED BY (PRINT NAME): UPS	DATE / TIME	RELINQUISHED BY (PRINT NAME)	DATE / TIME	RECEIVED BY (PRINT NAME)	DATE / TIME
RELINQUISHED BY (SIGNATURE): UPS	DATE / TIME	RECEIVED BY (SIGNATURE): Briana Gonzalez	DATE / TIME: 4/25/23 11:15	METHOD OF SHIPMENT		SUBCONTRACTED ❑ YES ❑ NO	
RELINQUISHED BY (PRINT NAME)	DATE / TIME	RECEIVED BY (PRINT NAME)	DATE / TIME	BULK ❑ (Initial) 5035 ❑ N/A ❑		CUSTODY SEAL IN PLACE & INTACT ❑ YES ❑ NO	

FORM: COC REV 09/2022 WHITE - LAB CANARY - CLIENT

Login Sample Receipt Checklist

Client: San Antonio Testing Laboratory, Inc.

Job Number: 160-49777-2

Login Number: 49777
List Number: 1
Creator: Sharkey-Gonzalez, Briana L

List Source: Eurofins St. Louis

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	preserved upon arrival
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Qualifiers

Metals

Qualifier	Qualifier Description
	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
SDL	Sample Detection Limit
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Method Summary

Client: San Antonio Testing Laboratory, Inc.
Project/Site: Radiological Sampling

Job ID: 160-49777-2

Method	Method Description	Protocol	Laboratory
6010D	Metals (ICP)	SW846	EET SL
3010A	Preparation, Total Metals	SW846	EET SL

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: San Antonio Testing Laboratory, Inc.
Project/Site: Radiological Sampling

Job ID: 160-49777-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
160-49777-1	2304294-10 (JKS-70-20230419-CCR)	Water	04/19/23 12:08	04/25/23 11:15

Client Sample Results

Client: San Antonio Testing Laboratory, Inc.
Project/Site: Radiological Sampling

Job ID: 160-49777-2

Client Sample ID: 2304294-10 (JKS-70-20230419-CCR)
Date Collected: 04/19/23 12:08
Date Received: 04/25/23 11:15

Lab Sample ID: 160-49777-1
Matrix: Water

Method: SW846 6010D - Metals (ICP)

Analyte	Result	Qualifier	MQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	21	J	50	15	ug/L		06/15/23 13:58	06/20/23 10:40	1

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 160-616167/1-A
Matrix: Water
Analysis Batch: 616913

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 616167

Analyte	MB Result	MB Qualifier	MQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	ND		50.0	15.0	ug/L		06/15/23 13:58	06/20/23 09:04	1

Lab Sample ID: LCS 160-616167/2-A
Matrix: Water
Analysis Batch: 616913

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 616167

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Lithium			100	105		ug/L		105	80 - 120		

Lab Sample ID: 160-50340-A-9-K MS
Matrix: Water
Analysis Batch: 616913

Client Sample ID: Matrix Spike
Prep Type: Dissolved
Prep Batch: 616167

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Lithium	ND		100	115		ug/L		115	75 - 125		

Lab Sample ID: 160-50340-A-9-L MSD
Matrix: Water
Analysis Batch: 616913

Client Sample ID: Matrix Spike Duplicate
Prep Type: Dissolved
Prep Batch: 616167

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Lithium	ND		100	117		ug/L		117	75 - 125	3	20

QC Association Summary

Client: San Antonio Testing Laboratory, Inc.
Project/Site: Radiological Sampling

Job ID: 160-49777-2

Metals

Prep Batch: 616167

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-49777-1	2304294-10 (JKS-70-20230419-CCR)	Total/NA	Water	3010A	
MB 160-616167/1-A	Method Blank	Total/NA	Water	3010A	
LCS 160-616167/2-A	Lab Control Sample	Total/NA	Water	3010A	
160-50340-A-9-K MS	Matrix Spike	Dissolved	Water	3010A	
160-50340-A-9-L MSD	Matrix Spike Duplicate	Dissolved	Water	3010A	

Analysis Batch: 616913

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-49777-1	2304294-10 (JKS-70-20230419-CCR)	Total/NA	Water	6010D	616167
MB 160-616167/1-A	Method Blank	Total/NA	Water	6010D	616167
LCS 160-616167/2-A	Lab Control Sample	Total/NA	Water	6010D	616167
160-50340-A-9-K MS	Matrix Spike	Dissolved	Water	6010D	616167
160-50340-A-9-L MSD	Matrix Spike Duplicate	Dissolved	Water	6010D	616167

Appendix A
Laboratory Data Package Cover Page - Page 1 of 4

This data package is for Eurofins St. Louis job number 160-49777-2 and consists of:

- ☑ 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 Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is NELAC 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 all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Rhonda E Ridenhower		6/20/2023
Name (printed)	Signature	Date

Business Unit Manager
Official Title (printed)

Laboratory Review Checklist: Reportable Data - Page 2 of 4

Laboratory Name:	Eurofins St. Louis	LRC Date:	6/20/2023
Project Name:	Radiological Sampling	Laboratory Job Number:	160-49777-2
Reviewer Name:	Rhonda E Ridenhower		

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
R1	OI	**Chain-of-custody (C-O-C)**					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?		X			R01A
		Were all departures from standard conditions described in an exception report?	X				
R2	OI	**Sample and quality control (QC) identification**					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	**Test reports**					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?			X		
		Were % moisture (or solids) reported for all soil and sediment samples?			X		
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?			X		
		If required for the project, are TICs reported?			X		
R4	O	**Surrogate recovery data**					
		Were surrogates added prior to extraction?			X		
		Were surrogate percent recoveries in all samples within the laboratory QC limits?			X		
R5	OI	**Test reports/summary forms for blank samples**					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6	OI	**Laboratory control samples (LCS):**					
		Were all COCs included in the LCS?	X				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		Was the LCSD RPD within QC limits?			X		
R7	OI	**Matrix spike (MS) and matrix spike duplicate (MSD) data**					
		Were the project/method specified analytes included in the MS and MSD?	X				
		Were MS/MSD analyzed at the appropriate frequency?	X				
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?	X				
		Were MS/MSD RPDs within laboratory QC limits?	X				
R8	OI	**Analytical duplicate data**					
		Were appropriate analytical duplicates analyzed for each matrix?			X		
		Were analytical duplicates analyzed at the appropriate frequency?			X		
		Were RPDs or relative standard deviations within the laboratory QC limits?			X		
R9	OI	**Method quantitation limits (MQLs):**					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	**Other problems/anomalies**					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?	X				
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted 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 Review checklist: Supporting Data - Page 3 of 4

Laboratory Name:	Eurofins St. Louis	LRC Date:	6/20/2023
Project Name:	Radiological Sampling	Laboratory Job Number:	160-49777-2
Reviewer Name:	Rhonda E Ridenhower		

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
S1	OI	**Initial calibration (ICAL)**					
		Were response factors and/or relative response factors for each analyte within QC limits?	X				
		Were percent RSDs or correlation coefficient criteria met?	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	**Initial and continuing calibration verification (ICV and CCV) and continuing calibration blank (CCB):**					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
S3	O	**Mass spectral tuning**					
		Was the appropriate compound for the method used for tuning?			X		
		Were ion abundance data within the method-required QC limits?			X		
S4	O	**Internal standards (IS)**					
		Were IS area counts and retention times within the method-required QC limits?			X		
S5	OI	**Raw data (NELAC Section 5.5.10)**					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?	X				
S6	O	**Dual column confirmation**					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	**Tentatively identified compounds (TICs)**					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	**Interference Check Sample (ICS) results**					
		Were percent recoveries within method QC limits?	X				
S9	I	**Serial dilutions, post digestion spikes, and method of standard additions**					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X		
S10	OI	**Method detection limit (MDL) studies**					
		Was a MDL study performed for each reported analyte?	X				
		Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S11	OI	**Proficiency test reports**					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	**Standards documentation**					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	**Compound/analyte identification procedures**					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	**Demonstration of analyst competency (DOC)**					
		Was DOC conducted consistent with NELAC Chapter 5?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	**Verification/validation documentation for methods (NELAC Chapter 5)**					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	**Laboratory standard operating procedures (SOPs)**					
		Are laboratory SOPs current and on file for each method performed?	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted 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 Review Checklist: Exception Reports - Page 4 of 4

Laboratory Name:	Eurofins St. Louis	LRC Date:	6/20/2023
Project Name:	Radiological Sampling	Laboratory Job Number:	160-49777-2
Reviewer Name:	Rhonda E Ridenhower		

ER #[1]	Description
R01A	The reference method requires samples to be preserved to a pH of <2. The following samples were received with insufficient preservation at a pH of 7: 2304295-01 (JKS-65-20230418-FPDP) (160-49776-1), 2304295-02 (JKS-66-20230419-FPDP) (160-49776-2), 2304295-03 (JKS-67-20230418-FPDP) (160-49776-3), 2304295-04 (JKS-68-20230418-FPDP) (160-49776-4), 2304295-05 (JKS-69-20230418-FPDP) (160-49776-5), 2304295-06 (DUP-001-20230418) (160-49776-6), 2304295-07 (FB-003-20230419) (160-49776-7) and 2304294-10 (JKS-70-20230419-CCR) (160-49777-1). The samples were preserved to the appropriate pH in the laboratory.

1. Items identified by the letter “R” must be included in the laboratory data package submitted 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).

Data Usability Summary
Sampling Event/August 2023

CPS Energy Calaveras Power Station
Coal Combustion Residuals (CCR) Units
San Antonio, Texas

This data usability summary (DUS) was prepared in general accordance with the following key documents:

1) *Groundwater Sampling and Analysis Program*, CPS Energy, Calaveras Power Station (ERM, January 2022);
2) Texas Commission on Environmental Quality's (TCEQ's) *Review and Reporting of COC Concentration Data Under TRRP* (RG-366/TRRP-13, May 2010); and
3) Environmental Protection Agency's (EPA's) *National Functional Guidelines for Inorganic Superfund Methods Data Review* (EPA-540-R-2017-001, January 2017).

Environmental Resources Management (ERM) reviewed two laboratory analytical data packages (2308595 and 2308598) from San Antonio Testing Laboratory (SATL) of San Antonio, Texas for the analysis of ground water samples collected on 23 August 2023 at the CPS Energy Calaveras Power Station in San Antonio, Texas. Analytes Radium-226 and Radium-228 were subbed to Eurofins of St. Louis by SATL for analysis. Data were reviewed to assess conformance with the requirements of the above-referenced documents.

SATL and Eurofins are NELAC-accredited under the Texas Laboratory Accreditation Program for the matrices, analytes, and methods of analysis requested on the chain-of-custody documentation. SATL and Eurofins National Environmental Laboratory Accreditation Program (NELAP) certificates applicable to the period during which the laboratories generated the data in these reports is referenced in the laboratory reports.

Intended Use of Data: To provide concentration data on Appendix III Coal Combustion Residuals (CCR) Rule parameters in ground water at the CPS Energy Calaveras Facility.

Analyses requested for the laboratory packages include the following:

- EPA 300.0 – Inorganic Anions (Chloride, Fluoride, Sulfate) by Ion Chromatography (IC)
- EPA 6010B – Total Metals by Inductively Coupled Plasma-Atomic Emission Spectroscopy (ICP-AES)
- EPA 903.0 and 904.0 – Radium-226 and Radium-228 (GFPC)
- SW846 7470A – Mercury (CVAA)

Data were reviewed and validated as described in the above-referenced documents, and the results of the review/validation are discussed in this Data Usability Summary (DUS). The following laboratory submittals and field data were examined:

- The reportable data;
- The laboratory review checklist (LRC) and associated exception report (ER); and
- The Quality Assurance/Quality Control (QA/QC) data supplied by the laboratory.

The results of supporting QC analyses are summarized on the LRC and ER, which are included in this review. The LRC, associated ER, QA/QC data, and reportable data covered by this review are included in the laboratory reports.

The Laboratory Data Package Cover Pages and Laboratory Review Checklists provided in the analytical data packages are outdated and inconsistent with current TRRP-13 guidance (May 2010). It is highly recommended that required items in the current TRRP-13 guidance be

followed for laboratory data packages generated to satisfy corrective action program requirements. Data were not qualified based on this deficiency.

Introduction

Six (6) groundwater samples, one (1) duplicate sample, one (1) field blank, and one (1) equipment blank were analyzed for select metals and anions. All Samples were also analyzed for Radium. Table 1 lists the sample identifications cross-referenced to laboratory identifications.

Project Data Quality Objectives (DQO)

The quantitative project DQO limits specified in the *Groundwater Sampling and Analysis Program* were utilized as follows:

- Recovery (%R)
  - Spike samples 75-125%
  - Non-spike samples 70-130%
- Relative Percent Difference (RPD) <20%

Data were qualified in accordance with the TCEQ's TRRP-13 guidance document, including data qualifier codes and data qualifier code definitions.

Data Review / Validation Results

Analytical Results

Ground water analytical results were reported in milligrams per liter (mg/L) for metals and anions. Analytical results from Eurofins was reported in micrograms per liter (µg/L) for metals and in picocurries per liter (pCi/L) for radiological analysis. Non-detect results are reported as less than the value of the sample detection limits (SDLs). The method quantitation limits (MQLs) are also reported.

Preservation and Holding Times

The samples were evaluated for agreement with the chain-of-custody forms. The samples were received in the appropriate containers and in good condition with the paperwork properly completed.

Sample receipt temperature of the cooler at SATL were within or less than the acceptance criteria of 4 +/- 2 degrees Celsius. Sample receipt temperature for lab reports 2308598 and 2308595 were 2.4°C and 1.8°C respectively. No qualifiers were added to the data. Samples were prepared and analyzed within holding times as specified by the methods. The samples were preserved in the field as specified by the methods, with the following exception.

For radium analysis, the reference method required samples to be preserved to a pH of <2. If samples are collected without preservation, they must be received by the laboratory within 5 days for preservation according to Method 904 specifications. All samples were received by the laboratory (Eurofins in Saint Louis) unpreserved 6-7 days after the samples were collected. The sample was preserved to the appropriate pH in the laboratory; however, the analytical results were still qualified as JL, estimated low, for detected results and UJL, non-detect and estimated low for non-detect results for radium.

Calibrations

According to the LRC, initial calibrations, continuing calibrations, and calibration verifications data met method requirements for metals and anions, as applicable.

Mass Spectral Tuning

As documented in the LRC, mass spectrometry instrument performance tunes were either not applicable (appropriate compound for the method) or met specific requirements for the requested analytical methods (ion abundance data within limits).

Internal Standards

As documented in the LRC, internal standard area counts and retention times were within or not applicable for the requested analytical methods.

Percent Yield

Ba and Y Carrier percent yields for radium analysis were within laboratory acceptance limits.

Blanks

Metals and anions were not detected in the method blanks. Metals, anions, and radium were not detected in the equipment blank or field blank, with the following exception.

The equipment blank was sampled from the submersible pump and therefore only pertains to sample locations where the submersible pump was utilized. Analyte detections for non-related samples were not qualified. Boron (0.002 J) and Calcium (0.660 J) were detected in the field blank. As such, detected results within five times the field blank concentrations for boron and calcium were qualified as U, non-detect.

Laboratory Control Samples

Laboratory control sample and duplicate (LCS/LCSD) precision and accuracy results (*i.e.,* percent recoveries and RPDs) for all analyses were within project DQO acceptance limits.

Matrix Spike / Matrix Spike Duplicates

Matrix spike/matrix spike duplicate (MS/MSD) precision and accuracy results (*i.e.,* percent recoveries and RPDs) using project samples were within project DQO acceptance limits, with the following exceptions.

In both laboratory packages (2308595 and 2308598), matrix spike/matrix spike duplicate (MS/MSD) analysis was performed on project sample JKS-70-202330823-CCR for metals and JKS-66-20230823-FPDP for anions. The MS for metals reported “NR” for no recovery. However, the parent concentration was greater than four times the amount spiked into it; therefore, no qualifiers were required. The MS and MSD had high recovery above DQO limits for sulfate. However, the parent concentration was greater than four times the amount spiked into it; therefore, no qualifiers were required.

Post Digestion Spike

According to the LRC, post digestion spike (PDS) recoveries were within method acceptance limits.

Serial Dilution

According to the LRC, serial dilution (SD) percent differences (%D) were within method acceptance limits.

Laboratory Precision

Laboratory duplicate RPD using project samples were within project DQO acceptance limits, with the following exception.

In laboratory packages 2308595 and 2308598, the laboratory duplicate RPD for arsenic in batch B335180, performed on project sample JKS-70-202330823-CCR, was higher than DQO acceptance limits. The analyte concentration was less than five times the MQL and all affected sample results were less than the value of the MQL; as such, no qualifiers were required.

Field Precision

One pair of field precision samples were analyzed for the August 2023 event (JKS-67-20230823-FPDP / DUP-002-20230823). RPD calculations for detected analytes for each field precision pair are shown in Table 2. All RPD were within DQO limits or had sample concentrations less than two times the value of the MQL; as such, no qualifiers were required.

Field Procedures

Sample collection procedures were in accordance with EPA ground water sampling protocols and the *Ground Water Sampling and Analysis Program*, dated January 2022.

SUMMARY

Ground water analytical results are useable for the purpose of provide concentration data on Appendix III Coal Combustion Residuals (CCR) Rule parameters in ground water at the CPS Energy Calaveras Power Station. Table 2 lists qualified data.

Tables

TABLE 1
Sample Cross-Reference

CPS Energy
Calaveras Power Station

Lab Report	Lab Identification	Field Identification	Sample Date	Sample Type
2308598	2308598-01	JKS-65-20230823-FPDP	8/23/2023	Groundwater
2308598	2308598-02	JKS-66-20230823-FPDP	8/23/2023	Groundwater
2308598	2308598-03	JKS-67-20230823-FPDP	8/23/2023	Groundwater
2308598	2308598-04	JKS-68-20230823-FPDP	8/23/2023	Groundwater
2308598	2308598-05	JKS-69-20230823-FPDP	8/23/2023	Groundwater
2308598	2308598-06	DUP-002-20230823	8/23/2023	Duplicate Sample
2308598	2308598-07	FB-002-20230823	8/23/2023	Field Blank
2308598	2308598-08	EB-002-20230823	8/23/2023	Equipment Blank
2308595	2308595-01	JKS-70-202330823-CCR	8/23/2023	Groundwater

TABLE 2
Data Usability Qualifiers

CPS Energy
Calaveras Power Station

Lab Report	Field ID	Parameter	Qualification	Rationale
2308595	JKS-70-202330823-CCR	Radium-226	JL	Outside Preservation Holding Time
2308595	JKS-70-202330823-CCR	Radium-228	JL	Outside Preservation Holding Time
2308595	JKS-70-202330823-CCR	Combined Radium	JL	Outside Preservation Holding Time
2308598	JKS-65-20230823-FPDP	Radium-226	JL	Outside Preservation Holding Time
2308598	JKS-66-20230823-FPDP	Radium-226	JL	Outside Preservation Holding Time
2308598	JKS-67-20230823-FPDP	Radium-226	JL	Outside Preservation Holding Time
2308598	JKS-68-20230823-FPDP	Radium-226	JL	Outside Preservation Holding Time
2308598	JKS-69-20230823-FPDP	Radium-226	JL	Outside Preservation Holding Time
2308598	DUP-002-20230823	Radium-226	JL	Outside Preservation Holding Time
2308598	JKS-65-20230823-FPDP	Radium-228	JL	Outside Preservation Holding Time
2308598	JKS-66-20230823-FPDP	Radium-228	UJL	Outside Preservation Holding Time
2308598	JKS-67-20230823-FPDP	Radium-228	JL	Outside Preservation Holding Time
2308598	JKS-68-20230823-FPDP	Radium-228	JL	Outside Preservation Holding Time
2308598	JKS-69-20230823-FPDP	Radium-228	JL	Outside Preservation Holding Time
2308598	DUP-002-20230823	Radium-228	UJL	Outside Preservation Holding Time
2308598	JKS-65-20230823-FPDP	Combined Radium	JL	Outside Preservation Holding Time
2308598	JKS-66-20230823-FPDP	Combined Radium	UJL	Outside Preservation Holding Time
2308598	JKS-67-20230823-FPDP	Combined Radium	JL	Outside Preservation Holding Time
2308598	JKS-68-20230823-FPDP	Combined Radium	JL	Outside Preservation Holding Time
2308598	JKS-69-20230823-FPDP	Combined Radium	JL	Outside Preservation Holding Time
2308598	DUP-002-20230823	Combined Radium	UJL	Outside Preservation Holding Time

Notes:
J = Estimated
UJ = Non-detect Estimated
U = Non-detect

TABLE 3
Field Precision

CPS Energy
Calaveras Power Station

Report	Pair	Analyte	Sample Result		Duplicate Result		RPD	r
2308598	JKS-67-20230823-FPDP / DUP-002-20230823	Total Dissolved Solids	511		524		2.51	A
		Chloride	64.9		75.4		14.97	A
		Fluoride	0.303		0.298		1.66	A
		Sulfate	58.0		67.3		14.84	A
		Barium	0.076		0.076		0.00	A
		Boron	0.510		0.506		0.79	A
		Calcium	56.4		54.7		3.06	A
		Cadmium	0.0005	J	0.0005	J	0.00	A
		Chromium	0.001	J	0.001	J	0.00	A
		Lead	0.004	J	0.004	J	0.00	A
		Selenium	0.005	J	<0.002		85.71	A*
		Radium-226	0.128		0.165		25.26	A*
		Radium-228	0.665		0.044	U	175.34	A*
		Combined Radium	0.793		0.209	U	86.71	A*

Notes:
RPD - Relative Percent Difference
RPD = (Sample Result - Duplicate Result) x 200 / (Sample Result + Duplicate Result)
Qualifier: A = Acceptable (no qualification necessary)
A* = Acceptable data based on sample concentrations less than two times the MQL
J = Estimated

SAN ANTONIO TESTING LABORATORY

September 28, 2023

Chelsey Vasbinder
CPS Energy - Environmental Dept.
P.O. Box 1771
San Antonio, TX 78296-1771

SATL Report No.: 2308595
RE: Calaveras Power Station- CCR Units

Dear Chelsey Vasbinder

SATL received 1 Sample(s) on 08/24/2023 for analyses identified on the chain of custody. The analyses were performed using methods indicated on the laboratory report. Any deviations observed at sample receiving are notated on the Sample Receipt Checklist and/or Chain of Custody documents attached as part of this analytical report.

Sincerely,

For San Antonio Testing Laboratory, Inc.

Richard Hawk,
General Manager

Appendix A Laboratory Data Package Cover Page

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 5.13 or ISO/IEC 17025 Section 5.10
  - 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) for each analyte for each method and matrix;
- ☑ R10 Other problems or anomalies.
- ☑ The Exception Report for every "No" or "Not Reviewed (NR)" item in laboratory review checklist.

Release Statement: I am responsible for the release of this laboratory data package. This data package has been reviewed by the laboratory and is complete and technically compliant with the requirements of the methods used, except where noted by the laboratory in the attached exception reports. By my signature below, I affirm to the best of my knowledge, all problems/anomalies, observed by the laboratory as having the potential to affect the quality of the data, have been identified by the laboratory in the Laboratory Review Checklist, and no information or data have been knowingly withheld that would affect the quality of the data.

Aimee Landon For Marcela Gracia Hawk, President

Richard Hawk, General Manager

09/28/23 18:21

Date/Time

Project Name:	Calaveras Power Station- CCR Units	Reviewer Name:	SG,XE
Laboratory Job Number:	2308595	Matrix :	

1610 S. Laredo Street, San Antonio, Texas 78207-7029 (210) 229-9920 Fax (210) 229-9921

www.satestinglab.com

Appendix A (cont'd): Laboratory Review Checklist: Reportable Data

Laboratory Name:	San Antonio Testing Laboratory Inc.	LRC Date:	08/30/23 to 09/01/23
Project Name:	Calaveras Power Station- CCR Units	Laboratory Job Number:	2308595
Reviewer Name:	SG,XE	Prep Batch Number(s):	B335180,B335184,B335195,B335260

# [1]	A [2]	Description	Yes	No	NA [3]	NR [4]	ER# [5]
R1		**Chain-of-custody (C-O-C)**					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		Were all departures from standard conditions described in an exception report?	X				
R2		**Sample and quality control (QC) identification**					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3		**Test reports**					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample quantitation limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?			X		
		Were % moisture (or solids) reported for all soil and sediment samples?			X		
		If required for the project, TICs reported?			X		
R4		**Surrogate recovery data**					
		Were surrogates added prior to extraction?			X		
		Were surrogate percent recoveries in all samples within the laboratory QC limits?			X		
R5		**Test reports/summary forms for blank samples**					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6		**Laboratory control samples (LCS):**					
		Were all COCs included in the LCS?	X				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SQLs?	X				
		Was the LCSD RPD within QC limits?	X				
R7		**Matrix spike (MS) and matrix spike duplicate (MSD) data**					
		Were the project/method specified analytes included in the MS and MSD?	X				
		Were MS/MSD analyzed at the appropriate frequency?	X				
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?		X			S001
		Were MS/MSD RPDs within laboratory QC limits?	X				
R8		**Analytical duplicate data**					
		Were appropriate analytical duplicates analyzed for each matrix?	X				
		Were analytical duplicates analyzed at the appropriate frequency?	X				
		Were RPDs or relative standard deviations within the laboratory QC limits?		X			S002
R9		**Method quantitation limits (MQLs):**					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs included in the laboratory data package?	X				
R10		**Other problems/anomalies**					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Were all necessary corrective actions performed for the reported data?	X				
		Was applicable and available technology used to lower the SQL minimize the matrix interference affects on the sample results?	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted 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).

RG-366/TRRP-13 December 2002

Appendix A (cont'd): Laboratory Review Checklist: Reportable Data

Laboratory Name:	San Antonio Testing Laboratory Inc.	LRC Date:	08/30/23 to 09/01/23
Project Name:	Calaveras Power Station- CCR Units	Laboratory Job Number:	2308595
Reviewer Name:	SG,XE	Prep Batch Number(s):	B335180,B335184,B335195,B335260

# [1]	A [2]	Description	Yes	No	NA [3]	NR [4]	ER# [5]
S1		**Initial calibration (ICAL)**					
		Were response factors and/or relative response factors for each analyte within QC limits?	X				
		Were percent RSDs or correlation coefficient criteria met?	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2		**Initial and continuing calibration verification (ICCV and CCV) and continuing calibration**					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
S3		**Mass spectral tuning:**					
		Was the appropriate compound for the method used for tuning?			X		
		Were ion abundance data within the method-required QC limits?			X		
S4		**Internal standards (IS):**					
		Were IS area counts and retention times within the method-required QC limits?	X				
S5		**Raw data (NELAC section 1 appendix A glossary, and section 5.12 or ISO/IEC 17025 section**					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?	X				
S6		**Dual column confirmation**					
		Did dual column confirmation results meet the method-required QC?			X		
S7		**Tentatively identified compounds (TICs):**					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8		**Interference Check Sample (ICS) results:**					
		Were percent recoveries within method QC limits?	X				
S9		**Serial dilutions, post digestion spikes, and method of standard additions**					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?	X				
S10		**Method detection limit (MDL) studies**					
		Was a MDL study performed for each reported analyte?	X				
		Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S11		**Proficiency test reports:**					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12		**Standards documentation**					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13		**Compound/analyte identification procedures**					
		Are the procedures for compound/analyte identification documented?	X				
S14		**Demonstration of analyst competency (DOC)**					
		Was DOC conducted consistent with NELAC Chapter 5C or ISO/IEC 4?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15		**Verification/validation documentation for methods (NELAC Chap 5 or ISO/IEC 17025 Section 5)**					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16		**Laboratory standard operating procedures (SOPs):**					
		Are laboratory SOPs current and on file for each method performed?	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted 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).

RG-366/TRRP-13 December 2002

Appendix A (cont'd): Laboratory Review Checklist: Exception Reports			
Laboratory Name:	San Antonio Testing Laboratory Inc.	LRC Date:	08/30/23 to 09/01/23
Project Name:	Calaveras Power Station- CCR Units	Laboratory Job Number:	2308595
Reviewer Name:	SG,XE	Prep Batch Number(s):	B335180,B335184,B335195,B335260

ER#[1]	Description
S001	Matrix Spike Recoveries outside the QC acceptance criteria, due to matrix interferences, are flagged on the analytical report.
S002	RPD values outside the QC acceptance limits are flagged on the analytical report.

1. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked on the LRC)

RG-366/TRRP-13 December 2002

CPS Energy - Environmental Dept.
P.O. Box 1771
San Antonio TX, 78296-1771

Notes:

Project: Calaveras Power Station- CCR Units

Project Number: [none]
Project Manager: Chelsey Vasbinder

Reported:
09/28/23 18:21
Received:
08/24/23 11:04

Report No. 2308595

SAMPLE SUMMARY

Total Samples received in this work order: **1**

Sample ID	Laboratory ID	Matrix	Sampling Method	Date Sampled	Date Received
JKS-70-202330823-CCR	2308595-01	Liquid	Grab	08/23/23 11:54	08/24/23 11:04

Notes

All quality control samples and checks are within acceptance limits unless otherwise indciated.
Test results pertain only to those items tested.
All samples were in good condition when received by the laboratory unless otherwise noted.

CPS Energy - Environmental Dept.
P.O. Box 1771
San Antonio TX, 78296-1771

Notes:

Project: Calaveras Power Station- CCR Units

Project Number: [none]
Project Manager: Chelsey Vasbinder

Reported:
09/28/23 18:21
Received:
08/24/23 11:04

Report No. 2308595

Sample ID #: JKS-70-202330823-CCR | **Sampling Method: Grab** | **Lab Sample ID #: 2308595-01**

Sample Matrix: Liquid | **Date/Time Collected: 08/23/23 11:54**

Analyte	Result	MQL	Flag	MDL	SQL[SDL]	Units	PrepMethod	Method	Analyzed	Analyst	Notes
General Chemistry				***Batch ID >*** *B335195*							
Total Dissolved Solids *	668	2.50		2.50	2.50	mg/L	SM2540C	SM2540C	08/25/23	SG	
Anions by Ion Chromatography				***Batch ID >*** *B335260*							
Chloride *	111	2.50		0.052	1.30	mg/L	EPA 300.0	EPA 300.0	08/30/23	SG	
Fluoride	0.668	0.020		0.018	0.018	mg/L	EPA 300.0	EPA 300.0	08/30/23	SG	
Sulfate *	41.8	0.10		0.06	0.06	mg/L	EPA 300.0	EPA 300.0	08/30/23	SG	
Total Mercury				***Batch ID >*** *B335184*							
Mercury	< 0.0001	0.0002		0.0001	0.0001	mg/L	EPA 7470A	EPA 7470A	08/29/23	AO	
Total Metals By ICP				***Batch ID >*** *B335180*							
Arsenic	0.0009	0.010	J	0.0006	0.0006	mg/L	EPA 6010B	EPA 6010B	08/30/23	XE	
Boron	0.269	0.010		0.0006	0.0006	mg/L	EPA 6010B	EPA 6010B	08/30/23	XE	
Barium	0.056	0.010		0.003	0.003	mg/L	EPA 6010B	EPA 6010B	08/30/23	XE	
Beryllium	< 0.0003	0.004		0.0003	0.0003	mg/L	EPA 6010B	EPA 6010B	08/30/23	XE	
Calcium *	62.8	1.00		0.009	0.009	mg/L	EPA 6010B	EPA 6010B	08/30/23	XE	
Cadmium	0.0008	0.005	J	0.0003	0.0003	mg/L	EPA 6010B	EPA 6010B	08/30/23	XE	
Cobalt	< 0.0003	0.010		0.0003	0.0003	mg/L	EPA 6010B	EPA 6010B	08/30/23	XE	
Chromium	0.0008	0.010	J	0.0003	0.0003	mg/L	EPA 6010B	EPA 6010B	08/30/23	XE	
Molybdenum	0.005	0.010	J	0.0003	0.0003	mg/L	EPA 6010B	EPA 6010B	08/30/23	XE	
Lead	0.009	0.010	J	0.0003	0.0003	mg/L	EPA 6010B	EPA 6010B	08/30/23	XE	
Antimony	< 0.002	0.010		0.002	0.002	mg/L	EPA 6010B	EPA 6010B	08/30/23	XE	
Selenium	0.004	0.010	J	0.002	0.002	mg/L	EPA 6010B	EPA 6010B	08/30/23	XE	
Thallium	< 0.0009	0.010		0.0009	0.0009	mg/L	EPA 6010B	EPA 6010B	08/30/23	XE	

CPS Energy - Environmental Dept.
P.O. Box 1771
San Antonio TX, 78296-1771

Notes:

Project: Calaveras Power Station- CCR Units

Project Number: [none]
Project Manager: Chelsey Vasbinder

Reported:
09/28/23 18:21
Received:
08/24/23 11:04

Report No. 2308595

General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B335195 - SM2540C									
Blank (B335195-BLK1)				Prepared: 08/24/23 17:00		Analyzed: 08/25/23 10:00			
Total Dissolved Solids	<2.50	2.50	mg/L				–		
LCS (B335195-BS1)				Prepared: 08/24/23 17:00		Analyzed: 08/25/23 10:02			
Total Dissolved Solids	108	2.50	mg/L	100		108	80–120		
LCS Dup (B335195-BSD1)				Prepared: 08/24/23 17:00		Analyzed: 08/25/23 10:04			
Total Dissolved Solids	89.0	2.50	mg/L	100		89	80–120	19	20
Duplicate (B335195-DUP1)		**Source: 2308598-01**		Prepared: 08/24/23 17:00		Analyzed: 08/25/23 10:32			
Total Dissolved Solids	558	2.50	mg/L		533		–	5	20

CPS Energy - Environmental Dept.
P.O. Box 1771
San Antonio TX, 78296-1771

Notes:

Project: Calaveras Power Station- CCR Units

Project Number: [none]
Project Manager: Chelsey Vasbinder

Reported:
09/28/23 18:21
Received:
08/24/23 11:04

Report No. 2308595

Anions by Ion Chromatography - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	
Batch B335260 - EPA 300.0										
Blank (B335260-BLK1)				Prepared: 08/30/23 08:00		Analyzed: 08/30/23 19:00				
Fluoride	<0.020	0.020	mg/L				–			
Chloride	<0.100	0.100	mg/L				–			
Sulfate	<0.10	0.10	mg/L				–			
LCS (B335260-BS1)				Prepared: 08/30/23 08:00		Analyzed: 08/30/23 19:18				
Fluoride	0.968	0.020	mg/L	1.00		97	90–110			
Chloride	5.02	0.100	mg/L	5.00		100	90–110			
Sulfate	5.10	0.10	mg/L	5.00		102	90–110			
LCS Dup (B335260-BSD1)				Prepared: 08/30/23 08:00		Analyzed: 08/30/23 19:35				
Fluoride	0.958	0.020	mg/L	1.00		96	90–110	1	20	
Chloride	4.99	0.100	mg/L	5.00		100	90–110	0.6	20	
Sulfate	5.12	0.10	mg/L	5.00		102	90–110	0.5	20	
Duplicate (B335260-DUP1)		**Source: 2308598-02**		Prepared: 08/30/23 08:00		Analyzed: 08/30/23 10:20				
Fluoride	0.0967	0.020	mg/L		0.0964		–	0.3	20	
Chloride	20.2	0.100	mg/L		20.3		–	0.3	20	
Sulfate	83.2	0.50	mg/L		83.1		–	0.1	20	
Matrix Spike (B335260-MS1)		**Source: 2308598-02**		Prepared: 08/30/23 08:00		Analyzed: 08/30/23 10:38				
Fluoride	0.991	0.020	mg/L	1.00	0.0964	89	80–120			
Chloride	25.2	0.100	mg/L	5.00	20.3	97	80–120			
Sulfate	96.8	0.10	mg/L	5.00	83.1	274	80–120			M
Matrix Spike Dup (B335260-MSD1)		**Source: 2308598-02**		Prepared: 08/30/23 08:00		Analyzed: 08/30/23 10:56				
Fluoride	0.990	0.020	mg/L	1.00	0.0964	89	80–120	0.07	20	
Chloride	25.2	0.100	mg/L	5.00	20.3	98	80–120	0.2	20	
Sulfate	96.9	0.10	mg/L	5.00	83.1	277	80–120	0.1	20	M

CPS Energy - Environmental Dept.
P.O. Box 1771
San Antonio TX, 78296-1771

Notes:

Project: Calaveras Power Station- CCR Units

Project Number: [none]
Project Manager: Chelsey Vasbinder

Reported:
09/28/23 18:21
Received:
08/24/23 11:04

Report No. 2308595

Total Mercury - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B335184 - EPA 7470A									
Blank (B335184-BLK1)				Prepared: 08/29/23 12:30		Analyzed: 08/29/23 16:45			
Mercury	<0.0002	0.0002	mg/L				–		
LCS (B335184-BS1)				Prepared: 08/29/23 12:30		Analyzed: 08/29/23 16:47			
Mercury	0.00956	0.0002	mg/L	0.0100		96	85–115		
LCS Dup (B335184-BSD1)				Prepared: 08/29/23 12:30		Analyzed: 08/29/23 16:49			
Mercury	0.00914	0.0002	mg/L	0.0100		91	85–115	4	25
Duplicate (B335184-DUP1)		**Source: 2308595-01**		Prepared: 08/29/23 12:30		Analyzed: 08/29/23 16:58			
Mercury	<0.0002	0.0002	mg/L		<0.0002		–		25
Matrix Spike (B335184-MS1)		**Source: 2308595-01**		Prepared: 08/29/23 12:30		Analyzed: 08/29/23 17:32			
Mercury	0.00881	0.0002	mg/L	0.0100	<0.0002	88	75–125		
Matrix Spike Dup (B335184-MSD1)		**Source: 2308595-01**		Prepared: 08/29/23 12:30		Analyzed: 08/29/23 17:34			
Mercury	0.00848	0.0002	mg/L	0.0100	<0.0002	85	75–125	4	25

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Project Manager: Chelsey Vasbinder

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09/28/23 18:21
Received:
08/24/23 11:04

Report No. 2308595

Total Metals By ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B335180 - EPA 6010B									
Blank (B335180-BLK1)				Prepared: 08/29/23 14:30 Analyzed: 08/30/23 12:48					
Antimony	<0.010	0.010	mg/L				–		
Arsenic	<0.010	0.010	mg/L				–		
Barium	<0.010	0.010	mg/L				–		
Beryllium	<0.004	0.004	mg/L				–		
Boron	<0.010	0.010	mg/L				–		
Cadmium	<0.005	0.005	mg/L				–		
Calcium	<1.00	1.00	mg/L				–		
Chromium	<0.010	0.010	mg/L				–		
Cobalt	<0.010	0.010	mg/L				–		
Lead	<0.010	0.010	mg/L				–		
Molybdenum	<0.010	0.010	mg/L				–		
Selenium	<0.010	0.010	mg/L				–		
Thallium	<0.010	0.010	mg/L				–		
LCS (B335180-BS1)				Prepared: 08/29/23 14:30 Analyzed: 08/30/23 12:54					
Antimony	2.12	0.010	mg/L	2.00		106	85–115		
Arsenic	2.07	0.010	mg/L	2.00		104	85–115		
Barium	2.05	0.010	mg/L	2.00		103	85–115		
Beryllium	2.12	0.004	mg/L	2.00		106	85–115		
Boron	2.14	0.010	mg/L	2.00		107	85–115		
Cadmium	1.96	0.005	mg/L	2.00		98	85–115		
Calcium	2.02	1.00	mg/L	2.00		101	85–115		
Chromium	1.96	0.010	mg/L	2.00		98	85–115		
Cobalt	2.13	0.010	mg/L	2.00		107	85–115		
Lead	2.12	0.010	mg/L	2.00		106	85–115		
Molybdenum	2.12	0.010	mg/L	2.00		106	85–115		
Selenium	1.96	0.010	mg/L	2.00		98	85–115		
Thallium	2.04	0.010	mg/L	2.00		102	85–115		

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Notes:

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Total Metals By ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	
Batch B335180 - EPA 6010B										
LCS Dup (B335180-BSD1)				Prepared: 08/29/23 14:30 Analyzed: 08/30/23 12:59						
Antimony	2.08	0.010	mg/L	2.00		104	85–115	2	20	
Arsenic	2.03	0.010	mg/L	2.00		102	85–115	2	20	
Barium	2.05	0.010	mg/L	2.00		102	85–115	0.3	20	
Beryllium	2.13	0.004	mg/L	2.00		107	85–115	0.8	20	
Boron	2.13	0.010	mg/L	2.00		106	85–115	0.5	20	
Cadmium	1.89	0.005	mg/L	2.00		95	85–115	4	20	
Calcium	2.03	1.00	mg/L	2.00		102	85–115	0.6	20	
Chromium	1.97	0.010	mg/L	2.00		99	85–115	0.4	20	
Cobalt	2.12	0.010	mg/L	2.00		106	85–115	0.8	20	
Lead	2.11	0.010	mg/L	2.00		106	85–115	0.3	20	
Molybdenum	2.11	0.010	mg/L	2.00		105	85–115	0.8	20	
Selenium	1.85	0.010	mg/L	2.00		93	85–115	6	20	
Thallium	2.02	0.010	mg/L	2.00		101	85–115	1	20	
Duplicate (B335180-DUP1)		**Source: 2308595-01**		Prepared: 08/29/23 14:30 Analyzed: 08/30/23 13:11						
Antimony	<0.010	0.010	mg/L		<0.010		–		20	
Arsenic	0.00140	0.010	mg/L		0.000900		–	43	20	S
Barium	0.0573	0.010	mg/L		0.0557		–	3	20	
Beryllium	<0.004	0.004	mg/L		<0.004		–		20	
Boron	0.275	0.010	mg/L		0.269		–	2	20	
Cadmium	0.000800	0.005	mg/L		0.000800		–	0	20	
Calcium	64.4	1.00	mg/L		62.8		–	2	20	
Chromium	0.000700	0.010	mg/L		0.000800		–	13	20	
Cobalt	<0.010	0.010	mg/L		<0.010		–		20	
Lead	0.00870	0.010	mg/L		0.00860		–	1	20	
Molybdenum	0.00460	0.010	mg/L		0.00510		–	10	20	
Selenium	0.00340	0.010	mg/L		0.00400		–	16	20	
Thallium	<0.010	0.010	mg/L		<0.010		–		20	

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Total Metals By ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	
Batch B335180 - EPA 6010B										
Duplicate (B335180-DUP2)		**Source: 2308596-10**		Prepared: 08/29/23 14:30 Analyzed: 08/30/23 14:43						
Antimony	<0.010	0.010	mg/L		<0.010		–		20	
Arsenic	<0.010	0.010	mg/L		<0.010		–		20	
Barium	<0.010	0.010	mg/L		<0.010		–		20	
Beryllium	<0.004	0.004	mg/L		<0.004		–		20	
Boron	0.000900	0.010	mg/L		0.00160		–	56	20	S
Cadmium	<0.005	0.005	mg/L		<0.005		–		20	
Calcium	0.753	1.00	mg/L		0.758		–	0.6	20	
Chromium	0.00610	0.010	mg/L		0.00240		–	87	20	S
Cobalt	<0.010	0.010	mg/L		<0.010		–		20	
Lead	<0.010	0.010	mg/L		<0.010		–		20	
Molybdenum	<0.010	0.010	mg/L		<0.010		–		20	
Selenium	<0.010	0.010	mg/L		<0.010		–		20	
Thallium	<0.010	0.010	mg/L		<0.010		–		20	
Matrix Spike (B335180-MS1)		**Source: 2308595-01**		Prepared: 08/29/23 14:30 Analyzed: 08/30/23 13:17						
Antimony	2.06	0.010	mg/L	2.00	<0.010	103	75–125			
Arsenic	2.02	0.010	mg/L	2.00	0.000900	101	75–125			
Barium	2.01	0.010	mg/L	2.00	0.0557	98	75–125			
Beryllium	2.20	0.004	mg/L	2.00	<0.004	110	75–125			
Boron	2.44	0.010	mg/L	2.00	0.269	109	75–125			
Cadmium	1.78	0.005	mg/L	2.00	0.000800	89	75–125			
Calcium	57.4	1.00	mg/L	2.00	62.8	NR	75–125			M
Chromium	1.92	0.010	mg/L	2.00	0.000800	96	75–125			
Cobalt	1.99	0.010	mg/L	2.00	<0.010	100	75–125			
Lead	2.09	0.010	mg/L	2.00	0.00860	104	75–125			
Molybdenum	2.19	0.010	mg/L	2.00	0.00510	109	75–125			
Selenium	1.74	0.010	mg/L	2.00	0.00400	87	75–125			
Thallium	1.89	0.010	mg/L	2.00	<0.010	95	75–125			

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09/28/23 18:21
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08/24/23 11:04

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Total Metals By ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	
Batch B335180 - EPA 6010B										
Matrix Spike (B335180-MS2)		**Source: 2308596-10**		Prepared: 08/29/23 14:30		Analyzed: 08/30/23 14:49				
Antimony	2.17	0.010	mg/L	2.00	<0.010	108	75-125			
Arsenic	2.10	0.010	mg/L	2.00	<0.010	105	75-125			
Barium	2.20	0.010	mg/L	2.00	<0.010	110	75-125			
Beryllium	2.26	0.004	mg/L	2.00	<0.004	113	75-125			
Boron	2.26	0.010	mg/L	2.00	0.00160	113	75-125			
Cadmium	1.97	0.005	mg/L	2.00	<0.005	99	75-125			
Calcium	2.88	1.00	mg/L	2.00	0.758	106	75-125			
Chromium	2.11	0.010	mg/L	2.00	0.00240	105	75-125			
Cobalt	2.19	0.010	mg/L	2.00	<0.010	110	75-125			
Lead	2.20	0.010	mg/L	2.00	<0.010	110	75-125			
Molybdenum	2.19	0.010	mg/L	2.00	<0.010	109	75-125			
Selenium	1.92	0.010	mg/L	2.00	<0.010	96	75-125			
Thallium	2.12	0.010	mg/L	2.00	<0.010	106	75-125			
Matrix Spike Dup (B335180-MSD1)		**Source: 2308595-01**		Prepared: 08/29/23 14:30		Analyzed: 08/30/23 13:22				
Antimony	2.08	0.010	mg/L	2.00	<0.010	104	75-125	0.7	20	
Arsenic	2.03	0.010	mg/L	2.00	0.000900	101	75-125	0.1	20	
Barium	2.01	0.010	mg/L	2.00	0.0557	98	75-125	0.1	20	
Beryllium	2.20	0.004	mg/L	2.00	<0.004	110	75-125	0.09	20	
Boron	2.46	0.010	mg/L	2.00	0.269	110	75-125	0.8	20	
Cadmium	1.77	0.005	mg/L	2.00	0.000800	88	75-125	1	20	
Calcium	58.8	1.00	mg/L	2.00	62.8	NR	75-125	3	20	M
Chromium	1.93	0.010	mg/L	2.00	0.000800	96	75-125	0.7	20	
Cobalt	2.02	0.010	mg/L	2.00	<0.010	101	75-125	1	20	
Lead	2.13	0.010	mg/L	2.00	0.00860	106	75-125	2	20	
Molybdenum	2.23	0.010	mg/L	2.00	0.00510	111	75-125	2	20	
Selenium	1.69	0.010	mg/L	2.00	0.00400	84	75-125	3	20	
Thallium	1.91	0.010	mg/L	2.00	<0.010	96	75-125	1	20	

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Total Metals By ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B335180 - EPA 6010B									
Matrix Spike Dup (B335180-MSD2)		**Source: 2308596-10**		Prepared: 08/29/23 14:30 Analyzed: 08/30/23 14:54					
Antimony	2.10	0.010	mg/L	2.00	<0.010	105	75-125	3	20
Arsenic	2.04	0.010	mg/L	2.00	<0.010	102	75-125	3	20
Barium	2.14	0.010	mg/L	2.00	<0.010	107	75-125	3	20
Beryllium	2.21	0.004	mg/L	2.00	<0.004	111	75-125	2	20
Boron	2.22	0.010	mg/L	2.00	0.00160	111	75-125	2	20
Cadmium	1.91	0.005	mg/L	2.00	<0.005	96	75-125	3	20
Calcium	2.80	1.00	mg/L	2.00	0.758	102	75-125	3	20
Chromium	2.06	0.010	mg/L	2.00	0.00240	103	75-125	3	20
Cobalt	2.14	0.010	mg/L	2.00	<0.010	107	75-125	2	20
Lead	2.17	0.010	mg/L	2.00	<0.010	108	75-125	1	20
Molybdenum	2.14	0.010	mg/L	2.00	<0.010	107	75-125	2	20
Selenium	1.87	0.010	mg/L	2.00	<0.010	93	75-125	3	20
Thallium	2.08	0.010	mg/L	2.00	<0.010	104	75-125	2	20

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DEFINITIONS

*	TNI / NELAC accredited analyte
PQL	Practical Quantitation Limit
MCL	Maximum Contaminant Level
mg/Kg	Milligrams per Kilogram (Parts per Million)
mg/L	Milligrams per Liter (Parts per Million)
PPM	Parts per Million
ND	This qualifier indicates that the analyte was analyzed but not detected above the MDL
J	This qualifier indicates that the analyte is an estimate value between MQL and MDL
SQL	Sample Quantitation Limit
MQL	Method Quantitation Limit
MDL	Method Detection Limit
L	LCS/LCSD recovery is outside QC limits, the results may have a slight bias.
M	MS/MSD recovery is outside QC limits due to possible matrix interferences, results may have a slight bias .
S	RPD is outside QC limits.
RMCCL	Recommended Maximum Concentration of Contaminants Level
µR/hr	MicroRoentgens per hour (Measure of Radioactivity Level)
HT	Sample received past holdtime
IC	Improper Container for this analyte(s)
IT	Improper Temperature
IP	Improper preservation for this analyte(s)
V	Insufficient Volume
B	Sample collected in Bulk
AB	VOA Vial contained air bubbles.
OP	ortho-Phosphate was not filtered in the field within 15minutes of collection.
CCV	Continuing Calibration Verification Standard.
ICV	Initial Calibration Verification Standard.
Surr L	Surrogate recovery is low outside QC limits.
Surr H	Surrogate recovery is high outside QC limits.
NR	Not Recovered due to source sample concentration exceeds spiked concentration.

Test Methods followed by the laboratory are referenced in the following approved methodology, unless otherwise specified.

Standard Methods for the Examination of Water and Wastewater, 23rd Edition, 2017
Methods for Chemical Analysis of Water and Wastes, EPA 600/4-79-020, Rev. March 1983
EPA SW Test Methods for the Examination of Solid Waste, SW-846, 1996

Subcontracted Analyses

Subcontractor Lab	Lab Number	Analysis
Eurofins - St. Louis	2308595-01	Li_T
Eurofins - St. Louis	2308595-01	Radium 226_SUB
Eurofins - St. Louis	2308595-01	Radium 228_SUB

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Notes:

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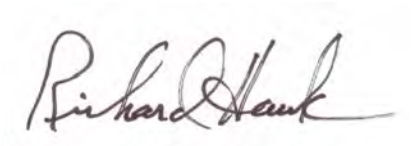
Aimee Landon For Marcela Gracia Hawk, President For



Richard Hawk, General Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

CHAIN-OF-CUSTODY RECORD

SAN ANTONIO TESTING LABORATORY, LLC

1610 S. Laredo Street, San Antonio, Texas 78207
Phone (210) 229-9920
Fax (210) 229-9921
www.satestinglab.com

REPORT TO:	INVOICE TO:	P.O. #2173863
COMPANY: CPS Energy	COMPANY: CPS Energy	REPORT NUMBER: 2308595
ADDRESS: 12940 US HWY 181 S	ADDRESS:	
CITY: San Antonio STATE: TX ZIP: 78223	CITY: STATE: ZIP:	E-MAIL: lesimmons@CPSEnergy.com
ATTN: Lance Simmons PHONE #: 210-353-5868	ATTN: PHONE #: 210-353-5868	

PROJECT NAME/LOCATION/SITE: Calaveras Power Station - CCR Units

PROJECT NO.:

SAMPLED BY: E. Partridge

REQUESTED TURNAROUND TIME IN BUSINESS DAYS & SURCHARGE: ❑ 7-10 Days REG ❑ 5 Days +25% ☑ 4 Days +50% ❑ 3 DAYS +75% ❑ 2 DAYS +100% ❑ Next Day +150% ❑ SAME DAY WHEN POSSIBLE +300%

THE TURNAROUND TIME FOR SAMPLES RECEIVED AFTER 3:00 PM SHALL BEGIN AT 8:00 AM THE FOLLOWING BUSINESS DAY / SPECIAL REQ.:

DATA TO TCEQ ❑ RRC ❑ Other (Specify) ❑

Field: pH:____; Temp:____ °C; LCS/D:____/____; Dup:____

SAMPLE TEMPERATURE WITHIN COMPLIANCE (> 0°C ≤ 6°C) ☑ YES ❑ NO
PROPER CONTAINERS ☑ YES ❑ NO

INSUFFICIENT SAMPLE AMOUNT FOR (TCLP/SPLP/OTHER): IF NO, INITIAL HERE TO AUTHORIZE ANALYSIS ____ ❑ YES ☑ NO — AUTHORIZE TO PROCEED ____

OBSERVED TEMP.: 24.2 / CORRECTED TEMP.: 24.2 / TEMP. I.R. GUN #: 7 / SAMPLE ICED ☑ YES ❑ NO

TRRP 13 ☑ APPENDIX A ❑ LPST PCLS ❑ LOW LEVEL ❑ PST ❑ SIM ❑ TSDF Class 2 ❑ PERMIT ❑

ANALYSIS REQUESTED

Analyses listed: BTEX/MTBE 8260 / TPH TX1005/TX1006; Metals ~~8/11/12/13/TCLP/SPLP/Total~~ attached; PAH / SVOC / 8270 / 625 / TCLP / SPLP / Total; VOC / 8260 / 624 / TCLP / SPLP / Total; Water Quality - Drinking / Livestock / Irrigation; Coli / TC / FC / HPC / ECoil / Enterococci / Q-Tray; Br / Cl / F / NO3 / NO2/O-P / SO4; PCB / 608 / 8082A; OC Pest / 608 / 8081A / TCLP / SPLP / Total; RADS, Cl, F, SO4, TDS

PRESERVED WITH: HCl; HNO3; H2SO4; NaOH; NONE; PRESERVED IN THE LAB; COMPOSITED IN THE LAB; FILTERED IN THE LAB; FILTERED IN THE FIELD

SAMPLE NUMBER	DATE	TIME	DRINKING WATER	NON-POTABLE WATER	PAINT CHIPS	OIL	ORGANIC LIQUID	SOLID/SLUDGE	WIPE	OTHER	COMPOSITE	GRAB	CORE	OTHER	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	SAMPLE AMOUNT	CONTAINER SIZE	BTEX/MTBE	Metals	RADS, Cl, F, SO4, TDS	HNO3	NONE	REMARKS
1	8/23/2023	11:54 am		✓								✓			JKS-70-20230823-CCR	3	1G, 1000mL, 250mL	1G, 1000mL, 250mL		✓	✓	X	X	

RELINQUISHED BY (SIGNATURE)	DATE / TIME	RECEIVED BY (SIGNATURE)	DATE / TIME	RELINQUISHED BY (SIGNATURE)	DATE / TIME	RECEIVED BY (SIGNATURE)	DATE / TIME
[signature]	8-24-23 950	[signature]	8-24-23 9:55	[signature]	8-24-23 11:04	[signature]	AUG 24 2023

RELINQUISHED BY (PRINT NAME)	DATE / TIME	RECEIVED BY (PRINT NAME)	DATE / TIME	RELINQUISHED BY (PRINT NAME)	DATE / TIME	RECEIVED BY (PRINT NAME)	DATE / TIME
EN Partridge	8-24-23 950	Lance Simmons	8-24-23 9:55	Lance Simmons	8-24-23 11:04	H. Melendez	1104

RELINQUISHED BY (SIGNATURE) DATE / TIME — RECEIVED BY (SIGNATURE) DATE / TIME — METHOD OF SHIPMENT: Hand — SUBCONTRACTED ❑ YES ❑ NO

RELINQUISHED BY (PRINT NAME) DATE / TIME — RECEIVED BY (PRINT NAME) DATE / TIME — BULK ❑ (Initial) 5035 ❑ N/A ☑ — CUSTODY SEAL IN PLACE & INTACT ❑ YES ☑ NO

FORM: COC REV 04/2022 WHITE - LAB CANARY - CLIENT

Project Name

Calaveras Power Station - CCR Units

COC	Parameter	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Calcium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium	Radium 226 & 228 Combined	Chloride	Fluoride	Sulfate	Total Dissolved Solids
	Required Lab Method	SW-846 Method 6010B	SW-846 Method 6010B	SW-846 Method 6010B	SW-846 Method 6010B	SW-846 Method 6010B	SW-846 Method 6010B	SW-846 Method 6010B	SW-846 Method 6010B	SW-846 Method 6010B	SW-846 Method 6010B	SW-846 Method 6010B	SW-846 Method 7470A	SW-846 Method 6010B	SW-846 Method 6010B	SW-846 Method 6010B	EPA Method 903.0/904.0	EPA Method 300.0	EPA Method 300.0	EPA Method 300.0	SM2540C
COC #2	PQL Mg/L	0.2	0.01	0.01	0.004	0.05	0.005	0.2	0.01	0.01	0.01	0.02	0.0002	0.01	0.03	0.02	Radium -226 by EPA 903.0 or 903.1: 1 pCi/L Radium-228 by EPA 904.0: 1 pCi/L	0.5	0.5	0.5	5
	Sample ID/Well#																				
	JKS-70	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

NOTES
TRRP 13 reporting required for all samples.
RUN CPS ENERGY METALS AT BEGINNING OF BATCH SEQUENCE

SAN ANTONIO TESTING LABORATORY

Sample Receipt Checklist

Client: CPS Energy - Environmental Dept.	**Project Manager: Marcela Gracia Hawk**
Project: Calaveras Power Station- CCR Units	**Project Number: [none]**

Report To:
Chelsey Vasbinder

SATL Report Number: 2308595

Work Order Due by:	08/30/23 17:00 (4 day TAT)		
Received By:	Aimee Landon	Date Received:	08/24/23 11:04
Logged In By:	Aimee Landon	Date Logged In:	08/24/23 12:46

Sample(s) Received on ICE/evidence of Ice (cooler with melted ice,etc):	*Yes*
Sample temperature at receipt *:	*2.4°C*
Custody Seals Present:	*No*
All containers intact:	*Yes*
Sample labels/COC agree:	*Yes*
Samples Received within Holding time :	*Yes*
Samples appropriately preserved **:	*Yes*
Containers received broken/damaged/leaking:	*No*
Air bubbles present in VOA vials for VOC/TPH analyses, if applicable:	*Not Applicable*
TRRP 13 Reporting requested?	*Yes*
BacT Sample bottles filled to volume (100mL mark), if applicable:	*Not Applicable*
LCR Sample bottles filled to volume (1 Liter mark), if applicable:	*Not Applicable*
Subcontracting required for any analyses:	*Yes*
RUSH turnaround time requested:	*Yes*
Requested Turnaround Time:	*4 Business days*
Samples delivered via :	*Hand Delivered*
Air bill included if Samples were shipped:	*No*
Other deviations not meeting SATL sample acceptance criteria notated on CoC:	*None*

Notes:
** Samples delivered to the laboratory on the same day that they are collected may not meet thermal preservation criteria (>0°C but <6°C) but are acceptable, if they arrive on ice.*
*** If improperly preserved, notate client authorization on CoC to proceed with analysis.*

Checked By : *Aimee Landon* Date : *08/24/23 11:04*

SATL#FO001
Revised 09/15/2022

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Marcela Hawk
San Antonio Testing Laboratory, Inc.
1610 S Laredo Street
San Antonio, Texas 78207

Generated 9/27/2023 2:48:34 PM

JOB DESCRIPTION

Radiological Sampling

JOB NUMBER

160-51274-1

Eurofins St. Louis
13715 Rider Trail North
Earth City MO 63045

See page two for job notes and contact information.

Eurofins St. Louis

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins TestAmerica Project Manager.

Authorization

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9/27/2023 2:48:34 PM

Authorized for release by
Micha Korrinhizer, Project Manager
Micha.Korrinhizer@et.eurofinsus.com
(314)298-8566

Table of Contents

Job ID: 160-51274-1

Laboratory: Eurofins St. Louis

Narrative

Job Narrative
160-51274-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Eurofins TestAmerica, St. Louis attests to the validity of the laboratory data generated by Eurofins TestAmerica facilities reported herein. All analyses performed by Eurofins TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. Eurofins TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results for Chemistry analyses are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header. All soil/sediment sample results for radiochemistry analyses are based upon sample as dried and disaggregated with the exception of tritium, carbon-14, and iodine-129 by gamma spectroscopy unless requested as wet weight by the client.

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

Reference the chain of custody and condition upon receipt report for any variations on receipt conditions and temperature of samples on receipt.

Manual Integrations were performed only when necessary and are in compliance with the laboratory's standard operating procedure. Detailed information can be found in the raw data section of the level IV report.

This laboratory report is confidential and is intended for the sole use of Eurofins TestAmerica and its client.

Receipt
The samples were received on 8/29/2023 11:15 AM. Unless otherwise noted below, the samples arrived in good condition, properly preserved. The temperatures of the 2 coolers at receipt time were 23.2°C and 24.7°C

RAD
Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

Gas Flow Proportional Counter
RADIUM-226
Sample 2308595-01 (JKS-70-20230823-CCR) (160-51274-1) was analyzed for Radium-226 (GFPC) in accordance with EPA Method 903.0. The samples were prepared on 08/31/2023 and analyzed on 09/22/2023.

Job ID: 160-51274-1 (Continued)

Laboratory: Eurofins St. Louis (Continued)

RADIUM-228

Sample 2308595-01 (JKS-70-20230823-CCR) (160-51274-1) was analyzed for Radium-228 (GFPC) in accordance with EPA Method 904.0. The samples were prepared on 08/31/2023 and analyzed on 09/18/2023.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

CHAIN-OF-CUSTODY RECORD

SAN ANTONIO TESTING LABORATORY, LLC

1610 S. Laredo Street, San Antonio, Texas 78207
(210) 229-9920 • Fax (210) 229-9921
www.satestinglab.com

REPORT TO:	INVOICE TO:	P.O. #
COMPANY SAT	COMPANY SAT	REPORT NUMBER
ADDRESS	ADDRESS	
CITY STATE ZIP	CITY STATE ZIP	E-MAIL
ATTN Aimee Landon PHONE #	ATTN Elizabeth PHONE #	

REQUESTED TURNAROUND TIME IN BUSINESS DAYS & SURCHARGE: ❑ 7-10 Days REG ❑ 5 Days +25% ❑ 4 Days +50% ❑ 3 DAYS +75% ❑ 2 DAYS +100% ❑ Next Day +150% ❑ SAME DAY WHEN POSSIBLE +300%

PROJECT NAME/LOCATION/SITE

THE TURNAROUND TIME FOR SAMPLES RECEIVED AFTER 3:00 PM SHALL BEGIN AT 8:00 AM THE FOLLOWING BUSINESS DAY / SPECIAL REQ

DATA TO TCEQ ❑ RRC ❑ Other (Specify) ❑ Field: pH:_____, Temp:_____ °C; LCS/D:_____/_____; Dup:_____

PROJECT NO

SAMPLE TEMPERATURE WITHIN COMPLIANCE (> 0°C ≤ 6°C) ❑ YES ❑ NO
PROPER CONTAINERS INTACT ❑ YES ❑ NO
INSUFFICIENT SAMPLE FOR (TCLP/SPLP/OTHER): ❑ YES ❑ NO
IF NO, INITIAL HERE TO AUTHORIZE ANALYSIS _____
AUTHORIZE TO PROCEED _____

SAMPLED BY

OBSERVED TEMP / CORRECTED TEMP / TEMP I.R GUN # _____ / SAMPLE ICED ❑ YES ❑ NO
TRRP 13 ❑ APPENDIX A ❑ PST PCLS ❑ SIM/LOW LEVEL ❑ TSDF Class 2 ❑ PERMIT ❑

SAMPLE NUMBER	COLLECTED DATE	COLLECTED TIME	MATRIX: DRINKING WATER	NON-POTABLE WATER	PAINT CHIPS	OIL	ORGANIC LIQUID	SOLID/SLUDGE	WIPE	OTHER	COMPOSITE	GRAB	CORE	OTHER	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	SAMPLE AMOUNT	CONTAINER SIZE	ANALYSIS REQUESTED: BTEX/MTBE 8260 / TPH TX1005/TX1006	Metals 8 / 11 / 12 / 13 / TCLP / SPLP / Total	PAH / SVOC / 8270 / 625.1 / TCLP / SPLP / Total	VOC / 8260 / 624.1 / TCLP / SPLP / Total	Water Quality - Drinking / Livestock / Irrigation	Coli / TC / FC / HPC / EColi / Enterococci / Q-Tray	Br / Cl / F / NO3 / NO2/O-P / SO4	Herb 8151A	PCB/8082A - Pest / 608.3 / 8081A / TCLP / SPLP / Total	Rad 226 GWCL 228 Combined	PRESERVED WITH: ICE	HCl	H2SO4	HNO3	NaOH	NaHSO4	ZnAc+NaOH	MeOH	PRESERVED IN THE LAB	COMPOSITED IN THE LAB	FILTERED IN THE LAB	VOA AIR BUBBLES	FILTERED IN THE FIELD	REMARKS
1	8/23/23	1154		✓								✓			JLS-70-20230823-CCR	1	5gal									X															2308375-01

160-51274 Chain of Custody

TRRP Reporting and EQuIS 5X EDD needed 1114 2104207

RELINQUISHED BY (SIGNATURE)	DATE / TIME	RECEIVED BY (SIGNATURE)	DATE / TIME	RELINQUISHED BY (SIGNATURE)	DATE / TIME	RECEIVED BY (SIGNATURE)	DATE / TIME
Aimee Landon	08/25/23 1700	UPS		UPS		Sina Workington	8/29/23
RELINQUISHED BY (PRINT NAME)	DATE / TIME	RECEIVED BY (PRINT NAME)	DATE / TIME	RELINQUISHED BY (PRINT NAME)	DATE / TIME	RECEIVED BY (PRINT NAME)	DATE / TIME
						Sina Workington	1115
RELINQUISHED BY (SIGNATURE)	DATE / TIME	RECEIVED BY (SIGNATURE)	DATE / TIME	METHOD OF SHIPMENT		SUBCONTRACTED ❑ YES ❑ NO	
RELINQUISHED BY (PRINT NAME)	DATE / TIME	RECEIVED BY (PRINT NAME)	DATE / TIME	BULK ❑ (Initial) 5035 ❑ N/A ❑		CUSTODY SEAL IN PLACE & INTACT ❑ YES ❑ NO	

FORM: COC REV 09/2022 WHITE - LAB CANARY - CL

13 12 11 10 9 8 7 6 5 4 3 2 1

Login Sample Receipt Checklist

Client: San Antonio Testing Laboratory, Inc.

Job Number: 160-51274-1

Login Number: 51274
List Number: 1
Creator: Worthington, Sierra M

List Source: Eurofins St. Louis

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	Preserved upon arrival
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Definitions/Glossary

Client: San Antonio Testing Laboratory, Inc.
Project/Site: Radiological Sampling

Job ID: 160-51274-1

Qualifiers

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
SDL	Sample Detection Limit
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Method Summary

Client: San Antonio Testing Laboratory, Inc.
Project/Site: Radiological Sampling

Job ID: 160-51274-1

Method	Method Description	Protocol	Laboratory
903.0	Radium-226 (GFPC)	EPA	EET SL
904.0	Radium-228 (GFPC)	EPA	EET SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	EET SL
PrecSep_0	Preparation, Precipitate Separation	None	EET SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	EET SL

Protocol References:

EPA = US Environmental Protection Agency

None = None

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: San Antonio Testing Laboratory, Inc.
Project/Site: Radiological Sampling

Job ID: 160-51274-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
160-51274-1	2308595-01 (JKS-70-20230823-CCR)	Water	08/23/23 11:54	08/29/23 11:15

Client: San Antonio Testing Laboratory, Inc.
Project/Site: Radiological Sampling

Job ID: 160-51274-1

Client Sample ID: 2308595-01 (JKS-70-20230823-CCR)

Lab Sample ID: 160-51274-1

Date Collected: 08/23/23 11:54

Matrix: Water

Date Received: 08/29/23 11:15

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	MQL	MDL	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.242		0.126	0.128	1.00	0.161	pCi/L	08/31/23 11:10	09/22/23 14:51	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*92.8*		*30 - 110*	*08/31/23 11:10*	*09/22/23 14:51*	*1*

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	MQL	MDL	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.76		0.513	0.538	1.00	0.585	pCi/L	08/31/23 11:15	09/18/23 12:39	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*92.8*		*30 - 110*	*08/31/23 11:15*	*09/18/23 12:39*	*1*
Y Carrier	*86.0*		*30 - 110*	*08/31/23 11:15*	*09/18/23 12:39*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	MQL	MDL	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.00		0.528	0.553	5.00	0.585	pCi/L		09/26/23 15:36	1

Method: 903.0 - Radium-226 (GFPC)

Lab Sample ID: MB 160-626180/1-A
Matrix: Water
Analysis Batch: 629275

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 626180

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	MQL	MDL	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.02184	U	0.0535	0.0535	1.00	0.128	pCi/L	08/31/23 11:10	09/22/23 14:34	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.8*		*30 - 110*	*08/31/23 11:10*	*09/22/23 14:34*	*1*

Lab Sample ID: LCS 160-626180/2-A
Matrix: Water
Analysis Batch: 629275

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 626180

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	MQL	MDL	Unit	%Rec	%Rec Limits		
Radium-226			11.3	10.99		1.18	1.00	0.129	pCi/L	97	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*94.0*		*30 - 110*

Method: 904.0 - Radium-228 (GFPC)

Lab Sample ID: MB 160-626182/1-A
Matrix: Water
Analysis Batch: 628632

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 626182

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	MQL	MDL	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.08319	U	0.303	0.304	1.00	0.545	pCi/L	08/31/23 11:15	09/18/23 12:29	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*94.8*		*30 - 110*	*08/31/23 11:15*	*09/18/23 12:29*	*1*
Y Carrier	*90.8*		*30 - 110*	*08/31/23 11:15*	*09/18/23 12:29*	*1*

Lab Sample ID: LCS 160-626182/2-A
Matrix: Water
Analysis Batch: 628632

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 626182

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	MQL	MDL	Unit	%Rec	%Rec Limits		
Radium-228			7.87	8.699		1.26	1.00	0.571	pCi/L	111	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*94.0*		*30 - 110*
Y Carrier	*81.5*		*30 - 110*

Method: 904.0 - Radium-228 (GFPC) (Continued)

Lab Sample ID: 500-238579-T-53-E MS
Matrix: Water
Analysis Batch: 628632

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 626182

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	MQL	MDL	Unit	%Rec	%Rec Limits
Radium-228	-0.414	U	7.89	8.647		1.46	1.00	0.860	pCi/L	110	60 - 140

Carrier	*MS %Yield*	*MS Qualifier*	*Limits*
Ba Carrier	*90.3*		*30 - 110*
Y Carrier	*80.0*		*30 - 110*

Lab Sample ID: 500-238579-T-53-F MSD
Matrix: Water
Analysis Batch: 628632

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 626182

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	MQL	MDL	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-228	-0.414	U	7.91	8.231		1.33	1.00	0.739	pCi/L	104	60 - 140	0.15	1

Carrier	*MSD %Yield*	*MSD Qualifier*	*Limits*
Ba Carrier	*94.8*		*30 - 110*
Y Carrier	*89.3*		*30 - 110*

QC Association Summary

Client: San Antonio Testing Laboratory, Inc.
Project/Site: Radiological Sampling

Job ID: 160-51274-1

Rad

Prep Batch: 626180

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-51274-1	2308595-01 (JKS-70-20230823-CCR)	Total/NA	Water	PrecSep-21	
MB 160-626180/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-626180/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 626182

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-51274-1	2308595-01 (JKS-70-20230823-CCR)	Total/NA	Water	PrecSep_0	
MB 160-626182/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-626182/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
500-238579-T-53-E MS	Matrix Spike	Total/NA	Water	PrecSep_0	
500-238579-T-53-F MSD	Matrix Spike Duplicate	Total/NA	Water	PrecSep_0	

Tracer/Carrier Summary

Client: San Antonio Testing Laboratory, Inc.
Project/Site: Radiological Sampling

Job ID: 160-51274-1

Method: 903.0 - Radium-226 (GFPC)

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)
		Ba
Lab Sample ID	Client Sample ID	(30-110)
160-51274-1	2308595-01 (JKS-70-20230823-	92.8
LCS 160-626180/2-A	Lab Control Sample	94.0
MB 160-626180/1-A	Method Blank	94.8

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 904.0 - Radium-228 (GFPC)

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
		Ba	Y
Lab Sample ID	Client Sample ID	(30-110)	(30-110)
160-51274-1	2308595-01 (JKS-70-20230823-	92.8	86.0
500-238579-T-53-E MS	Matrix Spike	90.3	80.0
500-238579-T-53-F MSD	Matrix Spike Duplicate	94.8	89.3
LCS 160-626182/2-A	Lab Control Sample	94.0	81.5
MB 160-626182/1-A	Method Blank	94.8	90.8

Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

Appendix A
Laboratory Data Package Cover Page - Page 1 of 4

This data package is for Eurofins St. Louis job number 160-51274-1 and consists of:

- ☑ 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 Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is NELAC 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 all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Micha Korrinhizer		9/27/2023
Name (printed)	Signature	Date

Project Manager
Official Title (printed)

Laboratory Review Checklist: Reportable Data - Page 2 of 4

Laboratory Name:	Eurofins St. Louis	LRC Date:	9/27/2023
Project Name:	Radiological Sampling	Laboratory Job Number:	160-51274-1
Reviewer Name:	Micha Korrinhizer		

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
R1	OI	**Chain-of-custody (C-O-C)**					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?		X			R01A
		Were all departures from standard conditions described in an exception report?	X				
R2	OI	**Sample and quality control (QC) identification**					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	**Test reports**					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?			X		
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?			X		
		Were % moisture (or solids) reported for all soil and sediment samples?			X		
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?			X		
		If required for the project, are TICs reported?			X		
R4	O	**Surrogate recovery data**					
		Were surrogates added prior to extraction?			X		
		Were surrogate percent recoveries in all samples within the laboratory QC limits?			X		
R5	OI	**Test reports/summary forms for blank samples**					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6	OI	**Laboratory control samples (LCS):**					
		Were all COCs included in the LCS?	X				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		Was the LCSD RPD within QC limits?			X		
R7	OI	**Matrix spike (MS) and matrix spike duplicate (MSD) data**					
		Were the project/method specified analytes included in the MS and MSD?			X		
		Were MS/MSD analyzed at the appropriate frequency?			X		
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?			X		
		Were MS/MSD RPDs within laboratory QC limits?			X		
R8	OI	**Analytical duplicate data**					
		Were appropriate analytical duplicates analyzed for each matrix?			X		
		Were analytical duplicates analyzed at the appropriate frequency?			X		
		Were RPDs or relative standard deviations within the laboratory QC limits?			X		
R9	OI	**Method quantitation limits (MQLs):**					
		Are the MQLs for each method analyte included in the laboratory data package?			X		
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?			X		
		Are unadjusted MQLs and DCSs included in the laboratory data package?			X		
R10	OI	**Other problems/anomalies**					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?	X				
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted 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 Review checklist: Supporting Data - Page 3 of 4

Laboratory Name:	Eurofins St. Louis	LRC Date:	9/27/2023
Project Name:	Radiological Sampling	Laboratory Job Number:	160-51274-1
Reviewer Name:	Micha Korrinhizer		

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
S1	OI	**Initial calibration (ICAL)**					
		Were response factors and/or relative response factors for each analyte within QC limits?	X				
		Were percent RSDs or correlation coefficient criteria met?	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	**Initial and continuing calibration verification (ICV and CCV) and continuing calibration blank (CCB):**					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
S3	O	**Mass spectral tuning**					
		Was the appropriate compound for the method used for tuning?			X		
		Were ion abundance data within the method-required QC limits?			X		
S4	O	**Internal standards (IS)**					
		Were IS area counts and retention times within the method-required QC limits?			X		
S5	OI	**Raw data (NELAC Section 5.5.10)**					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?			X		
		Were data associated with manual integrations flagged on the raw data?			X		
S6	O	**Dual column confirmation**					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	**Tentatively identified compounds (TICs)**					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	**Interference Check Sample (ICS) results**					
		Were percent recoveries within method QC limits?			X		
S9	I	**Serial dilutions, post digestion spikes, and method of standard additions**					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X		
S10	OI	**Method detection limit (MDL) studies**					
		Was a MDL study performed for each reported analyte?			X		
		Is the MDL either adjusted or supported by the analysis of DCSs?			X		
S11	OI	**Proficiency test reports**					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	**Standards documentation**					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	**Compound/analyte identification procedures**					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	**Demonstration of analyst competency (DOC)**					
		Was DOC conducted consistent with NELAC Chapter 5?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	**Verification/validation documentation for methods (NELAC Chapter 5)**					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	**Laboratory standard operating procedures (SOPs)**					
		Are laboratory SOPs current and on file for each method performed?	X				

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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 Review Checklist: Exception Reports - Page 4 of 4

Laboratory Name:	Eurofins St. Louis	LRC Date:	9/27/2023
Project Name:	Radiological Sampling	Laboratory Job Number:	160-51274-1
Reviewer Name:	Micha Korrinhizer		

ER #[1]	Description
R01A	The sampler name is not listed on the COC. The reference method requires samples to be preserved to a pH of <2. The following sample was received with insufficient preservation at a pH of 7: 2308595-01 (JKS-70-20230823-CCR) (160-51274-1). The sample was preserved to the appropriate pH in the laboratory.
Misc	Method 903.0: Radium-226 prep batch 160-626180 Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.2308595-01 (JKS-70-20230823-CCR) (160-51274-1), (LCS 160-626180/2-A) and (MB 160-626180/1-A) Method 904.0: Radium-228 prep batch 160-626182 Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. 2308595-01 (JKS-70-20230823-CCR) (160-51274-1), (LCS 160-626182/2-A), (MB 160-626182/1-A), (500-238579-T-53-D), (500-238579-T-53-E MS) and (500-238579-T-53-F MSD)

1. Items identified by the letter “R” must be included in the laboratory data package submitted 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).

Data Usability Summary
Sampling Event/October 2023

CPS Energy Calaveras Power Station
Coal Combustion Residuals (CCR) Units
San Antonio, Texas

This data usability summary (DUS) was prepared in general accordance with the following key documents:

1) *Groundwater Sampling and Analysis Program*, CPS Energy, Calaveras Power Station (ERM, August 2023);
2) Texas Commission on Environmental Quality's (TCEQ's) *Review and Reporting of COC Concentration Data Under TRRP* (RG-366/TRRP-13, May 2010); and
3) Environmental Protection Agency's (EPA's) *National Functional Guidelines for Inorganic Superfund Methods Data Review* (EPA-540-R-2017-001, January 2017).

Environmental Resources Management (ERM) reviewed four laboratory analytical data packages (2310293, 2310294, 2310304, 2310305) from San Antonio Testing Laboratory (SATL) of San Antonio, Texas for the analysis of ground water samples collected on 17 October to 18 October 2023 at the CPS Energy Calaveras Power Station in San Antonio, Texas. Analytes Radium-226, Radium-228, and Lithium were subbed to Eurofins of St. Louis by SATL for analysis. Data were reviewed to assess conformance with the requirements of the above-referenced documents.

SATL and Eurofins are NELAC-accredited under the Texas Laboratory Accreditation Program for the matrices, analytes, and methods of analysis requested on the chain-of-custody documentation. SATL and Eurofins National Environmental Laboratory Accreditation Program (NELAP) certificates applicable to the period during which the laboratories generated the data in these reports is referenced in the laboratory reports.

Intended Use of Data: To provide concentration data on Appendix III Coal Combustion Residuals (CCR) Rule parameters in ground water at the CPS Energy Calaveras Facility.

Analyses requested for the laboratory packages include the following:

- EPA 300.0 – Inorganic Anions (Chloride, Fluoride, Sulfate) by Ion Chromatography (IC)
- EPA 6010B – Total Metals by Inductively Coupled Plasma-Atomic Emission Spectroscopy (ICP-AES)
- EPA 903.0 and 904.0 – Radium-226 and Radium-228 by Gas Flow Proportional Counters (GFPC)
- SW846 6010D – Total Metals (Lithium) by ICP
- EPA 7470A – Mercury by Cold-Vapor Atomic Absorption (CVAA)
- SM2540C – Total Dissolved Solids

Data were reviewed and validated as described in the above-referenced documents, and the results of the review/validation are discussed in this Data Usability Summary (DUS). The following laboratory submittals and field data were examined:

- The reportable data;
- The laboratory review checklist (LRC) and associated exception report (ER); and
- The Quality Assurance/Quality Control (QA/QC) data supplied by the laboratory.

The results of supporting QC analyses are summarized on the LRC and ER, which are included in this review. The LRC, associated ER, QA/QC data, and reportable data covered by this review are included in the laboratory reports.

The Laboratory Data Package Cover Pages and Laboratory Review Checklists provided in the analytical data packages are outdated and inconsistent with current TRRP-13 guidance (May 2010). It is highly recommended that required items in the current TRRP-13 guidance be followed for laboratory data packages generated to satisfy corrective action program requirements. Data were not qualified based on this deficiency.

Introduction

Twenty-six (26) groundwater samples, two (2) duplicate samples, two (2) field blanks, and one (1) equipment blank were analyzed for select metals and anions. Seven (7) groundwater samples, one (1) duplicate sample, and one (1) field blank was also analyzed for Radium and Lithium. Table 1 lists the sample identifications cross-referenced to laboratory identifications.

Project Data Quality Objectives (DQO)

The quantitative project DQO limits specified in the *Groundwater Sampling and Analysis Program* were utilized as follows:

- Recovery (%R)
  - Spike samples 75-125%
  - Non-spike samples 70-130%
- Relative Percent Difference (RPD) <20%

Data were qualified in accordance with the TCEQ's TRRP-13 guidance document, including data qualifier codes and data qualifier code definitions.

Data Review / Validation Results

Analytical Results

Ground water analytical results were reported in milligrams per liter (mg/L) for metals and anions. Analytical results from Eurofins was reported in micrograms per liter (µg/L) for metals and in picocurries per liter (pCi/L) for radiological analysis. Non-detect results are reported as less than the value of the sample detection limits (SDLs). The method quantitation limits (MQLs) are also reported.

Preservation and Holding Times

The samples were evaluated for agreement with the chain-of-custody forms. The samples were received in the appropriate containers and in good condition with the paperwork properly completed.

Sample receipt temperature of the cooler at SATL were within or less than the acceptance criteria of 4 +/- 2 degrees Celsius. Sample receipt temperature for lab reports 2310293, 2310294, 2310304, 2310305 were 4.1°C, 3.9°C, 4°C, and 3.4°C, respectively. No qualifiers were added to the data. Samples were prepared and analyzed within holding times as specified by the methods. The samples were preserved in the field as specified by the methods, with the following exceptions.

In lab report 2310304, sample FB-002-20231018, and in lab report 2310305, samples JKS-36-20231017-CCR, JKS-61-20231017-CCR, and JKS-72-20231017-CCR were analyzed one day outside of holding time for TDS. The results were qualified as JL, estimated with low bias, for detected results or non-detect and estimated with low bias, UJL, for non-detect results.

For radium analysis, the reference method required samples to be preserved to a pH of <2. If samples are collected without preservation, they must be received by the laboratory within 5 days for preservation according to Method 904 specifications. One sample, JKS-72-20231017-CCR, in lab report 2310305 was received by the laboratory unpreserved 6 days after the sample was collected. The sample was preserved to the appropriate pH in the laboratory; however, the analytical results were still qualified as JL, estimated low, for detected results for radium.

Calibrations

According to the LRC, initial calibrations, continuing calibrations, and calibration verifications data met method requirements for metals and anions, as applicable.

Mass Spectral Tuning

As documented in the LRC, mass spectrometry instrument performance tunes were either not applicable (appropriate compound for the method) or met specific requirements for the requested analytical methods (ion abundance data within limits).

Internal Standards

As documented in the LRC, internal standard area counts and retention times were within or not applicable for the requested analytical methods.

Percent Yield

Ba and Y Carrier percent yields for radium analysis were within laboratory acceptance limits.

Blanks

Metals, radium, and anions were not detected in the method blanks, field blanks, or equipment blanks, with the following exceptions.

For laboratory report 2310294, boron (0.004J) and calcium (0.076J) were detected in the field blank. For laboratory report 2310304, boron (0.003J), calcium (0.057J), and chloride (0.052J) were detected in the field blank. For laboratory report 2310295, boron (0.007J) and calcium (0.122J) were detected in the equipment blank. However, detected results for calcium, boron, and chloride were greater than five times the field or equipment blank concentrations; as such, no qualifiers were required.

Laboratory Control Samples

Laboratory control sample and duplicate (LCS/LCSD) precision and accuracy results (*i.e.,* percent recoveries and RPDs) for all analyses were within project DQO acceptance limits, with the following exception.

In lab reports 2310294, 2310304, and 2310305, LCS/LCSD percent recoveries for mercury were above laboratory limits, but within DQO limits; therefore, no qualifiers were required.

Matrix Spike / Matrix Spike Duplicates

Matrix spike/matrix spike duplicate (MS/MSD) precision and accuracy results (*i.e.,* percent recoveries and RPDs) using project samples were within project DQO acceptance limits, with the following exceptions.

In lab report 2310293, MS/MSD analysis was performed on project samples JKS-46-20231017-CCR for anions and JKS-31-20231018-CCR and JKS-51-20231018-CCR for metals. The MS and MSD had recoveries above laboratory and DQO limits or Not Recoverable (NR) for chloride and sulfate. The parent concentrations for chloride and sulfate were greater than four times the amount spiked into it; therefore, no qualifiers were required for high MS/MSD recoveries for chloride or the NR-flagged recoveries for sulfate. The MS and MSD recoveries for metals were run on two project-related samples in the same batch. The MS/MSD recoveries for boron and calcium were above laboratory and DQO limits or Not Recoverable (NR) for calcium. The parent concentration for calcium was greater than four times the amount spiked into it; therefore, no qualifiers were required for calcium. Additionally, MS/MSD recoveries for boron were within DQO limits associated with sample JKS-51-20231018-CCR in the same batch. As such, only the parent sample would be qualified as estimated with high bias (JH) due to high MS/MSD recoveries.

In lab report 2310294, MS/MSD analysis was performed on project samples JKS-46-20231017-CCR and FB-001-20231018 for anions and JKS-31-20231018-CCR and JKS-51-20231018-CCR for metals. The MS and MSD had recoveries above laboratory and DQO limits or Not Recoverable (NR) for chloride and sulfate. The parent concentrations for chloride and sulfate were greater than four times the amount spiked into it; therefore, no qualifiers were required for high MS/MSD recoveries for chloride or the NR-flagged recoveries for sulfate. The MS and MSD had recoveries above laboratory and DQO limits for cadmium, calcium, selenium, arsenic, and boron; however, MS/MSD recoveries for arsenic and boron were within DQO limits associated with sample JKS-31-20231018-CCR in the same batch. As such, only the parent sample JKS-51-20231018-CCR was qualified as estimated with high bias (JH) for arsenic and boron (if analyzed) due to high MS/MSD recoveries. All samples in the batch with reported detections for cadmium and selenium were qualified as estimated with high bias (JH) due to high MS/MSD recoveries. The MS/MSD recoveries were Not Recoverable (NR) for Calcium as the parent concentrations were greater than four times the amount spiked into it; therefore, no qualifiers were required for calcium.

In lab report 2310304, MS/MSD analysis was performed on project sample JKS-65-20231018-PDP for anions. The MS and MSD had recoveries above laboratory and DQO limits or Not Recoverable (NR) and MSD RPDs higher than DQO limits for chloride and sulfate. The parent concentrations for chloride and sulfate were greater than four times the amount spiked into it; therefore, no qualifiers were required for high MS/MSD recoveries or RPDs for sulfate or the NR-flagged recoveries for chloride.

In lab report 2310305, MS/MSD analysis was performed on project sample JKS-47-20231018-CCR for anions. The MS and MSD had Not Recoverable (NR) recoveries for chloride and sulfate. The parent concentrations for chloride and sulfate were greater than four times the amount spiked into it; therefore, no qualifiers were required for the NR-flagged recoveries.

In lab report 2310305, MS/MSD analysis was performed on project sample 2310305-01 for metals. MS/MSD recoveries were below DQO limits for antimony, barium, beryllium, boron, chromium, and cobalt and were above DQO limits or Not Recoverable (NR) for cadmium and calcium. The parent concentration for calcium was greater than four times the amount spiked into it; therefore, no qualifiers were required for calcium. All samples in the batch with reported concentrations for antimony, barium, beryllium, boron, chromium, and cobalt were qualified as estimated with low bias (JL) or non-detect and estimated with low bias (UJL) due to low MS/MSD recoveries. All samples in the batch with reported detections for cadmium were qualified as estimated with high bias (JH) for cadmium (if analyzed) due to high MS/MSD recoveries.

Post Digestion Spike

According to the LRC, post digestion spike (PDS) recoveries were within method acceptance limits.

Serial Dilution

According to the LRC, serial dilution (SD) percent differences (%D) were within method acceptance limits.

Laboratory Precision

Laboratory duplicate RPD using project samples were within project DQO acceptance limits, with the following exceptions.

In lab report 2310293, the laboratory duplicate RPDs for boron and calcium, performed on project samples JKS-31-20231018-CCR and JKS-51-20231018-CCR, were higher than DQO limits only for sample JKS-51-20231018-CCR. Since both laboratory duplicates were run on the same batch, only the parent sample, JKS-51-20231018-CCR, was qualified as estimated (J) for boron and calcium due to high laboratory precision RPD.

In lab report 2310294, the laboratory duplicate RPDs for arsenic, barium, boron, calcium, and molybdenum, performed on project samples JKS-31-20231018-CCR and JKS-51-20231018-CCR, were higher than DQO limits; however, only arsenic RPDs were above DQO limits for both parent samples. Affected samples in the batch had detected results less than the MQL; as such, no qualifiers were required for arsenic. Since both laboratory duplicates were run on the same batch, only the parent sample, JKS-31-20231018-CCR or JKS-51-20231018-CCR would need to be qualified for molybdenum, boron, barium, calcium, and/or lead. However, only boron and calcium were analyzed in parent sample JKS-51-20231018-CCR; as such, only boron and calcium were qualified.

In lab report 2310305, the laboratory duplicate RPD for sulfate, performed on project sample JKS-47-20231018-CCR, was higher than DQO limits. Affected samples in the batch detected at concentrations above the MQL for sulfate were qualified as estimated, J, for high laboratory precision RPD.

Field Precision

Two pairs of field precision samples were collected during the November 2023 event (JKS-56-20231017-CCR / DUP-001-20231017 and JKS-65-20231018-PDP / DUP-002-20231018). RPD calculations for detected analytes for each field precision pair are shown in Table 2. All RPD were within DQO limits or had sample concentrations less than two times the value of the MQL; as such, no qualifiers were required.

Field Procedures

Sample collection procedures were in accordance with EPA ground water sampling protocols and the *Ground Water Sampling and Analysis Program*, dated August 2023.

SUMMARY

Ground water analytical results are useable for the purpose of provide concentration data on Appendix III Coal Combustion Residuals (CCR) Rule parameters in ground water at the CPS Energy Calaveras Power Station. Table 2 lists qualified data.

Tables

TABLE 1
Sample Cross-Reference

CPS Energy
Calaveras Power Station

Lab Report	Lab Identification	Field Identification	Sample Date	Sample Type
2310293	2310293-01	JKS-31-20231018-CCR	10/18/2023	Groundwater
2310293	2310293-02	JKS-33-20231017-CCR	10/17/2023	Groundwater
2310293	2310293-03	JKS-45-20231017-CCR	10/17/2023	Groundwater
2310293	2310293-04	JKS-46-20231017-CCR	10/17/2023	Groundwater
2310293	2310293-05	JKS-60-20231017-CCR	10/17/2023	Groundwater
2310294	2310294-01	JKS-48-20231017-CCR	10/17/2023	Groundwater
2310294	2310294-02	JKS-49-20231017-CCR	10/17/2023	Groundwater
2310294	2310294-03	JKS-50R-20231017-CCR	10/17/2023	Groundwater
2310294	2310294-04	JKS-51-20231018-CCR	10/28/2023	Groundwater
2310294	2310294-05	JKS-52-20231017-CCR	10/17/2023	Groundwater
2310294	2310294-06	JKS-53-20231017-CCR	10/17/2023	Groundwater
2310294	2310294-07	JKS-54-20231017-CCR	10/17/2023	Groundwater
2310294	2310294-08	JKS-56-20231017-CCR	10/17/2023	Groundwater
2310294	2310294-09	JKS-70-20231018-CCR	10/18/2023	Groundwater
2310294	2310294-10	FB-001-20231018	10/18/2023	Field Blank
2310294	2310294-11	DUP-001-20231017	10/17/2023	Duplicate Sample
2310294	2310294-12	JKS-55-20231017-CCR	10/17/2023	Groundwater
2310304	2310304-01	JKS-65-20231018-PDP	10/18/2023	Groundwater
2310304	2310304-02	JKS-66-20231018-PDP	10/18/2023	Groundwater
2310304	2310304-03	JKS-67-20231018-PDP	10/18/2023	Groundwater
2310304	2310304-04	JKS-68-20231018-PDP	10/18/2023	Groundwater
2310304	2310304-05	JKS-69-20231018-PDP	10/18/2023	Groundwater
2310304	2310304-06	DUP-002-20231018	10/18/2023	Duplicate Sample
2310304	2310304-07	FB-002-20231018	10/18/2023	Field Blank
2310305	2310305-01	JKS-36-20231017-CCR	10/17/2023	Groundwater
2310305	2310305-02	JKS-47-20231018-CCR	10/17/2023	Groundwater
2310305	2310305-03	JKS-61-20231017-CCR	10/18/2023	Groundwater
2310305	2310305-04	JKS-63R-20231018-CCR	10/17/2023	Groundwater
2310305	2310305-05	JKS-64-20231018-CCR	10/18/2023	Groundwater
2310305	2310305-06	JKS-72-20231017-CCR	10/17/2023	Groundwater
2310305	2310305-07	EB-001-20231018-CCR	10/18/2023	Equipment Blank

TABLE 2
Data Usability Qualifiers

CPS Energy
Calaveras Power Station

Lab Report	Field ID	Parameter	Qualification	Rationale
2310304	FB-002-20231018	TDS	UJL	Outside Analysis Holding Time
2310305	JKS-36-20231017-CCR	TDS	JL	Outside Analysis Holding Time
2310305	JKS-61-20231017-CCR	TDS	JL	Outside Analysis Holding Time
2310305	JKS-72-20231017-CCR	TDS	JL	Outside Analysis Holding Time
2310305	JKS-72-20231017-CCR	Radium-226	JL	Outside Preservation Holding Time
2310305	JKS-72-20231017-CCR	Radium-228	JL	Outside Preservation Holding Time
2310305	JKS-72-20231017-CCR	Combined Radium	JL	Outside Preservation Holding Time
2310294	JKS-51-20231018-CCR	Boron	JH	High MS/MSD Recovery and High Laboratory Precision RPD
2310294	JKS-51-20231018-CCR	Calcium	J	High Laboratory Precision RPD
2310294	JKS-70-20231018-CCR	Cadmium	JH	High MS/MSD Recovery
2310294	JKS-70-20231018-CCR	Selenium	JH	High MS/MSD Recovery
2310305	JKS-36-20231017-CCR	Sulfate	J	High Laboratory Precision RPD
2310305	JKS-47-20231018-CCR	Sulfate	J	High Laboratory Precision RPD
2310305	JKS-61-20231017-CCR	Sulfate	J	High Laboratory Precision RPD
2310305	JKS-63R-20231018-CCR	Sulfate	J	High Laboratory Precision RPD
2310305	JKS-64-20231018-CCR	Sulfate	J	High Laboratory Precision RPD
2310305	JKS-72-20231017-CCR	Sulfate	J	High Laboratory Precision RPD
2310305	JKS-36-20231017-CCR	Boron	JL	Low MS/MSD Recovery
2310305	JKS-47-20231018-CCR	Boron	JL	Low MS/MSD Recovery
2310305	JKS-61-20231017-CCR	Boron	JL	Low MS/MSD Recovery
2310305	JKS-63R-20231018-CCR	Boron	JL	Low MS/MSD Recovery
2310305	JKS-64-20231018-CCR	Boron	JL	Low MS/MSD Recovery
2310305	JKS-72-20231017-CCR	Boron	JL	Low MS/MSD Recovery
2310305	EB-001-20231018-CCR	Boron	JL	Low MS/MSD Recovery
2310305	JKS-72-20231017-CCR	Antimony	UJL	Low MS/MSD Recovery
2310305	JKS-72-20231017-CCR	Barium	JL	Low MS/MSD Recovery
2310305	JKS-72-20231017-CCR	Beryllium	JL	Low MS/MSD Recovery
2310305	JKS-72-20231017-CCR	Chromium	JL	Low MS/MSD Recovery
2310305	JKS-72-20231017-CCR	Cobalt	JL	Low MS/MSD Recovery
2310305	JKS-72-20231017-CCR	Cadmium	JH	High MS/MSD Recovery

Notes:
J = Estimated
UJ = Non-detect Estimated

TABLE 3
Field Precision

CPS Energy
Calaveras Power Station

Lab Report	Field Duplicate Pair	Parameter	Sample Result		Duplicate Result		RPD	Qualifier
2310294	JKS-56-20231017-CCR / DUP-001-20231017	TDS	840		780		7.41	A
		Chloride	133		131		1.52	A
		Fluoride	0.448		0.451		0.67	A
		Sulfate	0.62	J	0.62	J	0.00	A
		Boron	3.35		3.39		1.19	A
		Calcium	106		102		3.85	A
2310304	JKS-65-20231018-PDP / DUP-002-20231018	TDS	524		511		2.51	A
		Chloride	114		104		9.17	A
		Fluoride	0.600		0.605		0.83	A
		Sulfate	62.2		56.1		10.31	A
		Arsenic	0.002	J	0.0006	J	107.69	A*
		Boron	0.273		0.284		3.95	A
		Barium	0.027		0.027		0.00	A
		Calcium	21.3		21.6		1.40	A
		Cadmium	0.0003	U	0.0004	J	28.57	A*
		Chromium	0.002	J	0.002	J	0.00	A
		Lead	0.002	J	0.006	J	100.00	A*
		Selenium	0.007	J	0.013		60.00	A*

Notes:
RPD - Relative Percent Difference
RPD = (Sample Result - Duplicate Result) x 200 / (Sample Result + Duplicate Result)
Qualifier: A = Acceptable (no qualification necessary)
A* = Acceptable data based on sample concentrations less than two times the MQL
J = Estimated

SAN ANTONIO TESTING LABORATORY

November 22, 2023

Chelsey Vasbinder
CPS Energy - Environmental Dept.
P.O. Box 1771
San Antonio, TX 78296-1771

SATL Report No.: 2310294
RE: Calaveras Power Station-CCR SRH/Bottom Ash Pond

Dear Chelsey Vasbinder

SATL received 12 Sample(s) on 10/18/2023 for analyses identified on the chain of custody. The analyses were performed using methods indicated on the laboratory report. Any deviations observed at sample receiving are notated on the Sample Receipt Checklist and/or Chain of Custody documents attached as part of this analytical report.

Sincerely,

For San Antonio Testing Laboratory, Inc.

Richard Hawk,
General Manager

Appendix A Laboratory Data Package Cover Page

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 5.13 or ISO/IEC 17025 Section 5.10
  - 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) for each analyte for each method and matrix;
- ☑ R10 Other problems or anomalies.
- ☑ The Exception Report for every "No" or "Not Reviewed (NR)" item in laboratory review checklist.

Release Statement: I am responsible for the release of this laboratory data package. This data package has been reviewed by the laboratory and is complete and technically compliant with the requirements of the methods used, except where noted by the laboratory in the attached exception reports. By my signature below, I affirm to the best of my knowledge, all problems/anomalies, observed by the laboratory as having the potential to affect the quality of the data, have been identified by the laboratory in the Laboratory Review Checklist, and no information or data have been knowingly withheld that would affect the quality of the data.

Aimee Landon For Marcela Gracia Hawk, President

Richard Hawk, General Manager

11/22/23 16:11

Date/Time

Project Name:	Calaveras Power Station-CCR SRH/Bottom Ash Pond	Reviewer Name:	SG,SJ
Laboratory Job Number:	2310294	Matrix :	

RG-366/TRRP-13 December 2002

Appendix A (cont'd): Laboratory Review Checklist: Reportable Data

Laboratory Name:	San Antonio Testing Laboratory Inc.	LRC Date:	10/27/23
Project Name:	Calaveras Power Station-CCR SRH/Bottom Ash	Laboratory Job Number:	2310294
Reviewer Name:	SG,SJ	Prep Batch Number(s):	B343132,B343133,B343139,B343169,B343231,B343232,B343245,B343246

# [1]	A [2]	Description	Yes	No	NA [3]	NR [4]	ER# [5]
R1		**Chain-of-custody (C-O-C)**					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		Were all departures from standard conditions described in an exception report?	X				
R2		**Sample and quality control (QC) identification**					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3		**Test reports**					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample quantitation limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?			X		
		Were % moisture (or solids) reported for all soil and sediment samples?			X		
		If required for the project, TICs reported?			X		
R4		**Surrogate recovery data**					
		Were surrogates added prior to extraction?			X		
		Were surrogate percent recoveries in all samples within the laboratory QC limits?			X		
R5		**Test reports/summary forms for blank samples**					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6		**Laboratory control samples (LCS):**					
		Were all COCs included in the LCS?	X				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SQLs?	X				
		Was the LCSD RPD within QC limits?	X				
R7		**Matrix spike (MS) and matrix spike duplicate (MSD) data**					
		Were the project/method specified analytes included in the MS and MSD?	X				
		Were MS/MSD analyzed at the appropriate frequency?	X				
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?		X			S001
		Were MS/MSD RPDs within laboratory QC limits?	X				
R8		**Analytical duplicate data**					
		Were appropriate analytical duplicates analyzed for each matrix?	X				
		Were analytical duplicates analyzed at the appropriate frequency?	X				
		Were RPDs or relative standard deviations within the laboratory QC limits?	X				
R9		**Method quantitation limits (MQLs):**					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs included in the laboratory data package?	X				
R10		**Other problems/anomalies**					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Were all necessary corrective actions performed for the reported data?	X				
		Was applicable and available technology used to lower the SQL minimize the matrix interference affects on the sample results?	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted 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).

RG-366/TRRP-13 December 2002

Appendix A (cont'd): Laboratory Review Checklist: Reportable Data

Laboratory Name:	San Antonio Testing Laboratory Inc.	LRC Date:	10/27/23
Project Name:	Calaveras Power Station-CCR SRH/Bottom Ash	Laboratory Job Number:	2310294
Reviewer Name:	SG,SJ	Prep Batch Number(s):	B343132,B343133,B343139,B343169,B343231,B343232,B343245,B343246

# [1]	A [2]	Description	Yes	No	NA [3]	NR [4]	ER# [5]
S1		**Initial calibration (ICAL)**					
		Were response factors and/or relative response factors for each analyte within QC limits?	X				
		Were percent RSDs or correlation coefficient criteria met?	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2		**Initial and continuing calibration verification (ICCV and CCV) and continuing calibration**					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
S3		**Mass spectral tuning:**					
		Was the appropriate compound for the method used for tuning?			X		
		Were ion abundance data within the method-required QC limits?			X		
S4		**Internal standards (IS):**					
		Were IS area counts and retention times within the method-required QC limits?	X				
S5		**Raw data (NELAC section 1 appendix A glossary, and section 5.12 or ISO/IEC 17025 section**					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?	X				
S6		**Dual column confirmation**					
		Did dual column confirmation results meet the method-required QC?			X		
S7		**Tentatively identified compounds (TICs):**					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8		**Interference Check Sample (ICS) results:**					
		Were percent recoveries within method QC limits?	X				
S9		**Serial dilutions, post digestion spikes, and method of standard additions**					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?	X				
S10		**Method detection limit (MDL) studies**					
		Was a MDL study performed for each reported analyte?	X				
		Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S11		**Proficiency test reports:**					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12		**Standards documentation**					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13		**Compound/analyte identification procedures**					
		Are the procedures for compound/analyte identification documented?	X				
S14		**Demonstration of analyst competency (DOC)**					
		Was DOC conducted consistent with NELAC Chapter 5C or ISO/IEC 4?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15		**Verification/validation documentation for methods (NELAC Chap 5 or ISO/IEC 17025 Section 5)**					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16		**Laboratory standard operating procedures (SOPs):**					
		Are laboratory SOPs current and on file for each method performed?	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted 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).

RG-366/TRRP-13 December 2002

Appendix A (cont'd): Laboratory Review Checklist: Exception Reports			
Laboratory Name:	San Antonio Testing Laboratory Inc.	LRC Date:	10/27/23
Project Name:	Calaveras Power Station-CCR SRH/Bottom Ash	Laboratory Job Number:	2310294
Reviewer Name:	SG,SJ	Prep Batch Number(s):	B343132,B343133,B343139,B343169,B343231,B343232,B343245,B343246

ER#[1]	Description
S001	Matrix spike recoveries outside the QC acceptance criteria, due to matrix interferences, are flagged on the analytical report.

1. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked on the LRC)

RG-366/TRRP-13 December 2002

CPS Energy - Environmental Dept.
P.O. Box 1771
San Antonio TX, 78296-1771

Notes:

Project: Calaveras Power Station-CCR SRH/Bottom Ash Pond
Project Number: [none]
Project Manager: Chelsey Vasbinder

Reported:
11/22/23 16:11
Received:
10/18/23 13:36

Report No. 2310294

SAMPLE SUMMARY

Total Samples received in this work order: **12**

Sample ID	Laboratory ID	Matrix	Sampling Method	Date Sampled	Date Received
JKS-48-20231017-CCR	2310294-01	Non-potable Water	Grab	10/17/23 13:01	10/18/23 13:36
JKS-49-20231017-CCR	2310294-02	Non-potable Water	Grab	10/17/23 15:37	10/18/23 13:36
JKS-50R-20231017-CCR	2310294-03	Non-potable Water	Grab	10/17/23 10:00	10/18/23 13:36
JKS-51-20231018-CCR	2310294-04	Non-potable Water	Grab	10/18/23 08:22	10/18/23 13:36
JKS-52-20231017-CCR	2310294-05	Non-potable Water	Grab	10/17/23 13:37	10/18/23 13:36
JKS-53-20231017-CCR	2310294-06	Non-potable Water	Grab	10/17/23 14:18	10/18/23 13:36
JKS-54-20231017-CCR	2310294-07	Non-potable Water	Grab	10/17/23 14:51	10/18/23 13:36
JKS-56-20231017-CCR	2310294-08	Non-potable Water	Grab	10/17/23 09:15	10/18/23 13:36
JKS-70-20231018-CCR	2310294-09	Non-potable Water	Grab	10/18/23 08:57	10/18/23 13:36
FB-001-20231018	2310294-10	Non-potable Water	Grab	10/18/23 09:22	10/18/23 13:36
DUP-001-20231017	2310294-11	Non-potable Water	Grab	10/17/23 08:45	10/18/23 13:36
JKS-55-20231017-CCR	2310294-12	Non-potable Water	Grab	10/17/23 10:30	10/18/23 13:36

Notes

All quality control samples and checks are within acceptance limits unless otherwise indciated.
Test results pertain only to those items tested.
All samples were in good condition when received by the laboratory unless otherwise noted.

CPS Energy - Environmental Dept.
P.O. Box 1771
San Antonio TX, 78296-1771

Notes:

Project: Calaveras Power Station-CCR SRH/Bottom Ash Pond
Project Number: [none]
Project Manager: Chelsey Vasbinder

Reported:
11/22/23 16:11
Received:
10/18/23 13:36

Report No. 2310294

Sample ID #: JKS-48-20231017-CCR **Sampling Method: Grab** **Lab Sample ID #: 2310294-01**

Sample Matrix: Non-potable Water **Date/Time Collected: 10/17/23 13:01**

Analyte	Result	MQL	Flag	MDL	SQL[SDL]	Units	PrepMethod	Method	Analyzed	Analyst	Notes
General Chemistry				***Batch ID >*** *B343132*							
Total Dissolved Solids *	1420	3.12		2.50	3.12	mg/L	SM2540C	SM2540C	10/24/23	SG	
Anions by Ion Chromatography				***Batch ID >*** *B343245*							
Chloride *	467	5.00		0.052	2.60	mg/L	EPA 300.0	EPA 300.0	10/26/23	SG	
Fluoride	1.06	0.020		0.018	0.018	mg/L	EPA 300.0	EPA 300.0	10/26/23	SG	
Sulfate *	212	5.00		0.06	2.80	mg/L	EPA 300.0	EPA 300.0	10/26/23	SG	
Total Metals By ICP				***Batch ID >*** *B343139*							
Boron	2.00	0.010		0.0006	0.0006	mg/L	EPA 3010A	EPA 6010B	10/23/23	SJ	
Calcium *	139	1.00		0.009	0.009	mg/L	EPA 3010A	EPA 6010B	10/23/23	SJ	

CPS Energy - Environmental Dept.
P.O. Box 1771
San Antonio TX, 78296-1771

Notes:

Project: Calaveras Power Station-CCR SRH/Bottom Ash Pond
Project Number: [none]
Project Manager: Chelsey Vasbinder

Reported:
11/22/23 16:11
Received:
10/18/23 13:36

Report No. 2310294

Sample ID #: JKS-49-20231017-CCR **Sampling Method: Grab** **Lab Sample ID #: 2310294-02**

Sample Matrix: Non-potable Water **Date/Time Collected: 10/17/23 15:37**

Analyte	Result	MQL	Flag	MDL	SQL[SDL]	Units	PrepMethod	Method	Analyzed	Analyst	Notes
General Chemistry				***Batch ID >*** *B343132*							
Total Dissolved Solids *	1320	3.12		2.50	3.12	mg/L	SM2540C	SM2540C	10/24/23	SG	
Anions by Ion Chromatography				***Batch ID >*** *B343245*							
Chloride *	437	5.00		0.052	2.60	mg/L	EPA 300.0	EPA 300.0	10/26/23	SG	
Fluoride	0.753	0.020		0.018	0.018	mg/L	EPA 300.0	EPA 300.0	10/26/23	SG	
Sulfate *	226	5.00		0.06	2.80	mg/L	EPA 300.0	EPA 300.0	10/26/23	SG	
Total Metals By ICP				***Batch ID >*** *B343139*							
Boron	2.58	0.010		0.0006	0.0006	mg/L	EPA 3010A	EPA 6010B	10/23/23	SJ	
Calcium *	120	1.00		0.009	0.009	mg/L	EPA 3010A	EPA 6010B	10/23/23	SJ	

CPS Energy - Environmental Dept.
P.O. Box 1771
San Antonio TX, 78296-1771

Notes:

Project: Calaveras Power Station-CCR SRH/Bottom Ash Pond
Project Number: [none]
Project Manager: Chelsey Vasbinder

Reported:
11/22/23 16:11
Received:
10/18/23 13:36

Report No. 2310294

Sample ID #: JKS-50R-20231017-CCR **Sampling Method: Grab** **Lab Sample ID #: 2310294-03**

Sample Matrix: Non-potable Water **Date/Time Collected: 10/17/23 10:00**

Analyte	Result	MQL	Flag	MDL	SQL[SDL]	Units	PrepMethod	Method	Analyzed	Analyst	Notes
General Chemistry				***Batch ID >*** *B343132*							
Total Dissolved Solids *	942	2.50		2.50	2.50	mg/L	SM2540C	SM2540C	10/24/23	SG	
Anions by Ion Chromatography				***Batch ID >*** *B343245*							
Chloride *	79.8	1.00		0.052	0.519	mg/L	EPA 300.0	EPA 300.0	10/26/23	SG	
Fluoride	0.312	0.020		0.018	0.018	mg/L	EPA 300.0	EPA 300.0	10/26/23	SG	
Sulfate *	188	1.00		0.06	0.56	mg/L	EPA 300.0	EPA 300.0	10/26/23	SG	
Total Metals By ICP				***Batch ID >*** *B343139*							
Boron	6.11	0.010		0.0006	0.0006	mg/L	EPA 3010A	EPA 6010B	10/23/23	SJ	
Calcium *	131	1.00		0.009	0.009	mg/L	EPA 3010A	EPA 6010B	10/23/23	SJ	

CPS Energy - Environmental Dept.
P.O. Box 1771
San Antonio TX, 78296-1771

Notes:

Project: Calaveras Power Station-CCR SRH/Bottom Ash Pond
Project Number: [none]
Project Manager: Chelsey Vasbinder

Reported:
11/22/23 16:11
Received:
10/18/23 13:36

Report No. 2310294

Sample ID #: JKS-51-20231018-CCR **Sampling Method: Grab** **Lab Sample ID #: 2310294-04**

Sample Matrix: Non-potable Water **Date/Time Collected: 10/18/23 08:22**

Analyte	Result	MQL	Flag	MDL	SQL[SDL]	Units	PrepMethod	Method	Analyzed	Analyst	Notes
General Chemistry			***Batch ID >*** *B343132*								
Total Dissolved Solids *	1550	3.12		2.50	3.12	mg/L	SM2540C	SM2540C	10/24/23	SG	
Anions by Ion Chromatography			***Batch ID >*** *B343245*								
Chloride *	437	5.00		0.052	2.60	mg/L	EPA 300.0	EPA 300.0	10/26/23	SG	
Fluoride	< 0.018	0.020		0.018	0.018	mg/L	EPA 300.0	EPA 300.0	10/26/23	SG	
Sulfate *	310	5.00		0.06	2.80	mg/L	EPA 300.0	EPA 300.0	10/26/23	SG	
Total Metals By ICP			***Batch ID >*** *B343139*								
Boron	0.656	0.010		0.0006	0.0006	mg/L	EPA 3010A	EPA 6010B	10/23/23	SJ	
Calcium *	236	1.00		0.009	0.009	mg/L	EPA 3010A	EPA 6010B	10/23/23	SJ	

CPS Energy - Environmental Dept.
P.O. Box 1771
San Antonio TX, 78296-1771

Notes:

Project: Calaveras Power Station-CCR SRH/Bottom Ash Pond
Project Number: [none]
Project Manager: Chelsey Vasbinder

Reported:
11/22/23 16:11
Received:
10/18/23 13:36

Report No. 2310294

Sample ID #: JKS-52-20231017-CCR **Sampling Method: Grab** **Lab Sample ID #: 2310294-05**

Sample Matrix: Non-potable Water **Date/Time Collected: 10/17/23 13:37**

Analyte	Result	MQL	Flag	MDL	SQL[SDL]	Units	PrepMethod	Method	Analyzed	Analyst	Notes
General Chemistry				***Batch ID >*** *B343132*							
Total Dissolved Solids *	1520	3.12		2.50	3.12	mg/L	SM2540C	SM2540C	10/24/23	SG	
Anions by Ion Chromatography				***Batch ID >*** *B343245*							
Chloride *	438	5.00		0.052	2.60	mg/L	EPA 300.0	EPA 300.0	10/26/23	SG	
Fluoride	< 0.018	0.020		0.018	0.018	mg/L	EPA 300.0	EPA 300.0	10/26/23	SG	
Sulfate *	287	5.00		0.06	2.80	mg/L	EPA 300.0	EPA 300.0	10/26/23	SG	
Total Metals By ICP				***Batch ID >*** *B343139*							
Boron	2.66	0.010		0.0006	0.0006	mg/L	EPA 3010A	EPA 6010B	10/23/23	SJ	
Calcium *	208	1.00		0.009	0.009	mg/L	EPA 3010A	EPA 6010B	10/23/23	SJ	

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Notes:

Project: Calaveras Power Station-CCR SRH/Bottom Ash Pond
Project Number: [none]
Project Manager: Chelsey Vasbinder

Reported:
11/22/23 16:11
Received:
10/18/23 13:36

Report No. 2310294

Sample ID #: JKS-53-20231017-CCR **Sampling Method: Grab** **Lab Sample ID #: 2310294-06**

Sample Matrix: Non-potable Water **Date/Time Collected: 10/17/23 14:18**

Analyte	Result	MQL	Flag	MDL	SQL[SDL]	Units	PrepMethod	Method	Analyzed	Analyst	Notes
General Chemistry				***Batch ID >*** *B343133*							
Total Dissolved Solids *	1600	3.57		2.50	3.57	mg/L	SM2540C	SM2540C	10/24/23	SG	
Anions by Ion Chromatography				***Batch ID >*** *B343246*							
Chloride *	487	5.00		0.052	2.60	mg/L	EPA 300.0	EPA 300.0	10/26/23	SG	
Fluoride	0.307	0.020		0.018	0.018	mg/L	EPA 300.0	EPA 300.0	10/26/23	SG	
Sulfate *	344	5.00		0.06	2.80	mg/L	EPA 300.0	EPA 300.0	10/26/23	SG	
Total Metals By ICP				***Batch ID >*** *B343139*							
Boron	1.89	0.010		0.0006	0.0006	mg/L	EPA 3010A	EPA 6010B	10/23/23	SJ	
Calcium *	148	1.00		0.009	0.009	mg/L	EPA 3010A	EPA 6010B	10/23/23	SJ	

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Notes:

Project: Calaveras Power Station-CCR SRH/Bottom Ash Pond
Project Number: [none]
Project Manager: Chelsey Vasbinder

Reported:
11/22/23 16:11
Received:
10/18/23 13:36

Report No. 2310294

Sample ID #: JKS-54-20231017-CCR **Sampling Method: Grab** **Lab Sample ID #: 2310294-07**

Sample Matrix: Non-potable Water **Date/Time Collected: 10/17/23 14:51**

Analyte	Result	MQL	Flag	MDL	SQL[SDL]	Units	PrepMethod	Method	Analyzed	Analyst	Notes
General Chemistry				***Batch ID >*** *B343133*							
Total Dissolved Solids *	1610	3.57		2.50	3.57	mg/L	SM2540C	SM2540C	10/24/23	SG	
Anions by Ion Chromatography				***Batch ID >*** *B343246*							
Chloride *	419	5.00		0.052	2.60	mg/L	EPA 300.0	EPA 300.0	10/26/23	SG	
Fluoride	0.646	0.020		0.018	0.018	mg/L	EPA 300.0	EPA 300.0	10/26/23	SG	
Sulfate *	383	5.00		0.06	2.80	mg/L	EPA 300.0	EPA 300.0	10/26/23	SG	
Total Metals By ICP				***Batch ID >*** *B343139*							
Boron	1.22	0.010		0.0006	0.0006	mg/L	EPA 3010A	EPA 6010B	10/23/23	SJ	
Calcium *	130	1.00		0.009	0.009	mg/L	EPA 3010A	EPA 6010B	10/23/23	SJ	

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Notes:

Project: Calaveras Power Station-CCR SRH/Bottom Ash Pond
Project Number: [none]
Project Manager: Chelsey Vasbinder

Reported:
11/22/23 16:11
Received:
10/18/23 13:36

Report No. 2310294

Sample ID #: JKS-56-20231017-CCR **Sampling Method: Grab** **Lab Sample ID #: 2310294-08**

Sample Matrix: Non-potable Water **Date/Time Collected: 10/17/23 09:15**

Analyte	Result	MQL	Flag	MDL	SQL[SDL]	Units	PrepMethod	Method	Analyzed	Analyst	Notes
General Chemistry				***Batch ID >*** *B343133*							
Total Dissolved Solids *	840	2.50		2.50	2.50	mg/L	SM2540C	SM2540C	10/24/23	SG	
Anions by Ion Chromatography				***Batch ID >*** *B343246*							
Chloride *	133	1.00		0.052	0.519	mg/L	EPA 300.0	EPA 300.0	10/26/23	SG	
Fluoride	0.448	0.020		0.018	0.018	mg/L	EPA 300.0	EPA 300.0	10/26/23	SG	
Sulfate *	0.62	1.00	J	0.06	0.56	mg/L	EPA 300.0	EPA 300.0	10/26/23	SG	
Total Metals By ICP				***Batch ID >*** *B343139*							
Boron	3.35	0.010		0.0006	0.0006	mg/L	EPA 3010A	EPA 6010B	10/23/23	SJ	
Calcium *	106	1.00		0.009	0.009	mg/L	EPA 3010A	EPA 6010B	10/23/23	SJ	

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Notes:

Project: Calaveras Power Station-CCR SRH/Bottom Ash Pond
Project Number: [none]
Project Manager: Chelsey Vasbinder

Reported:
11/22/23 16:11
Received:
10/18/23 13:36

Report No. 2310294

Sample ID #: JKS-70-20231018-CCR **Sampling Method: Grab** **Lab Sample ID #: 2310294-09**

Sample Matrix: Non-potable Water **Date/Time Collected: 10/18/23 08:57**

Analyte	Result	MQL	Flag	MDL	SQL[SDL]	Units	PrepMethod	Method	Analyzed	Analyst	Notes
General Chemistry				***Batch ID >*** *B343133*							
Total Dissolved Solids *	635	2.50		2.50	2.50	mg/L	SM2540C	SM2540C	10/24/23	SG	
Anions by Ion Chromatography				***Batch ID >*** *B343246*							
Chloride *	115	1.00		0.052	0.519	mg/L	EPA 300.0	EPA 300.0	10/26/23	SG	
Fluoride	0.642	0.020		0.018	0.018	mg/L	EPA 300.0	EPA 300.0	10/26/23	SG	
Sulfate *	< 0.56	1.00		0.06	0.56	mg/L	EPA 300.0	EPA 300.0	10/26/23	SG	
Total Mercury				***Batch ID >*** *B343169*							
Mercury	< 0.0001	0.0002		0.0001	0.0001	mg/L	EPA 7470A	EPA 7470A	10/24/23	AO	
Total Metals By ICP				***Batch ID >*** *B343139*							
Arsenic	0.008	0.010	J	0.0006	0.0006	mg/L	EPA 3010A	EPA 6010B	10/23/23	SJ	
Boron	0.243	0.010		0.0006	0.0006	mg/L	EPA 3010A	EPA 6010B	10/23/23	SJ	
Barium	0.050	0.010		0.003	0.003	mg/L	EPA 3010A	EPA 6010B	10/23/23	SJ	
Beryllium	0.0007	0.004	J	0.0003	0.0003	mg/L	EPA 3010A	EPA 6010B	10/23/23	SJ	
Calcium *	71.7	1.00		0.009	0.009	mg/L	EPA 3010A	EPA 6010B	10/23/23	SJ	
Cadmium	0.001	0.005	J	0.0003	0.0003	mg/L	EPA 3010A	EPA 6010B	10/23/23	SJ	
Cobalt	< 0.0003	0.010		0.0003	0.0003	mg/L	EPA 3010A	EPA 6010B	10/23/23	SJ	
Chromium	0.0004	0.010	J	0.0003	0.0003	mg/L	EPA 3010A	EPA 6010B	10/23/23	SJ	
Molybdenum	0.003	0.010	J	0.0003	0.0003	mg/L	EPA 3010A	EPA 6010B	10/23/23	SJ	
Lead *	0.011	0.010		0.0003	0.0003	mg/L	EPA 3010A	EPA 6010B	10/23/23	SJ	
Antimony	< 0.002	0.010		0.002	0.002	mg/L	EPA 3010A	EPA 6010B	10/23/23	SJ	
Selenium	0.004	0.010	J	0.002	0.002	mg/L	EPA 3010A	EPA 6010B	10/23/23	SJ	
Thallium	< 0.0009	0.010		0.0009	0.0009	mg/L	EPA 3010A	EPA 6010B	10/23/23	SJ	

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Notes:

Project: Calaveras Power Station-CCR SRH/Bottom Ash Pond
Project Number: [none]
Project Manager: Chelsey Vasbinder

Reported:
11/22/23 16:11
Received:
10/18/23 13:36

Report No. 2310294

Sample ID #: FB-001-20231018 **Sampling Method: Grab** **Lab Sample ID #: 2310294-10**

Sample Matrix: Non-potable Water **Date/Time Collected: 10/18/23 09:22**

Analyte	Result	MQL	Flag	MDL	SQL[SDL]	Units	PrepMethod	Method	Analyzed	Analyst	Notes
General Chemistry				***Batch ID >*** *B343133*							
Total Dissolved Solids *	< 2.50	2.50		2.50	2.50	mg/L	SM2540C	SM2540C	10/24/23	SG	
Anions by Ion Chromatography				***Batch ID >*** *B343246*							
Chloride *	< 0.052	0.100		0.052	0.052	mg/L	EPA 300.0	EPA 300.0	10/26/23	SG	
Fluoride	< 0.018	0.020		0.018	0.018	mg/L	EPA 300.0	EPA 300.0	10/26/23	SG	
Sulfate *	< 0.06	0.10		0.06	0.06	mg/L	EPA 300.0	EPA 300.0	10/26/23	SG	
Total Metals By ICP				***Batch ID >*** *B343139*							
Boron	0.004	0.010	J	0.0006	0.0006	mg/L	EPA 3010A	EPA 6010B	10/24/23	SJ	
Calcium *	0.076	1.00	J	0.009	0.009	mg/L	EPA 3010A	EPA 6010B	10/24/23	SJ	

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Notes:

Project: Calaveras Power Station-CCR SRH/Bottom Ash Pond
Project Number: [none]
Project Manager: Chelsey Vasbinder

Reported:
11/22/23 16:11
Received:
10/18/23 13:36

Report No. 2310294

Sample ID #: DUP-001-20231017 **Sampling Method: Grab** **Lab Sample ID #: 2310294-11**

Sample Matrix: Non-potable Water **Date/Time Collected: 10/17/23 08:45**

Analyte	Result	MQL	Flag	MDL	SQL[SDL]	Units	PrepMethod	Method	Analyzed	Analyst	Notes
General Chemistry				***Batch ID >*** *B343133*							
Total Dissolved Solids *	780	2.50		2.50	2.50	mg/L	SM2540C	SM2540C	10/24/23	SG	
Anions by Ion Chromatography				***Batch ID >*** *B343246*							
Chloride *	131	1.00		0.052	0.519	mg/L	EPA 300.0	EPA 300.0	10/26/23	SG	
Fluoride	0.451	0.020		0.018	0.018	mg/L	EPA 300.0	EPA 300.0	10/26/23	SG	
Sulfate *	0.62	1.00	J	0.06	0.56	mg/L	EPA 300.0	EPA 300.0	10/26/23	SG	
Total Metals By ICP				***Batch ID >*** *B343139*							
Boron	3.39	0.010		0.0006	0.0006	mg/L	EPA 3010A	EPA 6010B	10/24/23	SJ	
Calcium *	102	1.00		0.009	0.009	mg/L	EPA 3010A	EPA 6010B	10/24/23	SJ	

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Notes:

Project: Calaveras Power Station-CCR SRH/Bottom Ash Pond
Project Number: [none]
Project Manager: Chelsey Vasbinder

Reported:
11/22/23 16:11
Received:
10/18/23 13:36

Report No. 2310294

Sample ID #: JKS-55-20231017-CCR **Sampling Method: Grab** **Lab Sample ID #: 2310294-12**

Sample Matrix: Non-potable Water **Date/Time Collected: 10/17/23 10:30**

Analyte	Result	MQL	Flag	MDL	SQL[SDL]	Units	PrepMethod	Method	Analyzed	Analyst	Notes
General Chemistry				***Batch ID >*** *B343133*							
Total Dissolved Solids *	1360	3.12		2.50	3.12	mg/L	SM2540C	SM2540C	10/24/23	SG	
Anions by Ion Chromatography				***Batch ID >*** *B343246*							
Chloride *	430	2.50		0.052	1.30	mg/L	EPA 300.0	EPA 300.0	10/26/23	SG	
Fluoride	0.822	0.020		0.018	0.018	mg/L	EPA 300.0	EPA 300.0	10/26/23	SG	
Sulfate *	194	2.50		0.06	1.40	mg/L	EPA 300.0	EPA 300.0	10/26/23	SG	
Total Metals By ICP				***Batch ID >*** *B343139*							
Boron	0.928	0.010		0.0006	0.0006	mg/L	EPA 3010A	EPA 6010B	10/24/23	SJ	
Calcium *	131	1.00		0.009	0.009	mg/L	EPA 3010A	EPA 6010B	10/24/23	SJ	

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Notes:

Project: Calaveras Power Station-CCR SRH/Bottom Ash Pond
Project Number: [none]
Project Manager: Chelsey Vasbinder

Reported:
11/22/23 16:11
Received:
10/18/23 13:36

Report No. 2310294

General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B343132 - SM2540C									
Blank (B343132-BLK1)				Prepared: 10/23/23 09:17		Analyzed: 10/24/23 16:06			
Total Dissolved Solids	<2.50	2.50	mg/L				–		
LCS (B343132-BS1)				Prepared: 10/23/23 09:17		Analyzed: 10/25/23 11:54			
Total Dissolved Solids	103	2.50	mg/L	100		103	80–120		
LCS Dup (B343132-BSD1)				Prepared: 10/23/23 09:17		Analyzed: 10/24/23 16:07			
Total Dissolved Solids	88.0	2.50	mg/L	100		88	80–120	16	20
Duplicate (B343132-DUP1)		**Source: 2310293-01**		Prepared: 10/23/23 09:17		Analyzed: 10/24/23 16:10			
Total Dissolved Solids	2260	4.17	mg/L		2300		–	2	20
Batch B343133 - SM2540C									
Blank (B343133-BLK1)				Prepared: 10/23/23 09:39		Analyzed: 10/24/23 16:06			
Total Dissolved Solids	<2.50	2.50	mg/L				–		
LCS (B343133-BS1)				Prepared: 10/23/23 09:39		Analyzed: 10/25/23 11:54			
Total Dissolved Solids	103	2.50	mg/L	100		103	80–120		
LCS Dup (B343133-BSD1)				Prepared: 10/23/23 09:39		Analyzed: 10/24/23 16:07			
Total Dissolved Solids	88.0	2.50	mg/L	100		88	80–120	16	20
Duplicate (B343133-DUP1)		**Source: 2310294-12**		Prepared: 10/23/23 09:39		Analyzed: 10/24/23 16:31			
Total Dissolved Solids	1320	3.12	mg/L		1360		–	3	20

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Notes:

Project: Calaveras Power Station-CCR SRH/Bottom Ash Pond
Project Number: [none]
Project Manager: Chelsey Vasbinder

Reported:
11/22/23 16:11
Received:
10/18/23 13:36

Report No. 2310294

Anions by Ion Chromatography - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B343231 - EPA 300.0									
Blank (B343231-BLK1)				Prepared: 10/25/23 16:00 Analyzed: 10/25/23 17:54					
Fluoride	<0.020	0.020	mg/L				–		
LCS (B343231-BS1)				Prepared: 10/25/23 16:00 Analyzed: 10/25/23 18:11					
Fluoride	0.954	0.020	mg/L	1.00		95	90–110		
LCS Dup (B343231-BSD1)				Prepared: 10/25/23 16:00 Analyzed: 10/25/23 18:29					
Fluoride	0.952	0.020	mg/L	1.00		95	90–110	0.2	20
Duplicate (B343231-DUP1)		**Source: 2310293-04**		Prepared: 10/25/23 16:00 Analyzed: 10/25/23 23:33					
Fluoride	1.21	0.020	mg/L		1.22		–	0.4	20
Matrix Spike (B343231-MS1)		**Source: 2310293-04**		Prepared: 10/25/23 16:00 Analyzed: 10/25/23 23:51					
Fluoride	2.08	0.020	mg/L	1.00	1.22	87	80–120		
Matrix Spike Dup (B343231-MSD1)		**Source: 2310293-04**		Prepared: 10/25/23 16:00 Analyzed: 10/26/23 00:27					
Fluoride	2.07	0.020	mg/L	1.00	1.22	85	80–120	0.7	20
Batch B343232 - EPA 300.0									
Blank (B343232-BLK1)				Prepared: 10/25/23 16:00 Analyzed: 10/25/23 17:54					
Fluoride	<0.020	0.020	mg/L				–		
LCS (B343232-BS1)				Prepared: 10/25/23 16:00 Analyzed: 10/25/23 18:11					
Fluoride	0.954	0.020	mg/L	1.00		95	90–110		
LCS Dup (B343232-BSD1)				Prepared: 10/25/23 16:00 Analyzed: 10/25/23 18:29					
Fluoride	0.952	0.020	mg/L	1.00		95	90–110	0.2	20

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Notes:

Project: Calaveras Power Station-CCR SRH/Bottom Ash Pond
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Project Manager: Chelsey Vasbinder

Reported:
11/22/23 16:11
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Report No. 2310294

Anions by Ion Chromatography - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	
Batch B343232 - EPA 300.0										
Duplicate (B343232-DUP1)		**Source: 2310294-10**		Prepared: 10/25/23 16:00		Analyzed: 10/26/23 04:19				
Fluoride	<0.020	0.020	mg/L		<0.020		–		20	
Matrix Spike (B343232-MS1)		**Source: 2310294-10**		Prepared: 10/25/23 16:00		Analyzed: 10/26/23 04:37				
Fluoride	1.04	0.020	mg/L	1.00	<0.020	104	80–120			
Matrix Spike Dup (B343232-MSD1)		**Source: 2310294-10**		Prepared: 10/25/23 16:00		Analyzed: 10/26/23 04:54				
Fluoride	1.04	0.020	mg/L	1.00	<0.020	104	80–120	0.7	20	
Batch B343245 - EPA 300.0										
Blank (B343245-BLK1)				Prepared: 10/25/23 16:00		Analyzed: 10/25/23 17:54				
Chloride	<0.100	0.100	mg/L				–			
Sulfate	<0.10	0.10	mg/L				–			
LCS (B343245-BS1)				Prepared: 10/25/23 16:00		Analyzed: 10/25/23 18:11				
Chloride	4.64	0.100	mg/L	5.00		93	90–110			
Sulfate	4.86	0.10	mg/L	5.00		97	90–110			
LCS Dup (B343245-BSD1)				Prepared: 10/25/23 16:00		Analyzed: 10/25/23 18:29				
Chloride	4.70	0.100	mg/L	5.00		94	90–110	1	20	
Sulfate	4.92	0.10	mg/L	5.00		98	90–110	1	20	
Duplicate (B343245-DUP1)		**Source: 2310293-04**		Prepared: 10/25/23 16:00		Analyzed: 10/26/23 11:00				
Chloride	42.4	5.00	mg/L		44.4		–	5	20	
Sulfate	634	5.00	mg/L		634		–	0.02	20	
Matrix Spike (B343245-MS1)		**Source: 2310293-04**		Prepared: 10/25/23 16:00		Analyzed: 10/25/23 23:51				
Chloride	55.1	0.100	mg/L	5.00	44.4	213	80–120			M
Sulfate	954	0.10	mg/L	5.00	634	NR	80–120			M

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Notes:

Project: Calaveras Power Station-CCR SRH/Bottom Ash Pond
Project Number: [none]
Project Manager: Chelsey Vasbinder

Reported:
11/22/23 16:11
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10/18/23 13:36

Report No. 2310294

Anions by Ion Chromatography - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	
Batch B343245 - EPA 300.0										
Matrix Spike Dup (B343245-MSD1)		**Source: 2310293-04**		Prepared: 10/25/23 16:00		Analyzed: 10/26/23 00:27				
Chloride	55.0	0.100	mg/L	5.00	44.4	210	80–120	0.2	20	M
Sulfate	951	0.10	mg/L	5.00	634	NR	80–120	0.3	20	M
Batch B343246 - EPA 300.0										
Blank (B343246-BLK1)				Prepared: 10/25/23 16:00		Analyzed: 10/25/23 17:54				
Chloride	<0.100	0.100	mg/L				–			
Sulfate	<0.10	0.10	mg/L				–			
LCS (B343246-BS1)				Prepared: 10/25/23 16:00		Analyzed: 10/25/23 18:11				
Chloride	4.64	0.100	mg/L	5.00		93	90–110			
Sulfate	4.86	0.10	mg/L	5.00		97	90–110			
LCS Dup (B343246-BSD1)				Prepared: 10/25/23 16:00		Analyzed: 10/25/23 18:29				
Chloride	4.70	0.100	mg/L	5.00		94	90–110	1	20	
Sulfate	4.92	0.10	mg/L	5.00		98	90–110	1	20	
Duplicate (B343246-DUP1)		**Source: 2310294-10**		Prepared: 10/25/23 16:00		Analyzed: 10/26/23 14:52				
Chloride	<0.100	0.100	mg/L		<0.100		–		20	
Sulfate	<0.10	0.10	mg/L		<0.10		–		20	
Matrix Spike (B343246-MS1)		**Source: 2310294-10**		Prepared: 10/25/23 16:00		Analyzed: 10/26/23 04:37				
Chloride	5.05	0.100	mg/L	5.00	<0.100	101	80–120			
Sulfate	5.23	0.10	mg/L	5.00	<0.10	105	80–120			
Matrix Spike Dup (B343246-MSD1)		**Source: 2310294-10**		Prepared: 10/25/23 16:00		Analyzed: 10/26/23 04:54				
Chloride	5.00	0.100	mg/L	5.00	<0.100	100	80–120	0.9	20	
Sulfate	5.23	0.10	mg/L	5.00	<0.10	105	80–120	0.05	20	

CPS Energy - Environmental Dept.
P.O. Box 1771
San Antonio TX, 78296-1771

Notes:

Project: Calaveras Power Station-CCR SRH/Bottom Ash Pond
Project Number: [none]
Project Manager: Chelsey Vasbinder

Reported:
11/22/23 16:11
Received:
10/18/23 13:36

Report No. 2310294

Total Mercury - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	
Batch B343169 - EPA 7470A										
Blank (B343169-BLK1)				Prepared: 10/24/23 11:30		Analyzed: 10/24/23 15:36				
Mercury	<0.0002	0.0002	mg/L				–			
LCS (B343169-BS1)				Prepared: 10/24/23 11:30		Analyzed: 10/24/23 15:42				
Mercury	0.0116	0.0002	mg/L	0.0100		116	85–115			L
LCS Dup (B343169-BSD1)				Prepared: 10/24/23 11:30		Analyzed: 10/24/23 15:44				
Mercury	0.0116	0.0002	mg/L	0.0100		116	85–115	0.1	25	L
Duplicate (B343169-DUP1)		**Source: 2310294-09**		Prepared: 10/24/23 11:30		Analyzed: 10/24/23 15:48				
Mercury	<0.0002	0.0002	mg/L		<0.0002		–		25	
Matrix Spike (B343169-MS1)		**Source: 2310294-09**		Prepared: 10/24/23 11:30		Analyzed: 10/24/23 15:50				
Mercury	0.00919	0.0002	mg/L	0.0100	<0.0002	92	75–125			
Matrix Spike Dup (B343169-MSD1)		**Source: 2310294-09**		Prepared: 10/24/23 11:30		Analyzed: 10/24/23 15:53				
Mercury	0.00908	0.0002	mg/L	0.0100	<0.0002	91	75–125	1	25	

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Notes:

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Reported:
11/22/23 16:11
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10/18/23 13:36

Report No. 2310294

Total Metals By ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B343139 - EPA 3010A									
Blank (B343139-BLK1)				Prepared: 10/23/23 12:30 Analyzed: 10/23/23 13:14					
Antimony	<0.010	0.010	mg/L				–		
Arsenic	<0.010	0.010	mg/L				–		
Barium	<0.010	0.010	mg/L				–		
Beryllium	<0.004	0.004	mg/L				–		
Boron	<0.010	0.010	mg/L				–		
Cadmium	<0.005	0.005	mg/L				–		
Calcium	<1.00	1.00	mg/L				–		
Chromium	<0.010	0.010	mg/L				–		
Cobalt	<0.010	0.010	mg/L				–		
Lead	<0.010	0.010	mg/L				–		
Molybdenum	<0.010	0.010	mg/L				–		
Selenium	<0.010	0.010	mg/L				–		
Thallium	<0.010	0.010	mg/L				–		
LCS (B343139-BS1)				Prepared: 10/23/23 12:30 Analyzed: 10/23/23 13:25					
Antimony	2.08	0.010	mg/L	2.00		104	85–115		
Arsenic	2.05	0.010	mg/L	2.00		103	85–115		
Barium	2.01	0.010	mg/L	2.00		100	85–115		
Beryllium	2.05	0.004	mg/L	2.00		103	85–115		
Boron	2.08	0.010	mg/L	2.00		104	85–115		
Cadmium	1.96	0.005	mg/L	2.00		98	85–115		
Calcium	2.04	1.00	mg/L	2.00		102	85–115		
Chromium	1.97	0.010	mg/L	2.00		99	85–115		
Cobalt	2.08	0.010	mg/L	2.00		104	85–115		
Lead	2.07	0.010	mg/L	2.00		103	85–115		
Molybdenum	2.07	0.010	mg/L	2.00		104	85–115		
Selenium	2.00	0.010	mg/L	2.00		100	85–115		
Thallium	2.04	0.010	mg/L	2.00		102	85–115		

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Notes:

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Total Metals By ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	
Batch B343139 - EPA 3010A										
LCS Dup (B343139-BSD1)				Prepared: 10/23/23 12:30 Analyzed: 10/23/23 13:31						
Antimony	2.11	0.010	mg/L	2.00		106	85–115	2	20	
Arsenic	2.13	0.010	mg/L	2.00		107	85–115	4	20	
Barium	2.04	0.010	mg/L	2.00		102	85–115	2	20	
Beryllium	2.14	0.004	mg/L	2.00		107	85–115	4	20	
Boron	2.13	0.010	mg/L	2.00		106	85–115	3	20	
Cadmium	2.08	0.005	mg/L	2.00		104	85–115	6	20	
Calcium	2.14	1.00	mg/L	2.00		107	85–115	5	20	
Chromium	2.07	0.010	mg/L	2.00		103	85–115	5	20	
Cobalt	2.14	0.010	mg/L	2.00		107	85–115	3	20	
Lead	2.15	0.010	mg/L	2.00		107	85–115	4	20	
Molybdenum	2.16	0.010	mg/L	2.00		108	85–115	4	20	
Selenium	2.10	0.010	mg/L	2.00		105	85–115	4	20	
Thallium	2.12	0.010	mg/L	2.00		106	85–115	4	20	
Duplicate (B343139-DUP1)		**Source: 2310293-01**		Prepared: 10/23/23 12:30 Analyzed: 10/23/23 17:24						
Antimony	<0.010	0.010	mg/L		<0.010		–		20	
Arsenic	0.0142	0.010	mg/L		0.0102		–	33	20	S
Barium	0.0156	0.010	mg/L		0.0153		–	2	20	
Beryllium	0.00850	0.004	mg/L		0.00830		–	2	20	
Boron	0.440	0.010	mg/L		0.429		–	2	20	
Cadmium	0.00990	0.005	mg/L		0.00980		–	1	20	
Calcium	280	1.00	mg/L		272		–	3	20	
Chromium	0.00740	0.010	mg/L		0.00660		–	11	20	
Cobalt	0.0520	0.010	mg/L		0.0511		–	2	20	
Lead	0.0110	0.010	mg/L		0.0131		–	17	20	
Molybdenum	0.000300	0.010	mg/L		0.00110		–	114	20	S
Selenium	<0.010	0.010	mg/L		<0.010		–		20	
Thallium	<0.010	0.010	mg/L		<0.010		–		20	

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Notes:

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11/22/23 16:11
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10/18/23 13:36

Report No. 2310294

Total Metals By ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	
Batch B343139 - EPA 3010A										
Duplicate (B343139-DUP2)		**Source: 2310294-04**		Prepared: 10/23/23 12:30 Analyzed: 10/23/23 19:16						
Antimony	<0.010	0.010	mg/L		<0.010		–		20	
Arsenic	0.00370	0.010	mg/L		0.00110		–	108	20	S
Barium	0.0516	0.010	mg/L		0.0390		–	28	20	S
Beryllium	0.000600	0.004	mg/L		0.000600		–	0	20	
Boron	1.93	0.010	mg/L		0.656		–	99	20	S
Cadmium	0.00110	0.005	mg/L		0.00120		–	9	20	
Calcium	158	1.00	mg/L		236		–	39	20	S
Chromium	0.000900	0.010	mg/L		0.00100		–	11	20	
Cobalt	<0.010	0.010	mg/L		<0.010		–		20	
Lead	0.00740	0.010	mg/L		0.00890		–	18	20	
Molybdenum	0.000600	0.010	mg/L		<0.010		–		20	
Selenium	<0.010	0.010	mg/L		<0.010		–		20	
Thallium	<0.010	0.010	mg/L		<0.010		–		20	
Matrix Spike (B343139-MS1)		**Source: 2310293-01**		Prepared: 10/23/23 12:30 Analyzed: 10/23/23 17:30						
Antimony	1.76	0.010	mg/L	2.00	<0.010	88	75–125			
Arsenic	2.28	0.010	mg/L	2.00	0.0102	114	75–125			
Barium	1.70	0.010	mg/L	2.00	0.0153	84	75–125			
Beryllium	1.82	0.004	mg/L	2.00	0.00830	91	75–125			
Boron	2.36	0.010	mg/L	2.00	0.429	97	75–125			
Cadmium	3.35	0.005	mg/L	2.00	0.00980	167	75–125			M
Calcium	267	1.00	mg/L	2.00	272	NR	75–125			M
Chromium	1.81	0.010	mg/L	2.00	0.00660	90	75–125			
Cobalt	1.75	0.010	mg/L	2.00	0.0511	85	75–125			
Lead	2.11	0.010	mg/L	2.00	0.0131	105	75–125			
Molybdenum	2.35	0.010	mg/L	2.00	0.00110	117	75–125			
Selenium	3.14	0.010	mg/L	2.00	<0.010	157	75–125			M
Thallium	2.14	0.010	mg/L	2.00	<0.010	107	75–125			

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Notes:

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Report No. 2310294

Total Metals By ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	
Batch B343139 - EPA 3010A										
Matrix Spike (B343139-MS2)		**Source: 2310294-04**		Prepared: 10/23/23 12:30		Analyzed: 10/23/23 19:22				
Antimony	1.98	0.010	mg/L	2.00	<0.010	99	75-125			
Arsenic	2.62	0.010	mg/L	2.00	0.00110	131	75-125			M
Barium	1.90	0.010	mg/L	2.00	0.0390	93	75-125			
Beryllium	1.93	0.004	mg/L	2.00	0.000600	96	75-125			
Boron	3.91	0.010	mg/L	2.00	0.656	163	75-125			M
Cadmium	3.45	0.005	mg/L	2.00	0.00120	172	75-125			M
Calcium	140	1.00	mg/L	2.00	236	NR	75-125			M
Chromium	1.94	0.010	mg/L	2.00	0.00100	97	75-125			
Cobalt	1.90	0.010	mg/L	2.00	<0.010	95	75-125			
Lead	2.02	0.010	mg/L	2.00	0.00890	100	75-125			
Molybdenum	2.29	0.010	mg/L	2.00	<0.010	115	75-125			
Selenium	3.78	0.010	mg/L	2.00	<0.010	189	75-125			M
Thallium	2.11	0.010	mg/L	2.00	<0.010	105	75-125			
Matrix Spike Dup (B343139-MSD1)		**Source: 2310293-01**		Prepared: 10/23/23 12:30		Analyzed: 10/23/23 17:36				
Antimony	1.84	0.010	mg/L	2.00	<0.010	92	75-125	5	20	
Arsenic	2.31	0.010	mg/L	2.00	0.0102	115	75-125	1	20	
Barium	1.74	0.010	mg/L	2.00	0.0153	86	75-125	2	20	
Beryllium	1.75	0.004	mg/L	2.00	0.00830	87	75-125	4	20	
Boron	2.36	0.010	mg/L	2.00	0.429	96	75-125	0.3	20	
Cadmium	3.20	0.005	mg/L	2.00	0.00980	160	75-125	4	20	M
Calcium	250	1.00	mg/L	2.00	272	NR	75-125	7	20	M
Chromium	1.74	0.010	mg/L	2.00	0.00660	87	75-125	4	20	
Cobalt	1.76	0.010	mg/L	2.00	0.0511	86	75-125	0.5	20	
Lead	2.06	0.010	mg/L	2.00	0.0131	102	75-125	2	20	
Molybdenum	2.30	0.010	mg/L	2.00	0.00110	115	75-125	2	20	
Selenium	3.15	0.010	mg/L	2.00	<0.010	158	75-125	0.3	20	M
Thallium	2.11	0.010	mg/L	2.00	<0.010	105	75-125	2	20	

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Total Metals By ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	
Batch B343139 - EPA 3010A										
Matrix Spike Dup (B343139-MSD2)		**Source: 2310294-04**		Prepared: 10/23/23 12:30 Analyzed: 10/23/23 19:28						
Antimony	1.99	0.010	mg/L	2.00	<0.010	100	75-125	0.8	20	
Arsenic	2.65	0.010	mg/L	2.00	0.00110	132	75-125	1	20	M
Barium	1.94	0.010	mg/L	2.00	0.0390	95	75-125	2	20	
Beryllium	1.98	0.004	mg/L	2.00	0.000600	99	75-125	3	20	
Boron	4.01	0.010	mg/L	2.00	0.656	168	75-125	2	20	M
Cadmium	3.49	0.005	mg/L	2.00	0.00120	175	75-125	1	20	M
Calcium	145	1.00	mg/L	2.00	236	NR	75-125	3	20	M
Chromium	2.01	0.010	mg/L	2.00	0.00100	100	75-125	3	20	
Cobalt	1.92	0.010	mg/L	2.00	<0.010	96	75-125	1	20	
Lead	2.05	0.010	mg/L	2.00	0.00890	102	75-125	2	20	
Molybdenum	2.33	0.010	mg/L	2.00	<0.010	116	75-125	2	20	
Selenium	3.79	0.010	mg/L	2.00	<0.010	190	75-125	0.1	20	M
Thallium	2.12	0.010	mg/L	2.00	<0.010	106	75-125	0.9	20	

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DEFINITIONS

*	TNI / NELAC accredited analyte
PQL	Practical Quantitation Limit
MCL	Maximum Contaminant Level
mg/Kg	Milligrams per Kilogram (Parts per Million)
mg/L	Milligrams per Liter (Parts per Million)
PPM	Parts per Million
ND	This qualifier indicates that the analyte was analyzed but not detected above the MDL
J	This qualifier indicates that the analyte is an estimate value between MQL and MDL
SQL	Sample Quantitation Limit
MQL	Method Quantitation Limit
MDL	Method Detection Limit
L	LCS/LCSD recovery is outside QC limits, the results may have a slight bias.
M	MS/MSD recovery is outside QC limits due to possible matrix interferences, results may have a slight bias .
S	RPD is outside QC limits.
RMCCL	Recommended Maximum Concentration of Contaminants Level
µR/hr	MicroRoentgens per hour (Measure of Radioactivity Level)
HT	Sample received past holdtime
IC	Improper Container for this analyte(s)
IT	Improper Temperature
IP	Improper preservation for this analyte(s)
V	Insufficient Volume
B	Sample collected in Bulk
AB	VOA Vial contained air bubbles.
OP	ortho-Phosphate was not filtered in the field within 15minutes of collection.
CCV	Continuing Calibration Verification Standard.
ICV	Initial Calibration Verification Standard.
Surr L	Surrogate recovery is low outside QC limits.
Surr H	Surrogate recovery is high outside QC limits.
NR	Not Recovered due to source sample concentration exceeds spiked concentration.

Test Methods followed by the laboratory are referenced in the following approved methodology, unless otherwise specified.

Standard Methods for the Examination of Water and Wastewater, 23rd Edition, 2017
Methods for Chemical Analysis of Water and Wastes, EPA 600/4-79-020, Rev. March 1983
EPA SW Test Methods for the Examination of Solid Waste, SW-846, 1996

Subcontracted Analyses

Subcontractor Lab	Lab Number	Analysis
Eurofins - St. Louis	2310294-09	Li_T
Eurofins - St. Louis	2310294-09	Radium 226_SUB
Eurofins - St. Louis	2310294-09	Radium 228_SUB

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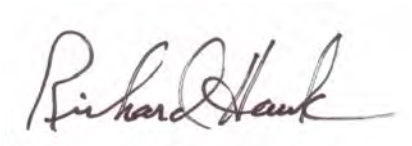
Aimee Landon For Marcela Gracia Hawk, President For



Richard Hawk, General Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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2310294

Submission key K291-LAC-234C	On 10/18/2023 12:21	By Chelsey Vasbinder	Page 1/3

Client Information	Project Information	Laboratory Information	COC Information
CPS Energy - Environmental Dept. P.O. Box 1771 San Antonio TX 78296-1771 Phone: (210) 353-4719 Fax: (210) 353-4271	Calaveras Power Station-CCR SRH/Bottom Ash Pond Number: [none] Sample count: 12 TAT: 7	San Antonio Testing Laboratory 1610 S. Laredo St San Antonio TX 78207 Phone: 210-229-9920 Fax: 210-229-9921	Shipped via: Hand Delivered

		Analyses	Containers
#1	JKS-48-20231017-CCR 10/17/2023 13:01 Grab / Non-potable Water	B_T TAT: 7 Ca_T TAT: 7 Chloride_IC TAT: 7 Fluoride_IC TAT: 7 Sulfate_IC TAT: 7 TDS TAT: 7	250 mL Plastic HNO3 (1) 1 L Plastic Unpreserved (1)
	Comments: TRRP REPORTING		
#2	JKS-49-20231017-CCR 10/17/2023 15:37 Grab / Non-potable Water	B_T TAT: 7 Ca_T TAT: 7 Chloride_IC TAT: 7 Fluoride_IC TAT: 7 Sulfate_IC TAT: 7 TDS TAT: 7	250 mL Plastic HNO3 (1) 1 L Plastic Unpreserved (1)
	Comments: TRRP REPORTING		
#3	JKS-50R-20231017-CCR 10/17/2023 10:00 Grab / Non-potable Water	B_T TAT: 7 Ca_T TAT: 7 Chloride_IC TAT: 7 Fluoride_IC TAT: 7 Sulfate_IC TAT: 7 TDS TAT: 7	250 mL Plastic HNO3 (1) 1 L Plastic Unpreserved (1)
	Comments: TRRP REPORTING		
#4	JKS-51-20231018-CCR 10/18/2023 08:22 Grab / Non-potable Water	B_T TAT: 7 Ca_T TAT: 7 Chloride_IC TAT: 7 Fluoride_IC TAT: 7 Sulfate_IC TAT: 7 TDS TAT: 7	250 mL Plastic HNO3 (1) 1 L Plastic Unpreserved (1)
	Comments: TRRP REPORTING		
#5	JKS-52-20231017-CCR 10/17/2023 13:37 Grab / Non-potable Water	B_T TAT: 7 Ca_T TAT: 7 Chloride_IC TAT: 7 Fluoride_IC TAT: 7 Sulfate_IC TAT: 7 TDS TAT: 7	250 mL Plastic HNO3 (1) 1 L Plastic Unpreserved (1)
	Comments: TRRP REPORTING		
#6	JKS-53-20231017-CCR 10/17/2023 14:18 Grab / Non-potable Water	B_T TAT: 7 Ca_T TAT: 7 Chloride_IC TAT: 7 Fluoride_IC TAT: 7 Sulfate_IC TAT: 7 TDS TAT: 7	250 mL Plastic HNO3 (1) 1 L Plastic Unpreserved (1)
	Comments: TRRP REPORTING		

		Analyses	Containers
#7	JKS-54-20231017-CCR 10/17/2023 14:51 Grab / Non-potable Water	B_T TAT: 7 Ca_T TAT: 7 Chloride_IC TAT: 7 Fluoride_IC TAT: 7 Sulfate_IC TAT: 7 TDS TAT: 7	250 mL Plastic HNO3 (1) 1 L Plastic Unpreserved (1)
	Comments: TRRP REPORTING		
#8	JKS-56-20231017-CCR 10/17/2023 09:15 Grab / Non-potable Water	B_T TAT: 7 Ca_T TAT: 7 Chloride_IC TAT: 7 Fluoride_IC TAT: 7 Sulfate_IC TAT: 7 TDS TAT: 7	250 mL Plastic HNO3 (1) 1 L Plastic Unpreserved (1)
	Comments: TRRP REPORTING		
#9	JKS-70-20231018-CCR 10/18/2023 08:57 Grab / Non-potable Water	As_T TAT: 7 B_T TAT: 7 Ba_T TAT: 7 Be_T TAT: 7 Ca_T TAT: 7 Cd_T TAT: 7 Chloride_IC TAT: 7 Co_T TAT: 7 Cr_T TAT: 7 Fluoride_IC TAT: 7 Hg_T TAT: 7 Li_T TAT: 7 (Subcontracted to Eurofins - St. Louis) Mo_T TAT: 7 Pb_T TAT: 7 Sb_T TAT: 7 Se_T TAT: 7 Sulfate_IC TAT: 7 TDS TAT: 7 Tl_T TAT: 7	250 mL Plastic HNO3 (1) 1 L Plastic Unpreserved (1) 1 Gallon Plastic (1)
	Comments: TRRP REPORTING - Radium 226 & 228 Combined		
#10	FB-001-20231018 10/18/2023 09:22 Grab / Non-potable Water	B_T TAT: 7 Ca_T TAT: 7 Chloride_IC TAT: 7 Fluoride_IC TAT: 7 Sulfate_IC TAT: 7 TDS TAT: 7	250 mL Plastic HNO3 (1) 1 L Plastic Unpreserved (1)
	Comments: TRRP REPORTING		
#11	DUP-001-20231017 10/17/2023 08:45 Grab / Non-potable Water	B_T TAT: 7 Ca_T TAT: 7 Chloride_IC TAT: 7 Fluoride_IC TAT: 7 Sulfate_IC TAT: 7 TDS TAT: 7	250 mL Plastic HNO3 (1) 1 L Plastic Unpreserved (1)
	Comments: TRRP REPORTING		
#12	JKS-55-20231017-CCR 10/17/2023 10:30 Grab / Non-potable Water	B_T TAT: 7 Ca_T TAT: 7 Chloride_IC TAT: 7 Fluoride_IC TAT: 7 Sulfate_IC TAT: 7 TDS TAT: 7	250 mL Plastic HNO3 (1) 1 L Plastic Unpreserved (1)
	Comments: TRRP REPORTING		

Sub Laboratory:	Eurofins - St. Louis 13715 Rider Trail North Earth City MO 63045 Number: (314) 298-8566 Laboratory: -

Temp Gun #7 3.9°C / 3.9°C - Iced

Relinquished by	Date/Time	Accepted by	Date/Time
Daniel Gomez	10-18-23 12:30	LANCE SIMMONS	10-18-23 12:30
LANCE SIMMONS	10-18-23 1336		10/18/23 13:36

SAN ANTONIO TESTING LABORATORY

Sample Receipt Checklist

Client: CPS Energy - Environmental Dept.	**Project Manager: Marcela Gracia Hawk**
Project: Calaveras Power Station-CCR SRH/Bottom A	**Project Number: [none]**

Report To:
Chelsey Vasbinder

SATL Report Number: 2310294

Work Order Due by:	12/01/23 17:00 (30 day TAT)		
Received By:	Elizabeth Lopez	Date Received:	10/18/23 13:36
Logged In By:	Aimee Landon	Date Logged In:	10/18/23 14:15

Sample(s) Received on ICE/evidence of Ice (cooler with melted ice,etc):	*Yes*
Sample temperature at receipt *:	*3.9°C*
Custody Seals Present:	*No*
All containers intact:	*Yes*
Sample labels/COC agree:	*Yes*
Samples Received within Holding time :	*Yes*
Samples appropriately preserved **:	*Yes*
Containers received broken/damaged/leaking:	*No*
Air bubbles present in VOA vials for VOC/TPH analyses, if applicable:	*Not Applicable*
TRRP 13 Reporting requested?	*Yes*
BacT Sample bottles filled to volume (100mL mark), if applicable:	*Not Applicable*
LCR Sample bottles filled to volume (1 Liter mark), if applicable:	*Not Applicable*
Subcontracting required for any analyses:	*Yes*
RUSH turnaround time requested:	*Yes*
Requested Turnaround Time:	*30 Business days*
Samples delivered via :	*Hand Delivered*
Air bill included if Samples were shipped:	*No*
Other deviations not meeting SATL sample acceptance criteria notated on CoC:	*None*

Notes:
** Samples delivered to the laboratory on the same day that they are collected may not meet thermal preservation criteria (>0°C but <6°C) but are acceptable, if they arrive on ice.*
*** If improperly preserved, notate client authorization on CoC to proceed with analysis.*

Checked By : *Elizabeth Lopez* Date : *10/18/23 13:36*

SATL#FO001
Revised 09/15/2022

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Marcela Hawk
San Antonio Testing Laboratory, Inc.
1610 S Laredo Street
San Antonio, Texas 78207

Generated 11/22/2023 3:38:09 PM

JOB DESCRIPTION

Radiological Sampling

JOB NUMBER

160-51920-1

Eurofins St. Louis
13715 Rider Trail North
Earth City MO 63045

See page two for job notes and contact information.

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins TestAmerica Project Manager.

Authorization

Rhonda Ridenhower

Generated
11/22/2023 3:38:09 PM

Authorized for release by
Rhonda Ridenhower, Business Unit Manager
Rhonda.Ridenhower@et.eurofinsus.com
Designee for
Micha Korrinhizer, Project Manager
Micha.Korrinhizer@et.eurofinsus.com
(314)298-8566

Table of Contents

Job ID: 160-51920-1

Laboratory: Eurofins St. Louis

Narrative

CASE NARRATIVE

Client: San Antonio Testing Laboratory, Inc.

Project: Radiological Sampling

Report Number: 160-51920-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition, all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method.

Eurofins Environment Testing attests to the validity of the laboratory data generated by Eurofins facilities reported herein. All analyses performed by Eurofins Environment Testing facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. Eurofins Environment Testing's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report.

Calculations are performed before rounding to avoid round-off errors in calculated results.

Proper preservation was noted for the methods performed on these samples, unless otherwise detailed below.

All soil/sediment sample results for radiochemistry analyses are based upon sample as dried and disaggregated with the exception of tritium, carbon-14, and iodine-129 by gamma spectroscopy unless requested as wet weight by the client.

Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative.

Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date.

This laboratory report is confidential and is intended for the sole use of Eurofins TestAmerica and its client.

Receipt
The sample was received on 10/23/2023 12:00 PM. Unless otherwise noted below, the sample arrived in good condition and properly preserved. The temperature of the cooler at receipt time was 20.0°C

Receipt Exceptions:
The reference method requires samples to have a pH of less than 2. The following sample was received with a pH of 7: 2310294-09 JKS-70-20231018-CCR (160-51920-1) . The samples were adjusted to the appropriate pH in the laboratory.

Lithium is not listed on the COC, but requested by the client via email.

Metals
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Gas Flow Proportional Counter
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

CHAIN-OF-CUSTODY RECORD

SAN ANTONIO TESTING LABORATORY, LLC
1610 S. Laredo Street, San Antonio, Texas 78207
(210) 229-9920 • Fax (210) 229-9921
www.satestinglab.com

REPORT TO:	INVOICE TO:	P.O. #
COMPANY SAR	COMPANY SAR	REPORT NUMBER
ADDRESS	ADDRESS	
CITY STATE ZIP	CITY STATE ZIP	E-MAIL
ATTN Aimee Landon PHONE #	ATTN Elizabeth PHONE #	

REQUESTED TURNAROUND TIME IN BUSINESS DAYS & SURCHARGE: ❑ 7-10 Days REG ❑ 5 Days +25% ❑ 4 Days +50% ❑ 3 DAYS +75% ❑ 2 DAYS +100% ❑ Next Day +150% ❑ SAME DAY WHEN POSSIBLE +300%

PROJECT NAME/LOCATION/SITE

THE TURNAROUND TIME FOR SAMPLES RECEIVED AFTER 3:00 PM SHALL BEGIN AT 8:00 AM THE FOLLOWING BUSINESS DAY / SPECIAL REQ:

DATA TO TCEQ ❑ RRC ❑ Other (Specify) ❑ — Field: pH:______ Temp:______ °C, LCS/D:______ / ______; Dup:______

PROJECT NO — SAMPLE TEMPERATURE WITHIN COMPLIANCE (> 0°C ≤ 6°C) ❑ YES ❑ NO; PROPER CONTAINERS INTACT ❑ YES ❑ NO; INSUFFICIENT SAMPLE FOR (TCLP/SPLP/OTHER): ❑ YES ❑ NO; IF NO, INITIAL HERE TO AUTHORIZE ANALYSIS; AUTHORIZE TO PROCEED ______

SAMPLED BY — OBSERVED TEMP. / CORRECTED TEMP. / TEMP. I.R. GUN #____ / SAMPLE ICED ❑ YES ❑ NO / TRRP 13 ❑ APPENDIX A ❑ / PST PCLS ❑ SIM/LOW LEVEL ❑ / TSDF Class 2 ❑ PERMIT ❑

ANALYSIS REQUESTED

Analysis columns: BTEX/MTBE 8260 / TPH TX1005/TX1006; Metals 8 / 11 / 12 / 13 / TCLP / SPLP / Total; PAH / SVOC / 8270 / 625.1 / TCLP / SPLP / Total; VOC / 8260 / 624.1 / TCLP / SPLP / Total; Water Quality - Drinking / Livestock / Irrigation; Coli / TC / FC / HPC / EColi / Enterococci / Q-Tray; Br / Cl / F / NO3 / NO2/O-P / SO4; Herb 8151A; PCB/8082A - Pest / 608.3 / 8081A / TCLP / SPLP / Total; Rad 226/228 comb.

PRESERV. WITH: ICE; NONE; OTHER; H_2SO_4; $Na_2S_2O_3$; NaOH; HCl; HNO_3; PRESERVED IN THE LAB; COMPOSITED IN THE LAB; FILTERED IN THE LAB; FILTERED IN THE FIELD; VOA AIR BUBBLES

SAMPLE NUMBER	DATE	TIME	MATRIX	GRAB/COMPOSITE	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	SAMPLE AMOUNT	CONTAINER SIZE	ANALYSIS REQUESTED	PRESERV.	REMARKS
1	10/18/23	0857	X (Drinking Water)	X (Grab)	JLS-70-20231018CCR	1	gal	gal	X (Rad 226/228 comb.)	X (None)	2310294-09

Matrix columns: DRINKING WATER; NON-POTABLE WATER; PAINT CHIPS; OIL; ORGANIC LIQUID; SOLID/SLUDGE; WIPE; OTHER. Type columns: COMPOSITE; GRAB; CORE; OTHER.

160-51920 Chain of Custody

TRRP Reporting
Equis 5X EDD needed
like 2104227

RELINQUISHED BY (SIGNATURE) [signature]	DATE / TIME 10/19/23	RECEIVED BY (SIGNATURE) UPS	DATE / TIME	RELINQUISHED BY (SIGNATURE)	DATE / TIME	RECEIVED BY (SIGNATURE)	DATE / TIME
RELINQUISHED BY (PRINT NAME) Aimee Landon	DATE / TIME 1700	RECEIVED BY (PRINT NAME)	DATE / TIME	RELINQUISHED BY (PRINT NAME)	DATE / TIME	RECEIVED BY (PRINT NAME)	DATE / TIME
RELINQUISHED BY (SIGNATURE) UPS	DATE / TIME	RECEIVED BY (SIGNATURE) [signature]	DATE / TIME 10/23/23	METHOD OF SHIPMENT		SUBCONTRACTED ❑ YES ❑ NO	
RELINQUISHED BY (PRINT NAME)	DATE / TIME	RECEIVED BY (PRINT NAME) Micaela Vonmolitzer	DATE / TIME 12:00	BULK ❑ (Initial) 5035 ❑ N/A ❑		CUSTODY SEAL IN PLACE & INTACT ❑ YES ❑ NO	

FORM: COC REV 09/2022 — WHITE - LAB — CANARY - CLIENT

Login Sample Receipt Checklist

Client: San Antonio Testing Laboratory, Inc.

Job Number: 160-51920-1

Login Number: 51920
List Number: 1
Creator: Korrinhizer, Micha L

List Source: Eurofins St. Louis

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	The pH was adjusted upon receipt.
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Definitions/Glossary

Client: San Antonio Testing Laboratory, Inc.
Project/Site: Radiological Sampling

Job ID: 160-51920-1

Qualifiers

Metals

Qualifier	Qualifier Description
	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
SDL	Sample Detection Limit
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Method Summary

Client: San Antonio Testing Laboratory, Inc.
Project/Site: Radiological Sampling

Job ID: 160-51920-1

Method	Method Description	Protocol	Laboratory
6010D	Metals (ICP)	SW846	EET SL
903.0	Radium-226 (GFPC)	EPA	EET SL
904.0	Radium-228 (GFPC)	EPA	EET SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	EET SL
3010A	Preparation, Total Metals	SW846	EET SL
PrecSep_0	Preparation, Precipitate Separation	None	EET SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	EET SL

Protocol References:

EPA = US Environmental Protection Agency

None = None

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: San Antonio Testing Laboratory, Inc.
Project/Site: Radiological Sampling

Job ID: 160-51920-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
160-51920-1	2310294-09 JKS-70-20231018-CCR	Water	10/18/23 08:57	10/23/23 12:00

Client: San Antonio Testing Laboratory, Inc.
Project/Site: Radiological Sampling

Job ID: 160-51920-1

Client Sample ID: 2310294-09 JKS-70-20231018-CCR
Date Collected: 10/18/23 08:57
Date Received: 10/23/23 12:00

Lab Sample ID: 160-51920-1
Matrix: Water

Method: SW846 6010D - Metals (ICP)

Analyte	Result	Qualifier	MQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	22	J	50.0	15.0	ug/L		11/08/23 11:55	11/22/23 09:43	1

Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	MQL	MDL	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.361		0.132	0.136	1.00	0.126	pCi/L	10/25/23 10:57	11/20/23 14:33	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.7*		*30 - 110*	*10/25/23 10:57*	*11/20/23 14:33*	*1*

Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	MQL	MDL	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.723		0.438	0.443	1.00	0.627	pCi/L	10/25/23 10:59	11/10/23 16:27	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*93.7*		*30 - 110*	*10/25/23 10:59*	*11/10/23 16:27*	*1*
Y Carrier	*84.5*		*30 - 110*	*10/25/23 10:59*	*11/10/23 16:27*	*1*

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	MQL	MDL	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.08		0.457	0.463	5.00	0.627	pCi/L		11/21/23 11:24	1

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 160-635857/1-A
Matrix: Water
Analysis Batch: 637956

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 635857

Analyte	MB Result	MB Qualifier	MQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	ND		50.0	15.0	ug/L		11/08/23 11:55	11/22/23 09:20	1

Lab Sample ID: LCS 160-635857/2-A
Matrix: Water
Analysis Batch: 637956

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 635857

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Lithium	100	86.8		ug/L		87	80 - 120

Lab Sample ID: 160-51920-1 MS
Matrix: Water
Analysis Batch: 637956

Client Sample ID: 2310294-09 JKS-70-20231018-CCR
Prep Type: Total/NA
Prep Batch: 635857

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Lithium	22		100	138		ug/L		116	75 - 125

Lab Sample ID: 160-51920-1 MSD
Matrix: Water
Analysis Batch: 637956

Client Sample ID: 2310294-09 JKS-70-20231018-CCR
Prep Type: Total/NA
Prep Batch: 635857

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Lithium	22		100	139		ug/L		117	75 - 125	1	20

Method: 903.0 - Radium-226 (GFPC)

Lab Sample ID: MB 160-633400/1-A
Matrix: Water
Analysis Batch: 637409

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 633400

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	MQL	MDL	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.01857	U	0.0502	0.0502	1.00	0.112	pCi/L	10/25/23 10:57	11/17/23 21:59	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*100*		*30 - 110*	*10/25/23 10:57*	*11/17/23 21:59*	*1*

Lab Sample ID: LCS 160-633400/2-A
Matrix: Water
Analysis Batch: 637409

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 633400

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	MQL	MDL	Unit	%Rec	%Rec Limits
Radium-226	11.3	11.81		1.22	1.00	0.112	pCi/L	104	75 - 125

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*95.7*		*30 - 110*

Method: 903.0 - Radium-226 (GFPC) (Continued)

Lab Sample ID: 160-51914-B-30-A MS
Matrix: Water
Analysis Batch: 637409

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 633400

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	MQL	MDL	Unit	%Rec	%Rec Limits		
Radium-226	0.00910	U	11.3	11.21		1.16	1.00	0.118	pCi/L	99	60 - 140		

Carrier	*MS %Yield*	*MS Qualifier*	*Limits*
Ba Carrier	*98.5*		*30 - 110*

Lab Sample ID: 160-51914-C-30-A MSD
Matrix: Water
Analysis Batch: 637570

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 633400

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	MQL	MDL	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-226	0.00910	U	11.3	11.23		1.15	1.00	0.0760	pCi/L	99	60 - 140	0.01	1

Carrier	*MSD %Yield*	*MSD Qualifier*	*Limits*
Ba Carrier	*101*		*30 - 110*

Method: 904.0 - Radium-228 (GFPC)

Lab Sample ID: MB 160-633402/1-A
Matrix: Water
Analysis Batch: 636330

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 633402

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	MQL	MDL	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.07191	U	0.250	0.250	1.00	0.451	pCi/L	10/25/23 10:59	11/10/23 16:21	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*100*		*30 - 110*	*10/25/23 10:59*	*11/10/23 16:21*	*1*
Y Carrier	*86.0*		*30 - 110*	*10/25/23 10:59*	*11/10/23 16:21*	*1*

Lab Sample ID: LCS 160-633402/2-A
Matrix: Water
Analysis Batch: 636330

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 633402

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	MQL	MDL	Unit	%Rec	%Rec Limits		
Radium-228			7.73	6.936		1.01	1.00	0.500	pCi/L	90	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*95.7*		*30 - 110*
Y Carrier	*87.5*		*30 - 110*

Method: 904.0 - Radium-228 (GFPC) (Continued)

Lab Sample ID: 160-51914-B-30-B MS
Matrix: Water
Analysis Batch: 636330

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 633402

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	MQL	MDL	Unit	%Rec	%Rec Limits
Radium-228	0.296	U	7.72	6.809		1.01	1.00	0.508	pCi/L	84	60 - 140

Carrier	*MS %Yield*	*MS Qualifier*	*Limits*
Ba Carrier	*98.5*		*30 - 110*
Y Carrier	*84.9*		*30 - 110*

Lab Sample ID: 160-51914-C-30-B MSD
Matrix: Water
Analysis Batch: 636330

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 633402

Analyte	Sample Result	Sample Qual	Spike Added	MSD Result	MSD Qual	Total Uncert. (2σ+/-)	MQL	MDL	Unit	%Rec	%Rec Limits	RER	RER Limit
Radium-228	0.296	U	7.69	8.148		1.11	1.00	0.481	pCi/L	102	60 - 140	0.63	1

Carrier	*MSD %Yield*	*MSD Qualifier*	*Limits*
Ba Carrier	*101*		*30 - 110*
Y Carrier	*87.5*		*30 - 110*

QC Association Summary

Client: San Antonio Testing Laboratory, Inc.
Project/Site: Radiological Sampling

Job ID: 160-51920-1

Metals

Prep Batch: 635857

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-51920-1	2310294-09 JKS-70-20231018-CCR	Total/NA	Water	3010A	
MB 160-635857/1-A	Method Blank	Total/NA	Water	3010A	
LCS 160-635857/2-A	Lab Control Sample	Total/NA	Water	3010A	
160-51920-1 MS	2310294-09 JKS-70-20231018-CCR	Total/NA	Water	3010A	
160-51920-1 MSD	2310294-09 JKS-70-20231018-CCR	Total/NA	Water	3010A	

Analysis Batch: 637956

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-51920-1	2310294-09 JKS-70-20231018-CCR	Total/NA	Water	6010D	635857
MB 160-635857/1-A	Method Blank	Total/NA	Water	6010D	635857
LCS 160-635857/2-A	Lab Control Sample	Total/NA	Water	6010D	635857
160-51920-1 MS	2310294-09 JKS-70-20231018-CCR	Total/NA	Water	6010D	635857
160-51920-1 MSD	2310294-09 JKS-70-20231018-CCR	Total/NA	Water	6010D	635857

Rad

Prep Batch: 633400

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-51920-1	2310294-09 JKS-70-20231018-CCR	Total/NA	Water	PrecSep-21	
MB 160-633400/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-633400/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
160-51914-B-30-A MS	Matrix Spike	Total/NA	Water	PrecSep-21	
160-51914-C-30-A MSD	Matrix Spike Duplicate	Total/NA	Water	PrecSep-21	

Prep Batch: 633402

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-51920-1	2310294-09 JKS-70-20231018-CCR	Total/NA	Water	PrecSep_0	
MB 160-633402/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-633402/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
160-51914-B-30-B MS	Matrix Spike	Total/NA	Water	PrecSep_0	
160-51914-C-30-B MSD	Matrix Spike Duplicate	Total/NA	Water	PrecSep_0	

Tracer/Carrier Summary

Client: San Antonio Testing Laboratory, Inc.
Project/Site: Radiological Sampling

Job ID: 160-51920-1

Method: 903.0 - Radium-226 (GFPC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Yield (Acceptance Limits) Ba (30-110)
160-51914-B-30-A MS	Matrix Spike	98.5
160-51914-C-30-A MSD	Matrix Spike Duplicate	101
160-51920-1	2310294-09 JKS-70-20231018-CCR	93.7
LCS 160-633400/2-A	Lab Control Sample	95.7
MB 160-633400/1-A	Method Blank	100

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 904.0 - Radium-228 (GFPC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Yield (Acceptance Limits) Ba (30-110)	Y (30-110)
160-51914-B-30-B MS	Matrix Spike	98.5	84.9
160-51914-C-30-B MSD	Matrix Spike Duplicate	101	87.5
160-51920-1	2310294-09 JKS-70-20231018-CCR	93.7	84.5
LCS 160-633402/2-A	Lab Control Sample	95.7	87.5
MB 160-633402/1-A	Method Blank	100	86.0

Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier

Appendix A
Laboratory Data Package Cover Page - Page 1 of 4

This data package is for Eurofins St. Louis job number 160-51920-1 and consists of:

- ☑ 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 Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is NELAC 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 all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Micha Korrinhizer		11/22/2023
Name (printed)	Signature	Date

Project Manager
Official Title (printed)

Laboratory Review Checklist: Reportable Data - Page 2 of 4

Laboratory Name:	Eurofins St. Louis	LRC Date:	11/22/2023
Project Name:	Radiological Sampling	Laboratory Job Number:	160-51920-1
Reviewer Name:	Micha Korrinhizer		

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
R1	OI	**Chain-of-custody (C-O-C)**					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		Were all departures from standard conditions described in an exception report?	X				
R2	OI	**Sample and quality control (QC) identification**					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	**Test reports**					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?			X		
		Were % moisture (or solids) reported for all soil and sediment samples?			X		
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?			X		
		If required for the project, are TICs reported?			X		
R4	O	**Surrogate recovery data**					
		Were surrogates added prior to extraction?			X		
		Were surrogate percent recoveries in all samples within the laboratory QC limits?			X		
R5	OI	**Test reports/summary forms for blank samples**					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6	OI	**Laboratory control samples (LCS):**					
		Were all COCs included in the LCS?	X				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		Was the LCSD RPD within QC limits?			X		
R7	OI	**Matrix spike (MS) and matrix spike duplicate (MSD) data**					
		Were the project/method specified analytes included in the MS and MSD?	X				
		Were MS/MSD analyzed at the appropriate frequency?	X				
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?	X				
		Were MS/MSD RPDs within laboratory QC limits?	X				
R8	OI	**Analytical duplicate data**					
		Were appropriate analytical duplicates analyzed for each matrix?			X		
		Were analytical duplicates analyzed at the appropriate frequency?			X		
		Were RPDs or relative standard deviations within the laboratory QC limits?			X		
R9	OI	**Method quantitation limits (MQLs):**					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	**Other problems/anomalies**					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?	X				
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted 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 Review checklist: Supporting Data - Page 3 of 4

Laboratory Name:	Eurofins St. Louis	LRC Date:	11/22/2023
Project Name:	Radiological Sampling	Laboratory Job Number:	160-51920-1
Reviewer Name:	Micha Korrinhizer		

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
S1	OI	**Initial calibration (ICAL)**					
		Were response factors and/or relative response factors for each analyte within QC limits?	X				
		Were percent RSDs or correlation coefficient criteria met?	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	**Initial and continuing calibration verification (ICV and CCV) and continuing calibration blank (CCB):**					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
S3	O	**Mass spectral tuning**					
		Was the appropriate compound for the method used for tuning?			X		
		Were ion abundance data within the method-required QC limits?			X		
S4	O	**Internal standards (IS)**					
		Were IS area counts and retention times within the method-required QC limits?			X		
S5	OI	**Raw data (NELAC Section 5.5.10)**					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?	X				
S6	O	**Dual column confirmation**					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	**Tentatively identified compounds (TICs)**					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	**Interference Check Sample (ICS) results**					
		Were percent recoveries within method QC limits?	X				
S9	I	**Serial dilutions, post digestion spikes, and method of standard additions**					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?	X				
S10	OI	**Method detection limit (MDL) studies**					
		Was a MDL study performed for each reported analyte?	X				
		Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S11	OI	**Proficiency test reports**					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	**Standards documentation**					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	**Compound/analyte identification procedures**					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	**Demonstration of analyst competency (DOC)**					
		Was DOC conducted consistent with NELAC Chapter 5?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	**Verification/validation documentation for methods (NELAC Chapter 5)**					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	**Laboratory standard operating procedures (SOPs)**					
		Are laboratory SOPs current and on file for each method performed?	X				

1. Items identified by the letter "R" must be included in the laboratory data package submitted 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 Review Checklist: Exception Reports - Page 4 of 4

Laboratory Name:	Eurofins St. Louis	LRC Date:	11/22/2023
Project Name:	Radiological Sampling	Laboratory Job Number:	160-51920-1
Reviewer Name:	Micha Korrinhizer		

ER #[1]	Description
Misc	Method 903.0: Method 904.0:

1. Items identified by the letter “R” must be included in the laboratory data package submitted 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).

APPENDIX B STATISTICAL ANALYSIS TABLES AND FIGURES

JANUARY 2024

Appendix B - Table 1
Kruskal-Wallis Test Comparisons of Upgradient Wells
Calaveras Power Station
Bottom Ash Ponds

Analyte	N	N Detect	Percent Detect	DF	statistic	p-value	Conclusion	UPL Type
Boron	24	24	100.00%	1	9.6	0.00194	Significant Difference	Intrawell
Calcium	24	24	100.00%	1	9.6	0.00194	Significant Difference	Intrawell
Chloride	24	24	100.00%	1	9.6	0.00194	Significant Difference	Intrawell
Fluoride	24	20	83.33%	1	4.06	0.0438	Significant Difference	Intrawell
pH	25	25	100.00%	1	11.1	<0.001	Significant Difference	Intrawell
Sulfate	24	24	100.00%	1	9.6	0.00194	Significant Difference	Intrawell
TDS	24	24	100.00%	1	9.62	0.00193	Significant Difference	Intrawell

Notes

Non-detects were substituted with a value of half the detection limit for calculations.
N: number of data points
DF: degrees of freedom
statistic: Kruskal Wallis test statistic
p-value: P-values below 0.05 indicate that the median concentrations in the upgradient wells are significantly different from each other and the upgradient wells should not be pooled.
p-value: P-values equal or above 0.05 indicate that the median concentrations in the upgradient wells are not significantly different from each other and the upgradient wells can be pooled.

Appendix B - Table 2
Descriptive Statistics for Upgradient Wells
Calaveras Power Station
Bottom Ash Ponds

Analyte	Well	Units	N	N Detect	Percent Detect	Min ND	Max ND	Min Detect	Median	Mean	Max Detect	SD	CV	Distribution
Boron	JKS-51	mg/L	20	20	100.00%			0.347	0.521	0.554	0.711	0.0925	0.16714	Normal
Boron	JKS-70	mg/L	4	4	100.00%			0.233	0.262	0.268	0.316	0.035	0.130318	Normal
Calcium	JKS-51	mg/L	20	20	100.00%			149	280	279	362	52.3	0.187383	Normal
Calcium	JKS-70	mg/L	4	4	100.00%			47.7	65	61.8	69.4	9.78	0.158256	Normal
Chloride	JKS-51	mg/L	20	20	100.00%			301	442	459	620	87.9	0.191506	Normal
Chloride	JKS-70	mg/L	4	4	100.00%			102	114	112	119	7.44	0.066416	Normal
Fluoride	JKS-51	mg/L	20	16	80.00%	0.009	0.048	0.224	0.3	0.283	0.534	0.155	0.546314	NDD
Fluoride	JKS-70	mg/L	4	4	100.00%			0.25	0.643	0.584	0.8	0.235	0.403397	Normal
pH	JKS-51	SU	20	20	100.00%			5.48	6.44	6.38	6.7	0.29	0.045493	NDD
pH	JKS-70	SU	5	5	100.00%			6.68	6.82	6.98	7.43	0.311	0.04456	Normal
Sulfate	JKS-51	mg/L	20	20	100.00%			260	351	362	503	62.4	0.172445	Normal
Sulfate	JKS-70	mg/L	4	4	100.00%			24.2	37.1	45.4	83.3	26.3	0.577962	Normal
TDS	JKS-51	mg/L	20	20	100.00%			916	1650	1800	2720	427	0.23764	Normal
TDS	JKS-70	mg/L	4	4	100.00%			619	680	723	912	130	0.179554	Normal

Notes
Non-detects were substituted with a value of half the detection limit for calculations.
Well = Pooled, indicates that the summary statistics were produced for the pooled upgradient wells based on the Kruskal-Wallis test (Table 1).
SU: Standard units
N: number of data points
ND: Non-detect
SD: Standard Deviation
CV: Coefficient of Variation (standard deviation divided by the mean)

Appendix B - Table 3
Potential Outliers in Upgradient Wells
Calaveras Power Station
Bottom Ash Ponds

Well	Sample	Date	Analyte	Units	Detect	Concentration	UPL type	Distribution	Statistical Outlier	Visual Outlier	Normal Outlier	Log Statistical Outlier	Log Visual Outlier	Lognormal Outlier	Statistical and Visual Outlier	Final Outlier Decision	Notes
JKS-51	JKS-51-WG-20170725	07/25/2017	pH	SU	TRUE	5.48	Intrawell	NDD	X	X	X	X	X	X	0		
JKS-51	JKS-51-WG-20191022-02	10/22/2019	pH	SU	TRUE	5.73	Intrawell	NDD	X	X	X	X	X	X	0		

Notes
NDD: No Discernible Distribution
SU: Standard units
Outlier tests were performed on detected data only.
Statistical outliers were determined using a Dixon's test for N < 25 and with Rosner's test for N > 25.
Visual outliers were identified if they fall above the confidence envelope on the QQ plot.
Data points were considered potential outliers if they were both statistical and visual outliers.
NDD wells had data points considered as potential outliers if they were either a normal or lognormal outlier.
[Blank] data distribution indicates that the well data did not have enough detected data points for outlier analysis.
Lognormally distributed data was first log-transformed before visual and statistical outlier tests were performed.
Normal data distribution indicates that the well data was directly used for statistical and visual outlier tests.
NDD indicates that both the untransformed and transformed data were examined with statistical and visual outlier tests.
'0' indicates that the data point was a statistical and visual outlier but was retained after review by the hydrogeologist.

Appendix B - Table 4
Mann Kendall Test for Trends in Upgradient Wells
Calaveras Power Station
Bottom Ash Ponds

Analyte	UPL Type	Well	N	Num Detects	Percent Detect	p-value	tau	Conclusion
Boron	Intrawell	JKS-51	20	20	100.00%	0.0212	0.375	Increasing Trend
Boron	Intrawell	JKS-70	4	4	100.00%			Insufficient Data
Calcium	Intrawell	JKS-51	20	20	100.00%	0.673	0.0686	Stable, No Trend
Calcium	Intrawell	JKS-70	4	4	100.00%			Insufficient Data
Chloride	Intrawell	JKS-51	20	20	100.00%	0.0408	0.332	Increasing Trend
Chloride	Intrawell	JKS-70	4	4	100.00%			Insufficient Data
Fluoride	Intrawell	JKS-51	20	16	80.00%	0.0505	-0.321	Stable, No Trend
Fluoride	Intrawell	JKS-70	4	4	100.00%			Insufficient Data
pH	Intrawell	JKS-51	20	20	100.00%	0.256	-0.185	Stable, No Trend
pH	Intrawell	JKS-70	5	5	100.00%			Insufficient Data
Sulfate	Intrawell	JKS-51	20	20	100.00%	0.0643	0.301	Stable, No Trend
Sulfate	Intrawell	JKS-70	4	4	100.00%			Insufficient Data
TDS	Intrawell	JKS-51	20	20	100.00%	0.0551	0.313	Stable, No Trend
TDS	Intrawell	JKS-70	4	4	100.00%			Insufficient Data

Notes
Non-detects were substituted with a value of zero for trend calculations.
N: number of data points
tau: Kendall's tau statistic
p-value: A two-sided p-value describing the probability of the H0 being true (α=0.05).
Trend tests were performed on all upgradient data, only if the dataset met the minimum data quality criteria (ERM 2017).

Appendix B - Table 5
Calculated Prediction Limits for Upgradient Datasets
Calaveras Power Station
Bottom Ash Ponds

Analyte	UPL Type	Trend	Well	N	Num Detects	Percent Detects	LPL	UPL	Units	Method	Final LPL	Final UPL	Notes
Boron	Intrawell	Increasing Trend	JKS-51	20	20	100.00%		0.766	mg/L	rended UPL		X	
Boron	Intrawell	Insufficient Data	JKS-70	4	4	100.00%		0.316	mg/L	Detect used			<5 Detected values
Calcium	Intrawell	Stable, No Trend	JKS-51	20	20	100.00%		372	mg/L	5% UPL (t)		X	
Calcium	Intrawell	Insufficient Data	JKS-70	4	4	100.00%		69.4	mg/L	Detect used			<5 Detected values
Chloride	Intrawell	Increasing Trend	JKS-51	20	20	100.00%		726	mg/L	rended UPL		X	
Chloride	Intrawell	Insufficient Data	JKS-70	4	4	100.00%		119	mg/L	Detect used			<5 Detected values
Fluoride	Intrawell	Stable, No Trend	JKS-51	20	16	80.00%		0.554	mg/L	KM UPL (t)			
Fluoride	Intrawell	Insufficient Data	JKS-70	4	4	100.00%		0.8	mg/L	Detect used		X	<5 Detected values
pH	Intrawell	Stable, No Trend	JKS-51	20	20	100.00%	6.05	6.7	SU	s, 95% UPL	X		
pH	Intrawell	Insufficient Data	JKS-70	5	5	100.00%	6.68	7.43	SU	Detect used		X	
Sulfate	Intrawell	Stable, No Trend	JKS-51	20	20	100.00%		472	mg/L	5% UPL (t)		X	
Sulfate	Intrawell	Insufficient Data	JKS-70	4	4	100.00%		83.3	mg/L	Detect used			<5 Detected values
TDS	Intrawell	Stable, No Trend	JKS-51	20	20	100.00%		2560	mg/L	5% UPL (t)		X	
TDS	Intrawell	Insufficient Data	JKS-70	4	4	100.00%		912	mg/L	Detect used			<5 Detected values

Notes
Non-detects were substituted with a value of half the detection limit for calculations.
UPL: upper prediction limit.
LPL: Lower prediction limit. These were only calculated for pH.
UPLs were constructed with a site wide false positive rate of 0.1 and a 1 of 2 retesting
UPLs were calculated using ProUCL software.
SU: Standard units
NP: non parametric
RL: Reporting Limit
Intra: indicates an intrawell UPL was used.
Inter: indicates an interwell UPL was used.
In the case where multiple UPLs were calculated for an analyte, the maximum UPL was used as the final UPL
In the case where multiple LPLs were calculated for an pH the minimum LPL was used as the final LPL

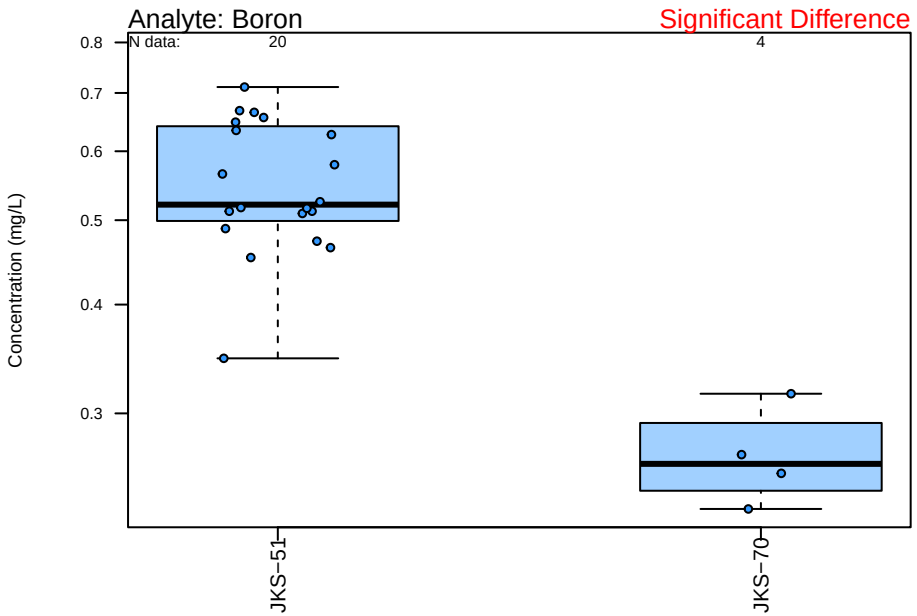
Appendix B - Table 6
Comparisons of Downgradient Wells to Prediction Limits
Calaveras Power Station
Bottom Ash Ponds

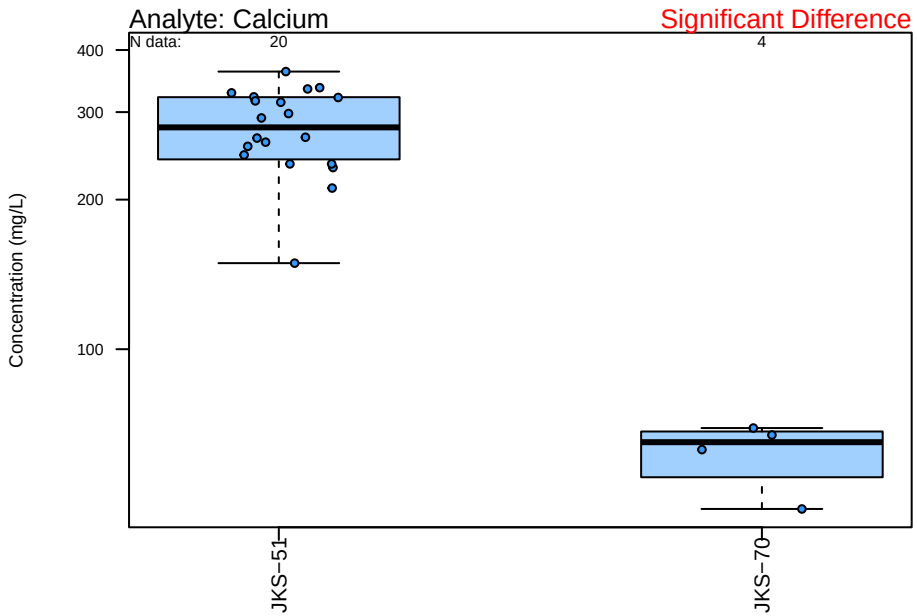
Analyte	Well	LPL	UPL	Units	Recent Date	Observation	Qualifier	Obs > UPL	Notes	Mann Kendall p-value	Mann Kendall tau	WRS p-value	WRS Conclusion	Exceed Median	Overall Conclusion
Boron	JKS-48		0.766	mg/L	10/17/2023	2		X	Trend Test: Stable, No Trend	0.505	0.112	<0.001	***	X	Both Exceedance
Boron	JKS-49		0.766	mg/L	10/17/2023	2.58		X	Trend Test: Decreasing Trend	<0.001	-0.642	<0.001	***	X	Both Exceedance
Boron	JKS-50R		0.766	mg/L	10/17/2023	6.11		X	Trend Test: Increasing Trend	0.043	0.32	<0.001	***	X	Both Exceedance
Boron	JKS-52		0.766	mg/L	10/17/2023	2.66		X	Trend Test: Increasing Trend	0.00123	0.511	<0.001	***	X	Both Exceedance
Boron	JKS-55		0.766	mg/L	10/17/2023	0.928		X	Trend Test: Increasing Trend	0.00579	0.449	0.68	NS		UPL Exceedance
Boron	JKS-56		0.766	mg/L	10/17/2023	3.35		X	Trend Test: Stable, No Trend	0.0634	-0.312	<0.001	***	X	Both Exceedance
Fluoride	JKS-48		0.8	mg/L	10/17/2023	1.06		X	Trend Test: Decreasing Trend	0.0123	-0.409	0.0229	*	X	Both Exceedance
Fluoride	JKS-55		0.8	mg/L	10/17/2023	0.822		X	Trend Test: Stable, No Trend	0.721	-0.0584	0.32	NS		UPL Exceedance

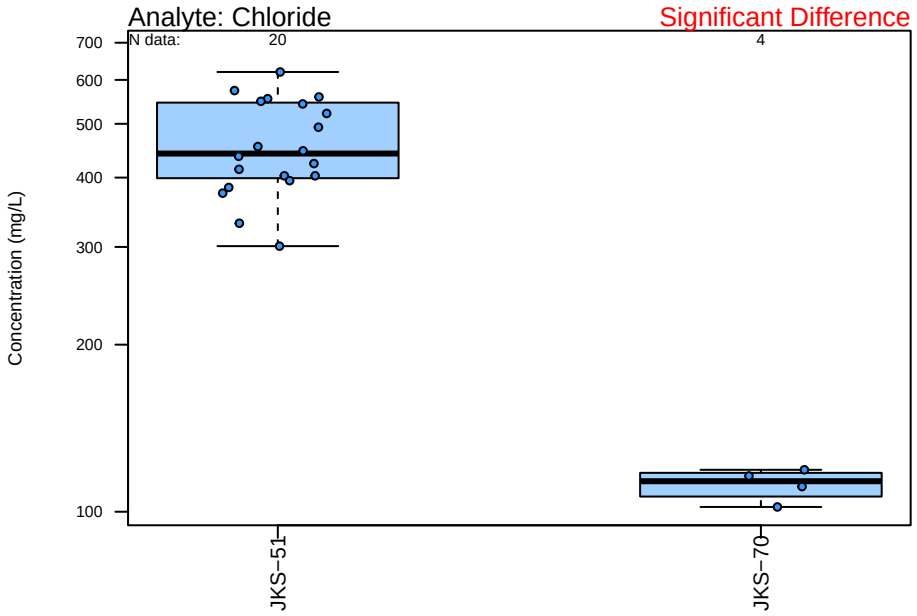
Notes

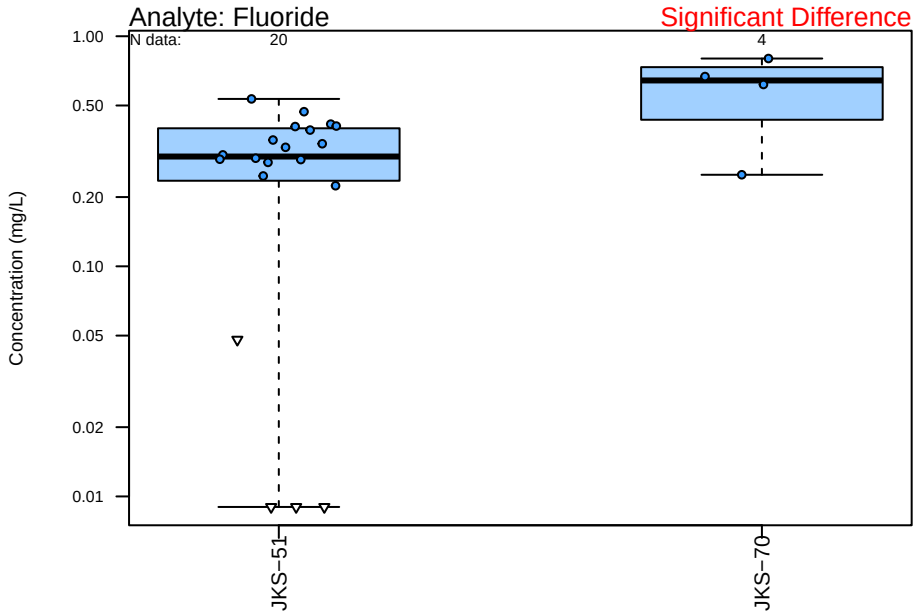
Non-detects were substituted with a value of zero for trend calculations
UPL: Upper Prediction Limi
ND: Not detected
SU: Standard units
tau: Kendall's tau statistic
Obs > UCL: Exceed 'X' indicates that the most recent observed value is higher than the UPL (or out of range of the LPL and UPL in the case of pH
Obs > UCL: Exceed 'X0' indicates that the two most recent values are higher than the UPL, but the upgradient well is 100% N
Obs > UCL: Exceed '0' indicated that the most recent observed value is higher than the UPL, but is not scored as an SSI due to Double Quantification Rule (ERM 201
WRS: Wilcoxon Rank Sum test comparing if median of downgradient well is larger than the UPL (for pH, also checks if median is less than LPL
WRS p-value: A one-sided p-value describing the probability of the H0 (UPL/LPL) being true (a=0.05
Overall: UPL Exceedance - most recent sampling event exceeds the UPL, but median of the well is not greater than UP
Overall: WRS Exceedance - most recent sampling event does not exceed the UPL, but median of the well is greater than UP
Overall: Both Exceedance - most recent sampling event exceeds the UPL and median of the well is larger than the UP

Appendix B − Figure 1
Unit: Bottom Ash Ponds
Boxplots of Upgradient Wells









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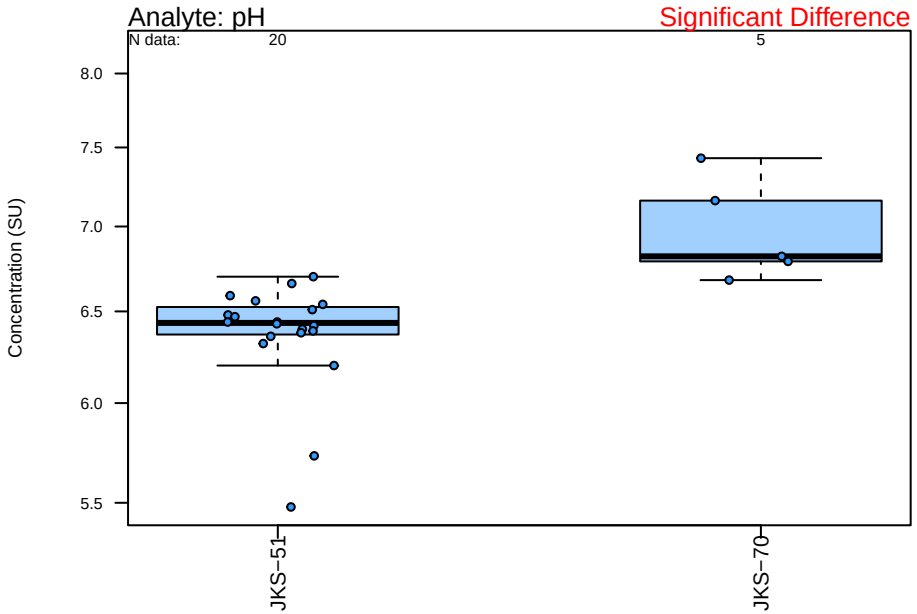
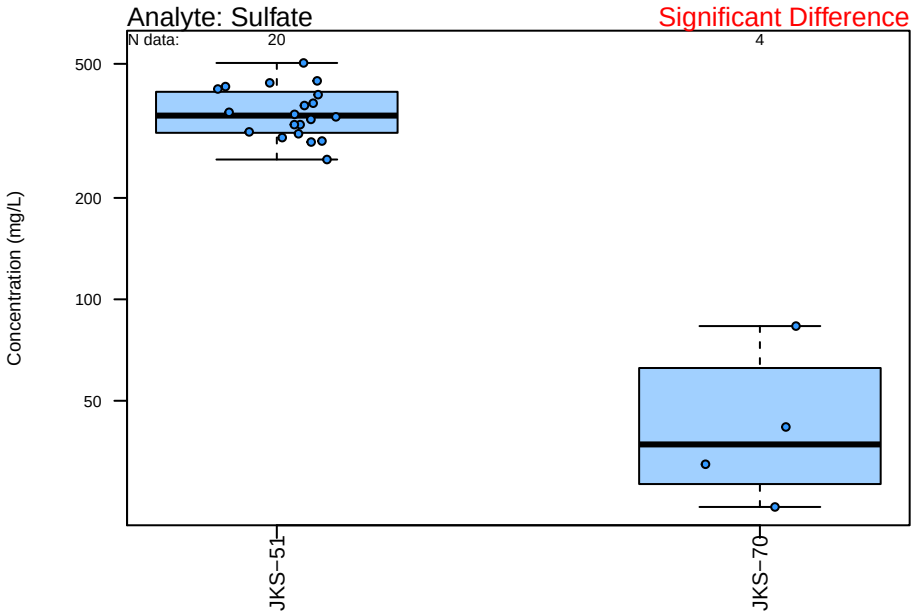
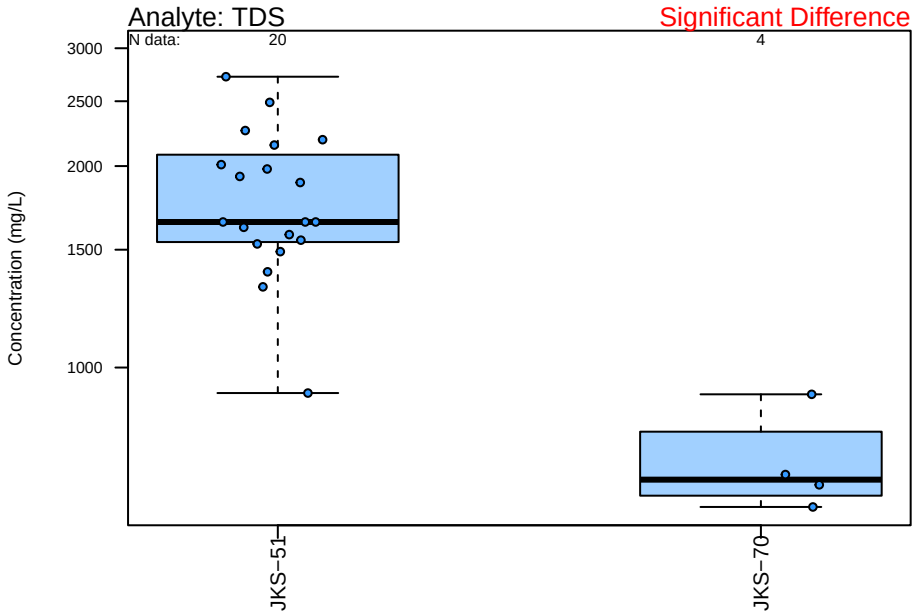
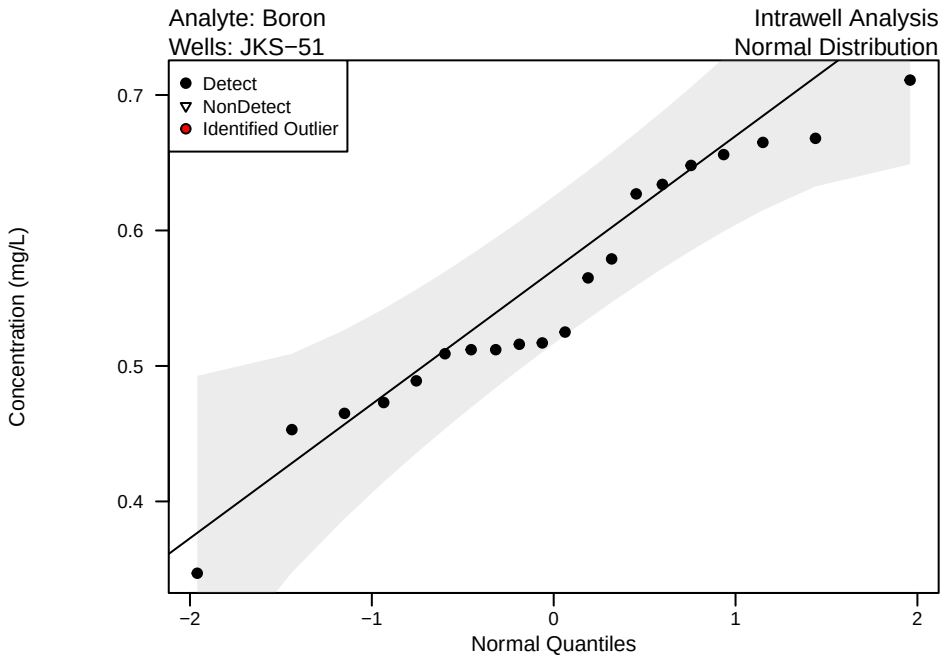
Boxplots of Upgradient Wells







Appendix B − Figure 2
Unit: Bottom Ash Ponds
QQ Plots of Upgradient Wells



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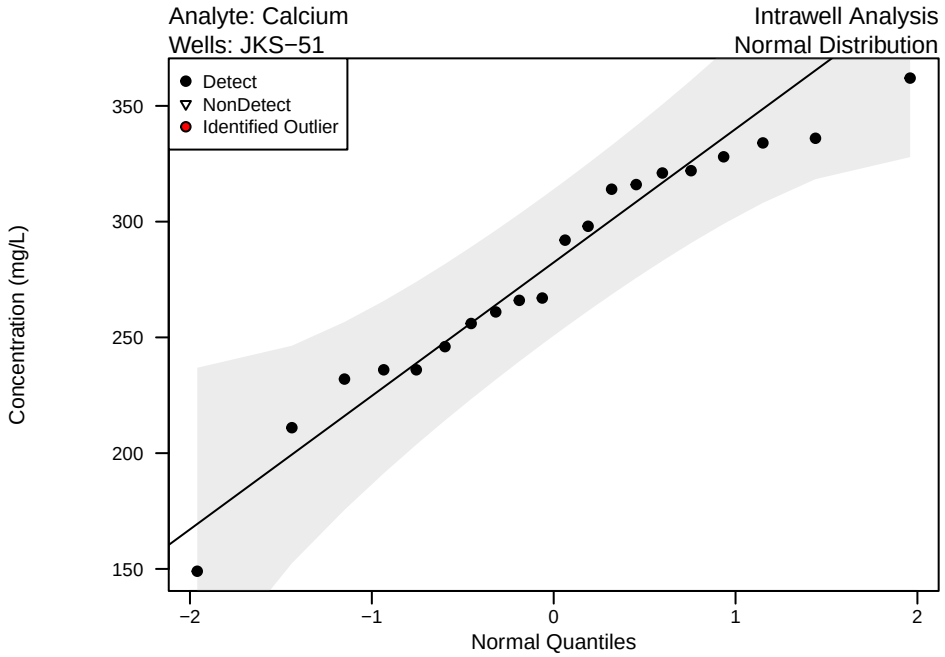
not Lognormal/NDD distribution.



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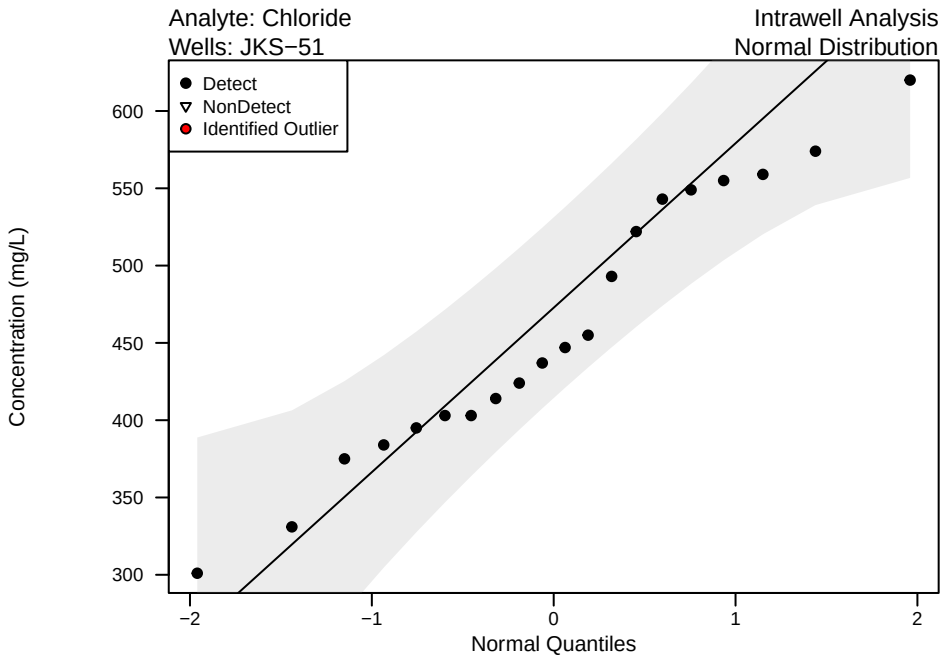
Appendix B − Figure 2
Unit: Bottom Ash Ponds
QQ Plots of Upgradient Wells



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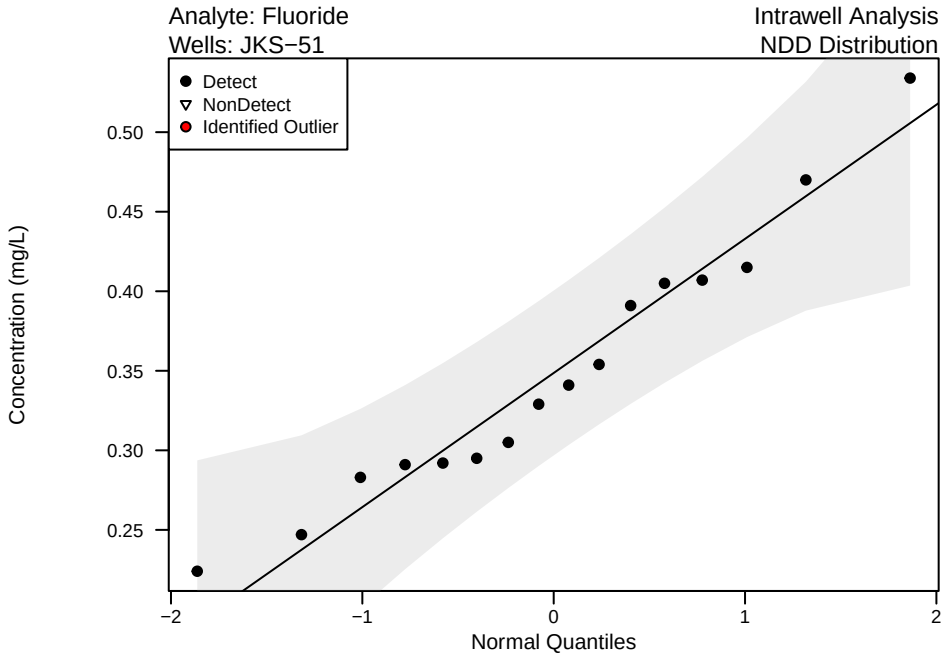

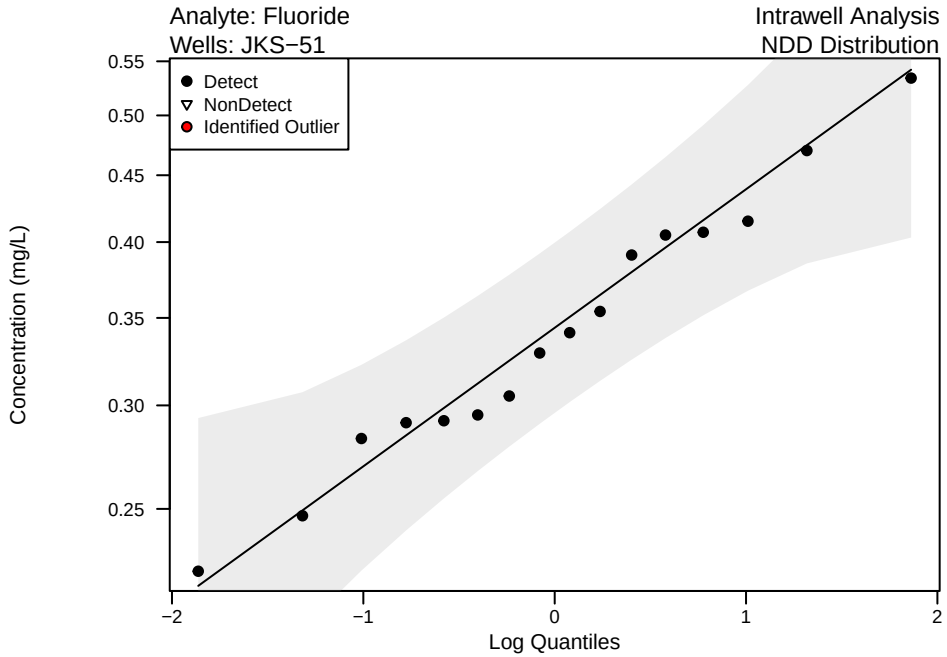

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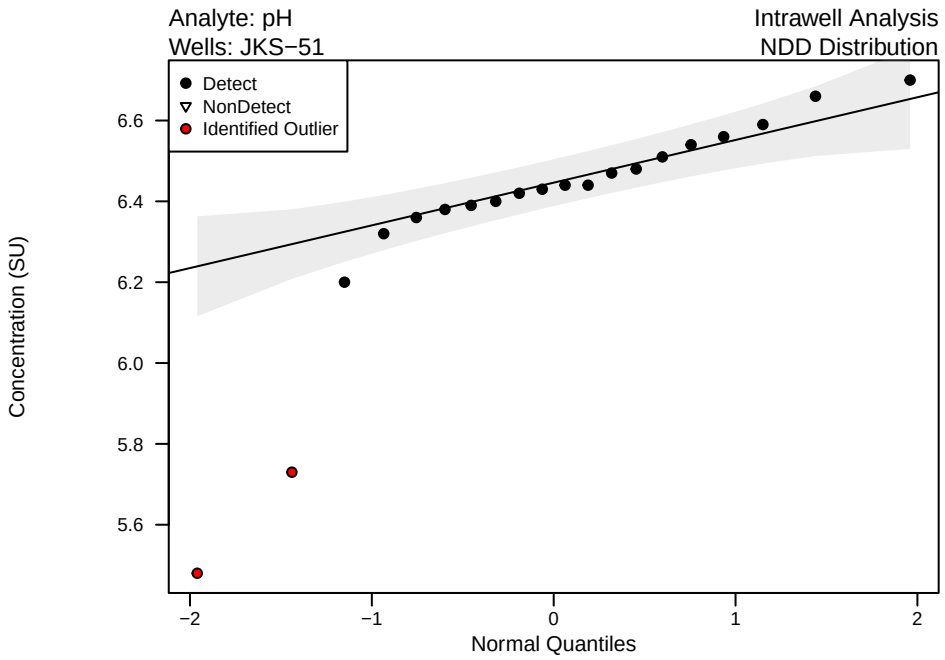
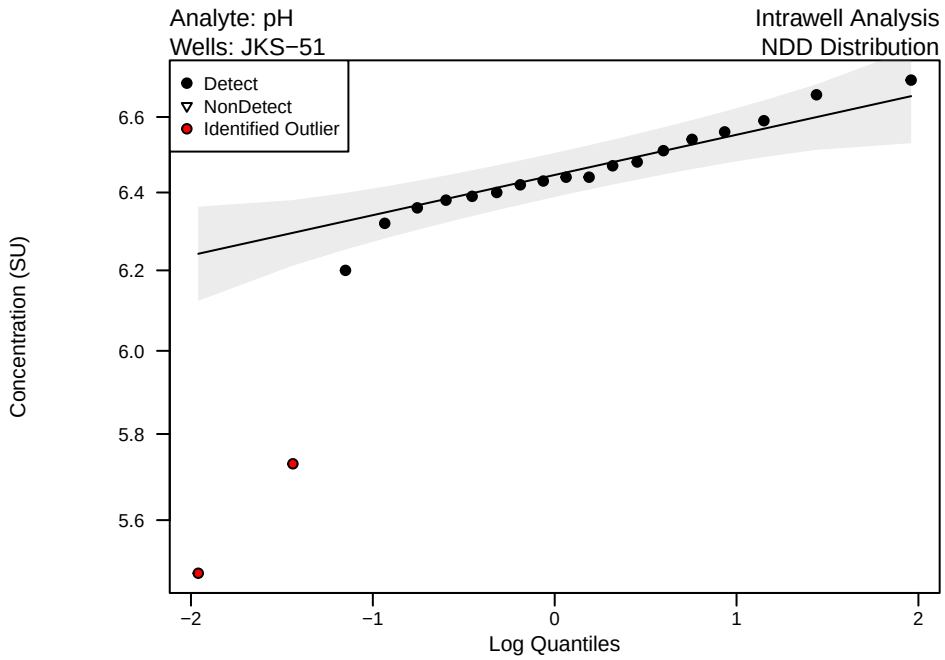
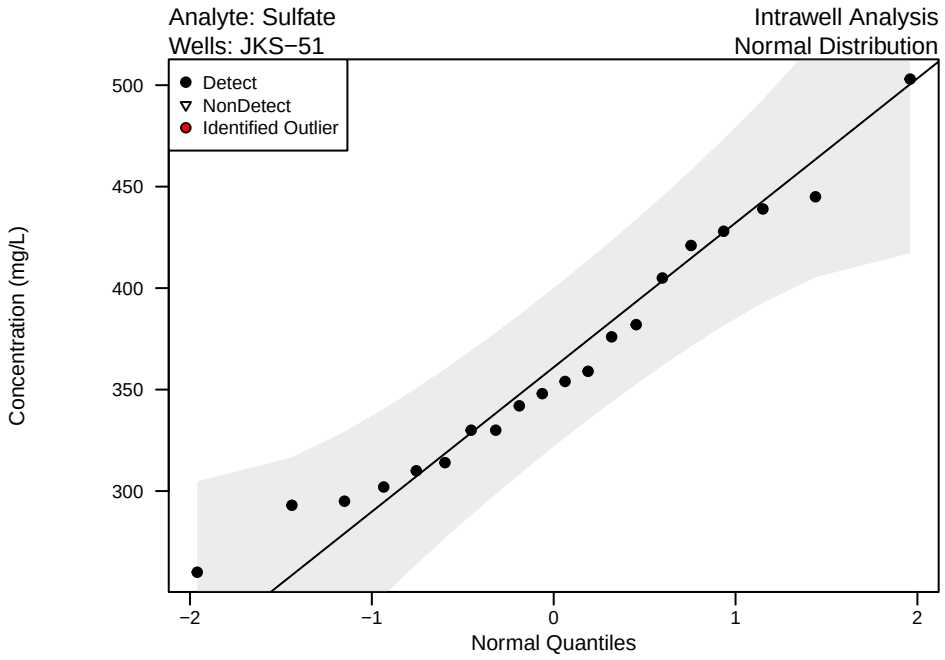
QQ Plots of Upgradient Wells







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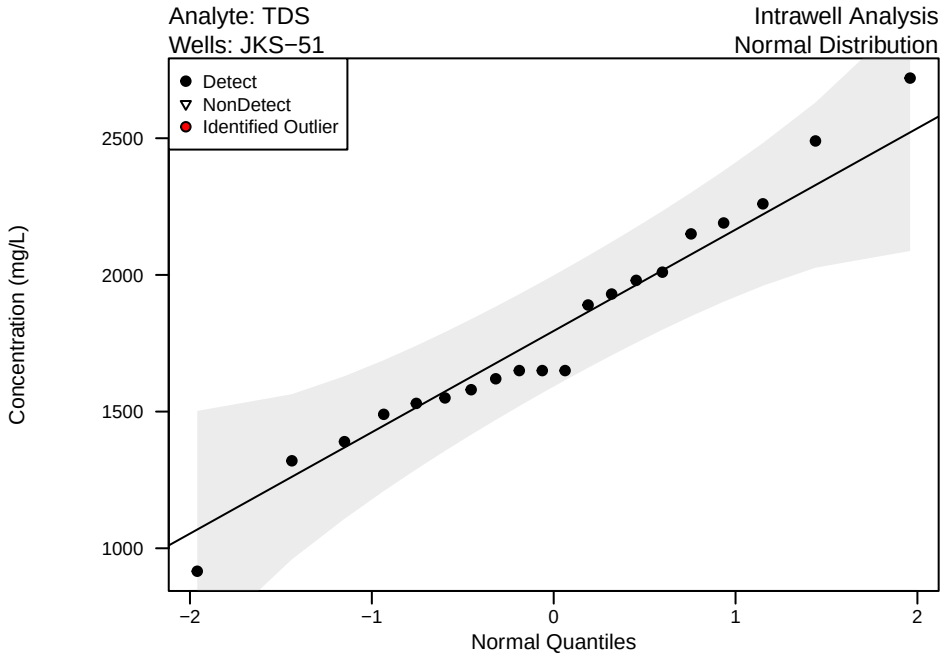
Unit: Bottom Ash Ponds
QQ Plots of Upgradient Wells



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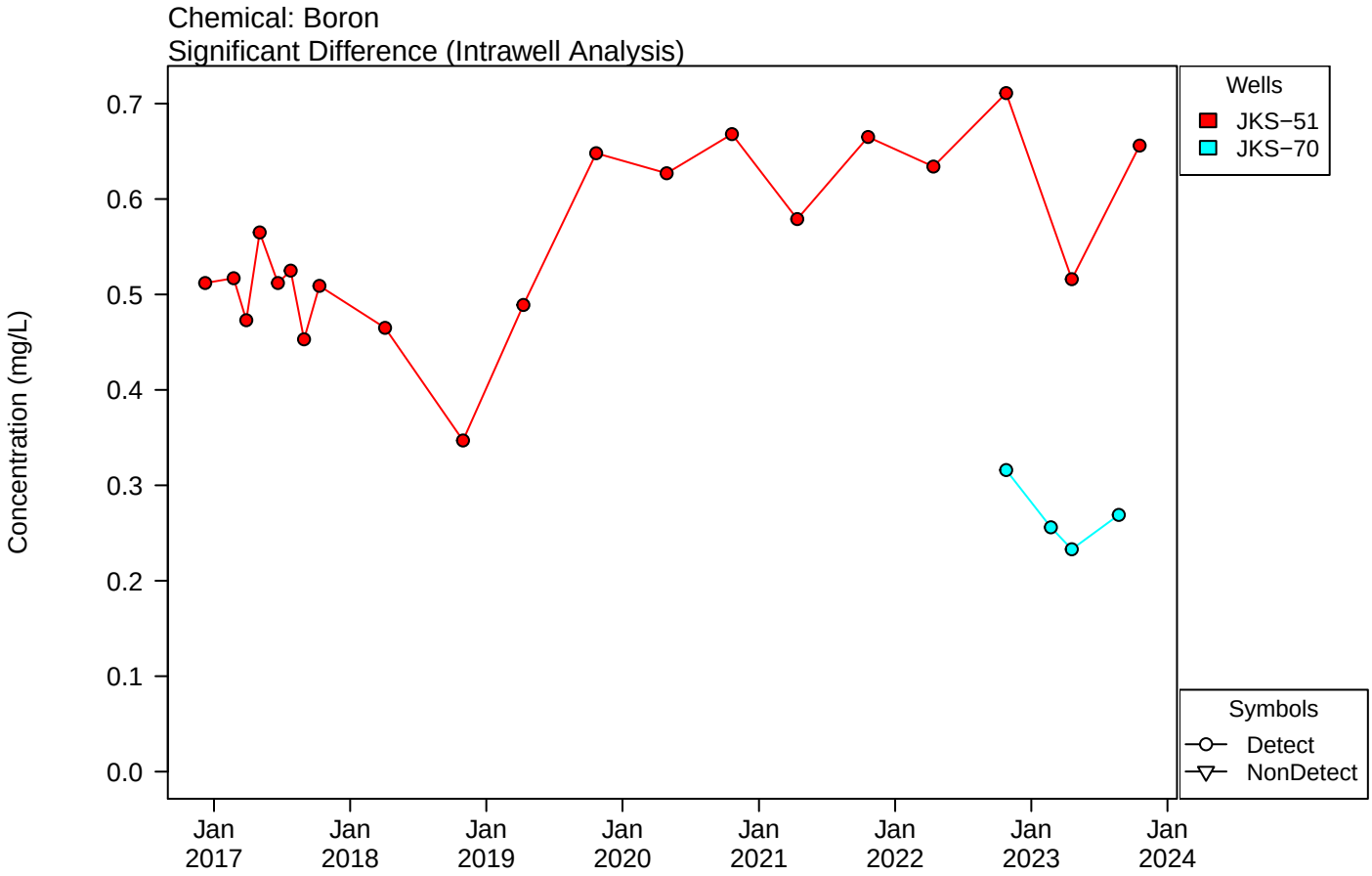
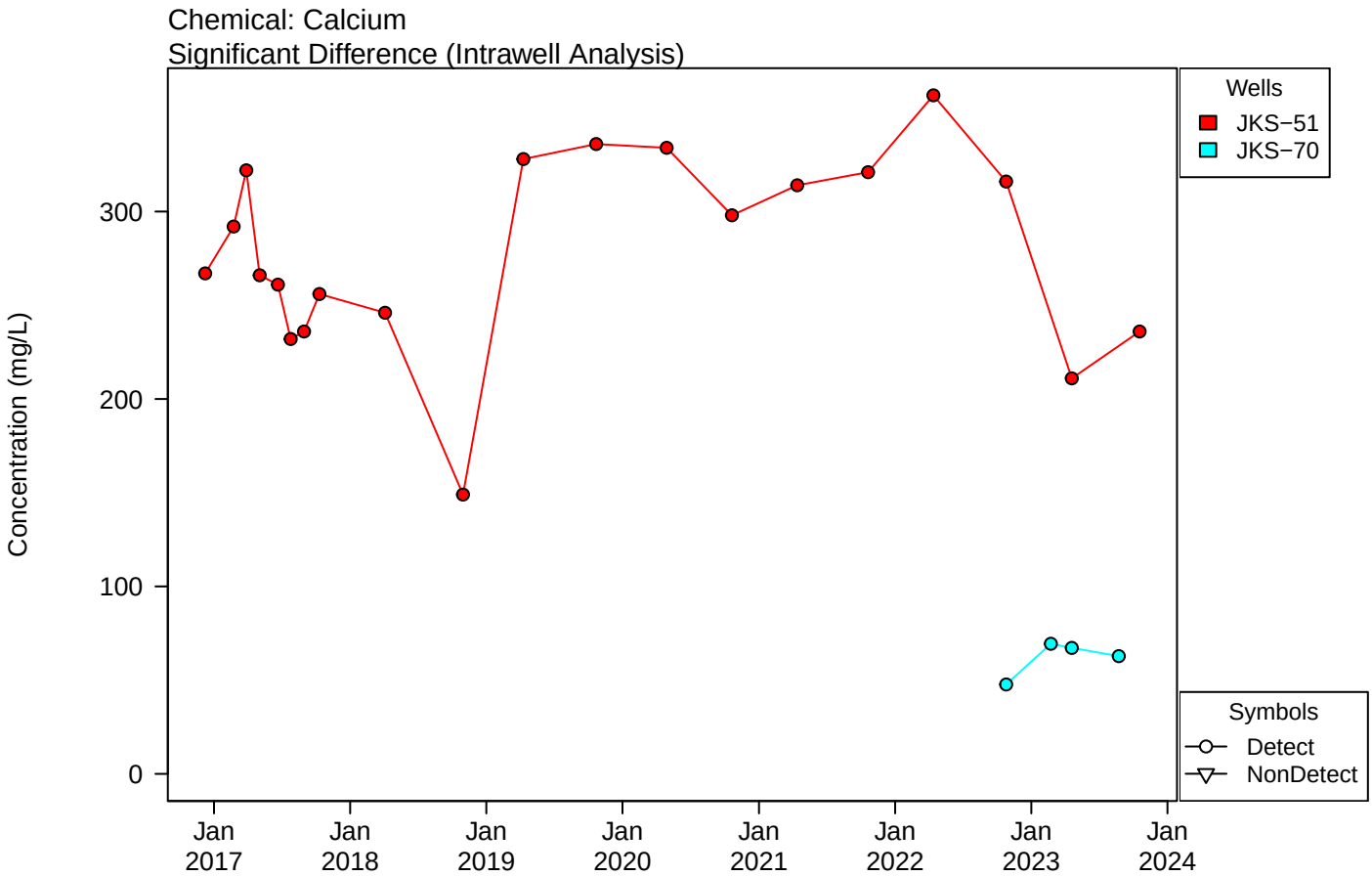
not Lognormal/NDD distribution.

Appendix B − Figure 3
Unit: Bottom Ash Ponds
Timeseries of Upgradient Wells





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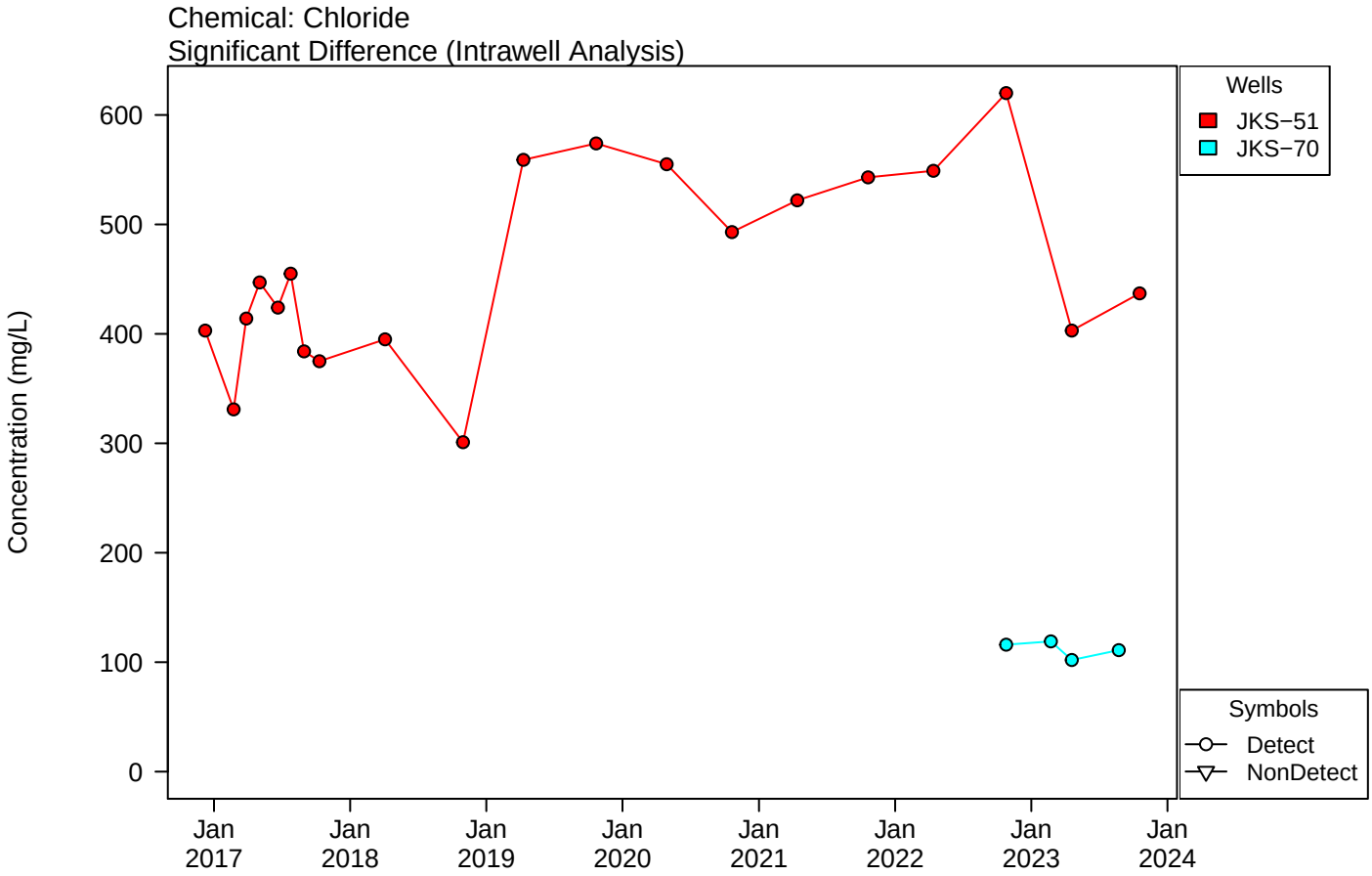
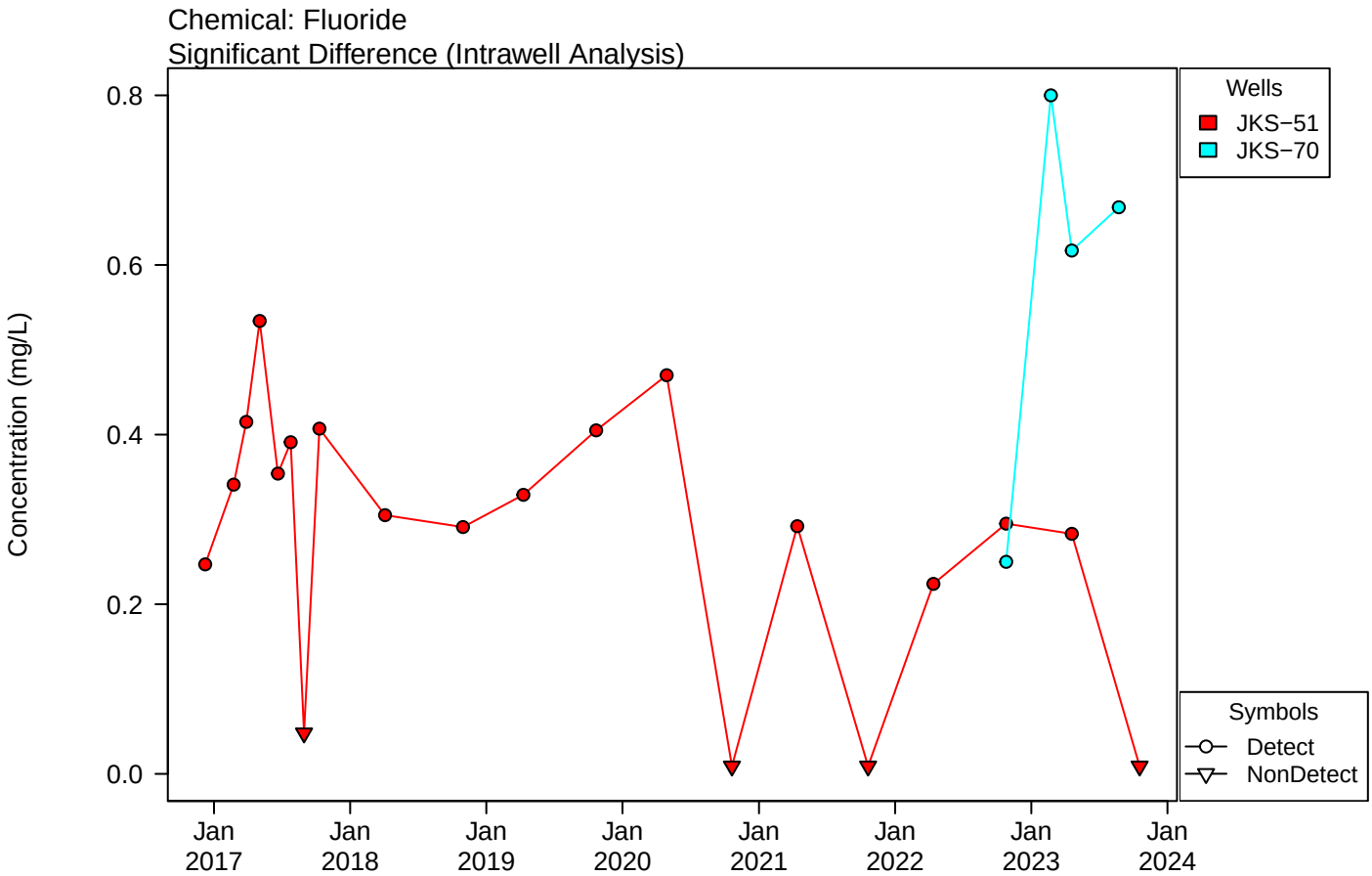
Timeseries of Upgradient Wells





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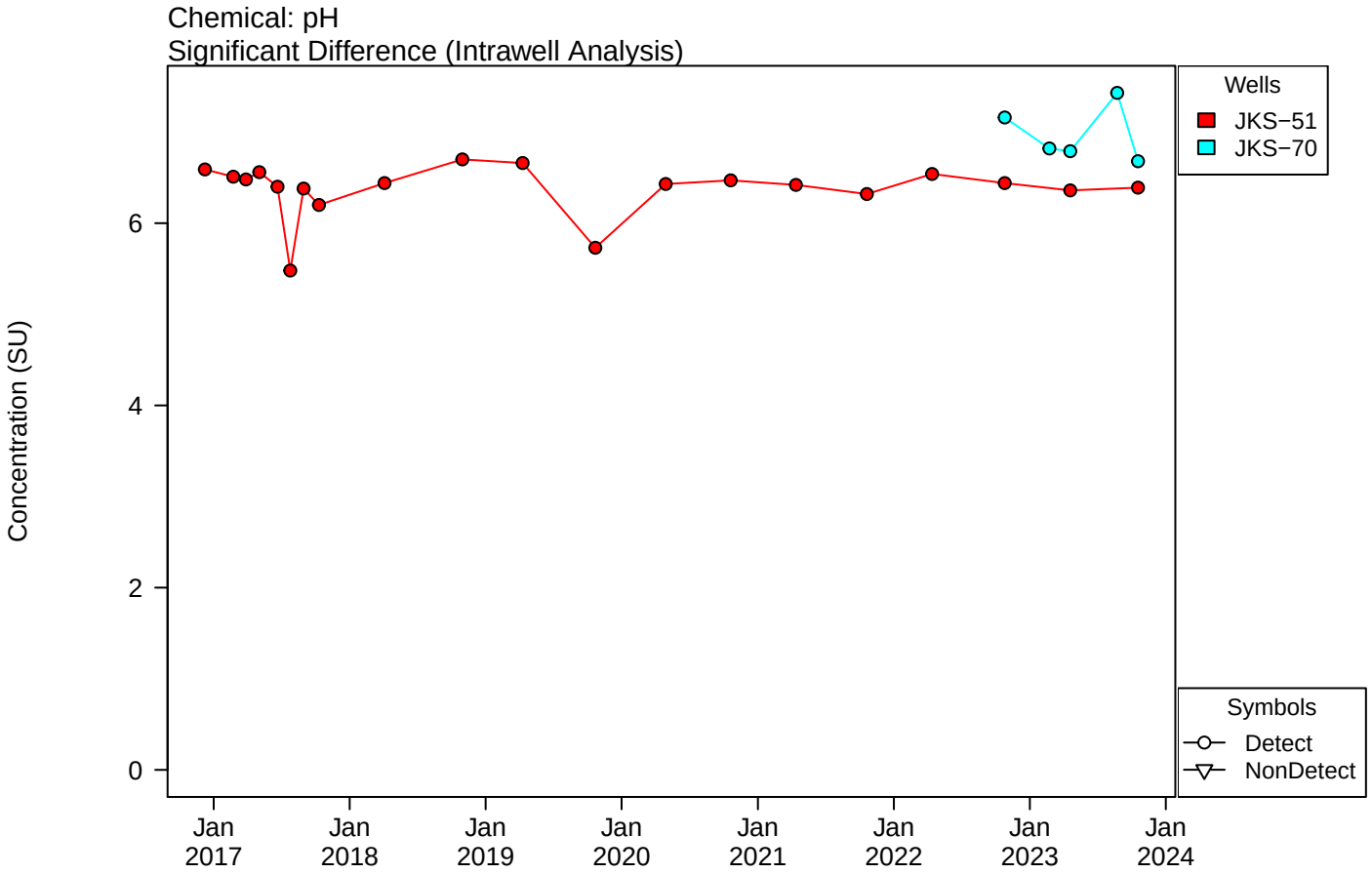
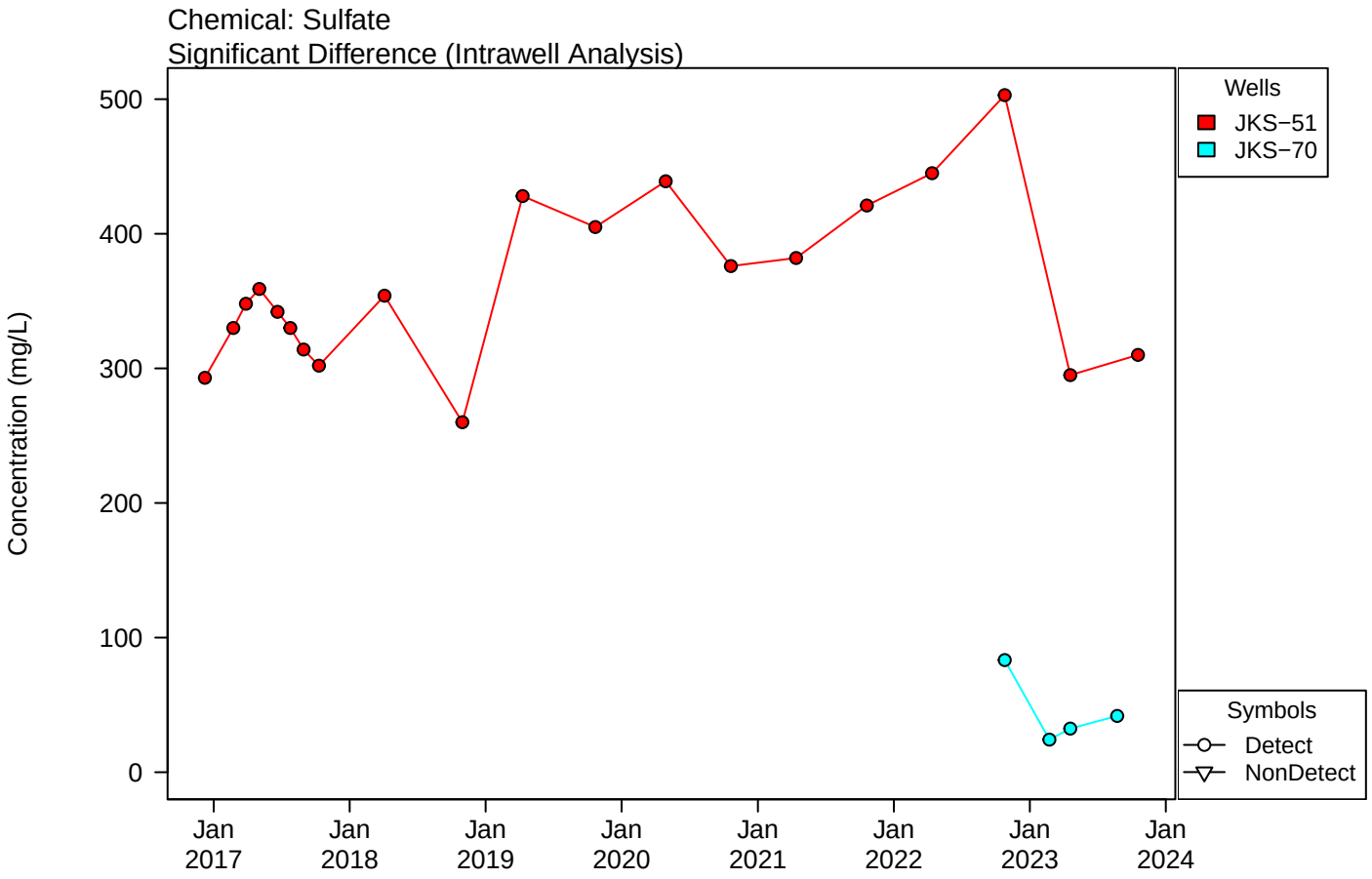
Timeseries of Upgradient Wells





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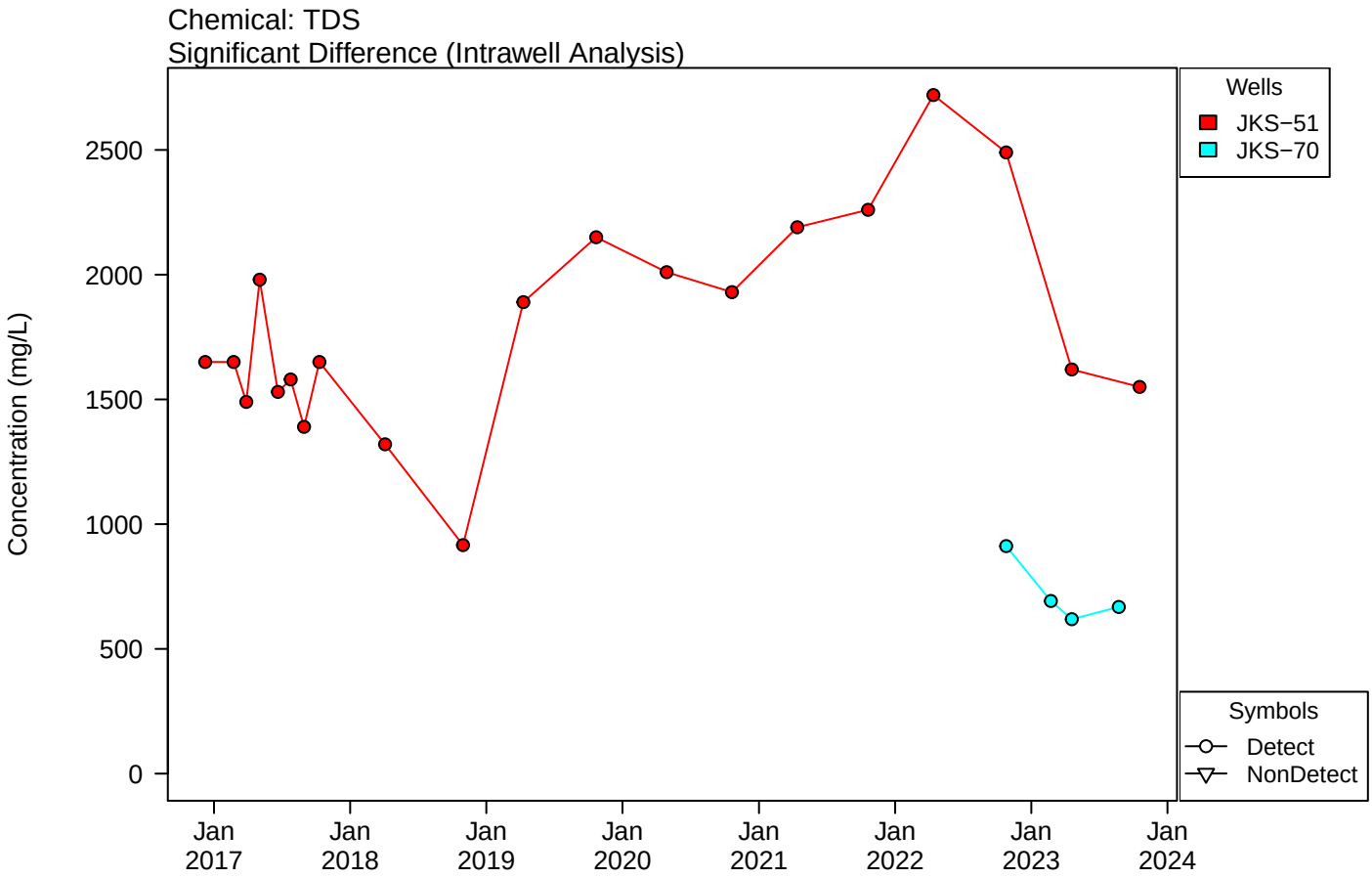
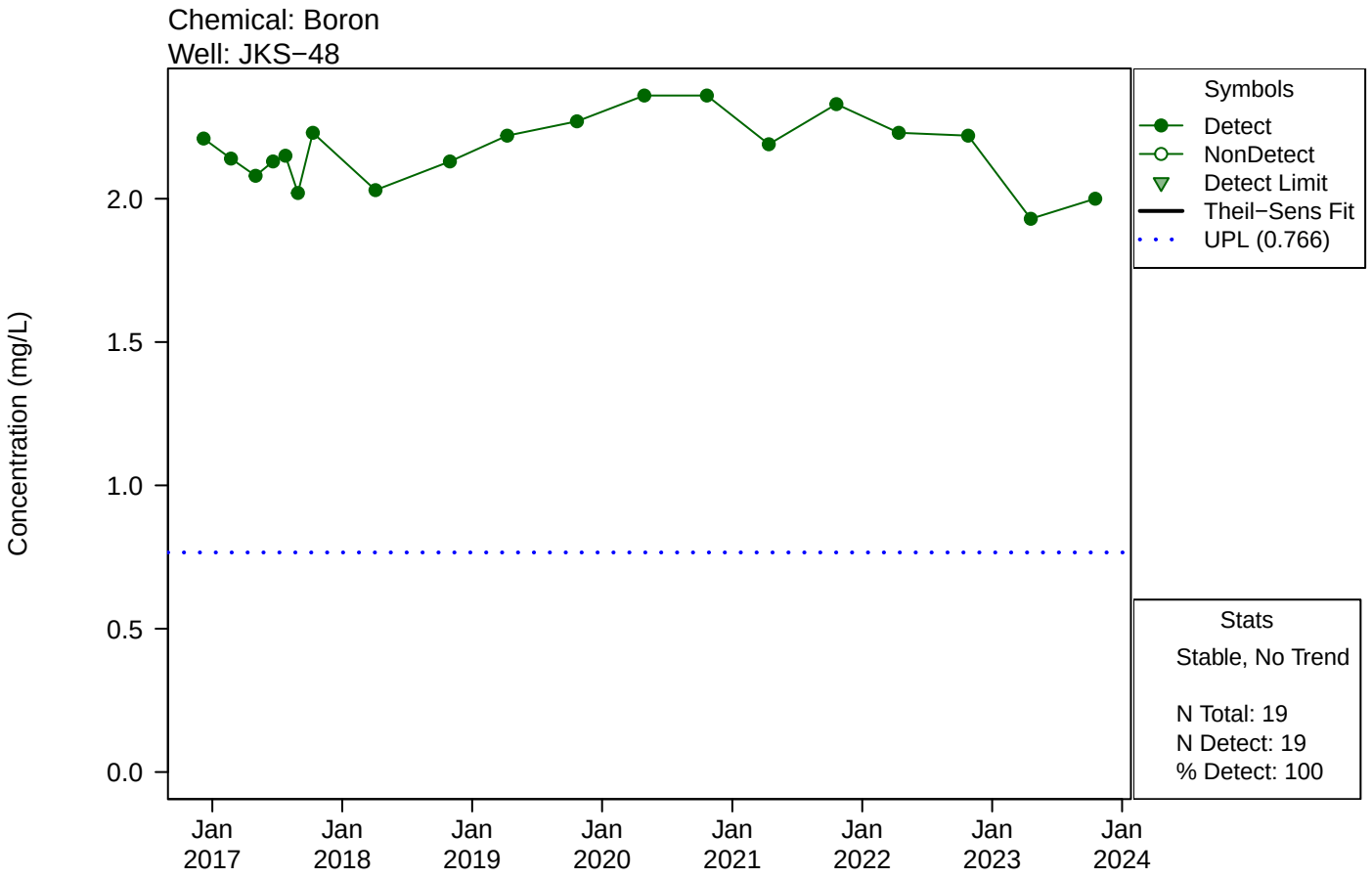
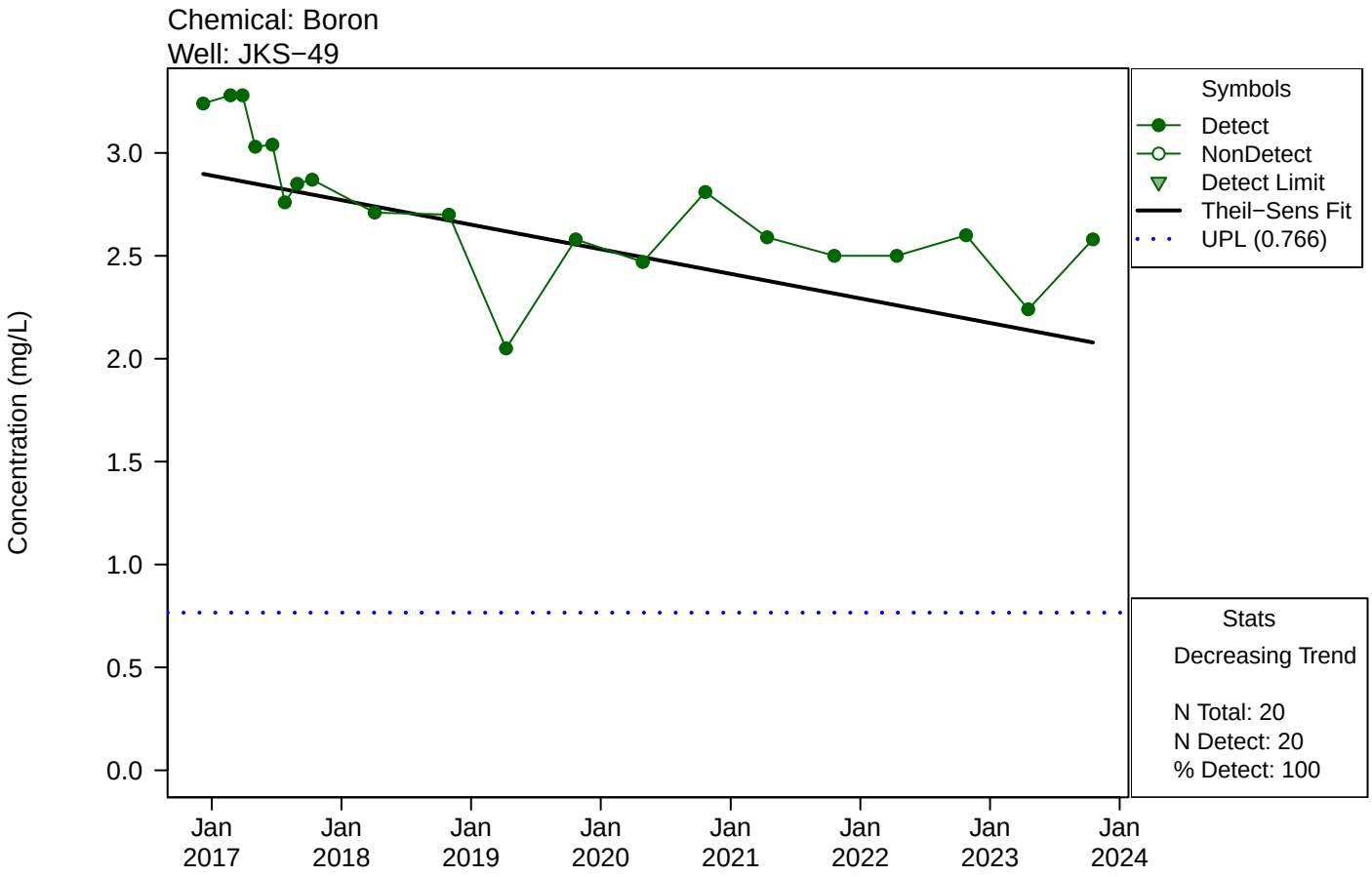


Appendix B − Figure 4
Unit: Bottom Ash Ponds
Trend Analysis of Downgradient Wells with Exceedances





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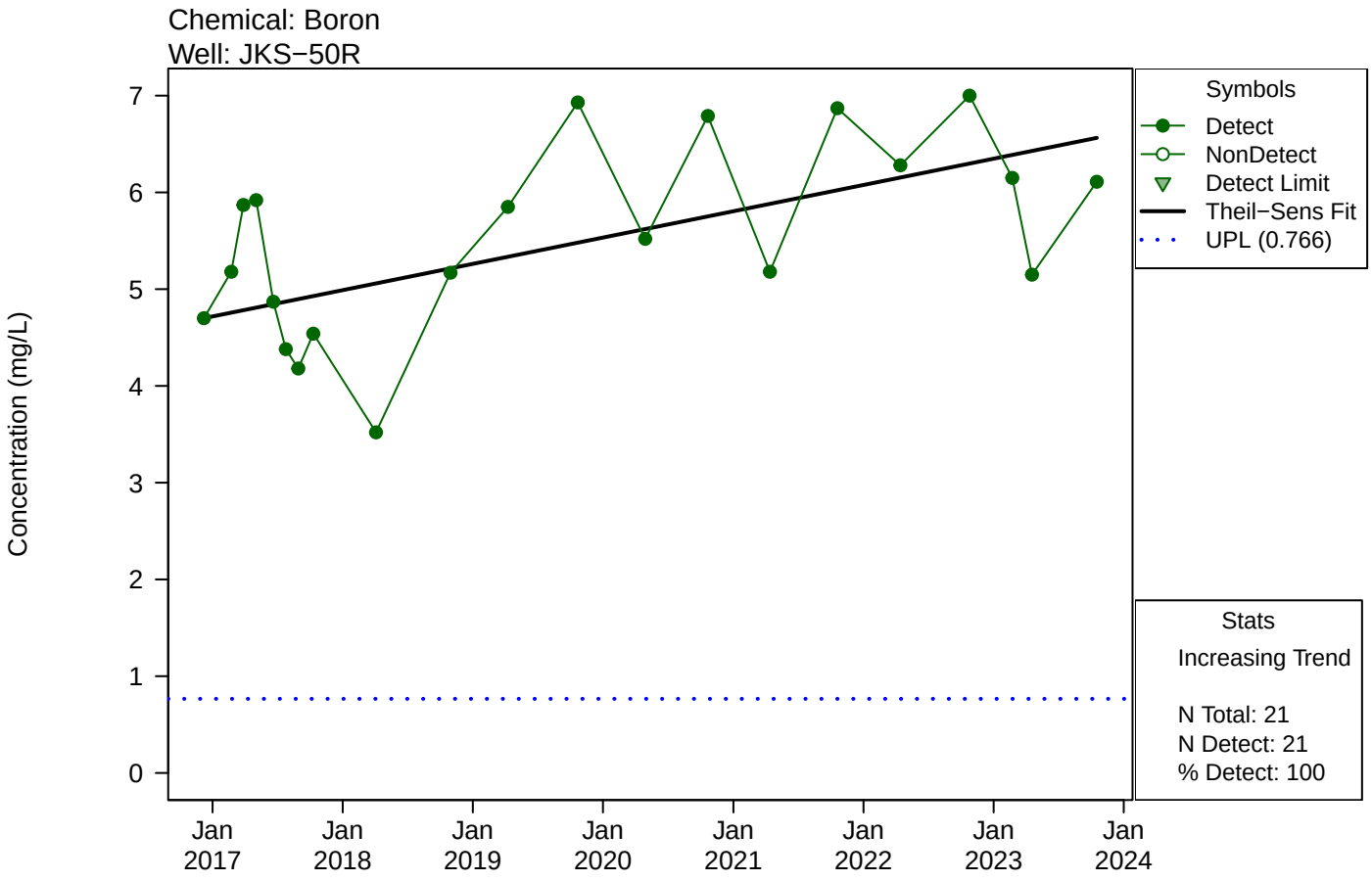

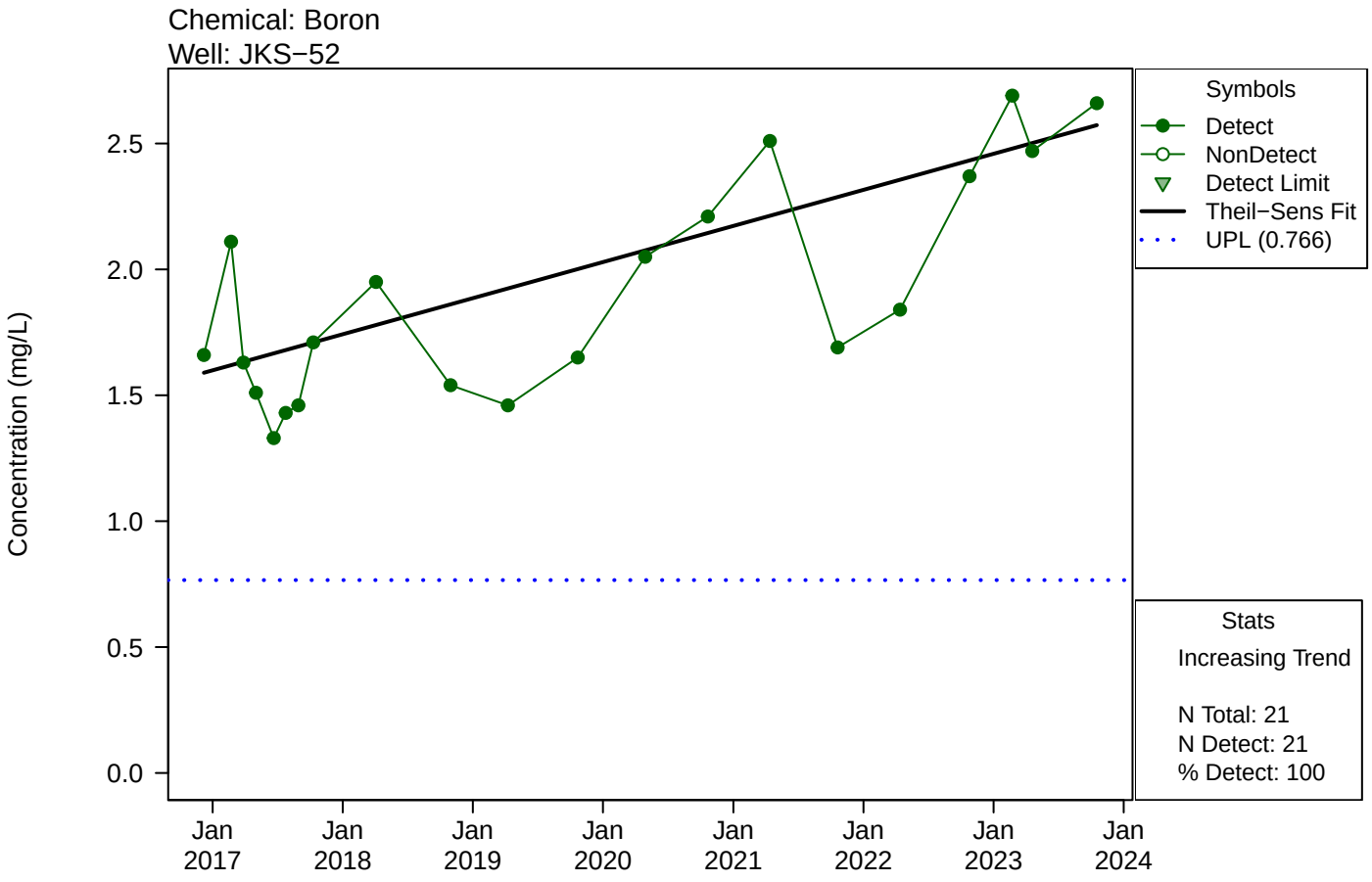

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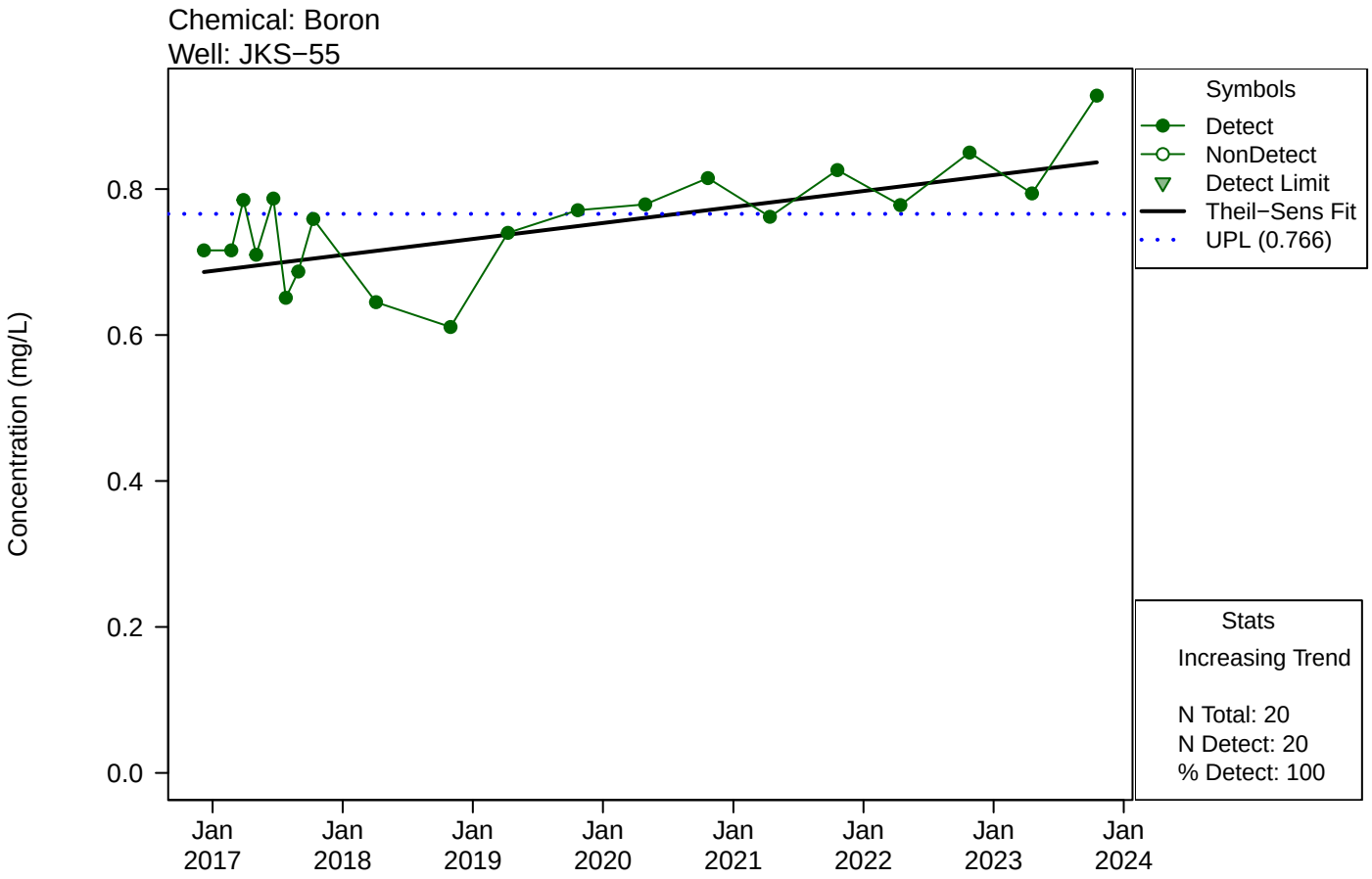

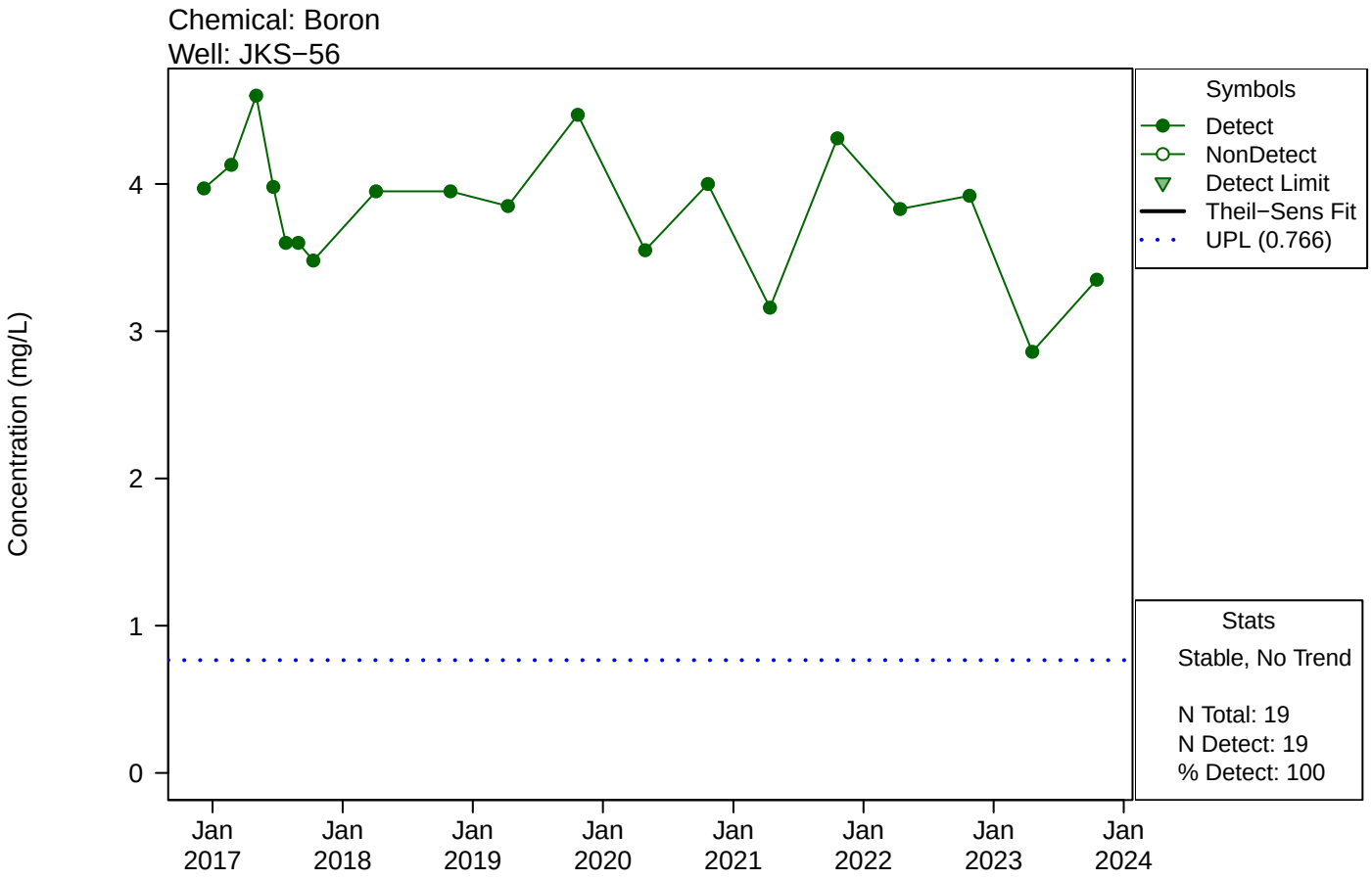

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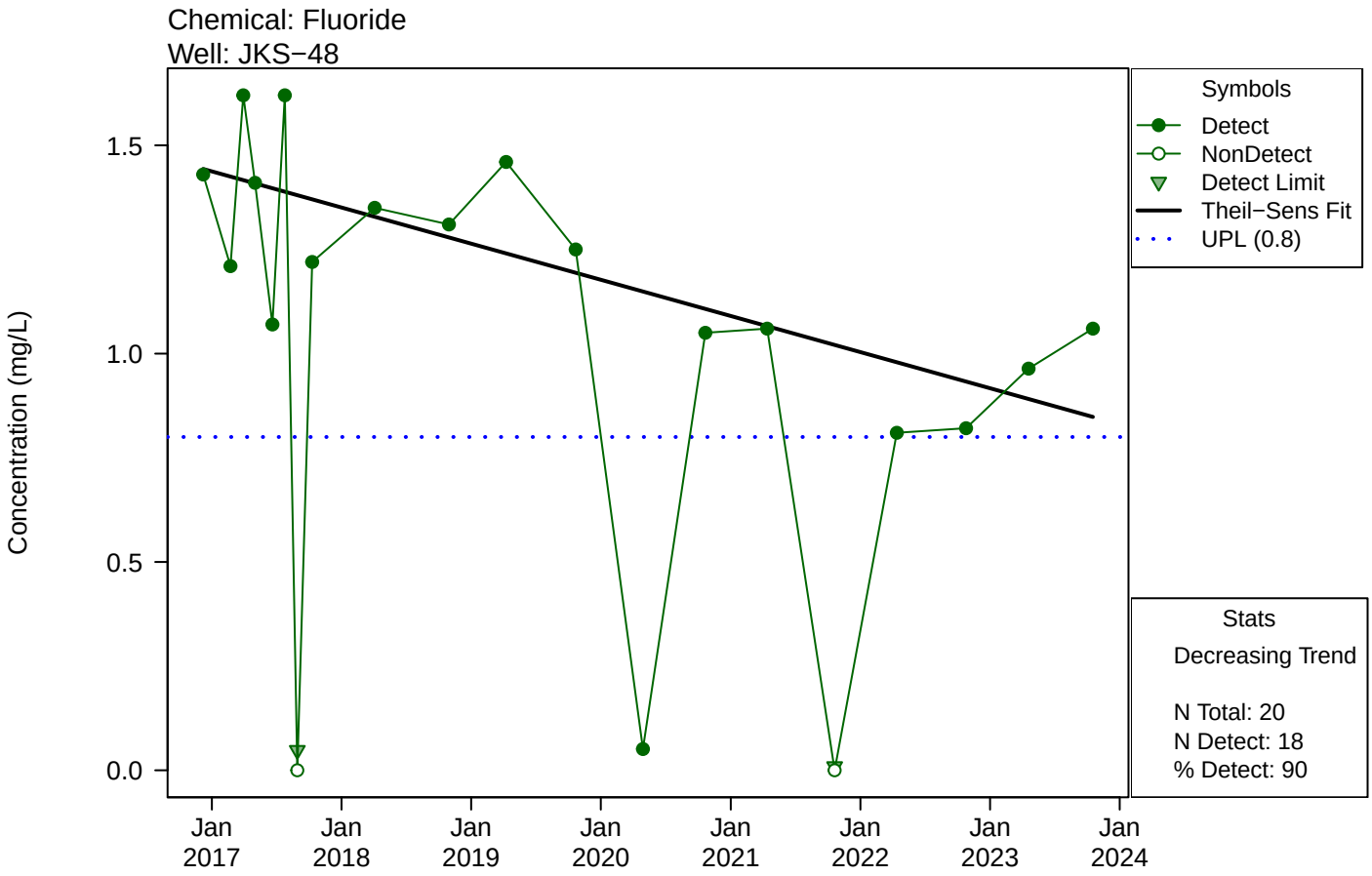

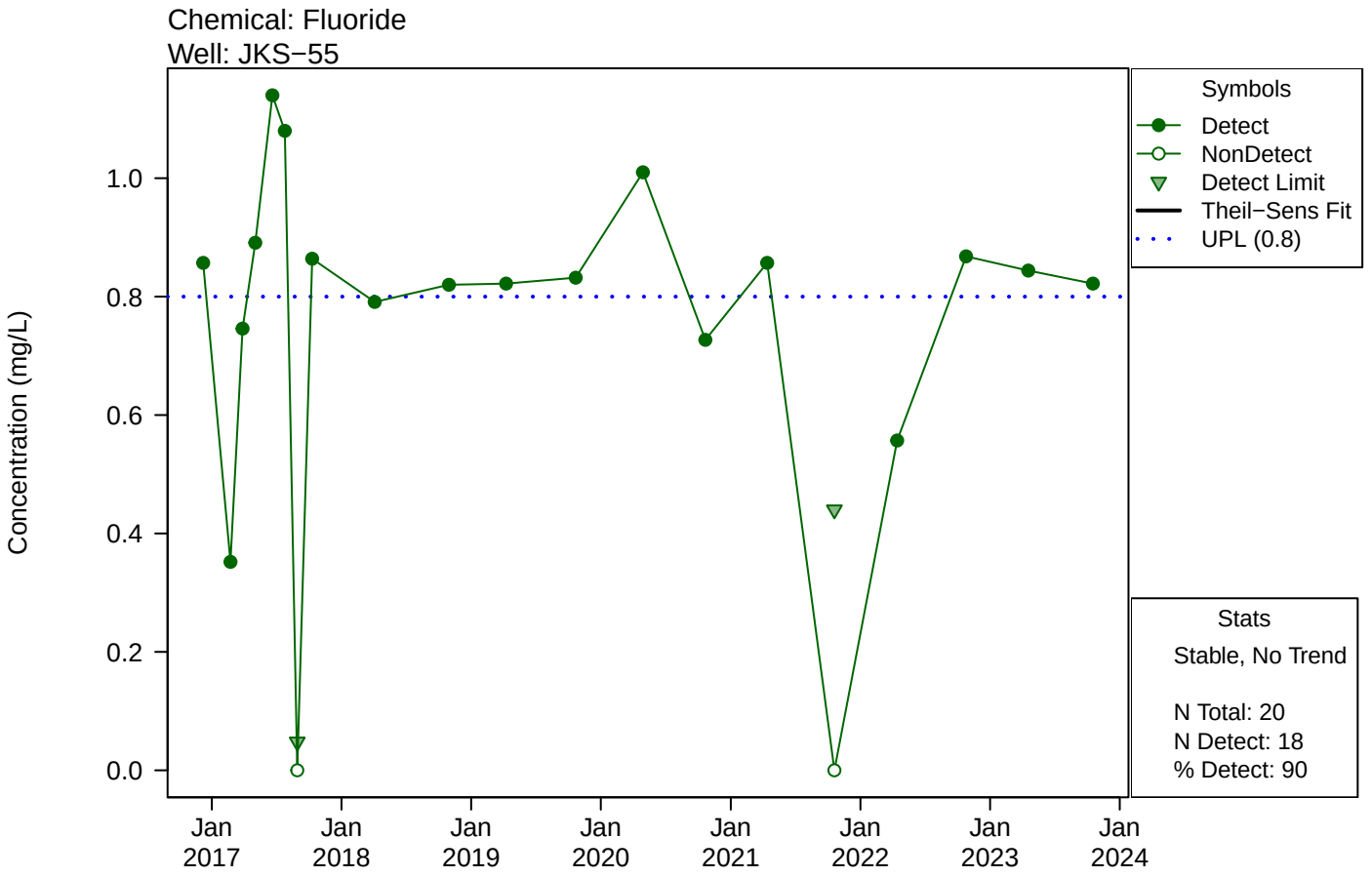

APPENDIX C APRIL 2023 GROUNDWATER SAMPLING RESULTS

JANUARY 2024

ERM

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August 31, 2023

Mr. Michael Malone
CPS Energy
500 McCullough Avenue
San Antonio, Texas 78215

Reference: 0681818

Subject: April 2023 Groundwater Sampling Event
Calaveras Power Station CCR Units
San Antonio, Texas

Introduction

Title 40 Code of Federal Regulations, Part 257, (40 CFR §257) Subpart D [a.k.a. Coal Combustion Residual (CCR) Rule] was published in the Federal Register in April 2015 and became effective in October 2015. Additionally, Title 30, Texas Administrative Code, Chapter 352 (30 TAC 352) (a.k.a. Texas CCR Rule), became effective in May 2020. One of the many requirements of the Federal and Texas CCR Rule was for CPS Energy to determine if there are impacts to groundwater from the surface impoundments [Evaporation Pond (EP), Bottom Ash Ponds (BAPs), and Sludge Recycling Holding Pond (SRHP)] and the landfill [Fly Ash Landfill (FAL)] that contain CCR at the Calaveras Power Station.

In the initial *2017 Annual Groundwater Monitoring and Corrective Action Report* for each CCR unit, the downgradient monitoring well results from the October 2016 sampling event were compared to Upper Prediction Limits (UPLs) and Lower Prediction Limits (LPLs). UPLs and LPLs were calculated in the *Annual Groundwater Monitoring and Corrective Action Reports* for the purpose of determining a potential statistically significant increase (SSI) over background levels. In the subsequent *Annual Groundwater Monitoring and Corrective Action Reports* for each CCR unit, the downgradient monitoring well results from the previous October sampling events were compared to updated UPLs and LPLs. These updated UPLs and LPLs were recalculated in the respective *Annual Groundwater Monitoring and Corrective Action Reports* using the additional data collected from the previous year. The April 2023 groundwater sample results were compared to the updated UPLs and LPLs and the evaluations of the sample results indicated a potential SSI for a limited number of constituents from the EP, FAL, and BAPs. No potential SSIs were identified for any constituents from the SRH Pond.

According to the Federal CCR Rule [40 CFR §257.94(e)] and Texas CCR Rule [30 TAC §352.941(c)], if the owner or operator of a CCR unit determines there is a SSI over background levels for one or more Appendix III constituents, the owner or operator may demonstrate that a source other than the CCR unit caused the SSI over background levels or that the SSI resulted from error in sampling, analysis, statistical evaluation or natural variation in groundwater quality. The CCR Rule also indicates that the owner or operator must complete the written demonstration within 90 days of detecting a SSI over the background levels. If a successful demonstration is

completed within the 90-day period, the owner or operator may continue with a detection monitoring program.

To address the potential SSIs identified in the previous *Annual Groundwater Monitoring and Corrective Action Reports*, CPS Energy prepared six *Written Demonstrations – Responses to Potential Statistically Significant Increases*[1] (dated 4 April 2018; 27 February 2019; 27 April 2020; 18 June 2021; 26 April 2022; and 31 May 2023). Based on the evidence provided in the *Written/ Alternative Source Demonstrations*, no SSIs over background levels were determined for any of the CPS Energy CCR units (EP, FAL, BAPs, and SRHP) and therefore, CPS Energy continued with a detection monitoring program that would include semiannual sampling.

Sampling Events Summary

The first semiannual groundwater sampling event for 2023 was conducted on April 18 and 19, 2023. The sampling event included the collection of water level measurements and groundwater samples from all the background and downgradient monitoring wells in the CCR monitoring program. Monitoring wells were gauged and then sampled by CPS Energy using low flow sampling techniques during the sampling event. The groundwater samples were analyzed for Appendix III constituents.

For each CCR unit, the downgradient monitoring well results from the April 2023 sampling event was compared to the updated UPLs and LPLs recalculated in their respective *2022 Annual Groundwater Monitoring and Corrective Action Report*. The April 2023 groundwater sample results for the downgradient monitoring wells in each CCR unit are summarized in Attachment 1.

Although the evaluations of the April 2023 groundwater sample results indicate potential SSIs for a limited number of constituents, the constituents associated with the potential SSIs are the same constituents, were detected at similar concentrations and were identified in one or all of the previous *Written/ Alternative Source Demonstrations*. The evaluations of the April 2023 groundwater sample results with potential SSIs are summarized below.

EP – The constituents associated with potential SSIs include fluoride in JKS-36 and JKS-61; and pH in JKS-36. As previously presented in the *Written/ Alternative Source Demonstrations*, the concentrations of fluoride and pH appear to reflect natural variation in groundwater quality in the vicinity of the CCR unit. The reported April 2023 concentrations were within the range of naturally occurring concentrations identified in the *Written/ Alternative Source Demonstrations*.

FAL – The constituents associated with potential SSIs include pH in JKS-31 and JKS-46. As previously presented in the *Written/ Alternative Source Demonstrations*, the concentration of pH in JKS-31 appears to reflect natural variation in groundwater quality in the vicinity of the CCR unit. The concentration of pH in JKS-46 is slightly higher than the naturally occurring range previously detected at this monitor well; however, the detected concentration is within historical ranges of naturally occurring pH values detected at JKS-36, JKS-40, and JKS-43 located in the vicinity of the

[1] The term *'Written Demonstration'* was historically used for a document that provided responses to potential SSIs. Starting with the 26 April 2022 document, the term *'Alternative Source Demonstration'* was used for these types of documents.

Northern CCR Units. The reported April 2023 concentrations were within the range of naturally occurring concentrations identified in the *Written/ Alternative Source Demonstrations*.

BAPs – The constituents associated with potential SSIs include boron in JKS-48, JKS-49, JKS-50R, JKS-52, JKS-55, and JKS-56; and fluoride in JKS-48, JKS-52, and JKS-55. As previously presented in the *Written/ Alternative Source Demonstrations*, the concentrations of boron and fluoride appear to reflect natural variation in groundwater quality in the vicinity of the CCR unit. The reported April 2023 concentrations were within the range of naturally occurring concentrations identified in the *Written/ Alternative Source Demonstrations*.

SRHP – The constituents associated with potential SSIs include boron in JKS-52, JKS-53, and JKS-54; and fluoride in JKS-52 and JKS-54. As previously presented in the *Written/ Alternative Source Demonstrations*, the concentrations of boron and fluoride appear to reflect natural variation in groundwater quality in the vicinity of the CCR unit. The reported April 2023 concentrations were within the range of naturally occurring concentrations identified in the *Written/ Alternative Source Demonstrations*.

Note: As discussed in the *2022 Annual Groundwater Monitoring and Corrective Action Reports* for the BAPs and SRHP, the groundwater monitoring well network was revised to designate newly installed well JKS-70 as an upgradient well. In addition, for the BAPs, JKS-49 was redesignated from an upgradient well to a downgradient well. Therefore, starting with the 2022 monitoring events, all statistical analyses (including the establishment of UPLs, LPLs and potential exceedances) were conducted using an upgradient monitoring well network comprised of JKS-51 and JKS-70. Further noted in the *Reports*, JKS-70 was only sampled during one event in 2022, and the incorporation of those analytical results into the statistical analyses have resulted in lower UPLs, and therefore the potential for additional exceedances. CPS Energy will continue to collect additional sample results from JKS-70 to better assess and evaluate these potential exceedances.

Conclusions

Based on the April 2023 groundwater sample results and the evidence provided in one or all of the *Written/ Alternative Source Demonstrations*, no SSIs over background levels have been determined for any of the CPS Energy CCR units (EP, FAL, BAPs, and SRHP) and therefore, CPS Energy should continue with a detection monitoring program. The second semiannual sampling event should be performed in October 2023.

We appreciate the opportunity to work with you on this project. Please contact me if you should have any questions.

Sincerely,

Environmental Resources Management Southwest, Inc.

Nicholas Houtchens
Senior Geologist

ATTACHMENT 1 APRIL 2023 GROUNDWATER SAMPLE RESULTS

April 2023 Groundwater Sample Results
CCR Unit: Evaporation Pond
CPS Energy Calaveras Power Station
San Antonio, TX

			CCR Unit	EP	EP	EP	EP
			Well Designation	Downgradient	Downgradient	Downgradient	Downgradient
			Well ID	JKS-36	JKS-61	JKS-62	JKS-64
			Sample Date	4/18/2023	4/19/2023	4/19/2023	4/19/2023
			Sample Type Code	N	N	N	N
Constituent	Units	2022 LPL - EP	2022 UPL - EP				
Boron	mg/L	--	1.67	0.415	1.06	NS	0.683
Calcium	mg/L	--	1,480	166	71.2	NS	21.6
Chloride	mg/L	--	3,420	341	150	NS	19.2
Fluoride	mg/L	--	0.252	1.30	0.355	NS	0.107
pH, Field	SU	4.94	6.51	4.55	5.96	NS	5.51
Sulfate	mg/L	--	2,100	950	331	NS	212
Total Dissolved Solids	mg/L	--	10,500	2,020	1,090	NS	574

NOTES:

Shaded results either exceed of the Upper Prediction Limit (UPL) or are below the Lower Prediction Limit (LPL) for this CCR unit.
Sample Type Code: N - Normal
NS: Not sampled (well blockage or limited water in well column)

April 2023 Groundwater Sample Results
CCR Unit: Fly Ash Landfill
CPS Energy Calaveras Power Station
San Antonio, TX

			CCR Unit	FAL	FAL	FAL	FAL	FAL
			Well Designation	Downgradient	Downgradient	Downgradient	Downgradient	Downgradient
			Well ID	JKS-31	JKS-33	JKS-33	JKS-46	JKS-60
			Sample Date	4/18/2023	4/19/2023	4/19/2023	4/18/2023	4/19/2023
			Sample Type Code	N	N	FD	N	N
Constituent	Units	2022 LPL - FAL	2022 UPL - FAL					
Boron	mg/L	--	5.16	0.442	0.988	0.996	0.425	0.579
Calcium	mg/L	--	948	205	376	386	91.4	358
Chloride	mg/L	--	5,300	389	732	752	46.2	287
Fluoride	mg/L	--	4.46	0.706	1.05	1.05	1.07	0.218
pH, Field	SU	4.98	7.10	4.71	5.75	5.75	3.88	5.77
Sulfate	mg/L	--	8,600	1,070	1,550	1,600	766	1,220
Total Dissolved Solids	mg/L	--	20,500	2,120	3,680	3,630	1,120	2,310

NOTES:

Shaded results either exceed of the Upper Prediction Limit (UPL) or are below the Lower Prediction Limit (LPL) for this CCR unit.
Sample Type Code: N - Normal; FD - Field Duplicate

April 2023 Groundwater Sample Results
CCR Unit: Bottom Ash Ponds
CPS Energy Calaveras Power Station
San Antonio, TX

			CCR Unit	BAP	BAP	BAP	BAP	BAP	BAP	BAP
			Well Designation	Downgradient	Downgradient	Downgradient	Downgradient	Downgradient	Downgradient	Downgradient
			Well ID	JKS-48	JKS-48	JKS-49	JKS-50R	JKS-52	JKS-55	JKS-56
			Sample Date	4/19/2023	4/19/2023	4/18/2023	4/18/2023	4/19/2023	4/18/2023	4/19/2023
			Sample Type Code	N	FD	N	N	N	N	N
Constituent	Units	2022 LPL - BAP	2022 UPL - BAP							
Boron	mg/L	--	0.726	1.93	1.97	2.24	5.15	2.47	0.794	2.86
Calcium	mg/L	--	404	118	120	106	119	179	126	92.0
Chloride	mg/L	--	658	434	470	404	84.8	412	406	138
Fluoride	mg/L	--	0.547	0.964	0.975	0.289	0.310	0.626	0.844	0.398
pH, Field	SU	5.48	7.16	6.72	6.72	7.16	6.60	6.74	6.80	6.68
Sulfate	mg/L	--	625	182	197	202	171	256	173	39.8
Total Dissolved Solids	mg/L	--	3,180	1,370	1,400	1,380	1,030	1,650	1,380	791

NOTES:

Shaded results either exceed of the Upper Prediction Limit (UPL) or are below the Lower Prediction Limit (LPL) for this CCR unit.
Sample Type Code: N - Normal; FD - Field Duplicate

April 2023 Groundwater Sample Results
CCR Unit: SRH Pond
CPS Energy Calaveras Power Station
San Antonio, TX

			CCR Unit	SRH Pond	SRH Pond	SRH Pond
			Well Designation	Downgradient	Downgradient	Downgradient
			Well ID	JKS-52	JKS-53	JKS-54
			Sample Date	4/19/2023	4/19/2023	4/19/2023
			Sample Type Code	N	N	N
Constituent	Units	2022 LPL - SRH	2022 UPL - SRH			
Boron	mg/L	--	0.726	2.47	1.72	1.07
Calcium	mg/L	--	404	179	140	144
Chloride	mg/L	--	658	412	450	440
Fluoride	mg/L	--	0.547	0.626	0.345	0.635
pH, Field	SU	5.48	7.16	6.74	6.52	6.60
Sulfate	mg/L	--	616	256	312	437
Total Dissolved Solids	mg/L	--	3,180	1,650	1,580	1,570

NOTES:

Shaded results either exceed of the Upper Prediction Limit (UPL) or are below the Lower Prediction Limit (LPL) for this CCR unit.
Sample Type Code: N - Normal; FD - Field Duplicate

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