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2024 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT ASH LANDFILL SPRINGERVILLE GENERATING STATION SPRINGERVILLE, ARIZONA

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on behalf of Tucson Electric Power Company Tucson, Arizona

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1	26 February 2025	Revised to include alternate source demonstration



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1. Introduction

This 2024 Annual Groundwater Monitoring and Corrective Action Report (Annual Report) addresses the Ash Landfill at the Springerville Generating Station (SGS), operated by Tucson Electric Power Company (TEP). This Annual Report was developed in accordance with the U.S. Environmental Protection Agency Coal Combustion Residual (CCR) Rule (Rule) effective 19 October 2015, including subsequent revisions, specifically Title 40 Code of Federal Regulations (40 CFR), subsection 257.90(e). This Annual Report documents the groundwater monitoring system for the Ash Landfill consistent with applicable sections of 257.90 through 257.98, and describes activities conducted in the prior calendar year (2024) and demonstrates compliance with the Rule. The specific requirements for the Annual Report listed in § 257.90(e) of the Rule are provided in Sections 1 and 2 of this Annual Report and are in bold italic font, followed by a narrative describing how each Rule requirement has been met.

Pursuant to § 257.105(h)(1), this Annual Report was complete and placed in the facility operating record by 31 January 2025. This Annual Report was subsequently revised on 26 February 2025 to incorporate the alternate source demonstration (ASD) that was completed and certified on 18 February 2025 addressing statistically significant increases (SSI) identified during the August 2024 semiannual detection monitoring sampling event.

This Annual Report must be posted to the TEP CCR website within 30 days of this Annual Report being placed on the facility operating record in accordance with § 257.107(h)(1). Since this Annual Report was revised prior to the date of required posting to the TEP CCR website (3 March 2025), only the 26 February 2025 revision is posted to the TEP CCR website.

1.1 40 CFR § 257.90(e)(6) SUMMARY

A section at the beginning of the annual report that provides an overview of the current status of groundwater monitoring and corrective action programs for the CCR unit. At a minimum, the summary must specify all of the following:

1.1.1 40 CFR § 257.90(e)(6)(i) – Initial Monitoring Program

At the start of the current annual reporting period, whether the CCR unit was operating under the detection monitoring program in § 257.94 or the assessment monitoring program in § 257.95;

At the start of the current annual reporting period (1 January 2024), the Ash Landfill was operating under a detection monitoring program in compliance with 40 CFR § 257.94.

1.1.2 40 CFR § 257.90(e)(6)(ii) – Final Monitoring Program

At the end of the current annual reporting period, whether the CCR unit was operating under the detection monitoring program in § 257.94 or the assessment monitoring program in § 257.95;



At the end of the current annual reporting period (31 December 2024), the Ash Landfill was operating under a detection monitoring program in compliance with 40 CFR § 257.94.

1.1.3 40 CFR § 257.90(e)(6)(iii) – Statistically Significant Increases

If it was determined that there was a statistically significant increase over background for one or more constituents listed in Appendix III to this part pursuant to § 257.94(e):

1.1.3.1 40 CFR § 257.90(e)(6)(iii)(a) – Statistically Significant Increase Constituents

Identify those constituents listed in Appendix III to this part and the names of the monitoring wells associated with such an increase; and

The statistical analyses were completed within 90 days of receipt of laboratory data and were conducted pursuant to 40 CFR § 257.93 of the CCR Rule. Summaries of the statistical analyses for February 2024 and August 2024 are included in Tables 2 and 3, respectively.

Statistical analysis of the August 2024 samples was completed on 21 November 2024. SSIs over background concentrations identified in samples collected during the August 2024 semiannual detection monitoring sampling event are listed in Table 1. SSIs were limited to fluoride and detected at both upgradient and downgradient monitoring wells. In accordance with 40 CFR § 257.94(e)(2), an alternate source demonstration (ASD) was completed and certified on 18 February 2025, within 90 days following completion of the statistical analyses, and is included in Attachment 1.

1.1.3.2 40 CFR § 257.90(e)(6)(iii)(b) – Initiation of Assessment Monitoring

Provide the date when the assessment monitoring program was initiated for the CCR unit.

An ASD was completed and certified on 18 February 2025 addressing SSIs identified during the August 2024 semiannual detection monitoring sampling event and is included in Attachment 1. Therefore, the Ash Landfill remained in the detection monitoring program during 2024.

1.1.4 40 CFR § 257.90(e)(6)(iv) – Statistically Significant Levels

If it was determined that there was a statistically significant level above the groundwater protection standard for one or more constituents listed in Appendix IV to this part pursuant to § 257.95(g) include all of the following:

1.1.4.1 40 CFR § 257.90(e)(6)(iv)(A) – Statistically Significant Level Constituents

Identify those constituents listed in Appendix IV to this part and the names of the monitoring wells associated with such an increase;



The Ash Landfill remained in detection monitoring during 2024. Therefore, no statistically significant levels above the groundwater protection standard for constituents listed in Appendix IV were identified for the Ash Landfill.

1.1.4.2 40 CFR § 257.90(e)(6)(iv)(B) – Initiation of the Assessment of Corrective Measures

Provide the date when the assessment of corrective measures was initiated for the CCR unit;

No assessment of corrective measures was required to be initiated in 2024 for this unit. The Ash Landfill remained in detection monitoring during 2024.

1.1.4.3 40 CFR § 257.90(e)(6)(iv)(C) – Assessment of Corrective Measures Public Meeting

Provide the date when the public meeting was held for the assessment of corrective measures for the CCR unit; and

An assessment of corrective measures was not required for the Ash Landfill during 2024; therefore, a public meeting was not held.

1.1.4.4 40 CFR § 257.90(e)(6)(iv)(D) – Completion of the Assessment of Corrective Measures

Provide the date when the assessment of corrective measures was completed for the CCR unit.

No assessment of corrective measures was required to be initiated in 2024 for this unit. The Ash Landfill remained in detection monitoring during 2024.

1.1.5 40 CFR § 257.90(e)(6)(v) – Selection of Remedy

Whether a remedy was selected pursuant to § 257.97 during the current annual reporting period, and if so, the date of remedy selection; and

The Ash Landfill remained in detection monitoring during 2024, and no remedy was required to be selected.

1.1.6 40 CFR § 257.90(e)(6)(vi) – Remedial Activities

Whether remedial activities were initiated or are ongoing pursuant to § 257.98 during the current annual reporting period.

No remedial activities were required in 2024; therefore, no demonstration or certification is applicable for this unit.



2. 40 CFR § 257.90 Applicability

2.1 40 CFR § 257.90(a)

All CCR Landfills, CCR surface impoundments, and lateral expansions of CCR units are subject to the groundwater monitoring and corrective action requirements under §§ 257.90 through 257.99, except as provided in paragraph (g) [Suspension of groundwater monitoring requirements] of this section.

TEP has installed and certified a groundwater monitoring system at the SGS Ash Landfill. The Ash Landfill is subject to the groundwater monitoring and corrective action requirements described under 40 CFR §§ 257.90 through 257.98. This document addresses the requirement for the Owner/Operator to prepare an Annual Report in accordance with § 257.90(e).

Pursuant to § 257.105(h)(1), this Annual Report was complete and placed in the facility's operating record by 31 January 2025. This Annual Report was subsequently revised on 26 February 2025 to incorporate the ASD that was completed and certified on 18 February 2025.

2.2 40 CFR § 257.90(e) – SUMMARY

Annual groundwater monitoring and corrective action report. For existing CCR Landfills and existing CCR surface impoundments, no later than January 31, 2018, and annually thereafter, the owner or operator must prepare an annual groundwater monitoring and corrective action report. For new CCR Landfills, new CCR surface impoundments, and all lateral expansions of CCR units, the owner or operator must prepare the initial annual groundwater monitoring and corrective action report no later than January 31 of the year following the calendar year a groundwater monitoring system has been established for such CCR unit as required by this subpart, and annually thereafter. For the preceding calendar year, the annual report must document the status of the groundwater monitoring and corrective any problems encountered, discuss actions to resolve the problems, and project key activities for the upcoming year. For purposes of this section, the owner or operator has prepared the annual report when the report is placed in the facility's operating record as required by § 257.105(h)(1).

This Annual Report describes monitoring completed and actions taken for the groundwater monitoring system at the SGS Ash Landfill as required by the Rule. Groundwater sampling and analysis was conducted in accordance with requirements described in § 257.93, and the status of the groundwater monitoring program described in § 257.94 is provided in this report. This Annual Report documents the applicable groundwater-related activities completed in the calendar year 2024.

Pursuant to § 257.105(h)(1), this Annual Report was completed and placed in the facility's operating record by 31 January 2025. This Annual Report was subsequently revised on 26 February 2025 to incorporate the ASD that was completed and certified on 18 February 2025.



2024 Annual Groundwater Monitoring and Corrective Action Report Revision 1, February 2025

2.2.1 Status of the Groundwater Monitoring Program

Statistical analyses of detection monitoring data collected in February and August 2024 were completed in 2024. Apparent Appendix III SSIs for fluoride were identified at monitoring wells CCR-1U, CCR-1D, CCR-2D, and CCR-3D at the Ash Landfill during the August 2024 semiannual detection monitoring sampling event. Summaries of the statistical analyses for February and August 2024 are included in Tables 2 and 3, respectively. An ASD was completed and certified on 18 February 2025, within 90 days following completion of the statistical analyses, for SSIs identified during the August 2024 semiannual detection monitoring sampling event and is included in Attachment 1. The Ash Landfill remained in a detection monitoring program during 2024.

2.2.2 Key Actions Completed

The 2023 Annual Groundwater Monitoring and Corrective Action Report was completed in January 2024. Semiannual detection monitoring events were completed in February and August of 2024. Statistical analyses were completed within 90 days of receipt of laboratory data for the February and August 2024 semiannual detection monitoring sampling events and were conducted pursuant to 40 CFR § 257.93 of the CCR Rule.

An ASD was completed and certified on 18 February 2025, within 90 days following completion of the statistical analyses, for SSIs identified during the August 2024 semiannual detection monitoring sampling event and is included in Attachment 1.

Pursuant to § 257.105(h)(1), this Annual Report was completed and placed in the facility's operating record by 31 January 2025. This Annual Report was subsequently revised on 26 February 2025 to incorporate the ASD that was completed and certified on 18 February 2025.

2.2.3 Verification Sampling

Potential issues were encountered during groundwater monitoring activities in 2024.

- Initial concentrations of fluoride were detected above statistical background concentrations at upgradient monitoring well CCR-1U and downgradient monitoring wells CCR-1D, CCR-2D, and CCR-3D during the August 2024 semiannual detection monitoring sampling event. Verification samples were collected from each monitoring well in October 2024 to confirm the elevated concentrations and to determine if additional actions were needed. The results from the August 2024 sampling event were confirmed by the verification samples.
- Chloride concentrations detected in samples collected from upgradient monitoring well CCR-1U and downgradient monitoring wells CCR-1D, CCR-2D, and CCR-3D during the August 2024 semiannual detection monitoring sampling event were elevated compared to historical sampling events. Verification samples were collected from each monitoring well in October 2024. The results from the August 2024 sampling event were confirmed by the verification samples.



2.2.4 Actions to Resolve Potential Issues

The resolution of potential issues encountered in 2024 included verification sampling, as described above. The analytical results were revised to reflect the verification sample results. An ASD was completed and certified on 18 February 2025, within 90 days following completion of the statistical analyses, for SSIs identified during the August 2024 semiannual detection monitoring sampling event and is included in Attachment 1.

No other potential issues (i.e., damaged wells, issues with sample collection or lack of sampling, and problems with analytical analysis) were encountered at the Ash Landfill in 2024; therefore, no additional actions to resolve issues were required.

2.2.5 Project Key Activities for Upcoming Year

Key activities planned for 2025 include completion of the 2024 Annual Groundwater Monitoring and Corrective Action Report, semiannual detection monitoring, and subsequent statistical evaluations.

An ASD was completed and certified on 18 February 2025 addressing SSIs identified during the August 2024 semiannual detection monitoring sampling event.

2.3 40 CFR § 257.90(e) – INFORMATION

At a minimum, the annual groundwater monitoring and corrective action report must contain the following information, to the extent available:

2.3.1 40 CFR § 257.90(e)(1)

A map, aerial image, or diagram showing the CCR unit and all background (or upgradient) and downgradient monitoring wells, to include the well identification numbers, that are part of the groundwater monitoring program for the CCR unit;

As required by § 257.90(e)(1), a map showing the locations of the CCR unit and associated upgradient and downgradient monitoring wells for the Ash Landfill is included in this report as Figure 1.

2.3.2 40 CFR § 257.90(e)(2) – Monitoring System Changes

Identification of any monitoring wells that were installed or decommissioned during the preceding year, along with a narrative description of why those actions were taken;

No monitoring wells were installed or decommissioned as part of the certified groundwater monitoring network in 2024.

TEP collected seven groundwater samples from an existing monitoring well (CCR-4D) located at the downgradient edge of waste, but not currently part of the CCR groundwater monitoring network. A total of eight groundwater samples have been collected from CCR-4D starting in 2023 to support baseline statistical analyses. TEP is assessing whether CCR-4D may be used to supplement the existing groundwater monitoring network.



2.3.3 40 CFR § 257.90(e)(3) – Summary of Sampling Events

In addition to all the monitoring data obtained under § 257.90 through § 257.98, a summary including the number of groundwater samples that were collected for analysis for each background and downgradient well, the dates the samples were collected, and whether the sample was required by the detection monitoring or assessment monitoring programs;

In accordance with § 257.94(b), two independent semiannual detection monitoring samples from each background and downgradient monitoring well were collected in 2024. A summary including the sample names, sample dates, field parameters, and monitoring data obtained for the groundwater monitoring program for the SGS Ash Landfill is presented in Table 4 with corresponding laboratory analytical reports provided in Attachment 2 of this report. Groundwater potentiometric elevation contour maps, along with calculated groundwater flow velocity and direction at each groundwater monitoring sampling event in 2024, are provided in Figures 2 and 3.

2.3.4 40 CFR § 257.90(e)(4) – Monitoring Transition Narrative

A narrative discussion of any transition between monitoring programs (e.g., the date and circumstances for transitioning from detection monitoring to assessment monitoring in addition to identifying the constituent(s) detected at a statistically significant increase over background levels); and

Data from the detection monitoring groundwater sampling events for the downgradient monitoring wells were compared to the calculated background concentrations (upper prediction limits) for the Appendix III constituents at the Ash Landfill. The background concentrations provided in Table 2 and Table 3 were updated in 2022 based on statistical evaluation of analytical results collected between 2016 and 2022. The updated values were used for evaluations of the February and August 2024 semiannual detection monitoring results.

Once the data is verified, a sample concentration greater than the prediction limit (PL) is considered to represent a SSI over background. The statistical analyses completed in 2024 for the February 2024 semiannual detection monitoring sampling event indicated no SSIs for Appendix III constituents. The statistical analyses completed for the August 2024 semiannual detection monitoring sampling event indicated SSIs for fluoride at monitoring wells CCR-1U, CCR-1D, CCR-2D, and CCR-3D. An ASD was completed and certified on 18 February 2025, within 90 days following completion of the statistical analyses, for SSIs identified during the August 2024 semiannual detection monitoring sampling event and is included in Attachment 1. Therefore, there was no transition between monitoring programs during 2024.

2.3.5 40 CFR § 257.90(e)(5) – Other Requirements

Other information required to be included in the annual report as specified in § 257.90 through § 257.98.



This Annual Report documents activities conducted to comply with § 257.90 through § 257.94 of the Rule. It is understood that there are supplemental references in § 257.90 through § 257.98 to information that must be placed in the Annual Report. The following requirements include relevant and required information in the Annual Report for activities completed in calendar year 2024.

2.3.5.1 40 CFR § 257.94(d)(3) – Demonstration for Alternative Detection Monitoring Frequency

The owner or operator must obtain a certification from a qualified professional engineer or approval from the Participating State Director or approval from EPA where EPA is the permitting authority stating that the demonstration for an alternative groundwater sampling and analysis frequency meets the requirements of this section. The owner or operator must include the demonstration providing the basis for the alternative monitoring frequency and the certification by a qualified professional engineer or the approval from the Participating State Director or approval from EPA where EPA is the permitting authority in the annual groundwater monitoring and corrective action report required by § 257.90(e).

An alternative groundwater detection monitoring sampling and analysis frequency has not been established for this CCR unit; therefore, no demonstration or certification is applicable.

2.3.5.2 40 CFR § 257.94(e)(2) – Detection Monitoring Alternate Source Demonstration

The owner or operator may demonstrate that a source other than the CCR unit caused the statistically significant increase over background levels for a constituent or that the statistically significant increase resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. The owner or operator must complete the written demonstration within 90 days of detecting a statistically significant increase over background levels to include obtaining a certification from a qualified professional engineer or approval from the Participating State Director or approval from EPA where EPA is the permitting authority verifying the accuracy of the information in the report. If a successful demonstration is completed within the 90-day period, the owner or operator of the CCR unit may continue with a detection monitoring program under this section. If a successful demonstration is not completed within the 90-day period, the owner or operator or unit must initiate an assessment monitoring program as required under § 257.95. The owner or operator must also include the demonstration in the annual groundwater monitoring and corrective action report required by § 257.90(e), in addition to the certification by a qualified professional engineer or approval from EPA where EPA is the permitting state Director or approval from EPA where EPA is the permitting authority.

An ASD was completed and certified on 18 February 2025, within 90 days following completion of the statistical analyses, for SSIs identified during the August 2024 semiannual detection monitoring sampling event and is included in Attachment 1. Therefore, the Ash Landfill remained in the detection monitoring program in 2024.

Pursuant to § 257.105(h)(1), this Annual Report was complete and placed in the facility's operating record by 31 January 2025. This Annual Report was subsequently revised on 26 February 2025 to incorporate the ASD that was completed and certified on 18 February 2025.



2.3.5.3 40 CFR § 257.95(c)(3) – Demonstration for Alternative Assessment Monitoring Frequency

The owner or operator must obtain a certification from a qualified professional engineer or approval from the Participating State Director or approval from EPA where EPA is the permitting authority stating that the demonstration for an alternative groundwater sampling and analysis frequency meets the requirements of this section. The owner or operator must include the demonstration providing the basis for the alternative monitoring frequency and the certification by a qualified professional engineer or the approval from the Participating State Director or approval from EPA where EPA is the permitting authority in the annual groundwater monitoring and corrective action report required by § 257.90(e).

The SGS Ash Landfill remained in detection monitoring during 2024 and an alternative groundwater assessment monitoring sampling and analysis frequency has not been established for this CCR unit; therefore, no demonstration or certification is applicable.

2.3.5.4 40 CFR § 257.95(d)(3) – Assessment Monitoring Concentrations and Groundwater Protection Standards

Include the recorded concentrations required by paragraph (d)(1) of this section, identify the background concentrations established under § 257.94(b), and identify the groundwater protection standards established under paragraph (d)(2) of this section in the annual groundwater monitoring and corrective action report required by § 257.90(e).

The SGS Ash Landfill remained in detection monitoring in 2024. Consequently, TEP is not required to establish groundwater protection standards for this CCR unit, and this criterion is not applicable.

2.3.5.5 40 CFR § 257.95(g)(3)(ii) – Assessment Monitoring Alternate Source Demonstration

Demonstrate that a source other than the CCR unit caused the contamination, or that the statistically significant increase resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. Any such demonstration must be supported by a report that includes the factual or evidentiary basis for any conclusions and must be certified to be accurate by a qualified professional engineer or approval from the Participating State Director or approval from EPA where EPA is the permitting authority. If a successful demonstration is made, the owner or operator must continue monitoring in accordance with the assessment monitoring program pursuant to this section and may return to detection monitoring if the constituents in appendices III and IV to this part are at or below background as specified in paragraph (e) of this section. The owner or operator must also include the demonstration in the annual groundwater monitoring and corrective action report required by § 257.90(e), in addition to the certification by a qualified professional engineer or the approval from the Participating State Director or approval from EPA is the permitting authority.

Assessment monitoring statistical analyses were not required or completed in 2024. Therefore, this criterion is not applicable.



2.3.5.6 40 CFR § 257.96(a) – Demonstration for Additional Time for Assessment of Corrective Measures

Within 90 days of finding that any constituent listed in Appendix IV to this part has been detected at a statistically significant level exceeding the groundwater protection standard defined under § 257.95(h), or immediately upon detection of a release from a CCR unit, the owner or operator must initiate an assessment of corrective measures to prevent further releases, to remediate any releases and to restore affected area to original conditions. The assessment of corrective measures must be completed within 90 days, unless the owner or operator demonstrates the need for additional time to complete the assessment of corrective measures due to site-specific conditions or circumstances. The owner or operator must obtain a certification from a qualified professional engineer or approval from the Participating State Director or approval from EPA where EPA is the permitting authority attesting that the demonstration is accurate. The 90-day deadline to complete the assessment of corrective molecular for a for days. The owner or operator must also include the demonstration in the annual groundwater monitoring and corrective action report required by § 257.90(e), in addition to the certification by a qualified professional engineer or the approval from the Participating State Director or approval from EPA where EPA is the permitting authority.

Assessment monitoring statistical analyses were not required or completed in 2024. Therefore, this criterion is not applicable.

2.4 40 CFR § 257.90(f)

The owner or operator of the CCR unit must comply with the recordkeeping requirements specified in § 257.105(h), the notification requirements specified in § 257.106(h), and the internet requirements specified in § 257.107(h).

In order to comply with Rule recordkeeping requirements, the following actions must be completed:

- Pursuant to § 257.105(h)(1), this Annual Report must be placed in the facility operating record.
- Pursuant to § 257.106(h)(1), notification must be sent to the relevant State Director and/or Tribal authority within 30 days of this Annual Report being placed on the facility operating record [§ 257.106(d)].
- Pursuant to § 257.107(h)(1), this Annual Report must be posted to the TEP CCR website within 30 days of this Annual Report being placed on the facility operating record [§ 257.107(d)].



3. Summary

TEP completed the two semiannual groundwater monitoring sampling events, and one subsequent verification sampling event in 2024 in accordance with 40 CFR § 257.94(b). The analytical results for Appendix III constituents generated from these sampling events were compared against updated background values to identify potential exceedances. The background groundwater quality values were updated in 2022 based on statistical evaluation of analytical results collected between 2016 and 2022.

Apparent Appendix III SSIs for fluoride were identified at upgradient and downgradient monitoring wells (CCR-1U, CCR-1D, CCR-2D, and CCR-3D) at the Ash Landfill during the August 2024 semiannual detection monitoring sampling event. An ASD was completed and certified on 18 February 2025, within 90 days following completion of the statistical analyses, for SSIs identified during the August 2024 semiannual detection monitoring sampling event. Therefore, the Ash Landfill remained in detection monitoring during 2024. No corrective actions were required for the downgradient compliance wells during 2024.

Pursuant to § 257.105(h)(1), this Annual Report was complete and placed in the facility's operating record by 31 January 2025. This Annual Report was subsequently revised on 26 February 2025 to incorporate the ASD that was completed and certified on 18 February 2025.

This Annual Report must be posted to the TEP CCR website within 30 days of this Annual Report being placed on the facility operating record in accordance with § 257.107(h)(1). Since this Annual Report was revised prior to the date of required posting to the TEP CCR website (3 March 2025), only the 26 February 2025 revision is posted to the TEP CCR website.



TABLES

TABLE 1SSI SUMMARY TABLETUCSON ELECTRIC POWER COMPANYSPRINGERVILLE GENERATING STATION, ASH LANDFILLSPRINGERVILLE, ARIZONA

Constituent	Sampling Event	Well ID	August 2024 (mg/L) ¹	Background Concentration (mg/L)	
		CCR-1U	4.1	3.7*	
Eluorido	August 2024	CCR-1D	3.1	3.0*	
Fluonde		CCR-2D	3.4	2.8*	
		CCR-3D	3.9	3.2*	

Notes:

¹ Results from verificaiton sample collected in October 2024

* Value obtained via intrawell statistical analysis.

mg/L = milligrams per liter

SSI = statistically significant increase



TABLE 2 FEBRUARY 2024 SUMMARY OF SEMIANNUAL DETECTION GROUNDWATER MONITORING STATISTICAL EVALUATION

TUCSON ELECTRIC POWER COMPANY

SPRINGERVILLE GENERATING STATION, ASH LANDFILL SPRINGERVILLE, ARIZONA

Well Number	February 2024 Outliers Sampling Result Removed		Analysis Background (Interwell/Intrawell) Distribution		Trend	Background Value (UPL) ¹	SSI (Yes/No)
			CCR Appendix-III: Boror	, Total (mg/L)			
CCR-1U (upgradient)	0.87	No	Intrawell	Parametric	Stable	0.97	No
CCR-2U (upgradient) 1.1 No			Intrawell	Non-Parametric	Stable	1.20	No
CCR-1D	0.82	No	Intrawell	Parametric	Stable	0.96	No
CCR-2D	0.78	No	Intrawell	Parametric	Stable	1.03	No
CCR-3D	0.89	No	Intrawell	Parametric	Stable	0.99	No
			CCR Appendix-III: Calcius	n, Total (mg/L)			
CCR-1U (upgradient)	480	No	Intrawell	Parametric	Stable	508	No
CCR-2U (upgradient)	730	No	Intrawell	Parametric	Stable	760	No
CCR-1D	510	No	Intrawell	Parametric	Increasing	546	No
CCR-2D	660	No	Intrawell	Parametric	Stable	697	No
CCR-3D	480	No	Intrawell	Parametric	Stable	504	No
			CCR Appendix-III: Chlo	oride (mg/L)			
CCR-1U (upgradient)	500	Yes ²	Intrawell	Parametric	Stable	588	No
CCR-2U (upgradient)	440	No	Intrawell	Parametric	Stable	518	No
CCR-1D	490	No	Intrawell	Parametric	Stable	574	No
CCR-2D	500	No	Intrawell	Parametric	Stable	610	No
CCR-3D	510	No	Intrawell	Parametric	Stable	625	No
			CCR Appendix-III: Flue	oride (mg/L)			
CCR-1U (upgradient)	3.6	No	Intrawell	Parametric	Increasing	3.7	No
CCR-2U (upgradient)	2.4	No	Intrawell	Parametric	Stable	3.0	No
CCR-1D	2.8	No	Intrawell	Non-Parametric	Increasing	3.0	No
CCR-2D	2.8	No	Intrawell	Non-Parametric	Stable	2.8	No
CCR-3D	3.0	No	Intrawell	Non-Parametric	Increasing	3.2	No
			CCR Appendix-III: pl	l (lab) (SU)			
CCR-1U (upgradient)	6.7	No	Intrawell	Parametric	Stable	7.4	No
CCR-2U (upgradient)	6.6	No	Intrawell	Parametric	Stable	7.0	No
CCR-1D	6.7	No	Intrawell	Parametric	Stable	7.3	No
CCR-2D	6.7	No	Intrawell Parametric		Stable	7.2	No
CCR-3D	6.7	No	Intrawell	Parametric	Stable	7.2	No
			CCR Appendix-III: Sul	fate (mg/L)			
CCR-1U (upgradient)	1,200	No	Intrawell	Parametric	Increasing	1,409	No
CCR-2U (upgradient)	1,800	No	Intrawell	Parametric	Stable	2,093	No
CCR-1D	1,200	No	Intrawell	Parametric	Stable	1,568	No
CCR-2D	1,600	No	Intrawell	Parametric	Stable	1,983	No
CCR-3D	1,200	No	Intrawell	Parametric	Stable	1,488	No
		CCR A	ppendix-III: Total Dissolve	ed Solids (TDS) (mg/L			
CCR-1U (upgradient)	3,100	No	Intrawell	Parametric	Stable	3,710	No
CCR-2U (upgradient)	3,900	No	Intrawell	Non-Parametric	Stable	4,740	No
CCR-1D	3,100	No	Intrawell	Parametric	Increasing	3,528	No
CCR-2D	3,700	No	Intrawell	Non-Parametric	Stable	3,800	No
CCR-3D 3,100 No Intrawell				Parametric	Stable	3,515	No

Notes:

¹ UPL calculated using intrawell background data collected from 15 November 2016 through 07 September 2022.

² The chloride concentration from monitoring well CCR-1U from October 2018 was removed from UPL calculations since it was a magnitude lower than historic chloride concentrations at the monitoring well and is considered a statistical outlier.

CCR = coal combustion residual

mg/L = milligrams per liter

SSI = statistically significant increase

SU = standard unit

UPL = upper prediction limit



TABLE 3 AUGUST 2024 SUMMARY OF SEMIANNUAL DETECTION GROUNDWATER MONITORING STATISTICAL EVALUATION

TUCSON ELECTRIC POWER COMPANY

SPRINGERVILLE GENERATING STATION, ASH LANDFILL SPRINGERVILLE, ARIZONA

Well Number	August 2024 Sampling Result	Outliers Analysis Removed (Interwell/Intrawell)		Background Distribution	Trend	Background Value (UPL) ¹	SSI (Yes/No)
			CCR Appendix-III: Boror	n, Total (mg/L)			
CCR-1U (upgradient)	0.82	No	Intrawell	Parametric	Stable	0.97	No
CCR-2U (upgradient) 1.1 No			Intrawell	Non-Parametric	Stable	1.20	No
CCR-1D	0.78	No	Intrawell	Parametric	Stable	0.96	No
CCR-2D	0.86	No	Intrawell	Parametric	Stable	1.03	No
CCR-3D	0.85	No	Intrawell	Parametric	Stable	0.99	No
			CCR Appendix-III: Calcius	m, Total (mg/L)			
CCR-1U (upgradient)	430	No	Intrawell	Parametric	Stable	508	No
CCR-2U (upgradient)	660	No	Intrawell	Parametric	Stable	760	No
CCR-1D	430	No	Intrawell	Parametric	Increasing	546	No
CCR-2D	600	No	Intrawell	Parametric	Stable	697	No
CCR-3D	430	No	Intrawell	Parametric	Stable	504	No
			CCR Appendix-III: Chlo	oride (mg/L)			
CCR-1U (upgradient)	560	Yes ²	Intrawell	Parametric	Stable	588	No
CCR-2U (upgradient)	460	No	Intrawell	Parametric	Stable	518	No
CCR-1D	510	No	Intrawell	Parametric	Stable	574	No
CCR-2D	530	No	Intrawell	Parametric	Stable	610	No
CCR-3D	560	No	Intrawell	Parametric	Stable	625	No
			CCR Appendix-III: Flue	oride (mg/L)			
CCR-1U (upgradient)	4.1	No	Intrawell	Parametric	Increasing	3.7	Yes
CCR-2U (upgradient)	2.7	No	Intrawell	Parametric	Stable	3.0	No
CCR-1D	3.1	No	Intrawell	Non-Parametric	Increasing	3.0	Yes
CCR-2D	3.4	No	Intrawell	Non-Parametric	Increasing	2.8	Yes
CCR-3D	3.9	No	Intrawell	Non-Parametric	Increasing	3.2	Yes
			CCR Appendix-III: pl	I (lab) (SU)			
CCR-1U (upgradient)	7.1	No	Intrawell	Parametric	Stable	7.4	No
CCR-2U (upgradient)	6.3	No	Intrawell	Parametric	Stable	7.0	No
CCR-1D	6.4	No	Intrawell	Parametric	Stable	7.3	No
CCR-2D	6.5	No	Intrawell Parametric		Stable	7.2	No
CCR-3D	6.5	No	Intrawell	Parametric	Stable	7.2	No
			CCR Appendix-III: Sul	fate (mg/L)			
CCR-1U (upgradient)	1,400	No	Intrawell	Parametric	Stable	1,409	No
CCR-2U (upgradient)	2,000	No	Intrawell	Parametric	Stable	2,093	No
CCR-1D	1,400	No	Intrawell	Parametric	Increasing	1,568	No
CCR-2D	1,800	No	Intrawell	Parametric	Stable	1,983	No
CCR-3D	1,300	No	Intrawell	Parametric	Stable	1,488	No
		CCR A	ppendix-III: Total Dissolve	ed Solids (TDS) (mg/L			
CCR-1U (upgradient)	3,700	No	Intrawell	Parametric	Increasing	3,710	No
CCR-2U (upgradient)	4,000	No	Intrawell	Non-Parametric	Stable	4,740	No
CCR-1D	3,200	No	Intrawell	Parametric	Increasing	3,528	No
CCR-2D	3,800	No	Intrawell	Non-Parametric	Stable	3,800	No
CCR-3D	3,200	No	Intrawell	Parametric	Stable	3,515	No

Notes:

¹ UPL calculated using intrawell background data collected from 15 November 2016 through 07 September 2022.

² The chloride concentration from monitoring well CCR-1U from October 2018 was removed from UPL calculations since it was a magnitude lower than historic chloride concentrations at the monitoring well and is considered a statistical outlier.

CCR = coal combustion residual

mg/L = milligrams per liter

SSI = statistically significant increase

SU = standard unit

UPL = upper prediction limit



TABLE 4SUMMARY OF ANALYTICAL RESULTS -2024 DETECTION MONITORINGTUCSON ELECTRIC POWERSPRINGERVILLE GENERATING STATION - ASH LANDFILLSPRINGERVILLE, ARIZONA

Location	Upgradient				Downgradient										
Location	CCR-1U	CCR-1U	CCR-1U	CCR-2U	CCR-2U	CCR-1D	CCR-1D	CCR-1D	CCR-1D	CCR-2D	CCR-2D	CCR-2D	CCR-3D	CCR-3D	CCR-3D
Measure Point (TOC)	6954.29	6954.29	6954.29	6782.62	6782.62	6708.98	6708.98	6708.98	6708.98	6837.64	6837.64	6837.64	6867.04	6867.04	6867.04
Sample Name	CCR-1U	CCR-1U	CCR-1U	CCR-2U	CCR-2U	CCR-1D	CCR-1D	CCR-1D-Dup	CCR-1D	CCR-2D	CCR-2D	CCR-2D	CCR-3D	CCR-3D	CCR-3D
Sample Date	2/20/2024	8/13/2024	10/10/2024	2/20/2024	8/14/2024	2/20/2024	8/13/2024	8/13/2024	10/10/2024	2/21/2024	8/14/2024	10/10/2024	2/20/2024	8/13/2024	10/10/2024
Final Lab Report Date	3/13/2024	8/30/2024	10/17/2024	3/13/2024	8/30/2024	3/13/2024	8/30/2024	8/30/2024	10/17/2024	3/13/2024	8/30/2024	10/17/2024	3/13/2024	8/30/2024	10/17/2024
Final Lab Report Revision Date	4/24/2024	9/27/2024	-	4/24/2024	9/27/2024	4/24/2024	9/27/2024	9/27/2024	-	4/24/2024	9/27/2024	-	4/24/2024	9/27/2024	-
Lab Data Reviewed and Accepted	5/1/2024	11/21/2024	11/21/2024	5/1/2024	11/21/2024	5/1/2024	11/21/2024	11/21/2024	11/21/2024	5/1/2024	11/21/2024	11/21/2024	5/1/2024	11/21/2024	11/21/2024
Depth to Water (ft btoc)	804.18	804.10	-	806.90	804.92	840.32	835.80	835.80	-	896.85	895.35	-	828.22	817.11	-
Temperature, Field (Deg C)	14.7	17	-	15.9	18.6	15.4	16.9	-	-	20.2	19.3	-	16.0	20	-
Conductivity, Field (μS/cm)	3011	3470	-	4496	3989	3266	3416	-	-	3789	3905	-	3319	3623	-
Turbidity, Field (NTU)	8	0.67	-	3	1.07	5	1.91	-	-	45	8.33	-	5	2.09	-
pH, Field (su)	6.27	6.79	-	6.52	6.81	6.88	6.57	-	-	6.53	6.59	-	6.27	7.07	-
Dissolved Oxygen, Field (mg/L)	1.15	18.8	-	1.64	2.86	6.51	1.28	-	-	2.41	67.7	-	0.75	1.05	-
Oxidation Reduction Potential, Field (mV)	-16.2	-11	-	7.4	9.9	34.6	-38.4	-	-	127.3	60	-	-23.7	-3.4	-
Boron, Total (mg/L)	0.87	0.82	-	1.1	1.1	0.82	0.78	0.8	-	0.78	0.86	-	0.89	0.85	-
Calcium, Total (mg/L)	480	430	-	730	660	510	430	440	-	660	600	-	480	430	-
Chloride (mg/L)	500 J-	500	560	440 J-	460	490 J-	520	510	510	500 J-	540	530	510 J-	550	560
Fluoride (mg/L)	3.6 J-	4.0	4.1	2.4 J-	2.7	2.8 J-	3.1	3.1	3.1	2.8 J-	3.0	3.4	3.0 J-	3.3	3.9
Sulfate (mg/L)	1200 J-	1400	-	1800 J-	2000	1200 J-	1400	1400	-	1600 J-	1800	-	1200 J-	1300	-
pH (lab) (su)	6.7 J	1.7	7.1 J	6.6 J	6.3 J	6.7 J	6.4 J	6.4 J	-	6.7 J	6.5 J	-	6.7 J	6.5 J	-
TDS (mg/L)	3100 J	3700	-	3900 J	4000	3100 J	3200	3200	-	3700 J	3800	-	3100 J	3200	-

Notes:

Bold value: Detection above laboratory reporting limit or minimum detectable concentration (MDC).

J = Estimated value

J- = Estimated value, biased low

μS/cm = micro Siemens per centimeter

Deg C = degrees Celsius

ft btoc = feet below top of casing

mg/L = milligrams per liter

mV = millivolt

N/A = Not Applicable

NTU = Nephelometric Turbidity Unit

pCi/L = picoCuries per liter

su = standard unit

TDS = total dissolved solids

TOC = top of casing



FIGURES











PROPOSED CCR MONITORING WELL, WATER QUALITY ONLY

۲ CCR MONITORING WELL

GROUNDWATER ELEVATION CONTOUR, 25-FT INTERVAL, DASHED WHERE INFERRED

GROUNDWATER FLOW DIRECTION WITH APPROXIMATE FLOW RATE (FEET/YEAR)

ASH LANDFILL BOUNDARY

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.

2. GROUNDWATER ELEVATION INDICATED IN BOLD BLUE TEXT IN FEET ABOVE MEAN SEA LEVEL (AMSL)

3.MONITORING WELL CCR-4D WAS NOT INCLUDED IN THE DATA SET USED TO CREATE THE DISPLAYED GROUNDWATER ELEVATION CONTOURS.

4. THE GROUNDWATER FLOW RATE WAS APPROXIMATED USING THE HYDRAULIC GRADIENT CALCULATED FROM GROUNDWATER POTENTIOMETRIC ELEVATIONS MEASURED FEBRUARY 2024 AND THE CONDUCTIVITY VALUES AND EFFECTIVE POROSITY VALUES OBTAINED FROM PUBLISHED SOURCES.

5. AERIAL IMAGERY SOURCE: ESRI



1,600 800 SCALE IN FEET



TUCSON ELECTRIC POWER COMPANY SPRINGERVILLE GENERATING STATION SPRINGERVILLE, ARIZONA

GROUNDWATER ELEVATION CONTOUR MAP - AUGUST 2024

FEBRUARY 2025

FIGURE 3

ATTACHMENT 1 Alternate Source Demonstration for the Ash Landfill, Springerville Generating Station, Springerville, Arizona



HALEY & ALDRICH, INC. 201 East Washington Street Suite 1795 Phoenix, AZ 85004 602.760.2450

ALTERNATE SOURCE DEMONSTRATION FOR THE ASH LANDFILL SPRINGERVILLE GENERATING STATION SPRINGERVILLE, ARIZONA



for Tucson Electric Power Company Tucson, Arizona

File No. 0208568-003 February 2025







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1. Introduction

Haley & Aldrich, Inc. (Haley & Aldrich) was retained by the Tucson Electric Power Company (TEP) to perform an evaluation of groundwater quality at the Ash Landfill at the Springerville Generating Station (SGS) located in Springerville, Arizona. This alternate source demonstration (ASD) provides a summary of the evaluation completed to identify the source of apparent elevated fluoride concentrations detected in groundwater samples collected from four monitoring wells at the Ash Landfill (three downgradient and one upgradient).

The data presented in this report describes the relationship between the Ash Landfill and groundwater in the uppermost aquifer and summarizes data describing natural variability of groundwater quality in the uppermost aquifer beneath the Ash Landfill. The analysis described herein, demonstrates that the apparent increased fluoride concentration observed downgradient of the Ash Landfill is within the range of observed fluoride concentrations in groundwater upgradient of the Ash Landfill, and is less than the maximum fluoride concentration observed at upgradient monitoring wells. The uppermost aquifer at the Ash Landfill is a regionally extensive C-aquifer, which is comprised of the Kaibab Formation and the Coconino Sandstone.

1.1 BACKGROUND

Consistent with Title 40 Code of Federal Regulations (40 CFR) §257.90 through §257.94, TEP has installed and certified a groundwater monitoring network for the Ash Landfill at SGS and has established groundwater quality prediction limits based on at least eight rounds of groundwater samples for the analysis of Appendix III constituents. TEP has conducted statistical analyses of groundwater quality data to determine if any of the Appendix III constituents are present at downgradient monitoring wells at concentrations that are at statistically significant levels above background concentrations. These analyses have been conducted on a semiannual basis since October 2017.

The statistical evaluation of the Appendix III constituents completed for the August 2024 semiannual detection monitoring sampling event identified apparent statistically significant increases (SSI) at downgradient monitoring wells CCR-1D, CCR-2D, and CCR-3D and upgradient monitoring well CCR-1U. The groundwater monitoring results for fluoride in the Ash Landfill monitoring wells CCR-1D, CCR-2D, and CCR-3D are included in Table I. The analyses described in this report were conducted for the purpose of identifying the source of elevated fluoride concentrations observed at the Ash Landfill.

Pursuant to 40 CFR §257.94(e)(2), *The owner or operator may demonstrate that a source other than the CCR unit caused the statistically significant increase over background levels for a constituent or that the statistically significant increase resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality*. The Rule provides 90 days from determination that an SSI over background exists to complete an Alternative Source Demonstration (ASD) for Appendix III constituents. If a successful demonstration is completed and certified by a qualified professional engineer, the coal combustion residual (CCR) unit may continue in detection monitoring. If, however, an alternate source of the apparent Appendix III SSI is not identified, the owner or operator must initiate an assessment monitoring program within 90 days following the ASD period. This report documents the findings and conclusions of an ASD completed for fluoride at the SGS Ash Landfill.



1.2 SITE SETTING

The Ash Landfill is located approximately 2.5 miles west-southwest of the power plant and encompasses approximately 500 acres. The location of the SGS plant site is shown on Figure 1. The Ash Landfill and associated groundwater monitoring network are shown on Figure 2.

The landfill was not constructed with a composite liner system or leachate collection system. TEP reports that during construction, approximately 5 to 25 feet of existing grades were excavated to remove any unsuitable materials (e.g., loose rock, debris, topsoil, and organics) until the naturally occurring clay layer was encountered. Subgrades were then recompacted to establish a stable and firm clay subbase.

1.3 SITE DESCRIPTION

The Ash Landfill is primarily used for disposal of fly and bottom ash produced by the TEP generating units. A delineated portion of the Ash Landfill is used for the disposal of other items in lesser quantities, i.e., reactivator sludge, construction debris and power plant outage refuse, sump sludge, demineralizer resins, cooling tower sludge, lime, soda ash, sewage pond sludge, evaporation pond solids, miscellaneous pond clean-outs, cooling tower treated lumber, and other inert and non-hazardous materials. TEP is authorized to dispose of these materials in the Ash Landfill under Aquifer Protection Permit (APP) No. P-101448 issued by the Arizona Department of Environmental Quality (ADEQ).



2. Site Geology and Hydrogeology

Hydrogeologic conditions beneath the Ash Landfill have been characterized based on information obtained during installation of monitoring wells as part of the CCR groundwater monitoring network and readily available published geologic information.

2.1 SITE GEOLOGY

The SGS plant site and Ash Landfill are located in the Colorado Plateau physiographic province. The Colorado Plateau is characterized by horizontally and vertically extensive sequences of sedimentary rocks that span more than 200 million years of deposition from the Paleozoic through Mesozoic eras. Many of the sedimentary formations of the Colorado Plateau constitute regional scale hydrogeologic units with widely variable groundwater production and groundwater quality characteristics.

The named lithologic units which underlie the Site include Quaternary Alluvial Deposits, Tertiary/Quaternary volcanic flows, Bidahochi, Chinle, Moenkopi, Kaibab Limestone, and Coconino Sandstone formations. The geologic formations beneath the Ash Landfill are composed of sedimentary rock including sandstone, claystone, and limestone bedrock overlain by surficial alluvial sediments.

The Kaibab Limestone is a regionally extensive limestone formation that contains localized sandstone beds and is locally jointed and fractured. The formation is composed of dense hard cherty limestone that is impermeable unless fractured, and these fractures are much more prevalent in faulted areas (Akers, 1964). Sandstone beds near the base of the Kaibab Limestone are hydraulically connected to the underlying Coconino Sandstone, thus forming a single aquifer. The Kaibab Limestone ranges from approximately 0 to 310 feet thick in the region (Akers, 1964).

The Coconino Sandstone is composed entirely of sandstone with localized occurrence of evaporite minerals. The formation is uniform in composition and quartz grains are bonded with firm to weak siliceous or calcareous cement. The Coconino Sandstone is estimated to be approximately 200 to 400 feet thick in the region (Akers, 1964).

The sedimentary bedrock formations generally dip toward the northeast throughout the region. However, displacement resulting from faulting and associated structural deformation has resulted in a localized dip to the southwest. The most prominent structural geologic features near the site include a regional northwest-trending anticline/fault (Cedar Mesa anticline/fault), the axis of which passes beneath the eastern part of the site, and a fault zone located west of the anticline (Coyote Wash fault). Geologic units on the west side of the anticline are downthrown, and vertical offset along the fault is more than 200 feet. The fault is classified as inactive because no displacement has occurred on the fault during Holocene time.

2.2 SITE HYDROGEOLOGY AND HYDROLOGY

The uppermost aquifer at the SGS Ash Landfill is the regional C-Aquifer which extends throughout much of northeast Arizona. The C-Aquifer is comprised of the Kaibab Limestone and Coconino Sandstone. Well yields in the Coconino Sandstone are documented to be much higher in areas where extensive fractures are present. Hydraulic conductivity and well yield for SGS production wells that are screened within fractured Coconino Sandstone are relatively high, and wells completed in the C-Aquifer are used to provide all water supply for SGS facilities (Montgomery & Associates, 2024).



Depth to groundwater in the uppermost aquifer ranges between 820 and 895 feet below ground surface (bgs) downgradient of the Ash Landfill. Depth to groundwater in the uppermost aquifer upgradient of the Ash Landfill is approximately 805 feet bgs. Groundwater flow in the uppermost aquifer is toward the south-southwest beneath the Ash Landfill. The groundwater flow direction is based on water level observations made at groundwater monitoring wells located upgradient and downgradient of the Ash Landfill.



3. Alternative Source Demonstration

Haley & Aldrich conducted an evaluation of potential alternative sources that included review of sampling procedures, laboratory procedures, and statistical analyses to determine if potential errors may have been made that would result in the apparent SSIs of fluoride downgradient of the Ash Landfill. Haley & Aldrich also evaluated potential point and non-point sources of contamination in the vicinity of the Ash Landfill and evaluated natural geologic conditions. Each of these analyses and the resulting findings are described below.

3.1 REVIEW OF SAMPLING, ANALYSIS, AND STATISTICAL PROCEDURES

3.1.1 Field Sampling Procedures

Confluence Environmental, a consultant of TEP, conducted the field sampling activities in accordance with a Groundwater Sampling and Analysis Program (SAP; Montgomery & Associates, 2016) that was prepared in accordance with 40 CFR §257.93. The SAP prescribes the site-specific activities and methodologies for groundwater sampling and included procedures for field data collection, sample collection, sample preservation and shipment, interpretation, laboratory analytical methods, and reporting for groundwater sampling for the Ash Landfill.

Haley & Aldrich reviewed the field sampling and equipment calibration logs and the field indicator parameters and did not identify any deviations or errors in sampling that would result in a potential SSI for fluoride upgradient and downgradient of the Ash Landfill.

3.1.2 Laboratory Quality Control

The groundwater samples collected downgradient of the Ash Landfill were analyzed using standard analytical methods. The data generated from these laboratory analyses are stored in a project database that incorporates hydrogeologic and groundwater quality data and was established to allow efficient management of chemical and physical data collected in the field and produced in the laboratory. The analytes, analytical methods, sample containers, field preservation, and maximum analytical holding times for monitoring are summarized in the SAP (Montgomery & Associates, 2016).

Haley & Aldrich conducted a quality assurance/quality control (QA/QC) review of each groundwater quality dataset generated for the Ash Landfill August 2024 groundwater sampling event and did not identify any errors that would result in a potential SSI for fluoride downgradient of the Ash Landfill.

3.1.3 Analytical Data

During the February 2024 sampling event, the fluoride concentrations at monitoring wells CCR-1U, CCR-1D, CCR-2D, and CCR-3D were detected at 4.1 milligrams per liter (mg/L), 3.1 mg/L, 3.4 mg/L, and 3.9 mg/L, respectively, which were above their respective upper prediction limits (UPL; Table II); therefore, potential SSIs were recorded. Verification samples for fluoride were collected in October 2024 at the monitoring wells. The results from the August 2024 sampling event were confirmed by the verification samples, and the analytical results were revised to reflect the verification sample results.



A total of 23 groundwater samples, not including duplicates or verification samples, have been collected at each SGS monitoring well since November 2016. All 23 samples were analyzed for fluoride. Fluoride concentrations at upgradient monitoring well CCR-1U are consistently higher than the fluoride concentrations at downgradient monitoring wells CCR-1D, CCR-2D, and CCR-3D (Table II).

3.1.4 Statistical Evaluation

TEP collected groundwater samples from each of the upgradient (CCR-1U and CCR-2U) and downgradient (CCR-1D, CCR-2D, and CCR-3D) monitoring wells at the SGS Ash Landfill in August 2024 pursuant to 40 CFR §§ 257.93 and 257.94 of the CCR Rule. Haley & Aldrich has reviewed the statistical analysis of groundwater quality data for the upgradient and downgradient monitoring wells at the SGS Ash Landfill and has not identified any errors that would result in a potential SSI for fluoride down gradient of the Ash Landfill. The statistical test method used met the performance standard established in the CCR Rule, and the statistical evaluation complies with the requirements of the Rule.

Statistical analysis of the analytical results from the August 2024 semiannual detection monitoring sampling event was completed using the intrawell Prediction Limits statistical method. Intrawell evaluations compare the most recent values from each compliance well against a background dataset composed of historical data from the subject well.

A review of interwell statistical analysis on the August 2024 data set results in a UPL of 3.91 mg/L. Interwell evaluations compare the most recent values from downgradient compliance wells against a background dataset composed of upgradient well data. Fluoride concentrations from the August 2024 semi-annual sampling event at downgradient monitoring wells CCR-1D, CCR-2D, and CCR-3D were below the UPL developed with upgradient (background) analytical data, indicating elevated fluoride concentrations upgradient of the Ash Landfill. Pursuant to 40 CFR 257.91(a)(2), downgradient monitoring wells CCR-1D, CCR-2D, and CCR-3D represent the quality of groundwater passing the downgradient waste boundary of the CCR unit, of which these fluoride concentrations are lower than upgradient (background) fluoride concentrations.

3.2 HISTORICAL LAND USE REVIEW

Haley & Aldrich assessed past usage of the site and adjoining properties through a review of the following records:

- Environmental Data Resources, Inc. (EDR) Aerial Photographs, dated 1953, 1969, 1984, 1996, 2007, 2010, 2015, and 2019 (Appendix A); and
- EDR topographic maps dated 1971, 1984, 2014, 2018, and 2021 (Appendix B).

Unless otherwise noted below, sources were reviewed dating back to 1940 or first developed use, whichever is earlier.

3.2.1 Historical Aerial Photographs

Haley & Aldrich reviewed aerial photographs depicting the development of the site and vicinity, as summarized in Table III. The historical aerial photograph search includes photographs from the United States Geological Survey (USGS; EDR, 2024) and are included in Appendix A.



Photographs suggest that the site was undeveloped in 1953 and was unchanged in 1969. In the 1984 photograph, construction of the Ash Landfill has begun and roads and structures are evident. By 2015, the structures and roads are in near current configuration with only slight variations compared to present. By 2019, the structures and roads are in their current configuration.

3.2.2 Historical Topographic Maps

Haley & Aldrich reviewed historical topographic maps depicting the development of the site and vicinity, as summarized in Table IV. The historical topographic maps from the USGS (EDR, 2024) are included in Appendix B.

3.3 POTENTIAL POINT AND NON-POINT SOURCES

Haley & Aldrich conducted a review of potential point and non-point sources of fluoride contamination in the vicinity of the SGS Ash Landfill to determine if previous or adjacent site activities, land uses, or practices could be associated with elevated fluoride concentrations occurring downgradient of the Ash Landfill. Potential point sources of fluoride could include naturally occurring or anthropogenic contributions associated with discharges or other activities occurring at a discrete location in the vicinity of the apparent SSI. Non-point sources could include diffuse discharging activities or practices (naturally occurring or anthropogenic) that may result in a low level but widespread increase in fluoride concentrations, which may be detected at the downgradient side of the SGS Ash Landfill.

3.3.1 Point Sources

Prior to construction of the SGS Ash Landfill, the landfill site and surrounding vicinity was undeveloped range land. Review of historical topographic maps and aerial photos shows no structures or other man-made features at the landfill site prior to construction of the SGS plant. No known industrial, agricultural, mining, or other activities were conducted at the Ash Landfill site that would potentially constitute a historical point source and result in elevated concentrations of fluoride in groundwater. No current or historical point sources have been identified as a potential ASD for the apparent fluoride SSIs at the Ash Landfill.

3.3.2 Non-Point Sources

No agricultural, mining, industrial, or other activities have been documented in the vicinity of the Ash Landfill that might constitute a non-point source of fluoride at the location of the apparent SSI. Records reviewed included historical aerial photographs and historical topographic maps showing past anthropogenic activities at the Site.

3.4 NATURAL VARIABILITY OF GROUNDWATER QUALITY

3.4.1 Groundwater Flow Direction

A review of groundwater elevations from the August 2024 semiannual sampling event confirms that CCR-1U and CCR-2U are located hydraulically upgradient of the Ash Landfill (Figure 2). Elevated concentrations of CCR constituents at the upgradient monitoring wells are the result of natural variability within the aquifer.



3.4.2 Regional Water Quality Data

The CCR Rule does not specifically include characterization of groundwater quality variability beyond the site boundaries, or in relation to regional groundwater quality trends and variability; however, the regional groundwater quality trends are important to consider for the SGS conceptual site model as they play a contributing role in understanding site-specific groundwater quality trends and disposition. Numerous studies summarize the variability in groundwater quality within the C-Aquifer in northern Arizona. Haley & Aldrich reviewed available data and information describing aquifer conditions and geologic conditions in the region.

Akers (1964) reported fluoride concentrations ranging from 0.4 to 5.4 mg/L in central Apache County indicating that the groundwater quality variability of fluoride at the Ash Landfill is naturally occurring at concentrations observed throughout the region where the uppermost aquifer occurs.

Haley & Aldrich conducted a search of the U.S. Environmental Protection Agency (USEPA) and USGS Water Quality Portal (WQP) database for publicly available data describing groundwater quality within the C-Aquifer, specifically the Kaibab and Coconino water bearing units of the aquifer. Fluoride concentrations in the Kaibab Formation in Apache County ranged from 0.2 mg/L to 4.7 mg/L at 40 wells located within 30 miles of SGS (Appendix C). Water quality data from SGS production wells completed in the C-Aquifer have variable fluoride concentrations spanning more than an order of magnitude in concentration and are within the range of fluoride values observed in the regional C-aquifer.

As discussed in Section 2, the Kaibab Formation is in hydraulic communication with the Coconino Sandstone forming a single aquifer beneath the SGS site. The fluoride concentrations reported in the WQP occur in the same aquifer where monitoring wells CCR-1U, CCR-1D, CCR-2D, and CCR-3D are screened, and therefore, these wells are in hydraulic communication with the fluoride source identified.



4. Findings and Conclusions

Haley & Aldrich conducted an evaluation of groundwater quality at the SGS Ash Landfill to identify the source of the apparent fluoride SSIs observed in downgradient monitoring wells CCR-1D, CCR-2D, and CCR-3D. The evaluation included review of sampling procedures, laboratory procedures, and statistical analyses to determine if potential errors may have been made that would result in the apparent fluoride SSIs. Haley & Aldrich also evaluated potential point and non-point sources of contamination in the vicinity of the Ash Landfill and evaluated natural geologic conditions and the effect of those conditions on native groundwater chemistry.

Haley & Aldrich found no errors in sampling, laboratory analysis, data management, or statistical analysis that would result in potential fluoride SSIs downgradient of the Ash Landfill. Haley & Aldrich found no apparent evidence of historical point or non-point sources (neither naturally occurring nor anthropogenic) of potential fluoride values in the vicinity of the Ash Landfill.

Haley & Aldrich evaluated data and information describing the water quality variability of groundwater in the uppermost aquifer at the Ash Landfill and confirmed statistical analyses of fluoride concentrations at the monitoring wells. Key findings regarding the fluoride in groundwater at the Ash Landfill are summarized below:

- Fluoride concentrations upgradient of the Ash Landfill remain elevated compared to downgradient fluoride concentrations.
- Statistical analyses completed using interwell evaluation confirms that fluoride concentrations passing the waste boundary at downgradient monitoring wells CCR-1D, CCR-2D, and CCR-3D are below background concentrations observed at upgradient monitoring well data.
- Groundwater elevations from the August 2024 semiannual sampling event confirms that CCR-1U and CCR-2U are located hydraulically upgradient of the Ash Landfill. Elevated concentrations of fluoride at the upgradient monitoring wells can be attributed to natural variability within the aquifer.
- The maximum fluoride concentrations observed at wells CCR-1D, CCR-2D, and CCR-3D downgradient of the Ash Landfill are lower than reported regional concentrations for wells completed in the Kaibab Formation within the region (USEPA, 2025). The Kaibab Formation and Coconino Sandstone function as one aquifer at the SGS site; therefore, the Ash Landfill monitoring wells are in hydraulic communication with the fluoride source identified. Water quality data from SGS production wells completed in the C-Aquifer have variable fluoride concentrations spanning more than an order of magnitude in concentration and are within the range of fluoride values observed in the regional C-aquifer.

Pursuant to 40 CFR §257.94(e)(2) and based on these findings, the fluoride concentrations detected in the groundwater at the Ash Landfill monitoring wells CCR-1D, CCR-2D, and CCR-3D in August 2024 are not attributed to the Ash Landfill; rather, they are attributed to natural variability within the aquifer. Haley & Aldrich will continue to monitor the groundwater quality passing the waste boundary at the Ash Landfill to confirm the findings documented herein.

Based on the data, information, research, and analyses presented in this document, Haley & Aldrich concludes that the source of fluoride resulting in apparent SSIs at downgradient monitoring wells CCR-1D, CCR-2D, and CCR-3D is natural groundwater quality variability.


References

- 1. Akers, J. P., 1964. Geology and ground water in the central part of Apache County, Arizona: U.S. Geological Survey Water-Supply Paper 1771.
- 2. Environmental Data Resources, Inc., 2024. The EDR Aerial Photo Decade Package. 27 December.
- 3. Environmental Data Resources, Inc., 2024. The EDR Historical Topo Map Report. 27 December.
- 4. Montgomery & Associates, 2016. Groundwater Sampling and Analysis Program, Springerville Generating Station, Apache County, Arizona. June.
- 5. Montgomery & Associates, 2024. Hydrogeologic Monitoring Program 2023 2024, Springerville Generating Station. October.
- 6. U.S. Environmental Protection Agency, 2025. Water Quality Portal. https://www.epa.gov/waterdata/water-quality-data. Accessed 31 January.



TABLES

TABLE I

SUMMARY OF ANALYTICAL FLUORIDE RESULTS

TUCSON ELECTRIC POWER

SPRINGERVILLE GENERATING STATION, ASH LANDFILL

SPRINGERVILLE, ARIZONA

	Fluoride (mg/L)				
	Upgradient		Downgradient		t
Sample Date	CCR-1U	CCR-2U	CCR-1D	CCR-2D	CCR-3D
11/15/2016	2.89	2.41	2.86	2.51	2.74
12/20/2016	2.96	2.45	1.92	1.75	2.1
1/31/2017	2.71	2.13	2.75	2.39	2.88
2/21/2017	2.78	2.12	2.77	2.4	2.84
3/28/2017	2.81	2.12	2.68	2.43	2.86
4/27/2017	3.08	2.65	2.88	2.8	3.12
5/23/2017	2.83	2.18	2.75	2.45	2.89
6/21/2017	2.89	2.34	2.8	2.77	2.99
7/18/2017	3.05	2.62	2.35	2.84	3.05
2/27/2018	3.1	2.5	2.8	2.7	3.1
8/20/2018	3	2.5	-	2.7	3
10/10/2018 (Verification Sample)	-	-	3	-	-
2/26/2019	2.9	2.3	2.8	2.5	2.9
8/20/2019	3.1	2.3	2.8	2.4	3
2/25/2020	2.8	2.2	2.8	2.4	2.8
8/26/2020	3.3	2.6	3	2.7	3.2
2/23/2021	3.1	2.3	2.9	2.5	3.1
8/24/2021	3.3	2.5	2.9	2.8	3
3/1/2022	3.3	2.4	2.8	2.8	3.1
9/7/2022	3.3	2.2	2.8	2.5	3.1
2/20/2023	3.3	2.5	3	2.8	3
8/22/2023	3.59	2.43	2.86	2.71	3.02
10/11/2023 (Verification Sample)	3.7	-	-	-	-
2/20/2024	3.6 J-	2.4 J-	2.8 J-	2.8 J-	3.0 J-
8/13/2024	4.0	2.7	3.1	3.0	3.3
10/10/2024 (Verification Sample) ¹	4.1	-	3.1	3.4	3.9

Notes:

¹ Verification samples for fluoride were collected in October 2024 at the monitoring wells CCR-1U, CCR-1D, CCR-2D, and CCR-3D. The results from the August 2024 sampling event were confirmed by the verification samples, and the analytical results were revised to reflect the verification sample results.

J- = Estimated value, biased low

- = not applicable

mg/L = milligrams per liter



TABLE IISSI SUMMARY TABLETUCSON ELECTRIC POWER COMPANY

SPRINGERVILLE GENERATING STATION, ASH LANDFILL SPRINGERVILLE, ARIZONA

Constituent	Sampling Event	Well ID	August 2024 (mg/L) ¹	Background Concentration Intrawell (mg/L)	Background Concentration Interwell (mg/L)
Fluoride	August 2024	CCR-1U	4.1	3.7	N/A ²
		CCR-1D	3.1	3.0	3.91
		CCR-2D	3.4	2.8	3.91
		CCR-3D	3.9	3.2	3.91

Notes:

¹ Results from verificaiton sample collected in October 2024

² Interwell evaluations compare the most recent values from downgradient compliance wells against a background dataset composed of upgradient well data. Therefore, an interwell background concentration is not applicable for upgradient monitoring wells.

mg/L = milligrams per liter

N/A = Not Applicable

SSI = statistically significant increase



TABLE IIIHISTORICAL AERIAL PHOTOGRAPH REVIEW SUMMARYSPRINGERVILLE GENERATING STATION - ASH LANDFILLSPRINGERVILLE, ARIZONA

Dates	Description of Site	Sources
1969 - 1984	First development of roads and Ash Landfill starting to be developed.	Aerial photo USGS
1984 - 1996	Development of eastern portion of Ash Landfill. Eastern boundaries similar to current landfill extent.	Aerial photo USGS / DOQQ
1996 - 2007	Continued development of the Ash Landfill.	Aerial photo USGS / NAIP
2007 - 2010	Continued development of the Ash Landfill.	Aerial photo USGS / NAIP
2010 - 2015	Extension of the Ash Landfill.	Aerial photo USGS / NAIP
2019 - 2019	Extension of the Ash Landfill. Roads, structures, and Ash Landfill at current extent.	Aerial photo USGS / NAIP

Notes:

DOQQ = Digital Orthophoto Quadrangle

NAIP = National Agricultural Imagery Program

USDA = United States Department of Agriculture

USGS = United States Geological Survey



TABLE IVHISTORICAL TOPOGRAPHIC MAP REVIEW SUMMARYSPRINGERVILLE GENERATING STATION - ASH LANDFILLSPRINGERVILLE, ARIZONA

Dates	Description of Site and Adjacent Properties	Map Name
1971	Site appears undeveloped, with some small roads present in the vicinity of and through the current Ash Landfill extent. Water tanks and a well are present to the northwest; a river or stream is present through the northern area, and several small water features are present south of the current extent of the Ash Landfill.	USGS Topographic Map 7.5-Minute Series Voigt Ranch Lyman Lake
1984	Development of county road 4265	USGS Topographic Map 7.5-Minute Series Voigt Ranch Lyman Lake
2014 - 2018	No observable change	USGS Topographic Map 7.5-Minute Series Voigt Ranch Lyman Lake
2021	Removal of access roads present within current extent of Ash Pond.	USGS Topographic Map 7.5-Minute Series Voigt Ranch Lyman Lake

Notes:

USGS = United States Geological Survey



FIGURES





PROPOSED CCR MONITORING WELL, WATER QUALITY ONLY

۲ CCR MONITORING WELL

GROUNDWATER ELEVATION CONTOUR, 25-FT INTERVAL, DASHED WHERE INFERRED

GROUNDWATER FLOW DIRECTION WITH APPROXIMATE FLOW RATE (FEET/YEAR)

ASH LANDFILL BOUNDARY L

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.

2. GROUNDWATER ELEVATION INDICATED IN BOLD BLUE TEXT IN FEET ABOVE MEAN SEA LEVEL (AMSL)

3.MONITORING WELL CCR-4D WAS NOT INCLUDED IN THE DATA SET USED TO CREATE THE DISPLAYED GROUNDWATER ELEVATION CONTOURS.

4. THE GROUNDWATER FLOW RATE WAS APPROXIMATED USING THE HYDRAULIC GRADIENT CALCULATED FROM GROUNDWATER POTENTIOMETRIC ELEVATIONS MEASURED FEBRUARY 2024 AND THE CONDUCTIVITY VALUES AND EFFECTIVE POROSITY VALUES OBTAINED FROM PUBLISHED SOURCES.

5. AERIAL IMAGERY SOURCE: ESRI



1,600 800 SCALE IN FEET



TUCSON ELECTRIC POWER COMPANY SPRINGERVILLE GENERATING STATION SPRINGERVILLE, ARIZONA

GROUNDWATER ELEVATION CONTOUR MAP - AUGUST 2024

FEBRUARY 2025

FIGURE 2

APPENDIX A EDR Historical Aerial Photograph Report

Springerville Generating Station

1200 County Road 4162 Saint Johns, AZ 85936

Inquiry Number: 7857799.2 December 27, 2024

The EDR Aerial Photo Decade Package



6 Armstrong Road, 4th floor Shelton, CT 06484 Toll Free: 800.352.0050 www.edrnet.com

Site Name:

Client Name:

er Ave Suite 100

12/27/24

Springerville Generating Station 1200 County Road 4162 Saint Johns, AZ 85936 EDR Inquiry # 7857799.2

Haley & Aldrich 600 South Meyer Ave Suite 100 Tucson, AZ 85701-0000 Contact: Samantha Kaney



Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:

Year	Scale	Details	Source
2019	1"=1375'	Flight Year: 2019	USDA/NAIP
2015	1"=1375'	Flight Year: 2015	USDA/NAIP
2010	1"=1375'	Flight Year: 2010	USDA/NAIP
2007	1"=1375'	Flight Year: 2007	USDA/NAIP
1996	1"=1375'	Acquisition Date: May 31, 1996	USGS/DOQQ
1984	1"=1375'	Flight Date: June 08, 1984	USGS
1969	1"=1375'	Flight Date: June 21, 1969	USGS
1953	1"=1375'	Flight Date: November 30, 1953	USGS

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APPENDIX B EDR Historical Topographic Photograph Report Springerville Generating Station 1200 County Road 4162 Saint Johns, AZ 85936

Inquiry Number: 7857799.1 December 27, 2024

EDR Historical Topo Map Report with QuadMatch™



6 Armstrong Road, 4th floor Shelton, CT 06484 Toll Free: 800.352.0050 www.edrnet.com

EDR Historical Topo Map Report

Site Name:

Springerville Generating Station

1200 County Road 4162

EDR Inquiry # 7857799.1

Saint Johns, AZ 85936

Client Name:

Haley & Aldrich 600 South Meyer Ave Suite 100 Tucson, AZ 85701-0000 Contact: Samantha Kaney



12/27/24

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by Haley & Aldrich were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

Search Resi	ults:	Coordinates:	
P.O.#	0208568-003	Latitude:	34.304345 34° 18' 16" North
Project:	TEP SGS	Longitude:	-109.23275 -109° 13' 58" West
-		UTM Zone:	Zone 12 North
		UTM X Meters:	662626.85
		UTM Y Meters:	3797315.77
		Elevation:	6789.93' above sea level
Maps Provid	led:		
2021			
2018			
2014			
1984			

1971

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Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

2021 Source Sheets





Voigt Ranch 2021 7.5-minute, 24000

Lyman Lake 2021 7.5-minute, 24000

2018 Source Sheets



Voigt Ranch 2018 7.5-minute, 24000

Lyman Lake 2018 7.5-minute, 24000

2014 Source Sheets



Voigt Ranch 2014 7.5-minute, 24000



Lyman Lake 2014 7.5-minute, 24000

1984 Source Sheets



Lyman Lake 1984 7.5-minute, 24000 Aerial Photo Revised 1982



Voigt Ranch 1984 7.5-minute, 24000 Aerial Photo Revised 1982

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1971 Source Sheets



Voigt Ranch 1971 7.5-minute, 24000 Aerial Photo Revised 1969



Lyman Lake 1971 7.5-minute, 24000 Aerial Photo Revised 1969









2021

7857799 - 1 page 5







Saint Johns, AZ 85936

Haley & Aldrich

CLIENT:













Saint Johns, AZ 85936

Haley & Aldrich

CLIENT:







APPENDIX C Regional Fluoride Groundwater Results

APPENDIX C REGIONAL FLUORIDE GROUNDWATER RESULTS

Sample Date	Location Identifier	Fluoride Result
Sample Date		(mg/L)
4/7/1977	USGS-343646109093101	4.7
5/21/1975	USGS-343646109093101	4.2
9/20/1977	USGS-343646109093101	4.1
6/20/1946	USGS-343618109241101	3.6
9/17/1975	USGS-343155109240501	3.4
9/20/1977	USGS-343414109142001	3.4
5/11/1978	USGS-343414109142001	3.4
9/13/1978	USGS-343414109142001	3.4
10/20/1982	USGS-343414109142001	3.4
2/22/1975	USGS-343204109275201	3.3
9/9/1976	USGS-343414109142001	3.3
11/17/1966	USGS-343020109214001	3.2
5/21/1975	USGS-343521109073001	3.2
7/15/1955	USGS-342158109225901	3.1
2/25/1975	USGS-343020109214001	3.1
4/10/1979	USGS-343414109142001	3.1
2/7/1975	USGS-343025109262501	3.0
9/17/1975	USGS-343414109142001	3.0
4/14/1976	USGS-343414109142001	3.0
4/7/1977	USGS-343414109142001	3.0
3/20/1975	USGS-342348109185001	2.8
1/7/1975	USGS-342431109244601	2.7
4/13/1976	USGS-344206109092901	2.7
1/17/1975	USGS-342148109222901	2.6
4/7/1977	USGS-344206109092901	2.5
1/8/1975	USGS-342203109230601	2.4
3/21/1975	USGS-342703109242001	2.4
2/24/1975	USGS-343501109285001	2.4
3/25/1986	USGS-342946109133501	2.4
5/4/1959	USGS-343026109281501	2.3
5/26/1955	USGS-343034109212701	2.3
3/20/1975	USGS-342728109152201	2.3
5/20/1975	USGS-342244109092501	2.3
3/19/1975	USGS-342207109151801	2.3
7/31/1975	USGS-344206109092901	2.3
4/6/1977	USGS-342946109133501	2.3
9/20/1977	USGS-344206109092901	2.3
4/7/1977	USGS-343439109270301	2.3
9/11/1979	USGS-342946109133501	2.3
9/12/1979	USGS-343439109270301	2.3
3/18/1975	USGS-342856109211501	2.2
3/20/1975	USGS-342957109052701	2.2



3/18/1975	USGS-343010109215201	2.2
9/9/1976	USGS-342946109133501	2.2
4/15/1981	USGS-342946109133501	2.2
10/25/1982	USGS-343439109270301	2.2
3/18/1987	USGS-342946109133501	2.2
3/17/1975	USGS-343536109312601	2.1
9/25/1981	USGS-343439109270301	2.1
10/13/1983	USGS-343439109270301	2.1
10/8/1986	USGS-343439109270301	2.1
5/21/1975	USGS-343947109092501	2.0
3/19/1975	USGS-342110109045801	2.0
3/20/1975	USGS-342633109070601	2.0
4/15/1981	USGS-343439109270301	2.0
3/24/1986	USGS-343439109270301	2.0
9/23/1987	USGS-343439109270301	2.0
3/18/1975	USGS-343027109201101	1.9
4/14/1976	USGS-343439109270301	1.9
4/30/1980	USGS-343439109270301	1.9
9/21/1984	USGS-343439109270301	1.9
3/15/1988	USGS-343439109270301	1.9
5/20/1975	USGS-342500109091101	1.8
3/19/1975	USGS-341807109084101	1.8
3/19/1975	USGS-341818109061501	1.8
9/9/1976	USGS-343439109270301	1.8
3/24/1982	USGS-343439109270301	1.8
10/10/1985	USGS-343439109270301	1.8
3/18/1987	USGS-343439109270301	1.8
3/20/1975	USGS-342946109133501	1.7
4/13/1976	USGS-342946109133501	1.7
4/10/1979	USGS-342946109133501	1.7
4/11/1984	USGS-343439109270301	1.7
9/12/1975	USGS-343439109270301	1.6
7/2/1975	USGS-343802109293401	1.6
4/9/1979	USGS-343439109270301	1.6
2/7/1975	USGS-342949109253301	1.3
3/18/1975	USGS-343034109212701	1.2
3/20/1975	USGS-342904109165201	1.2
9/12/1947	USGS-344650109114501	1.15
3/17/1975	USGS-343824109324901	0.8
4/8/1977	USGS-343623109403201	0.7
9/25/1987	USGS-343623109403201	0.7
9/21/1977	USGS-343623109403201	0.6
9/11/1975	USGS-343623109403201	0.5
3/5/1975	USGS-343623109403201	0.5
		-



5/12/1978	USGS-343623109403201	0.5
9/14/1978	USGS-343623109403201	0.5
9/13/1979	USGS-343623109403201	0.5
3/24/1982	USGS-343623109403201	0.5
9/21/1984	USGS-343623109403201	0.5
4/14/1976	USGS-343623109403201	0.4
4/10/1979	USGS-343623109403201	0.4
4/30/1980	USGS-343623109403201	0.4
4/16/1981	USGS-343623109403201	0.4
10/25/1982	USGS-343623109403201	0.4
10/14/1983	USGS-343623109403201	0.4
4/11/1984	USGS-343623109403201	0.4
8/20/1985	USGS-342148109222901	0.4
10/8/1985	USGS-343623109403201	0.4
3/24/1986	USGS-343623109403201	0.4
3/17/1987	USGS-343623109403201	0.4
3/15/1988	USGS-343623109403201	0.4
9/25/1981	USGS-343623109403201	0.3
9/14/1978	USGS-343439109270301	0.2

Notes:

mg/L = milligrams per liter

USGS = United States Geological Survey

ATTACHMENT 2 Laboratory Analytical Reports ATTACHMENT 2-1 February 2024 Semiannual Sampling Event Laboratory Analytical Report


Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Jeff Foster Tucson Electric Power PO BOX 2222 Springerville, Arizona 85938 Generated 4/24/2024 3:20:36 PM Revision 1

JOB DESCRIPTION

SGS Semi- Annual SGS

JOB NUMBER

550-214603-1

Eurofins Phoenix 4625 East Cotton Center Boulevard Suite #189 Phoenix AZ 85040





Eurofins Phoenix

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 Environment Testing Southwest, LLC Project Manager.

Authorization

Authorized for release by Emily Petrunia, Project Manager I Emily.Petrunia@et.eurofinsus.com (602)659-7629 Generated

Revision 1

4/24/2024 3:20:36 PM

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Qualifiers

HPLC/IC	
Qualifier	Qualifier Description
D2	Sample required dilution due to high concentration of analyte.
D5	Minimum Reporting Limit (MRL) adjusted due to sample dilution; analyte was non-detect in the sample.
E2	Concentration estimated. Analyte exceeded calibration range. Reanalysis not performed due to sample matrix.
E8	Analyte reported to MDL per project specification. Target analyte was not detected in the sample.
H1	Sample analysis performed past holding time.
M1	Matrix spike recovery was high, the associated blank spike recovery was acceptable.
M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The associated blank spike was acceptable.
Metals	
Qualifier	Qualifier Description
E4	Concentration estimated. Analyte was detected below laboratory minimum reporting level (MRL) but above MDL.
E8	Analyte reported to MDL per project specification. Target analyte was not detected in the sample.
M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The associated blank spike was acceptable.
General Ch	nemistry second s
Qualifier	Qualifier Description
D1	Sample required dilution due to matrix.
E8	Analyte reported to MDL per project specification. Target analyte was not detected in the sample.
H1	Sample analysis performed past holding time.

H5 This test is specified to be performed in the field within 15 minutes of sampling; sample was received and analyzed past the regulatory holding time.

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)

Definitions/Glossary

Client: Tucson Electric Power Project/Site: SGS Semi- Annual Job ID: 550-214603-1 SDG: SGS

Glossary (Continued)

Glossary	(Continued)		R
Abbreviation	These commonly used abbreviations may or may not be present in this report.		
RL	Reporting Limit or Requested Limit (Radiochemistry)		
RPD	Relative Percent Difference, a measure of the relative difference between two points		
TEF	Toxicity Equivalent Factor (Dioxin)		5
TEQ	Toxicity Equivalent Quotient (Dioxin)		
TNTC	Too Numerous To Count		
		8	8
		9	9
		1	3

Job ID: 550-214603-1

Eurofins Phoenix

Job Narrative 550-214603-1

REVISION

The report being provided is a revision of the original report sent on 3/13/2024. The report (revision 1) is being revised due to Client emailed and requested the reanalysis results be included on one single report.

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to
 demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the
 method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 2/22/2024 7:56 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.3°C.

HPLC/IC

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

Metals

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

General Chemistry

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

Job ID: 550-214603-2

Eurofins Phoenix

Job Narrative 550-214603-2

REVISION

The report being provided is a revision of the original report sent on 4/11/2024. The report (revision 1) is being revised due to Client emailed and requested the reanalysis results be included on one single report.

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to
 demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the
 method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 2/22/2024 7:56 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.3°C.

HPLC/IC

Method 300_ORGFMS: Reanalysis of the following samples were performed outside of the analytical holding time due to client request for confirmation of previous results : CCR-1D (550-214603-1), CCR-2U (550-214603-2), CCR-1U (550-214603-3), CCR-3D (550-214603-4) and CCR-2D (550-214603-5). Samples are qualified with an H1 flag.

Method 300_ORGFMS: Reanalysis of the following samples were performed outside of the analytical holding time due to client request for reanalysis : CCR-1D (550-214603-1), CCR-2U (550-214603-2), CCR-1U (550-214603-3), CCR-3D (550-214603-4) and CCR-2D (550-214603-5).

Method 300_ORGFMS: These samples were rerun per client request for confirmation of previous results. for fluoride, original and secondary run confirm except for sample 5; reruns confirm with each other. For chloride reruns confirmed with each other but not with original. For sulfate, reruns confirmed with each other but not with the original run, except for sample 2. Cause is most likely a dilution error was committed during the initial run.

CCR-1D (550-214603-1), CCR-2U (550-214603-2), CCR-1U (550-214603-3), CCR-3D (550-214603-4) and CCR-2D (550-214603-5)

Method 300_ORGFMS: These samples were rerun per client request for confirmation of previous results. for fluoride, original and secondary run confirm except for sample 5; reruns confirm with each other. For chloride reruns confirmed with each other but not with original. For sulfate, reruns confirmed with each other but not with the original run, except for sample 2. Cause is most likely a dilution error was committed during the initial run.

CCR-1D (550-214603-1), CCR-2U (550-214603-2), CCR-1U (550-214603-3), CCR-3D (550-214603-4) and CCR-2D (550-214603-5)

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

Metals

Method 200.7_CWA: At the request of the client the following samples were prepared and reanalyzed to confirm or deny the calcium results. All results confirm with the original run data.

CCR-1D (550-214603-1), CCR-2U (550-214603-2), CCR-1U (550-214603-3), CCR-3D (550-214603-4) and CCR-2D (550-214603-5)

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

Job ID: 550-214603-2 (Continued)

General Chemistry

Method 2540C_Calcd: The following samples were reanalyzed in duplicate for data quality review at the client's request. CCR-1D (550-214603-1), CCR-2U (550-214603-2), CCR-1U (550-214603-3), CCR-3D (550-214603-4) and (550-214603-A-2 DU). All analyses confirmed initial results.

Method 2540C_Calcd: The following sample was reanalyzed in duplicate for data quality review at the client's request: 550-214603-5. Analyses confirmed with one another, but did not confirm the initial result. The initial result reported from batch 550-316469 was approximately double the current confirmed duplicate results. The most likely explanation is that on the first analysis the sample was mistakenly not diluted as according to procedure based on the conductivity, but the dilution factor was erroneously added to the batch.

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

Job ID: 550-214603-1

Eurofins Phoenix

Sample Summary

Client: Tucson Electric Power Project/Site: SGS Semi- Annual

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
550-214603-1	CCR-1D	Water	02/20/24 09:20	02/22/24 07:56
550-214603-2	CCR-2U	Water	02/20/24 10:40	02/22/24 07:56
550-214603-3	CCR-1U	Water	02/20/24 12:15	02/22/24 07:56
550-214603-4	CCR-3D	Water	02/20/24 14:20	02/22/24 07:56
550-214603-5	CCR-2D	Water	02/21/24 13:20	02/22/24 07:56

Client Sample ID: CCR-1D

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D Method	Prep Type
Fluoride	3.1		0.40	0.047	mg/L	1	300.0	Total/NA
Fluoride	2.8	H1	0.40	0.047	mg/L	1	300.0	Total/NA
Fluoride	2.8	H1	0.40	0.047	mg/L	1	300.0	Total/NA
Sulfate	1200	D2 H1	20	4.3	mg/L	10	300.0	Total/NA
Chloride	490	D2 H1	20	5.2	mg/L	10	300.0	Total/NA
Boron	0.82		0.050	0.0025	mg/L	1	200.7 Rev 4.4	Total/NA
Calcium	480		2.0	0.013	mg/L	1	200.7 Rev 4.4	Total/NA
Calcium	510		2.0	0.013	mg/L	1	200.7 Rev 4.4	Total/NA
Calcium	510		2.0	0.013	mg/L	1	200.7 Rev 4.4	Total/NA
Total Dissolved Solids	3200		40	40	mg/L	1	SM 2540C	Total/NA
Total Dissolved Solids	3100	D1 H1	40	40	mg/L	1	SM 2540C	Total/NA
Total Dissolved Solids	3100	D1 H1	40	40	mg/L	1	SM 2540C	Total/NA

1.7

1.7 SU

6.7 H5

Client Sample ID: CCR-2U

pН

Lab Sample ID: 550-214603-2

Lab Sample ID: 550-214603-3

Lab Sample ID: 550-214603-4

SM 4500 H+ B

Total/NA

1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	2.7		0.40	0.047	mg/L	1	_	300.0	Total/NA
Fluoride	2.4	H1	0.40	0.047	mg/L	1		300.0	Total/NA
Fluoride	2.4	H1	0.40	0.047	mg/L	1		300.0	Total/NA
Sulfate	1700	D2	200	43	mg/L	100		300.0	Total/NA
Sulfate	1800	D2 H1	20	4.3	mg/L	10		300.0	Total/NA
Chloride	440	D2 H1	20	5.2	mg/L	10		300.0	Total/NA
Boron	1.1		0.050	0.0025	mg/L	1		200.7 Rev 4.4	Total/NA
Calcium	710		2.0	0.013	mg/L	1		200.7 Rev 4.4	Total/NA
Calcium	760		2.0	0.013	mg/L	1		200.7 Rev 4.4	Total/NA
Calcium	730		2.0	0.013	mg/L	1		200.7 Rev 4.4	Total/NA
Total Dissolved Solids	4100		40	40	mg/L	1		SM 2540C	Total/NA
Total Dissolved Solids	3900	D1 H1	40	40	mg/L	1		SM 2540C	Total/NA
рН	6.6	H5	1.7	1.7	SU	1		SM 4500 H+ B	Total/NA

Client Sample ID: CCR-1U

Analyte **Result Qualifier** RL MDL Unit Dil Fac D Method Prep Type Fluoride 4.0 0.40 0.047 mg/L 1 300.0 Total/NA Fluoride 3.6 H1 0.40 0.047 mg/L 1 300.0 Total/NA Fluoride 3.6 H1 0.40 0.047 mg/L 1 300.0 Total/NA 4.3 mg/L Sulfate 300.0 Total/NA 1200 D2 H1 20 10 Chloride 500 D2 H1 20 5.2 mg/L 10 300.0 Total/NA Boron 0.87 0.050 0.0025 mg/L 200.7 Rev 4.4 Total/NA 1 Calcium 0.013 mg/L 200.7 Rev 4.4 Total/NA 500 2.0 1 Calcium 470 2.0 0.013 mg/L 1 200.7 Rev 4.4 Total/NA Calcium 480 2.0 0.013 mg/L 200.7 Rev 4.4 Total/NA 1 3100 40 SM 2540C Total/NA Total Dissolved Solids 40 mg/L 1 Total Dissolved Solids 3100 D1 H1 40 40 mg/L 1 SM 2540C Total/NA Total Dissolved Solids 3100 D1 H1 40 40 mg/L 1 SM 2540C Total/NA SM 4500 H+ B 6.7 H5 1.7 1.7 SU 1 Total/NA pН

Client Sample ID: CCR-3D

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	F	Prep Type
Fluoride	3.3		0.40	0.047	mg/L	1	_	300.0	T T	fotal/NA

This Detection Summary does not include radiochemical test results.

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Lab Sample ID: 550-214603-1

Client Sample ID: CCR-3D (Continued)

5 6 7

Lab Sample ID: 550-214603-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	2.9	H1	0.40	0.047	mg/L	1	_	300.0	Total/NA
Fluoride	3.0	H1	0.40	0.047	mg/L	1		300.0	Total/NA
Sulfate	1200	D2 H1	20	4.3	mg/L	10		300.0	Total/NA
Chloride	510	D2 H1	20	5.2	mg/L	10	10 300.0		Total/NA
Boron	0.89		0.050	0.0025	mg/L	1		200.7 Rev 4.4	Total/NA
Calcium	480		2.0	0.013	mg/L	1		200.7 Rev 4.4	Total/NA
Calcium	470		2.0	0.013	mg/L	1		200.7 Rev 4.4	Total/NA
Calcium	480		2.0	0.013	mg/L	1		200.7 Rev 4.4	Total/NA
Total Dissolved Solids	3200		40	40	mg/L	1		SM 2540C	Total/NA
Total Dissolved Solids	3100	D1 H1	40	40	mg/L	1		SM 2540C	Total/NA
Total Dissolved Solids	3100	D1 H1	40	40	mg/L	1		SM 2540C	Total/NA
рН	6.7	H5	1.7	1.7	SU	1		SM 4500 H+ B	Total/NA

Client Sample ID: CCR-2D

Lab Sample ID: 550-214603-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac D	Method	Prep Type
Fluoride	2.8	H1	0.40	0.047	mg/L	1	300.0	Total/NA
Fluoride	2.8	H1	0.40	0.047	mg/L	1	300.0	Total/NA
Sulfate	1600	D5 H1	20	4.3	mg/L	10	300.0	Total/NA
Chloride	500	D2 H1	20	5.2	mg/L	10	300.0	Total/NA
Boron	0.78		0.050	0.0025	mg/L	1	200.7 Rev 4.4	Total/NA
Calcium	570		2.0	0.013	mg/L	1	200.7 Rev 4.4	Total/NA
Calcium	640		2.0	0.013	mg/L	1	200.7 Rev 4.4	Total/NA
Calcium	660		2.0	0.013	mg/L	1	200.7 Rev 4.4	Total/NA
Total Dissolved Solids	3600	D1 H1	40	40	mg/L	1	SM 2540C	Total/NA
Total Dissolved Solids	3700	D1 H1	40	40	mg/L	1	SM 2540C	Total/NA
рН	6.7	H5	1.7	1.7	SU	1	SM 4500 H+ B	Total/NA

Client Sample Results

Client: Tucson Electric Power Project/Site: SGS Semi- Annual Job ID: 550-214603-1 SDG: SGS

Matrix: Water

Lab Sample ID: 550-214603-1

Lab Sample ID: 550-214603-2

Matrix: Water

Client Sample ID: CCR-1D Date Collected: 02/20/24 09:20 Date Received: 02/22/24 07:56

Method: EPA 300.0 - Anions, lor	Chroma	tography							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	3.1		0.40	0.047	mg/L			03/05/24 18:39	1
Fluoride	2.8	H1	0.40	0.047	mg/L			04/02/24 15:24	1
Fluoride	2.8	H1	0.40	0.047	mg/L			04/02/24 16:39	1
Sulfate	1200	D2 H1	20	4.3	mg/L			04/04/24 13:54	10
Chloride	490	D2 H1	20	5.2	mg/L			04/04/24 13:54	10
- Method: EPA 200.7 Rev 4.4 - Me	tals (ICP)								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.82		0.050	0.0025	mg/L		02/22/24 10:24	02/29/24 11:12	1
Calcium	480		2.0	0.013	mg/L		02/22/24 10:24	02/29/24 11:12	1
Calcium	510		2.0	0.013	mg/L		03/28/24 05:59	04/03/24 17:47	1
Calcium	510		2.0	0.013	mg/L		03/28/24 05:59	04/03/24 17:50	1
- General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	3200		40	40	mg/L			02/27/24 12:52	1
Total Dissolved Solids (SM 2540C)	3100	D1 H1	40	40	mg/L			03/28/24 12:12	1
Total Dissolved Solids (SM 2540C)	3100	D1 H1	40	40	mg/L			03/28/24 12:12	1
pH (SM 4500 H+ B)	6.7	H5	1.7	1.7	SU			03/04/24 14:41	1

Client Sample ID: CCR-2U

Date Collected: 02/20/24 10:40 Date Received: 02/22/24 07:56

pH (SM 4500 H+ B)

Method: EPA 300.0 - Anions, Ion Chromatography Analyte Result Qualifier RL MDL Unit D Prepared Dil Fac Analyzed 0.047 mg/L Fluoride 0.40 03/05/24 20:44 2.7 1 Fluoride 0.40 0.047 mg/L 04/02/24 17:04 2.4 H1 1 0.047 mg/L Fluoride 2.4 H1 0.40 04/02/24 17:29 1 Sulfate 1700 D2 200 43 mg/L 03/11/24 17:51 100 20 Sulfate 4.3 mg/L 04/04/24 14:45 10 1800 D2 H1 Chloride 440 D2 H1 20 5.2 mg/L 04/04/24 14:45 10

Method: EPA 200.7 Rev 4.4 - Met	tals (ICP)								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.1		0.050	0.0025	mg/L		02/22/24 10:24	02/29/24 11:39	1
Calcium	710		2.0	0.013	mg/L		02/22/24 10:24	02/29/24 11:39	1
Calcium	760		2.0	0.013	mg/L		03/28/24 05:59	04/03/24 17:53	1
Calcium	730		2.0	0.013	mg/L		03/28/24 05:59	04/03/24 17:56	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	4100		40	40	mg/L			02/27/24 12:52	1
Total Dissolved Solids (SM 2540C)	3900	D1 H1	40	40	mg/L			03/28/24 12:12	1

1.7

1.7 SU

6.6 H5

Eurofins Phoenix

1

03/04/24 14:41

Client Sample Results

Client: Tucson Electric Power Project/Site: SGS Semi- Annual Job ID: 550-214603-1 SDG: SGS

Matrix: Water

5

7

Lab Sample ID: 550-214603-3

Client Sample ID: CCR-1U Date Collected: 02/20/24 12:15 Date Received: 02/22/24 07:56

Method: EPA 300.0 - Anions, Ion Chro	oma	tography							
Analyte R	esult	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	4.0		0.40	0.047	mg/L			03/05/24 21:34	1
Fluoride	3.6	H1	0.40	0.047	mg/L			04/02/24 17:54	1
Fluoride	3.6	H1	0.40	0.047	mg/L			04/02/24 18:19	1
Sulfate	1200	D2 H1	20	4.3	mg/L			04/04/24 15:35	10
Chloride	500	D2 H1	20	5.2	mg/L			04/04/24 15:35	10
	CP)								
Analyte R	esult	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.87		0.050	0.0025	mg/L		02/22/24 10:24	02/29/24 11:45	1
Calcium	500		2.0	0.013	mg/L		02/22/24 10:24	02/29/24 11:45	1
Calcium	470		2.0	0.013	mg/L		03/28/24 05:59	04/03/24 17:58	1
_Calcium	480		2.0	0.013	mg/L		03/28/24 05:59	04/03/24 18:29	1
General Chemistry									
Analyte R	esult	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	3100		40	40	mg/L			02/27/24 12:52	1
Total Dissolved Solids (SM 2540C)	3100	D1 H1	40	40	mg/L			03/28/24 12:12	1
Total Dissolved Solids (SM 2540C)	3100	D1 H1	40	40	mg/L			03/28/24 12:12	1
_pH (SM 4500 H+ B)	6.7	H5	1.7	1.7	SU			03/04/24 14:41	1

Client Sample ID: CCR-3D

Date Collected: 02/20/24 14:20

Lab Sample ID: 550-214603-4

Matrix: Water

Date Received: 02/22/24 07:56

lethod: EPA 300.0 - Anions, Ion Chromatography												
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac			
Fluoride	3.3		0.40	0.047	mg/L			03/05/24 22:24	1			
Fluoride	2.9	H1	0.40	0.047	mg/L			04/02/24 19:59	1			
Fluoride	3.0	H1	0.40	0.047	mg/L			04/02/24 20:24	1			
Sulfate	1200	D2 H1	20	4.3	mg/L			04/04/24 17:40	10			
Chloride	510	D2 H1	20	5.2	mg/L			04/04/24 17:40	10			

Method: EPA 200.7 Rev 4.4 - Metals (ICP)												
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac			
Boron	0.89		0.050	0.0025	mg/L		02/22/24 10:24	02/29/24 11:50	1			
Calcium	480		2.0	0.013	mg/L		02/22/24 10:24	02/29/24 11:50	1			
Calcium	470		2.0	0.013	mg/L		03/28/24 05:59	04/03/24 18:31	1			
Calcium	480		2.0	0.013	mg/L		03/28/24 05:59	04/03/24 18:34	1			

General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	3200		40	40	mg/L			02/27/24 12:52	1
Total Dissolved Solids (SM 2540C)	3100	D1 H1	40	40	mg/L			03/28/24 12:12	1
Total Dissolved Solids (SM 2540C)	3100	D1 H1	40	40	mg/L			03/28/24 12:12	1
pH (SM 4500 H+ B)	6.7	H5	1.7	1.7	SU			03/04/24 14:41	1

Client Sample Results

Client: Tucson Electric Power Project/Site: SGS Semi- Annual Job ID: 550-214603-1 SDG: SGS

Matrix: Water

Lab Sample ID: 550-214603-5

Client Sample ID: CCR-2D Date Collected: 02/21/24 13:20 Date Received: 02/22/24 07:56

Method: EPA 300.0 - Anions, Ion	Chroma	tography							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	2.8	H1	0.40	0.047	mg/L			04/02/24 20:49	1
Fluoride	2.8	H1	0.40	0.047	mg/L			04/02/24 21:15	1
Sulfate	1600	D5 H1	20	4.3	mg/L			04/04/24 18:30	10
Chloride	500	D2 H1	20	5.2	mg/L			04/04/24 18:30	10
Method: EPA 200.7 Rev 4.4 - Met	als (ICP)								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.78		0.050	0.0025	mg/L		02/22/24 10:24	02/29/24 11:56	1
Calcium	570		2.0	0.013	mg/L		02/22/24 10:24	02/29/24 11:56	1
Calcium	640		2.0	0.013	mg/L		03/28/24 05:59	04/03/24 18:37	1
Calcium	660		2.0	0.013	mg/L		03/28/24 05:59	04/03/24 18:40	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	3600	D1 H1	40	40	mg/L			03/28/24 12:12	1
Total Dissolved Solids (SM 2540C)	3700	D1 H1	40	40	mg/L			03/28/24 12:12	1
pH (SM 4500 H+ B)	6.7	H5	1.7	1.7	SU			03/04/24 14:41	1

Prep Type: Total/NA

Prep Type: Total/NA

Prep Type: Total/NA

Prep Type: Total/NA

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 550-316965/2 Matrix: Water Analysis Batch: 316965							Client Sam	ple ID: Method Prep Type: To	l Blank otal/NA
	MB	МВ							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	ND	E8	0.40	0.047	mg/L			03/05/24 13:38	1
Sulfate	ND	E8	2.0	0.43	mg/L			03/05/24 13:38	1
_ Lab Sample ID: LCS 550-316965/5	5					Client	Sample ID	: Lab Control S	Sample

Lab Sample ID: LCS 550-316965/5 Matrix: Water Analysis Batch: 316965

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Fluoride	4.00	4.29		mg/L		107	90 - 110	
Sulfate	20.0	21.1		mg/L		105	90 - 110	
Chloride	20.0	20.9		mg/L		105	90 - 110	

Lab Sample ID: LCSD 550-316965/6

Matrix: Water Analysis Batch: 316965

-	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Fluoride	4.00	4.30		mg/L		108	90 - 110	0	20
Sulfate	20.0	21.1		mg/L		106	90 - 110	0	20
Chloride	20.0	20.9		mg/L		105	90 - 110	0	20

Lab Sample ID: 550-214538-B-4 MS ^10 Matrix: Water

Analy	sis E	Batch:	316	965
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	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Fluoride	11		40.0	54.1		mg/L		109	80 - 120	
Sulfate	1100		200	1300	M3	mg/L		97	80 - 120	
Chloride	20		200	232		mg/L		106	80 - 120	

Lab Sample ID: 550-214538-B-4 MSD ^10 Matrix: Water

Analysis Batch: 316965

-	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Fluoride	11		40.0	54.2		mg/L		109	80 - 120	0	20
Sulfate	1100		200	1310	M3	mg/L		98	80 - 120	0	20
Chloride	20		200	233		mg/L		107	80 - 120	1	20

Lab Sample ID: MB 550-317221/2 Matrix: Water Analysis Batch: 317221

Analysis Datch. 317221									
	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	ND	E8	2.0	0.43	mg/L			03/11/24 12:20	1

Eurofins Phoenix

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

Client Sample ID: Matrix Spike Duplicate

Client Sample ID: Method Blank

Client Sample ID: Lab Control Sample Dup

3 4 5

8 9

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 550-31	7221/5					Cli	ent Sa	mple ID	: Lab Cor	ntrol Sa	ample
Matrix: Water									Prep Ty	pe: Tot	al/NA
Analysis Batch: 317221											
			Spike	LCS	S LCS				%Rec		
Analyte			Added	Resul	t Qualifier	Unit	D	%Rec	Limits		
Sulfate			20.0	19.	7	mg/L		98	90 - 110		
Lab Sample ID: LCSD 550-3	817221/6					Client S	amnlo	ID: Lat		Sample	
Matrix: Water							ampic	ID. Lat	Pron Tv	ne [.] Tot	
Analysis Batch: 317221									i i cp i j		
Analysis Datch. 017221			Spike	LCSI	LCSD				%Rec		RPD
Analyte			Added	Resul	t Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Sulfate			20.0	19.	5	mg/L		97	90 - 110	1	20
						-					
Lab Sample ID: 550-215036	-A-6 MS						С	lient Sa	mple ID:	Matrix 3	Spike
Matrix: Water									Prep Ty	pe: Tot	al/NA
Analysis Batch: 317221											
	Sample	Sample	Spike	MS	6 MS				%Rec		
Analyte	Result	Qualifier	Added	Resul	t Qualifier	Unit	D	%Rec	Limits		
Sulfate	340	E2 M3	20.0	33	7 E2 M3	mg/L		4	80 - 120		
						Client	Com		Intriv Call		lieste
Lab Sample ID: 550-215036						Clien	r Samh		Drop Tu	ke Dup	
Matrix. Water									Prep ly	pe. Iot	.al/INA
Analysis Batch: 517221	Sampla	Sampla	Spike	мег	MOD				% Boo		
Analyta	Booult	Sample	Spike	Booul		Unit	_	% Bee	%Rec	חחם	Limit
Sulfate	340	F2 M3	20.0	33	$\overline{F2M3}$			3	80 120		20
	040		20.0	00		mg/∟		Ū	00-120	0	20
Lab Sample ID: MB 550-318	3549/2						Cli	ent Sam	nple ID: M	ethod I	Blank
Matrix: Water											
									Prep Ty	pe: Tot	al/NA
Analysis Batch: 318549									Prep Ty	pe: Tot	al/NA
Analysis Batch: 318549		MB MB							Prep Ty	pe: Tot	al/NA
Analysis Batch: 318549 Analyte	Re	MB MB esult Qualifier		RL	MDL Unit		D P	repared	Prep Ty Analy:	pe: Tot ^{zed}	al/NA
Analysis Batch: 318549 Analyte Fluoride	Re	MB MB esult Qualifier ND E8		RL	MDL Unit		<u>D</u>	repared	Prep Ty <u>Analy</u> 	pe: Tot zed 13:18	Dil Fac
Analysis Batch: 318549 Analyte Fluoride Chloride	Re	MB MB esult Qualifier ND E8 ND E8		RL 0.40 2.0	MDL Unit 0.047 mg/L 0.52 mg/L		<u>D</u>	repared	Prep Ty Analy: 04/02/24 04/02/24	zed 13:18 13:18	Dil Fac
Analysis Batch: 318549 Analyte Fluoride Chloride	Re	MB MB esult Qualifier ND E8		RL 0.40 2.0	MDL Unit 0.047 mg/L 0.52 mg/L		<u>D</u> _ F	repared	Prep Ty 	zed 13:18 13:18	Dil Fac
Analysis Batch: 318549 Analyte Fluoride Chloride Lab Sample ID: LCS 550-31	Re 8549/5	MB MB esult Qualifier ND E8 ND E8		RL 0.40 2.0	MDL Unit 0.047 mg/L 0.52 mg/L	Cli	D F	repared mple ID	Prep Ty 	pe: Tot zed 13:18 13:18 13:18	Dil Fac 1 1
Analysis Batch: 318549 Analyte Fluoride Chloride Lab Sample ID: LCS 550-31 Matrix: Water	Re 8549/5	MB MB esult Qualifier ND E8 ND E8		RL 0.40 2.0	MDL Unit 0.047 mg/L 0.52 mg/L	Cli	D_F	repared mple ID	Prep Ty Analy: 04/02/24 04/02/24 : Lab Cor Prep Ty	2ed 13:18 13:18 13:18 ntrol Sa pe: Tot	Dil Fac 1 1 ample cal/NA
Analysis Batch: 318549 Analyte Fluoride Chloride Lab Sample ID: LCS 550-31 Matrix: Water Analysis Batch: 318549	Re 8549/5	MB MB esult Qualifier ND E8 ND E8		RL 0.40 2.0	MDL Unit 0.047 mg/L 0.52 mg/L	Cli	D P	repared mple ID	Prep Ty 	2ed 13:18 13:18 13:18 ntrol Sa pe: Tot	Dil Fac 1 1 ample al/NA
Analysis Batch: 318549 Analyte Fluoride Chloride Lab Sample ID: LCS 550-31 Matrix: Water Analysis Batch: 318549	Re 8549/5	MB MB esult Qualifier ND E8	Spike	RL 0.40 2.0	MDL Unit 0.047 mg/L 0.52 mg/L	Cli	D F	repared	Prep Ty 	pe: Tot zed 13:18 13:18 htrol Sa pe: Tot	Dil Fac 1 1 ample al/NA
Analysis Batch: 318549 Analyte Fluoride Chloride Lab Sample ID: LCS 550-31 Matrix: Water Analysis Batch: 318549 Analyte	Re 8549/5	MB MB esult Qualifier ND E8 ND E8	Spike Added	RL 0.40 2.0 LC3 Resul	MDL Unit 0.047 mg/L 0.52 mg/L 6 LCS t Qualifier	Cli	D F ent Sa	mple ID	Prep Ty Analy: 04/02/24 04/02/24 Cab Cor Prep Ty %Rec Limits	2ed 13:18 13:18 ntrol Sa pe: Tot	Dil Fac 1 1 ample al/NA
Analysis Batch: 318549 Analyte Fluoride Chloride Lab Sample ID: LCS 550-31 Matrix: Water Analysis Batch: 318549 Analyte Fluoride	Re 8549/5	MB MB esult Qualifier ND E8 ND E8	Spike Added 4.00	RL 0.40 2.0 LCS Result 3.76	MDL Unit 0.047 mg/L 0.52 mg/L 6 LCS 6 Qualifier	Cli Unit mg/L	D F	mple ID %Rec 95	Prep Ty 	pe: Tot 2ed 13:18 13:18 htrol Sa pe: Tot	ample
Analysis Batch: 318549 Analyte Fluoride Chloride Lab Sample ID: LCS 550-31 Matrix: Water Analysis Batch: 318549 Analyte Fluoride Chloride	Re	MB MB esult Qualifier ND E8 ND E8	Spike Added 4.00 20.0	RL 0.40 2.0 LCS Result 3.74 18.74	MDL Unit 0.047 mg/L 0.52 mg/L LCS t Qualifier	Cli mg/L mg/L	D F	mple ID %Rec 95 93	Prep Ty Analy: 04/02/24 04/02/24 C Lab Cor Prep Ty %Rec Limits 90 - 110 90 - 110	pe: Tot zed 13:18 13:18 htrol Sa pe: Tot	ample
Analysis Batch: 318549 Analyte Fluoride Chloride Lab Sample ID: LCS 550-31 Matrix: Water Analysis Batch: 318549 Analyte Fluoride Chloride	Re 8549/5	MB MB esult Qualifier ND E8 ND E8	Spike Added 4.00 20.0	RL 0.40 2.0 LCS Resul 3.74 18.7	MDL Unit 0.047 mg/L 0.52 mg/L 5 LCS t Qualifier	Cli Unit mg/L mg/L	D F ent Sa D	mple ID %Rec 95 93	Analy: 04/02/24 04/02/24 04/02/24 : Lab Cor Prep Ty %Rec Limits 90 - 110 90 - 110	pe: Tot zed 13:18 13:18 htrol Sa pe: Tot	ample
Analysis Batch: 318549 Analysis Batch: 318549 Analyte Fluoride Chloride Lab Sample ID: LCS 550-31 Matrix: Water Analysis Batch: 318549 Analyte Fluoride Chloride Lab Sample ID: LCSD 550-3 Matrix: Water	Re 8549/5 318549/6	MB MB esult Qualifier ND E8 ND E8	Spike Added 4.00 20.0	RL 0.40 2.0 LCS Resul 3.74 18.7	MDL Unit 0.047 mg/L 0.52 mg/L LCS t Qualifier	Cli mg/L mg/L Client S	D P ent Sa D	mple ID %Rec 95 93 ID: Lat	Prep Ty Analy: 04/02/24 04/02/24 C Lab Cor Prep Ty %Rec Limits 90 - 110 90 - 110 90 - 110	pe: Tot zed 13:18 13:18 ntrol Sa pe: Tot Sample pe: Tot	anple anple al/NA
Analysis Batch: 318549 Analyte Fluoride Chloride Lab Sample ID: LCS 550-31 Matrix: Water Analysis Batch: 318549 Analyte Fluoride Chloride Lab Sample ID: LCS 550-31 Matrix: Water Analyte Fluoride Chloride Lab Sample ID: LCSD 550-3 Matrix: Water Analysis Batch: 318549	Re 8549/5 318549/6	MB MB esult Qualifier ND E8 ND E8	Spike Added 4.00 20.0	RL 0.40 2.0 LCS Result 3.71 18.7	MDL Unit 0.047 mg/L 0.52 mg/L 6 LCS 1 Qualifier 2 Mail (Compared to the second to the sec	Cli <u>Unit</u> mg/L mg/L Client S	D F ent Sa D	mple ID %Rec 95 93 ID: Lat	Analy: 04/02/24 04/02/24 02/24 04/02/24 Cab Corr Prep Ty %Rec Limits 90 - 110 90 - 110 90 - 110 Prep Ty	pe: Tot 2ed 13:18 13:18 ntrol Sa pe: Tot Sample pe: Tot	ample ample al/NA
Analysis Batch: 318549 Analyte Fluoride Chloride Lab Sample ID: LCS 550-31 Matrix: Water Analysis Batch: 318549 Analyte Fluoride Chloride Lab Sample ID: LCS 550-31 Matrix: Water Analyte Fluoride Chloride Lab Sample ID: LCSD 550-3 Matrix: Water Analysis Batch: 318549	Re 8549/5 318549/6	MB MB esult Qualifier ND E8 ND E8	Spike Added 4.00 20.0	RL 0.40 2.0 LCS Resul 3.77 18.7	MDL Unit 0.047 mg/L 0.52 mg/L LCS t Qualifier	Cli mg/L mg/L Client S	D F ent Sa D	mple ID %Rec 95 93 ID: Lat	Prep Ty Analy: 04/02/24 04/02/24 C Lab Cor Prep Ty %Rec Limits 90 - 110 90 - 110 90 - 110 90 - 110 90 - 110 90 - 110 %Rec	pe: Tot 2ed 13:18 13:18 ntrol Sa pe: Tot Sample pe: Tot	ample ample al/NA
Analysis Batch: 318549 Analyte Fluoride Chloride Lab Sample ID: LCS 550-31 Matrix: Water Analysis Batch: 318549 Analyte Fluoride Chloride Lab Sample ID: LCS 550-31 Matrix: Water Analysis Batch: 318549 Analyte Fluoride Chloride Lab Sample ID: LCSD 550-3 Matrix: Water Analysis Batch: 318549 Analysis Batch: 318549	Re 8549/5 318549/6	MB MB esult Qualifier ND E8 ND E8	Spike Added 4.00 20.0 Spike	RL 0.40 2.0 LCS Result 3.77 18.7 LCSI Result	MDL Unit 0.047 mg/L 0.52 mg/L LCS Qualifier	Cli Unit mg/L mg/L Client S	D F ent Sa D	mple ID %Rec 95 93 ID: Lat	Prep Ty Analy: 04/02/24 04/02/24 C Lab Cor Prep Ty %Rec Limits 90 - 110 90 - 110 90 - 110 Prep Ty %Rec Limits	pe: Tot 2ed 13:18 13:18 htrol Sa pe: Tot Sample pe: Tot	ample ample al/NA
Analysis Batch: 318549 Analyte Fluoride Chloride Lab Sample ID: LCS 550-31 Matrix: Water Analysis Batch: 318549 Analyte Fluoride Chloride Lab Sample ID: LCS 550-31 Matrix: Water Analyte Fluoride Lab Sample ID: LCSD 550-3 Matrix: Water Analysis Batch: 318549 Analysis Batch: 318549 Analysis Batch: 318549	Re 8549/5 318549/6	MB MB esult Qualifier ND E8 ND E8	Spike Added 4.00 20.0 Spike Added 4.00	RL 0.40 2.0 LCS Resul 3.74 18.7 LCSI Resul 3.74 3.74 3.74	MDL Unit 0.047 mg/L 0.52 mg/L LCS Qualifier	Cli mg/L mg/L Client S	D F ent Sa D Sample	mple ID %Rec 95 93 ID: Lat	Prep Ty Analy: 04/02/24 04/02/24 C: Lab Cor Prep Ty %Rec Limits 90 - 110 90 - 110 Prep Ty %Rec Limits 90 - 110 90 - 110 90 - 110	zed	E Dup cal/NA
Analysis Batch: 318549 Analyte Fluoride Chloride Lab Sample ID: LCS 550-31 Matrix: Water Analysis Batch: 318549 Analyte Fluoride Chloride Lab Sample ID: LCS 550-31 Matrix: Water Analyte Fluoride Chloride Analysis Batch: 318549 Analysis Batch: 318549 Analysis Batch: 318549 Analyte Fluoride Chloride	Re 8549/5 318549/6	MB MB esult Qualifier ND E8 ND E8	Spike Added 4.00 20.0 Spike Added 4.00 20.0	RL 0.40 2.0 LCS Resul 3.74 18.7 IS 3.74 18.7 18.7	MDL Unit 0.047 mg/L 0.52 mg/L CS LCS Qualifier C LCSD LCSD Qualifier	Cli mg/L mg/L Client S	D F ent Sa D Sample	mple ID %Rec 95 93 ID: Lat %Rec 95 93	Prep Ty Analy: 04/02/24 04/02/24 2: Lab Cor Prep Ty %Rec Limits 90 - 110 90 - 110 Prep Ty %Rec Limits 90 - 110 90 - 110 90 - 110 90 - 110	zed	al/NA Dil Fac 1 1 ample cal/NA PD Limit 20 20

Chloride

QC Sample Results

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 550-21460	3-1 MS									Clie	nt Sample	ID: C	CR-1D
Matrix: Water											Prep Ty	pe: To	tal/NA
Analysis Batch: 318549												- -	
-	Sample	San	nple	Spike		MS	MS				%Rec		
Analyte	Result	Qua	alifier	Added		Result	Qualifie	r Unit	D	%Rec	Limits		
Fluoride	2.8	H1		4.00		6.54		mg/L		93	80 - 120		
Lab Sample ID: 550-21460 Matrix: Water	3-1 MSD									Clie	nt Sample Prep Ty	ID: C pe: To	CR-1D tal/NA
Analysis Batch: 318549													
	Sample	San	nple	Spike		MSD	MSD				%Rec		RPD
Analyte	Result	Qua	alifier	Added		Result	Qualifie	r Unit	D	%Rec	Limits	RPD	Limit
Fluoride	2.8	H1		4.00		6.72		mg/L		97	80 - 120	3	20
Lab Sample ID: MB 550-31 Matrix: Water Analysis Batch: 318694	8694/2								Clie	ent San	nple ID: M Prep Ty	ethod pe: To	Blank tal/NA
· ····, · · · · · · · · · · · · · · · ·		ΜВ	МВ										
Analyte	Re	sult	Qualifier		RL		MDL Un	t	D P	repared	Analyz	zed	Dil Fac
Fluoride		ND	E8		0.40	0	0.047 ma	/L			04/04/24	10:34	1
Sulfate		ND	E8		2.0		0.43 mg	/			04/04/24	10.34	1
Chloride			E0 E8		2.0		0.52 mg	/			04/04/24	10.04	1
Lab Sample ID: LCS 550-3 Matrix: Water	18694/8							Clie	ent Sa	mple ID	: Lab Cor Prep Ty	ntrol S pe: To	ample tal/NA
Analysis Batch: 318694													
				Spike		LCS	LCS				%Rec		
Analyte				Added		Result	Qualifie	r Unit	D	%Rec	Limits		
Fluoride				4.00		3.80		mg/L		95	90 - 110		
Sulfate				20.0		18.7		ma/L		94	90 - 110		
Chloride				20.0		18.7		mg/L		94	90 - 110		
Lab Sample ID: LCSD 550-	·318 <mark>694</mark> /9							Client S	ample	ID: Lat		Sampl	e Dup
watrix: water											Prep Ty	pe: To	tal/NA
Matrix: water Analysis Batch: 318694									•		Prep Ty	pe: To	tal/NA
Analysis Batch: 318694				Spike		LCSD	LCSD				Prep Ty %Rec	pe: To	tal/NA RPD
Analysis Batch: 318694				Spike Added		LCSD Result	LCSD Qualifie	r <u>Unit</u>	D	%Rec	Prep Ty %Rec Limits	pe: To RPD	tal/NA RPD Limit
Analysis Batch: 318694 Analyte Fluoride				Spike Added 4.00		LCSD Result 3.80	LCSD Qualifie	r <u>Unit</u> mg/L	<u>D</u>	%Rec 95	Prep Ty %Rec Limits 90 - 110	pe: To RPD 0	tal/NA RPD Limit 20
Analysis Batch: 318694 Analyte Fluoride Sulfate				Spike Added 4.00 20.0		LCSD Result 3.80 18.7	LCSD Qualifie	r Unit mg/L mg/L	<u>D</u>	%Rec 95 94	Prep Ty %Rec Limits 90 - 110 90 - 110	RPD 0	tal/NA RPD Limit 20 20
Analysis Batch: 318694 Analyte Fluoride Sulfate Chloride				Spike Added 4.00 20.0 20.0		LCSD Result 3.80 18.7 18.7	LCSD Qualifie	r Unit mg/L mg/L mg/L	<u>D</u>	%Rec 95 94 93	Prep Ty %Rec Limits 90 - 110 90 - 110 90 - 110	RPD 0 0	tal/NA RPD Limit 20 20 20
Analysis Batch: 318694 Analyte Fluoride Sulfate Chloride Lab Sample ID: 580-138400	 B-C-2 MS ^:			Spike Added 4.00 20.0 20.0		LCSD Result 3.80 18.7 18.7	LCSD Qualifie	r Unit mg/L mg/L mg/L	<u>P</u> C	<mark>%Rec</mark> 95 94 93 lient Sa	Prep Ty %Rec Limits 90 - 110 90 - 110 90 - 110	pe: To RPD 0 0 0 Matrix	tal/NA RPD Limit 20 20 20 Spike
Analysis Batch: 318694 Analyte Fluoride Sulfate Chloride Lab Sample ID: 580-138403 Matrix: Water	 B-C-2 MS ^;			Spike Added 4.00 20.0 20.0		LCSD Result 3.80 18.7 18.7	LCSD Qualifie	r Unit mg/L mg/L mg/L	<u>D</u> 	<mark>%Rec</mark> 95 94 93 lient Sa	Prep Ty %Rec Limits 90 - 110 90 - 110 90 - 110 90 - 110 mple ID: I Prep Ty	Pe: To RPD 0 0 0 0 0 Matrix pe: To	tal/NA RPD Limit 20 20 20 Spike tal/NA
Analysis Batch: 318694 Analyte Fluoride Sulfate Chloride Lab Sample ID: 580-138408 Matrix: Water Analysis Batch: 318694	 B-C-2 MS ^:			Spike Added 4.00 20.0 20.0		LCSD Result 3.80 18.7 18.7	LCSD Qualifie	r Unit mg/L mg/L mg/L	<u>D</u> C	<mark>%Rec</mark> 95 94 93 lient Sa	Prep Ty %Rec Limits 90 - 110 90 - 110 90 - 110 90 - 110 mple ID: I Prep Ty	Pe: To RPD 0 0 0 0 Matrix pe: To	tal/NA RPD Limit 20 20 20 Spike tal/NA
Matrix: Water Analysis Batch: 318694 Analyte Fluoride Sulfate Chloride Lab Sample ID: 580-138406 Matrix: Water Analysis Batch: 318694	B-C-2 MS ^2 Sample	 200 San		Spike <u>Added</u> 4.00 20.0 20.0 Spike		LCSD Result 3.80 18.7 18.7	LCSD Qualifie MS	r Unit mg/L mg/L mg/L	<u>P</u> C	<mark>%Rec</mark> 95 94 93 lient Sa	Prep Ty %Rec Limits 90 - 110 90 - 110 90 - 110 90 - 110 mple ID: I Prep Ty %Rec	Pe: To RPD 0 0 0 Matrix pe: To	tal/NA RPD Limit 20 20 20 Spike tal/NA
Matrix: water Analysis Batch: 318694 Analyte Fluoride Sulfate Chloride Lab Sample ID: 580-138406 Matrix: Water Analysis Batch: 318694 Analyte	B-C-2 MS ^/ Sample Result	200 San Qua	nple alifier	Spike Added 4.00 20.0 20.0 Spike Added		LCSD Result 3.80 18.7 18.7 MS Result	LCSD Qualifie MS Qualifie	r <u>Unit</u> mg/L mg/L mg/L	<u>D</u> C	%Rec 95 94 93 lient Sa %Rec	Prep Ty %Rec Limits 90 - 110 90 - 110 90 - 110 90 - 110 mple ID: I Prep Ty %Rec Limits	Pe: To RPD 0 0 0 0 Matrix pe: To	tal/NA RPD Limit 20 20 20 Spike tal/NA
Matrix: Water Analysis Batch: 318694 Analyte Fluoride Sulfate Chloride Lab Sample ID: 580-138408 Matrix: Water Analysis Batch: 318694 Analyte Fluoride	B-C-2 MS ^2 Sample Result ND	200 San Qua E8 I	nple alifier	Spike Added 4.00 20.0 20.0 20.0 Spike Added 800		LCSD Result 3.80 18.7 18.7 MS Result 784	LCSD Qualifie MS Qualifie	r <u>Unit</u> mg/L mg/L mg/L	<u>D</u> 	<u>%Rec</u> 95 94 93 lient Sa <u>%Rec</u> 98	Prep Ty %Rec Limits 90 - 110 90 - 110 90 - 110 90 - 110 mple ID: I Prep Ty %Rec Limits 80 - 120	Pe: To RPD 0 0 0 0 Matrix pe: To	tal/NA RPD Limit 20 20 20 Spike tal/NA

3770

mg/L

94

80 - 120

4000

ND E8 D2

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 580-138408 Matrix: Water Analysis Batch: 318694	B-C-2 MSD	^200						Client	Samp	ole ID: M	atrix Spi Prep Ty	ke Dup pe: Toi	licate tal/NA
Analysis Baten. 010004	Sample	Sample	e	Spike		MSD	MSD				%Rec		RPD
Analyte	Result	Qualifi	er	Added		Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Fluoride	ND	E8 D2		800		763		mg/L		95	80 - 120	3	20
Sulfate	3400	M1 D2		4000		114000	E2 M1	mg/L		2774	80 - 120	0	20
Chloride	ND	E8 D2		4000		3620		mg/L		91	80 - 120	4	20
Method: 200.7 Rev 4.4 -	Metals (ICP)											
Lab Sample ID: MB 550-310 Matrix: Water	6266/1-A								Cli	ent Sam	ple ID: M Prep Ty	ethod pe: To	Blank tal/NA
Analysis Batch: 316637			-								Ргер Ва	atch: 3	16266
Analysia	De		D		ы) was not not d	A mah		
Peren					0.050					22/24 10:24		<u>10:40</u> -	
Calcium	0.00	0300 E4	+ 1		0.050	0.0	012 mg/L		02/2	22/24 10.24	02/29/24	10.49	1
Calcium	0.0	U301 E4	+		2.0	0	.013 Hig/L		02/2	22/24 10.24	02/29/24	10.49	1
Lab Sample ID: LCS 550-31	16266/2-A							Clie	nt Sa	mple ID:	Lab Cor	ntrol Sa	ample
Matrix: Water								•			Pren Tv	ne. To	tal/NA
Analysis Batch: 316637											Pren Ba	atch: 3	16266
Analysis Batom stooor				Spike		LCS	LCS				%Rec		
Analyte				Added		Result	Qualifier	Unit	D	%Rec	Limits		
Boron				1.00		0.973		ma/L		97	85 - 115		
Calcium				21.0		21.0		ma/L		100	85 - 115		
								5					
Lab Sample ID: LCSD 550-	316266/3-A						(Client Sa	ample	ID: Lab	Control	Sampl	e Dup
Matrix: Water											Prep Ty	pe: To	tal/NA
Analysis Batch: 316637											Prep Ba	atch: 3	16266
-				Spike		LCSD	LCSD				%Rec		RPD
Analyte				Added		Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Boron				1.00		0.981		mg/L		98	85 - 115	1	20
Calcium				21.0		21.4		mg/L		102	85 - 115	2	20
 Lab Sample ID: 550-214604									C	lient Sar	nnle ID:	Matrix	Snike
Matrix: Water		·								none ou	Pron Ty	ne: To	tal/NA
Analysis Batch: 316637											Pron B:	atch: 3	16266
Analysis Batch. 010007	Sample	Sample	_	Snike		MS	MS				%Rec		10200
Analyte	Result	Qualifi	or	babh A		Result	Qualifier	Unit	п	%Rec	Limits		
Boron	12	quain		1 00		2 22				99	70 - 130		
Calcium	720	M3		21.0		711	М3	mg/L		-58	70 - 130		
								-					
Lab Sample ID: 550-214604	I-D-1-B MS	D						Client	Samp	ole ID: M	atrix Spi	ke Dup	licate
Matrix: Water											Prep Ty	pe: Tot	tal/NA
Analysis Batch: 316637											Prep Ba	atch: 3	16266
	Sample	Sample	e	Spike		MSD	MSD				%Rec		RPD
Analyte	Result	Qualifi	er	Added		Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Boron	1.2			1.00		2.20		mg/L		97	70 - 130	1	20
Calcium	720	M3		21.0		695	M3	mg/L		-134	70 - 130	2	20

Method: 200.7 Rev 4.4 - Metals (ICP) (Continued)

Lab Sample ID: MB 550-318 Matrix: Water Analysis Batch: 318650	3 25 8/1-A							(Clie	ent Samı	ole ID: M Prep Ty Prep Ba	ethod pe: To	Blank tal/NA
		MB MB											
Analyte	Re	sult Qualifie	er	RL	I	MDL Unit		D	P	repared	Analy	zed	Dil Fac
Calcium		ND E8		2.0	0	0.013 mg/L		- (03/2	8/24 05:59	04/03/24	17:31	1
							0		.		Lab Car		
Lab Sample ID: LCS 550-31 Matrix: Water	0230/2-A						CII	ent	Sar	npie iD:		itroi S	
Analysis Ratch: 219650											Prop B	pe. 10	10250
Analysis Batch. 510050			Snike		LCS	LCS					%Rec	aton. J	10250
Analyte			Added		Result	Qualifier	Unit		D	%Rec	Limits		
Calcium			21.0		23.6		mg/L		=	113	85 - 115		
							3						
Lab Sample ID: LCSD 550-3	318258/3- <mark>A</mark>					C	Client S	Sam	ole	ID: Lab	Control	Samp	e Dup
Matrix: Water											Prep Ty	pe: To	tal/NA
Analysis Batch: 318650											Prep Ba	atch: 3	18258
			Spike		LCSD	LCSD					%Rec		RPD
Analyte			Added		Result	Qualifier	Unit		D	%Rec	Limits	RPD	Limit
Calcium			21.0		23.4		mg/L			111	85 - 115	1	20
Lab Sample ID: 550-216088	-R-1-4 MS								С	iont San	nnle ID· I	Matrix	Snike
Matrix: Water	BIANO										Pren Tv	ne [.] To	tal/NA
Analysis Batch: 318650											Pren Ba	atch: 3	18258
	Sample	Sample	Spike		MS	MS					%Rec		10200
Analyte	Result	Qualifier	Added		Result	Qualifier	Unit		D	%Rec	Limits		
Calcium	77		21.0		96.4		mg/L		_	94	70 - 130		
Lab Sample ID: 550-216088	8-B-1-B MS	D					Clien	t Sa	mp	le ID: Ma	atrix Spil	ke Duj	olicate
Matrix: Water											Prep Ty	pe: To	tal/NA
Analysis Batch: 318650		. .									Prep Ba	atch: 3	18258
	Sample	Sample	Spike		MSD	MSD			_	a/ -	%Rec		RPD
Analyte	Result	Qualifier	Added		Result	Qualifier	Unit		<u>D</u>	%Rec			Limit
Calcium	11		21.0		90.7		mg/∟			90	70 - 130	0	20
Method: SM 2540C - So	lids, Tota	l Dissolv	ved (TDS	5)									
Lab Sample ID: MB 550-316	6469/1							0	Clie	ent Samp	ole ID: M	ethod	Blank
Matrix: Water											Prep Ty	pe: To	tal/NA
Analysis Batch: 316469													
A so a b sta								_	-		A		D'I 5
Analyte Tatal Dissolved Solida	Ke		er		·			<u> </u>	P	repared		2ea	DIIFac
		ND EO		20		20 mg/L					02/27/24	12.02	1
Lab Sample ID: 550-214585	-S-1 DU									Client S	Sample I	D: Du	olicate
Matrix: Water	-										Prep Tv	pe: To	tal/NA
Analysis Batch: 316469												-	
-	Sample	Sample			DU	DU							RPD
Analyte	Result	Qualifier			Result	Qualifier	Unit		D			RPD	Limit
Total Dissolved Solids	490				500		mg/L					1	10

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: MB 550-318292/ Matrix: Water Analysis Batch: 318292	1									(Clie	nt Sam	ple ID: M Prep Ty	ethod pe: Tot	Blank al/NA
		мв	мв												
Analyte	Res	sult	Qualifier		RL	1	MDL	Unit		D	Pr	repared	Analyz	zed	Dil Fac
Total Dissolved Solids		ND	E8		20		20	mg/L					03/28/24	12:12	1
Lab Sample ID: LCS 550-318292	2/2								Clie	ent	Sar	nple ID	: Lab Cor	ntrol Sa	mple
Matrix: Water													Prep Ty	pe: Tot	al/NA
Analysis Batch: 318292															
-				Spike		LCS	LCS						%Rec		
Analyte				Added		Result	Qua	lifier	Unit		D	%Rec	Limits		
Total Dissolved Solids				1000		984			mg/L		_	98	90 - 110		
Lab Sample ID: LCSD 550-31829	92/3							C	lient S	am	ple	ID: Lab	Control	Sample	e Dup
Matrix: Water													Prep Ty	pe: Tot	al/NA
Analysis Batch: 318292														-	
-				Spike		LCSD	LCS	D					%Rec		RPD
Analyte				Added		Result	Qua	lifier	Unit		D	%Rec	Limits	RPD	Limit
Total Dissolved Solids				1000		994			mg/L		_	99	90 - 110	1	10
Lab Sample ID: 550-214603-2 DI	J											Clier	t Sample	ID: CO	R-2U
Matrix: Water													Prep Ty	pe: Tot	al/NA
Analysis Batch: 318292														•	
S	ample	Samp	ble			DU	DU								RPD
Analyte	Result	Quali	fier			Result	Qua	lifier	Unit		D			RPD	Limit
Total Dissolved Solids	3900	H1 D	1			3900	D1		mg/L		_			0.3	10
Total Dissolved Solids	3900	H1 D	1			3900	D1		mg/L					0.3	10
Method: SM 4500 H+ B - pH															

Lab Sample ID: LCSSRM 5 Matrix: Water Analysis Batch: 316813	550-316813/	1				Clie	ent Sa	mple II	D: Lab Cont Prep Typ	trol Sa e: Tot	ample al/NA
-			Spike	LCSSRM	LCSSRM				%Rec		
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits		
pH			7.00	7.0		SU		100.4	98.5 - 101.		
_									5		
Lab Sample ID: 550-21460	3-1 DU							Clie	nt Sample	ID: CC	R-1D
Matrix: Water									Prep Typ	e: Tot	al/NA
Analysis Batch: 316813											
-	Sample	Sample		DU	DU						RPD
Analyte	Result	Qualifier		Result	Qualifier	Unit	D			RPD	Limit
pH	6.7	H5		6.7		SU				0.1	5

HPLC/IC

Analysis Batch: 316965

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-214603-1	CCR-1D	Total/NA	Water	300.0	
550-214603-2	CCR-2U	Total/NA	Water	300.0	
550-214603-3	CCR-1U	Total/NA	Water	300.0	
550-214603-4	CCR-3D	Total/NA	Water	300.0	
MB 550-316965/2	Method Blank	Total/NA	Water	300.0	
LCS 550-316965/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 550-316965/6	Lab Control Sample Dup	Total/NA	Water	300.0	
550-214538-B-4 MS ^10	Matrix Spike	Total/NA	Water	300.0	
550-214538-B-4 MSD ^10	Matrix Spike Duplicate	Total/NA	Water	300.0	
Analysis Batch: 31722	1				
Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch
550-214603-2	CCR-2U	Total/NA	Water	300.0	
MB 550-317221/2	Method Blank	Total/NA	Water	300.0	
LCS 550-317221/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 550-317221/6	Lab Control Sample Dup	Total/NA	Water	300.0	
550-215036-A-6 MS	Matrix Spike	Total/NA	Water	300.0	
550-215036-A-6 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
Analysis Batch: 31854	9				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-214603-1	CCR-1D	Total/NA	Water	300.0	
550-214603-1	CCR-1D	Total/NA	Water	300.0	
550-214603-2	CCR-2U	Total/NA	Water	300.0	
550-214603-2	CCR-2U	Total/NA	Water	300.0	
550-214603-3	CCR-1U	Total/NA	Water	300.0	
550-214603-3	CCR-1U	Total/NA	Water	300.0	
550-214603-4	CCR-3D	Total/NA	Water	300.0	
550-214603-4	CCR-3D	Total/NA	Water	300.0	
550-214603-5	CCR-2D	Total/NA	Water	300.0	
550-214603-5	CCR-2D	Total/NA	Water	300.0	
MB 550-318549/2	Method Blank	Total/NA	Water	300.0	
LCS 550-318549/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 550-318549/6	Lab Control Sample Dup	Total/NA	Water	300.0	
550-214603-1 MS	CCR-1D	Total/NA	Water	300.0	
550-214603-1 MSD	CCR-1D	Total/NA	Water	300.0	

Analysis Batch: 318694

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-214603-1	CCR-1D	Total/NA	Water	300.0	
550-214603-2	CCR-2U	Total/NA	Water	300.0	
550-214603-3	CCR-1U	Total/NA	Water	300.0	
550-214603-4	CCR-3D	Total/NA	Water	300.0	
550-214603-5	CCR-2D	Total/NA	Water	300.0	
MB 550-318694/2	Method Blank	Total/NA	Water	300.0	
LCS 550-318694/8	Lab Control Sample	Total/NA	Water	300.0	
LCSD 550-318694/9	Lab Control Sample Dup	Total/NA	Water	300.0	
580-138408-C-2 MS ^200	Matrix Spike	Total/NA	Water	300.0	
580-138408-C-2 MSD ^200	Matrix Spike Duplicate	Total/NA	Water	300.0	

5 6

9

Metals

Prep Batch: 316266

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-214603-1	CCR-1D	Total/NA	Water	200.7	
550-214603-2	CCR-2U	Total/NA	Water	200.7	
550-214603-3	CCR-1U	Total/NA	Water	200.7	
550-214603-4	CCR-3D	Total/NA	Water	200.7	
550-214603-5	CCR-2D	Total/NA	Water	200.7	
MB 550-316266/1-A	Method Blank	Total/NA	Water	200.7	
LCS 550-316266/2-A	Lab Control Sample	Total/NA	Water	200.7	
LCSD 550-316266/3-A	Lab Control Sample Dup	Total/NA	Water	200.7	
550-214604-D-1-A MS	Matrix Spike	Total/NA	Water	200.7	
550-214604-D-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	200.7	

Analysis Batch: 316637

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-214603-1	CCR-1D	Total/NA	Water	200.7 Rev 4.4	316266
550-214603-2	CCR-2U	Total/NA	Water	200.7 Rev 4.4	316266
550-214603-3	CCR-1U	Total/NA	Water	200.7 Rev 4.4	316266
550-214603-4	CCR-3D	Total/NA	Water	200.7 Rev 4.4	316266
550-214603-5	CCR-2D	Total/NA	Water	200.7 Rev 4.4	316266
MB 550-316266/1-A	Method Blank	Total/NA	Water	200.7 Rev 4.4	316266
LCS 550-316266/2-A	Lab Control Sample	Total/NA	Water	200.7 Rev 4.4	316266
LCSD 550-316266/3-A	Lab Control Sample Dup	Total/NA	Water	200.7 Rev 4.4	316266
550-214604-D-1-A MS	Matrix Spike	Total/NA	Water	200.7 Rev 4.4	316266
550-214604-D-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	200.7 Rev 4.4	316266

Prep Batch: 318258

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-214603-1	CCR-1D	Total/NA	Water	200.7	
550-214603-1	CCR-1D	Total/NA	Water	200.7	
550-214603-2	CCR-2U	Total/NA	Water	200.7	
550-214603-2	CCR-2U	Total/NA	Water	200.7	
550-214603-3	CCR-1U	Total/NA	Water	200.7	
550-214603-3	CCR-1U	Total/NA	Water	200.7	
550-214603-4	CCR-3D	Total/NA	Water	200.7	
550-214603-4	CCR-3D	Total/NA	Water	200.7	
550-214603-5	CCR-2D	Total/NA	Water	200.7	
550-214603-5	CCR-2D	Total/NA	Water	200.7	
MB 550-318258/1-A	Method Blank	Total/NA	Water	200.7	
LCS 550-318258/2-A	Lab Control Sample	Total/NA	Water	200.7	
LCSD 550-318258/3-A	Lab Control Sample Dup	Total/NA	Water	200.7	
550-216088-B-1-A MS	Matrix Spike	Total/NA	Water	200.7	
550-216088-B-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	200.7	

Analysis Batch: 318650

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-214603-1	CCR-1D	Total/NA	Water	200.7 Rev 4.4	318258
550-214603-1	CCR-1D	Total/NA	Water	200.7 Rev 4.4	318258
550-214603-2	CCR-2U	Total/NA	Water	200.7 Rev 4.4	318258
550-214603-2	CCR-2U	Total/NA	Water	200.7 Rev 4.4	318258
550-214603-3	CCR-1U	Total/NA	Water	200.7 Rev 4.4	318258
550-214603-3	CCR-1U	Total/NA	Water	200.7 Rev 4.4	318258
550-214603-4	CCR-3D	Total/NA	Water	200.7 Rev 4.4	318258

QC Association Summary

5 6

9

Metals (Continued)

Analysis Batch: 318650 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-214603-4	CCR-3D	Total/NA	Water	200.7 Rev 4.4	318258
550-214603-5	CCR-2D	Total/NA	Water	200.7 Rev 4.4	318258
550-214603-5	CCR-2D	Total/NA	Water	200.7 Rev 4.4	318258
MB 550-318258/1-A	Method Blank	Total/NA	Water	200.7 Rev 4.4	318258
LCS 550-318258/2-A	Lab Control Sample	Total/NA	Water	200.7 Rev 4.4	318258
LCSD 550-318258/3-A	Lab Control Sample Dup	Total/NA	Water	200.7 Rev 4.4	318258
550-216088-B-1-A MS	Matrix Spike	Total/NA	Water	200.7 Rev 4.4	318258
550-216088-B-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	200.7 Rev 4.4	318258

General Chemistry

Analysis Batch: 316469

Lab Sample ID	Client Sample ID	Ргер Туре	Matrix	Method	Prep Batch	
550-214603-1	CCR-1D	Total/NA	Water	SM 2540C		
550-214603-2	CCR-2U	Total/NA	Water	SM 2540C		
550-214603-3	CCR-1U	Total/NA	Water	SM 2540C		
550-214603-4	CCR-3D	Total/NA	Water	SM 2540C		
MB 550-316469/1	Method Blank	Total/NA	Water	SM 2540C		
LCS 550-316469/2	Lab Control Sample	Total/NA	Water	SM 2540C		
LCSD 550-316469/3	Lab Control Sample Dup	Total/NA	Water	SM 2540C		
550-214585-S-1 DU	Duplicate	Total/NA	Water	SM 2540C		

Analysis Batch: 316813

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-214603-1	CCR-1D	Total/NA	Water	SM 4500 H+ B	
550-214603-2	CCR-2U	Total/NA	Water	SM 4500 H+ B	
550-214603-3	CCR-1U	Total/NA	Water	SM 4500 H+ B	
550-214603-4	CCR-3D	Total/NA	Water	SM 4500 H+ B	
550-214603-5	CCR-2D	Total/NA	Water	SM 4500 H+ B	
LCSSRM 550-316813/1	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	
550-214603-1 DU	CCR-1D	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 318292

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-214603-1	CCR-1D	Total/NA	Water	SM 2540C	
550-214603-1	CCR-1D	Total/NA	Water	SM 2540C	
550-214603-2	CCR-2U	Total/NA	Water	SM 2540C	
550-214603-3	CCR-1U	Total/NA	Water	SM 2540C	
550-214603-3	CCR-1U	Total/NA	Water	SM 2540C	
550-214603-4	CCR-3D	Total/NA	Water	SM 2540C	
550-214603-4	CCR-3D	Total/NA	Water	SM 2540C	
550-214603-5	CCR-2D	Total/NA	Water	SM 2540C	
550-214603-5	CCR-2D	Total/NA	Water	SM 2540C	
MB 550-318292/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 550-318292/2	Lab Control Sample	Total/NA	Water	SM 2540C	
LCSD 550-318292/3	Lab Control Sample Dup	Total/NA	Water	SM 2540C	
550-214603-2 DU	CCR-2U	Total/NA	Water	SM 2540C	

Dilution

Factor

1

1

1

10

1

Run

Batch

316965

Number Analyst

318549 RDC

318549 RDC

318694 RDC

316266 SGO

318258 SGO

316637

MMH

GLW

Lab

EET PHX

Client Sample ID: CCR-1D Date Collected: 02/20/24 09:20 Date Received: 02/22/24 07:56

Prep Type

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Batch

Туре

Analysis

Analysis

Analysis

Analysis

Analysis

Prep

Prep

Batch

300.0

300.0

300.0

300.0

200.7

200.7

200.7 Rev 4.4

Method

Lab Sample ID: 550-214603-1 Matrix: Water

Prepared

or Analyzed

03/05/24 18:39

04/02/24 15:24

04/02/24 16:39

04/04/24 13:54

02/22/24 10:24

02/29/24 11:12

03/28/24 05:59

04/03/24 17:47

03/28/24 05:59

04/03/24 17:50

03/04/24 14:41

02/27/24 12:52 - 02/29/24 16:20 1

03/28/24 12:12 - 03/29/24 18:00 1

03/28/24 12:12 - 03/29/24 18:00 1

Matrix: Water

Lab Sample ID: 550-214603-2

Lab Sample ID: 550-214603-3

Total/NA Analysis 200.7 Rev 4.4 1 318650 GLW Total/NA 200.7 Prep 318258 SGO Total/NA Analysis 200.7 Rev 4.4 1 318650 GLW Total/NA SM 2540C 316469 GRW Analysis 1 Total/NA Analysis SM 2540C 1 318292 GRW Total/NA Analysis SM 2540C 1 318292 GRW SM 4500 H+ B Total/NA Analysis 1 316813 ELN

Client Sample ID: CCR-2U Date Collected: 02/20/24 10:40 Date Received: 02/22/24 07:56

_	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	300.0		1	316965	MMH	EET PHX	03/05/24 20:44
Total/NA	Analysis	300.0		1	318549	RDC	EET PHX	04/02/24 17:04
Total/NA	Analysis	300.0		1	318549	RDC	EET PHX	04/02/24 17:29
Total/NA	Analysis	300.0		10	318694	RDC	EET PHX	04/04/24 14:45
Total/NA	Analysis	300.0		100	317221	MMH	EET PHX	03/11/24 17:51
Total/NA	Prep	200.7			316266	SGO	EET PHX	02/22/24 10:24
Total/NA	Analysis	200.7 Rev 4.4		1	316637	GLW	EET PHX	02/29/24 11:39
Total/NA	Prep	200.7			318258	SGO	EET PHX	03/28/24 05:59
Total/NA	Analysis	200.7 Rev 4.4		1	318650	GLW	EET PHX	04/03/24 17:53
Total/NA	Prep	200.7			318258	SGO	EET PHX	03/28/24 05:59
Total/NA	Analysis	200.7 Rev 4.4		1	318650	GLW	EET PHX	04/03/24 17:56
Total/NA	Analysis	SM 2540C		1	316469	GRW	EET PHX	02/27/24 12:52 - 02/29/24 16:20 1
Total/NA	Analysis	SM 2540C		1	318292	GRW	EET PHX	03/28/24 12:12 - 03/29/24 18:00 1
Total/NA	Analysis	SM 4500 H+ B		1	316813	ELN	EET PHX	03/04/24 14:41

Client Sample ID: CCR-1U Date Collected: 02/20/24 12:15 Date Received: 02/22/24 07:56

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	300.0		1	316965	MMH	EET PHX	03/05/24 21:34
Total/NA	Analysis	300.0		1	318549	RDC	EET PHX	04/02/24 17:54
Total/NA	Analysis	300.0		1	318549	RDC	EET PHX	04/02/24 18:19

Eurofins Phoenix

Matrix: Water

1

1

1

1

1

1

Client Sample ID: CCR-1U Date Collected: 02/20/24 12:15 Date Received: 02/22/24 07:56

Prep Type

Total/NA

Batch

Type

Prep

Prep

Prep

Analysis

Analysis

Analysis

Analysis

Analysis

Analysis

Analysis

Analysis

200.7 Rev 4.4

200.7 Rev 4.4

SM 2540C

SM 2540C

SM 2540C

SM 4500 H+ B

200.7

Lab Sample ID: 550-214603-3 Matrix: Water

04/03/24 17:58

03/28/24 05:59

04/03/24 18:29

03/04/24 14:41

02/27/24 12:52 - 02/29/24 16:20 1

03/28/24 12:12 - 03/29/24 18:00 1

03/28/24 12:12 - 03/29/24 18:00 1

Matrix: Water

Lab Sample ID: 550-214603-4

Lab Sample ID: 550-214603-5

Dilution Batch Batch Prepared Method or Analyzed Run Factor Number Analyst Lab 04/04/24 15:35 300.0 10 318694 RDC EET PHX 200.7 316266 SGO EET PHX 02/22/24 10:24 200.7 Rev 4.4 1 316637 GLW EET PHX 02/29/24 11:45 318258 SGO 2007 EET PHX 03/28/24 05:59

GLW

GRW

GRW

EET PHX

318650

316469

318292

318258 SGO

318650 GLW

318292 GRW

316813 ELN

Client Sample ID: CCR-3D Date Collected: 02/20/24 14:20 Date Received: 02/22/24 07:56

Batch Batch Dilution Batch Prepared Method Prep Type Туре Run Factor Number Analyst or Analyzed Lab Total/NA Analysis 300.0 316965 MMH EET PHX 03/05/24 22:24 1 Total/NA Analysis 300.0 1 318549 RDC EET PHX 04/02/24 19:59 Total/NA Analysis 300.0 1 318549 RDC EET PHX 04/02/24 20:24 300.0 10 318694 RDC EET PHX Total/NA Analysis 04/04/24 17:40 Total/NA Prep 200.7 316266 SGO EET PHX 02/22/24 10:24 Total/NA Analysis 200.7 Rev 4.4 1 316637 GLW EET PHX 02/29/24 11:50 Total/NA Prep 200.7 318258 SGO EET PHX 03/28/24 05:59 Total/NA Analysis 200.7 Rev 4.4 1 318650 GLW EET PHX 04/03/24 18:31 Total/NA 200.7 318258 SGO EET PHX 03/28/24 05:59 Prep Total/NA Analysis 200.7 Rev 4.4 EET PHX 04/03/24 18:34 1 318650 GLW 02/27/24 12:52 - 02/29/24 16:20 1 Total/NA Analysis SM 2540C 1 316469 GRW EET PHX EET PHX Total/NA Analysis SM 2540C 1 318292 GRW 03/28/24 12:12 - 03/29/24 18:00 1 Total/NA SM 2540C 318292 GRW EET PHX 03/28/24 12:12 - 03/29/24 18:00 1 Analysis 1 Total/NA Analysis SM 4500 H+ B 1 316813 ELN EET PHX 03/04/24 14:41

Client Sample ID: CCR-2D Date Collected: 02/21/24 13:20 Date Received: 02/22/24 07:56

_	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	300.0			318549	RDC	EET PHX	04/02/24 20:49
Total/NA	Analysis	300.0		1	318549	RDC	EET PHX	04/02/24 21:15
Total/NA	Analysis	300.0		10	318694	RDC	EET PHX	04/04/24 18:30
Total/NA	Prep	200.7			316266	SGO	EET PHX	02/22/24 10:24
Total/NA	Analysis	200.7 Rev 4.4		1	316637	GLW	EET PHX	02/29/24 11:56

Eurofins Phoenix

Matrix: Water

Dilution

Factor

1

1

1

1

1

Run

This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

EET PHX = Eurofins Phoenix, 4625 East Cotton Center Boulevard, Suite #189, Phoenix, AZ 85040, TEL (602)437-3340

Batch

318258

Number Analyst

318650 GLW

318258 SGO

318650 GLW

318292 GRW

318292 GRW

316813 ELN

SGO

Lab

EET PHX

Client Sample ID: CCR-2D Date Collected: 02/21/24 13:20 Date Received: 02/22/24 07:56

Prep Type

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Laboratory References:

Batch

Туре

Prep

Prep

Analysis

Analysis

Analysis

Analysis

Analysis

Batch

200.7

200.7

Method

200.7 Rev 4.4

200.7 Rev 4.4

SM 4500 H+ B

SM 2540C

SM 2540C

Lab Sample ID: 550-214603-5 Matrix: Water

Prepared

or Analyzed

03/28/24 05:59

04/03/24 18:37

03/28/24 05:59

04/03/24 18:40

03/28/24 12:12 -

03/28/24 12:12 -

03/04/24 14:41

matrix: mator	
	5
03/29/24 18:00 1	•
03/29/24 18:00 ¹	ð
	9
	10

	Accreditation/C	ertification Summary		1
Client: Tucson Electric P Project/Site: SGS Semi-	Power Annual	-	Job ID: 550-2140 SDG:	603-1 SGS 2
Laboratory: Eurofin	ns Phoenix Is listed below are applicable to this report.			3
Authority	Program	Identification Number	Expiration Date	4
Arizona	State	AZ0728	06-10-24	5
				8
				9
				1
				1:

Method Summary

Client: Tucson Electric Power Project/Site: SGS Semi- Annual

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	EPA	EET PHX
200.7 Rev 4.4	Metals (ICP)	EPA	EET PHX
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET PHX
SM 4500 H+ B	рН	SM	EET PHX
200.7	Preparation, Total Metals	EPA	EET PHX

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

EET PHX = Eurofins Phoenix, 4625 East Cotton Center Boulevard, Suite #189, Phoenix, AZ 85040, TEL (602)437-3340

0 0 7 0 7 0 0 7 -	5 1 2 5 5					~
Eurofins Phoenix		Chain	of Custody Record	10 e	SI4 4	12
4625 East Cotton Center Boulevard				400 C	Environment Testi	ig S
Suite 189					America	Ľ,
Phoenix, AZ 85040-4807	Pequiatory Program				Eurofing Environment Testing Amor	4
phone 002.437.3340		DWNPDES	RCRAOther:			
Oliont Contract	Project manager: Dom K	avery		2/20/24 - 2/21/24		- 4
	Email: SKANEVE haleve	Idrich.com	Site Contact: A. N. +SON Da	ie: apaciar - apaciar		- 4
Address DO Box 2222	Analysis Turnaroun	65 Time			Sampler: 2 . A. A.	-
City/State/Zip Socianarcy/IVC 47 35978	CALENDAR DAYS WOF	RKING DAYS			For Lab Use Only:	-
Phone 928-551-5202	TAT if different from Below				Walk-in Client:	-
FAX	2 weeks				Lab Sampling:	
Project Name: 565 Scmir Annual	1 week					
Site: 56-5	2 days				Job / SDG No.:	
P O #	1 day					
	Sample					
Sample Identification	Sample Sample C=Comp, Date Time G=Grab)	# of Matrix Cont.	Perfor		Sample Specific Notes:	
CLR-ID	2/20/24/0920 6	6W 3			-01	
CCR-2U	1 10-10 1		NXXXX		-02	
CCR-10	1215		NXXXX		-03	
CCR-3D	V 1H20		N XXXX		-04	af 30
CCR-2D	2/21/24 1320 V	* *			-05	53
						ade
						_ <u> </u>
						-
				550-214603 Cha	in of Custody	_
					1	
					_	
Preservation Used: 1= Ice, 2= HCI: 3= H2SO4: 4=HNO	3: 5=NaOH: 6= Other					
Possible Hazard Identification:			Sample Disposal (A fee may be as	sessed if samples are retain	ned longer than 1 month)	-
Are any samples from a listed EPA Hazardous Waste? Ple	ease List any EPA Waste Codes f	or the sample in			, ,	
the Comments Section if the lab is to dispose of the sample				—		
Special Instructions/OC Requirements & Comments:		own	Return to Client Disposa	I by LabArchive for	Months	-
					1.3°C/ICE/ChCe	
Custody Seals Intact: Yes No	Custody Seal No.:		Cooler Temp. (°C): Obs'd:	Corr'd:	_ Therm ID No.:	
Relinquished by	Company:	Date/Time:	6 Received by:	Company:	Date/Time:	
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:	-
Relinguished by:	Company:	Date/Time:	Received in Laboratory by:		Date/Time:	-
			V YUL	CETAPHA	12122124 0754	

Client: Tucson Electric Power

Login Number: 214603 List Number: 1 Creator: Vela, Jorge

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	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.	True	
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	
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.	False	Check done at department level as required.

List Source: Eurofins Phoenix

ATTACHMENT 2-2 August 2024 Semiannual Sampling Event Laboratory Analytical Report



Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: James Thomas Tucson Electric Power Attn: Accounts Payable Mail Drop HQE703 PO BOX 3033 Tucson, Arizona 85702-3033 Generated 8/30/2024 1:37:06 PM

JOB DESCRIPTION

Springerville TEPS

JOB NUMBER

550-222252-1

Eurofins Phoenix 4625 East Cotton Center Boulevard Suite #189 Phoenix AZ 85040





Eurofins Phoenix

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 Environment Testing Southwest, LLC Project Manager.

Authorization

Authorized for release by Emily Petrunia, Project Manager I Emily.Petrunia@et.eurofinsus.com (602)659-7629 Generated

8/30/2024 1:37:06 PM

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Qualifiers

Qualifiers			
Qualifier Description	4		
Sample required dilution due to high concentration of analyte.			
Analyte reported to MDL per project specification. Target analyte was not detected in the sample.	5		
Qualifier Description	6		
Analyte reported to MDL per project specification. Target analyte was not detected in the sample.			
The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The associated blank spike was acceptable.			
General Chemistry Qualifier Qualifier Description			
Analyte reported to MDL per project specification. Target analyte was not detected in the sample.	0		
This test is specified to be performed in the field within 15 minutes of sampling; sample was received and analyzed past the regulatory holding time.	10		
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			
Percent Recovery			
Contains Free Liquid			
Colony Forming Unit	13		
Contains No Free Liquid			
Duplicate Error Ratio (normalized absolute difference)			
-	Qualifier Description Sample required dilution due to high concentration of analyte. Analyte reported to MDL per project specification. Target analyte was not detected in the sample. Qualifier Description Analyte reported to MDL per project specification. Target analyte was not detected in the sample. The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The associated blank spike was acceptable. emistry Qualifier Description Analyte reported to MDL per project specification. Target analyte was not detected in the sample. This test is specified to be performed in the field within 15 minutes of sampling; sample was received and analyzed past the regulatory holding time. 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 Percent Recovery Contains Free Liquid Colony Forming Unit Contains No Free Liquid Duplicate Error Ratio (normalized absolute difference)		

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

Minimum Level (Dioxin)
Most Probable Number
Method Quantitation Limit
Not Calculated
Not Detected at the reporting limit (or MDL or EDL if shown)
Negative / Absent
Positive / Present
Practical Quantitation Limit
Presumptive
Quality Control
Relative Error Ratio (Radiochemistry)
Reporting Limit or Requested Limit (Radiochemistry)
Relative Percent Difference, a measure of the relative difference between two points
Toxicity Equivalent Factor (Dioxin)
Toxicity Equivalent Quotient (Dioxin)

Job ID: 550-222252-1

Eurofins Phoenix

Job Narrative 550-222252-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these
 situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise
 specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 8/14/2024 5:15 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.7°C.

HPLC/IC

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

Metals

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

General Chemistry

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

Client: Tucson Electric Power Project/Site: Springerville

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
550-222252-1	CCR-1D	Water	08/13/24 08:35	08/14/24 17:15
550-222252-2	CCR-1D-Dup	Water	08/13/24 08:40	08/14/24 17:15
550-222252-3	CCR-3D	Water	08/13/24 11:40	08/14/24 17:15
550-222252-4	CCR-1U	Water	08/13/24 13:05	08/14/24 17:15
550-222252-5	CCR-2U	Water	08/14/24 12:30	08/14/24 17:15
550-222252-6	CCR-2D	Water	08/14/24 08:40	08/14/24 17:15

Client Sample ID: CCR-1D

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	3.1		0.40	0.11	mg/L	1	_	300.0	Total/NA
Sulfate	1400	D2	40	8.5	mg/L	20		300.0	Total/NA
Chloride	520	D2	40	23	mg/L	20		300.0	Total/NA
Boron	0.78		0.050	0.0094	mg/L	1		200.7 Rev 4.4	Total/NA
Calcium	430		2.0	0.068	mg/L	1		200.7 Rev 4.4	Total/NA
Total Dissolved Solids	3200		40	40	mg/L	1		SM 2540C	Total/NA
рН	6.4	H5	1.7	1.7	SU	1		SM 4500 H+ B	Total/NA

Client Sample ID: CCR-1D-Dup

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	3.1		0.40	0.11	mg/L	1	_	300.0	Total/NA
Sulfate	1400	D2	40	8.5	mg/L	20		300.0	Total/NA
Chloride	510	D2	40	23	mg/L	20		300.0	Total/NA
Boron	0.80		0.050	0.0094	mg/L	1		200.7 Rev 4.4	Total/NA
Calcium	440		2.0	0.068	mg/L	1		200.7 Rev 4.4	Total/NA
Total Dissolved Solids	3200		40	40	mg/L	1		SM 2540C	Total/NA
рН	6.4	H5	1.7	1.7	SU	1		SM 4500 H+ B	Total/NA

Client Sample ID: CCR-3D

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	3.3		0.40	0.11	mg/L	1	_	300.0	Total/NA
Sulfate	1300	D2	40	8.5	mg/L	20		300.0	Total/NA
Chloride	550	D2	40	23	mg/L	20		300.0	Total/NA
Boron	0.85		0.050	0.0094	mg/L	1		200.7 Rev 4.4	Total/NA
Calcium	430		2.0	0.068	mg/L	1		200.7 Rev 4.4	Total/NA
Total Dissolved Solids	3200		40	40	mg/L	1		SM 2540C	Total/NA
рН	6.5	H5	1.7	1.7	SU	1		SM 4500 H+ B	Total/NA

Client Sample ID: CCR-1U

Analyte **Result Qualifier** RL MDL Unit Dil Fac D Method Prep Type Fluoride 4.0 0.40 0.11 mg/L 1 300.0 Total/NA Sulfate 1400 D2 50 300.0 Total/NA 100 21 mg/L Total/NA Chloride 500 D2 100 56 mg/L 50 300.0 Total/NA Boron 0.82 0.050 0.0094 mg/L 200.7 Rev 4.4 1 Calcium 0.068 mg/L 200.7 Rev 4.4 Total/NA 430 2.0 1 **Total Dissolved Solids** 3700 100 100 mg/L 1 SM 2540C Total/NA

Client Sample ID: CCR-2U

 Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac D	Method	Prep Type
Fluoride	2.7		0.40	0.11	mg/L	1	300.0	Total/NA
Sulfate	2000	D2	50	11	mg/L	25	300.0	Total/NA
Chloride	460	D2	50	28	mg/L	25	300.0	Total/NA
Boron	1.1		0.050	0.0094	mg/L	1	200.7 Rev 4.4	Total/NA
Calcium	660		2.0	0.068	mg/L	1	200.7 Rev 4.4	Total/NA
Total Dissolved Solids	4000		40	40	mg/L	1	SM 2540C	Total/NA
pН	6.3	H5	1.7	1.7	SU	1	SM 4500 H+ B	Total/NA

Page 7 of 27

This Detection Summary does not include radiochemical test results.

5 6

Lab Sample ID: 550-222252-1

Lab Sample ID: 550-222252-2

Lab Sample ID: 550-222252-3

Lab Sample ID: 550-222252-4

Lab Sample ID: 550-222252-5

Client Sample ID: CCR-2D

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac D	Method	Prep Type
Fluoride	3.0		0.40	0.11	mg/L	1	300.0	Total/NA
Sulfate	1800	D2	40	8.5	mg/L	20	300.0	Total/NA
Chloride	540	D2	40	23	mg/L	20	300.0	Total/NA
Boron	0.86		0.050	0.0094	mg/L	1	200.7 Rev 4.4	Total/NA
Calcium	600		2.0	0.068	mg/L	1	200.7 Rev 4.4	Total/NA
Total Dissolved Solids	3800		40	40	mg/L	1	SM 2540C	Total/NA
pН	6.5	H5	1.7	1.7	SU	1	SM 4500 H+ B	Total/NA

Lab Sample ID: 550-222252-6 3 4 5 6 7 8 9 10 11 12 13 14

Client Sample Results

Client: Tucson Electric Power Project/Site: Springerville

Job ID: 550-222252-1 SDG: TEPS

Lab Sample ID: 550-222252-1

Client Sample ID: CCR-1D Date Collected: 08/13/24 08:35 Date

Date Collected: 08/13/24 08:35 Date Received: 08/14/24 17:15								Matrix	: Water
Method: EPA 300.0 - Anions, Ion	Chroma	tography							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	3.1		0.40	0.11	mg/L			08/16/24 15:24	1
Sulfate	1400	D2	40	8.5	mg/L			08/16/24 15:52	20
Chloride	520	D2	40	23	mg/L			08/16/24 15:52	20
Method: EPA 200.7 Rev 4.4 - Met	tals (ICP)								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.78		0.050	0.0094	mg/L		08/16/24 05:51	08/20/24 17:05	1
Calcium	430		2.0	0.068	mg/L		08/16/24 05:51	08/20/24 17:05	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	3200		40	40	mg/L			08/15/24 15:41	1
_pH (SM 4500 H+ B)	6.4	H5	1.7	1.7	SU			08/20/24 13:27	1
Date Received: 08/14/24 17:15 Method: EPA 300.0 - Anions, Ion	Chroma	tography							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	3.1		0.40	0.11	mg/L			08/16/24 17:15	1
Sulfate	1400	D2	40	8.5	mg/L			08/16/24 17:43	20
Chloride	510	D2	40	23	mg/L			08/16/24 17:43	20
Method: EPA 200.7 Rev 4.4 - Met	tals (ICP)								
Analyte	Result	Qualifier	RL	MDL	Unit	<u>D</u>	Prepared	Analyzed	Dil Fac
Boron	0.80		0.050	0.0094	mg/L		08/16/24 05:51	08/20/24 17:08	1
Calcium	440		2.0	0.068	mg/L		08/16/24 05:51	08/20/24 17:08	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	3200		40	40	mg/L			08/15/24 15:41	1
pH (SM 4500 H+ B)	6.4	H5	1.7	1.7	SU			08/20/24 13:18	1
Client Sample ID: CCR-3D						La	ab Sample	ID: 550-222	252-3
Date Collected: 08/13/24 11:40								Matrix	: Water

Date Received: 08/14/24 17:15

Method: EPA 300.0 - Anions, Io	n Chroma	tography							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	3.3		0.40	0.11	mg/L			08/16/24 18:11	1
Sulfate	1300	D2	40	8.5	mg/L			08/16/24 18:39	20
Chloride	550	D2	40	23	mg/L			08/16/24 18:39	20
Method: EPA 200.7 Rev 4.4 - Me	etals (ICP)								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.85		0.050	0.0094	mg/L		08/16/24 05:51	08/20/24 17:12	1
Calcium	430		2.0	0.068	mg/L		08/16/24 05:51	08/20/24 17:12	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	3200		40	40	mg/L			08/15/24 15:41	1

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Client Sample Results

RL

1.7

Result Qualifier

6.5 H5

Job ID: 550-222252-1 SDG: TEPS

Matrix: Water

Matrix: Water

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Client Sample ID: CCR-3D Date Collected: 08/13/24 11:40 Date Received: 08/14/24 17:15

General Chemistry (Continued)

Client: Tucson Electric Power

Project/Site: Springerville

Analyte

pH (SM 4500 H+ B)

	Lab Sample	ID: 550-222 Matrix	252-3 Water
MDL Unit	D Prepared	Analyzed 08/20/24 13:15	Dil Fac
	Lab Sample	ID: 550-222	252-4

Lab Sample ID: 550-222252-5

Client Sample ID: CCR-1U Date Collected: 08/13/24 13:05 Date Received: 08/44/24 17:45

Date Received: 08/14/24 17:15

Method: EPA 300.0 - Anions, Ior	n Chroma	tography							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	4.0		0.40	0.11	mg/L			08/16/24 19:07	1
Sulfate	1400	D2	100	21	mg/L			08/16/24 20:59	50
Chloride	500	D2	100	56	mg/L			08/16/24 20:59	50
Method: EPA 200.7 Rev 4.4 - Me	tals (ICP)								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.82		0.050	0.0094	mg/L		08/16/24 05:51	08/20/24 17:15	1
Calcium	430		2.0	0.068	mg/L		08/16/24 05:51	08/20/24 17:15	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	3700		100	100	mg/L			08/15/24 15:41	1
pH (SM 4500 H+ B)	ND	E8 H5	1.7	1.7	SU			08/20/24 13:11	1

Client Sample ID: CCR-2U

Date Collected: 08/14/24 12:30 Date Received: 08/14/24 17:15

Method: EPA 300.0 - Anions, Ion	Chroma	tography							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	2.7		0.40	0.11	mg/L			08/16/24 21:27	1
Sulfate	2000	D2	50	11	mg/L			08/16/24 21:55	25
Chloride	460	D2	50	28	mg/L			08/16/24 21:55	25
Method: EPA 200.7 Rev 4.4 - Met	tals (ICP)								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.1		0.050	0.0094	mg/L		08/16/24 05:51	08/20/24 17:18	1
Calcium	660		2.0	0.068	mg/L		08/16/24 05:51	08/20/24 17:18	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	4000		40	40	mg/L			08/15/24 15:41	1
pH (SM 4500 H+ B)	6.3	H5	1.7	1.7	SU			08/20/24 13:09	1
Client Sample ID: CCR-2D						La	ab Sample	ID: 550-222	252-6
Date Collected: 08/14/24 08:40							-	Matrix	: Water
Date Received: 08/14/24 17:15									

Method: EPA 300.0 - Anions, Ion Chromatography Analyte Result Qualifier RL MDL Unit D Prepared Analyzed Dil Fac Fluoride 3.0 0.40 0.11 mg/L 08/16/24 22:22 1 Sulfate 1800 D2 40 8.5 mg/L 08/16/24 22:50 20 Chloride 540 D2 40 23 mg/L 08/16/24 22:50 20

Client Sample ID: CCR-2D Date Collected: 08/14/24 08:40 Date Received: 08/14/24 17:15

Lab Sample ID: 550-222252-6 Matrix: Water

Matrix: Water

Method: EPA 200.7 Rev 4.4 - Met	tals (ICP)								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.86		0.050	0.0094	mg/L		08/16/24 05:51	08/20/24 17:22	1
Calcium	600		2.0	0.068	mg/L		08/16/24 05:51	08/20/24 17:22	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	3800		40	40	mg/L			08/15/24 15:41	1
рН (SM 4500 H+ B)	6.5	H5	1.7	1.7	SU			08/22/24 11:40	1

Prep Type: Total/NA

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 550-324901/2

Matrix: Water Analysis Batch: 324901

	MB	MB MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	ND	E8	0.40	0.11	mg/L			08/16/24 13:04	1
Sulfate	ND	E8	2.0	0.43	mg/L			08/16/24 13:04	1
Chloride	ND	E8	2.0	1.1	mg/L			08/16/24 13:04	1

Lab Sample ID: LCS 550-324901/5 Matrix: Water Analysis Batch: 324901

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Fluoride	4.00	4.29		mg/L		107	90 - 110	
Sulfate	20.0	21.2		mg/L		106	90 - 110	
Chloride	20.0	21.5		mg/L		107	90 - 110	

Lab Sample ID: LCSD 550-324901/6

Matrix: Water Analysis Batch: 324901

-	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Fluoride	4.00	4.30		mg/L		108	90 - 110	0	20
Sulfate	20.0	21.2		mg/L		106	90 - 110	0	20
Chloride	20.0	21.5		mg/L		107	90 - 110	0	20

Lab Sample ID: 550-222252-1 MS Matrix: Water

Analysis Batch: 324901

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Fluoride	3.3	E4 D2	80.0	89.6	D2	mg/L		108	80 - 120	
Fluoride	3.3	E4 D2	80.0	89.6	D2	mg/L		108	80 - 120	
Sulfate	1400	D2	400	1780	D2	mg/L		103	80 - 120	
Sulfate	1400	D2	400	1780	D2	mg/L		103	80 - 120	
Chloride	520	D2	400	983	D2	mg/L		116	80 - 120	
Chloride	520	D2	400	983	D2	mg/L		116	80 - 120	

Lab Sample ID: 550-222252-1 MSD Matrix: Water Analysis Batch: 324901

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Fluoride	3.3	E4 D2	80.0	89.5	D2	mg/L		108	80 - 120	0	20	
Fluoride	3.3	E4 D2	80.0	89.5	D2	mg/L		108	80 - 120	0	20	
Sulfate	1400	D2	400	1770	D2	mg/L		100	80 - 120	0	20	
Sulfate	1400	D2	400	1770	D2	mg/L		100	80 - 120	0	20	
Chloride	520	D2	400	980	D2	mg/L		115	80 - 120	0	20	
Chloride	520	D2	400	980	D2	mg/L		115	80 - 120	0	20	

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Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Client Sample ID: CCR-1D

Client Sample ID: CCR-1D

Prep Type: Total/NA

Prep Type: Total/NA

Client Sample ID: Lab Control Sample

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 550-324	1867/1-A										Clie	ent Samp	ole ID: Mo	ethod	Blank
Analysis Batch: 325057													Pron Ba	tch·3	24867
Analysis Daten. 525057		MR MR	1										пер Ба		24007
Analyte	Res	ult Qu	, alifier		RI		וחוי	Unit		р	Р	repared	Analyz	ed	Dil Fac
Boron			unner		0.050		0094	ma/l		_	08/1	6/24 05·51	08/20/24	16·48	1
Calcium	, 1				2.0	0.0	068	ma/l			08/1	6/24 05:51	08/20/24	16:48	1
Calcium	I				2.0	0	.000	mg/L			00/1	0/24 00.01	00/20/24	10.40	1
l ab Sample ID: I CS 550-32	4867/2-4								Clie	ont	Sar	nnle ID:	Lab Con	trol S	amnle
Matrix: Water									U.I.C		Uu.		Prop Ty		
Analysis Batch: 325057													Drop Ba	tch: 3	24867
Analysis Batch. 525057				Spike		1.09	1.00							icn. 5	24007
Awalista				Spike		LU3	203		11		~	0/ D = =	%Rec		
Analyte				Added		Result	Qua	litier	Unit		<u> </u>	%Rec	Limits		
Boron				1.00		0.963			mg/L			96	85 - 115		
Calcium				21.0		20.1			mg/L			96	85 - 115		
								_					0		- D
Lab Sample ID: LCSD 550-3	324867/3-A							U	lient S	am	pie	ID: Lab	Control	sampi	е Бир
Matrix: Water													Prep Ty	be: Io	tal/NA
Analysis Batch: 325057													Prep Ba	tch: 3	24867
				Spike		LCSD	LCS	D					%Rec		RPD
Analyte				Added		Result	Qua	lifier	Unit		D	%Rec	Limits	RPD	Limit
Boron				1.00		0.953			mg/L			95	85 - 115	1	20
Calcium				21.0		20.0			mg/L			95	85 - 115	0	20
Lab Sample ID: 550-222252	-1 MS											Client	t Sample	ID: CO	CR-1D
Matrix: Water													Prep Ty	be: To	tal/NA
Analysis Batch: 325057													Prep Ba	tch: 3	24867
	Sample S	Sample		Spike		MS	MS						%Rec		
Analyte	Result (Qualifie	r	Added		Result	Qua	lifier	Unit		D	%Rec	Limits		
Boron	0.78		<u> </u>	1 00		1 79			ma/l			101	70 - 130		
Calcium	430			21.0		110	МЗ		ma/l			106	70 130		
Guidian	400			21.0		0	WIO		ing/L			100	10-100		
l ab Sample ID: 550-222252	-1 MSD											Client	Sample		R-1D
Matrix: Water													Pron Tv		tal/NA
Analysis Patch: 225057														toh: 2	24967
Analysis Batch. 525057	Sampla (Somalo		Spike		Med	мег	`						icn. 5	
Awalista	Sample 3	Sample	-	Spike		NISD		, 1161 a m	11		~	0/ D = =	%Rec		
		Qualifie	r	Added		Result	Qua	litter	Unit		<u> </u>				
Boron	0.78			1.00		1.78			mg/L			100	70 - 130	1	20
Calcium	430			21.0		446	М3		mg/L			93	70 - 130	1	20
Method: SM 2540C - Sol	lide Total	Dice	olvo		5)										
Wethod: 5W 2540C - 50	ius, iotai	D133		u (ID.)										
Lab Sample ID: MR 550 324	1927/4											nt Same		thod	Plank
Metrix: Weter	03771										Cile	ant Samp			
Watrix: Water													Prep Ty	be: 10	lai/NA
Analysis Batch: 324837	_														
	n	ИВ МВ	8												
Analyte	Res	ult Qu	alifier		RL		MDL	Unit		D	P	repared	Analyz	ed	Dil Fac
Total Dissolved Solids	1	ND E8			20		20	mg/L					08/15/24	15:41	1
Γ											_				
Lab Sample ID: LCS 550-32	4837/2								Clie	ent	Sar	nple ID:	Lab Con	trol Sa	ample
Matrix: Water													Prep Ty	be: To	tal/NA
Analysis Batch: 324837															
				Spike		LCS	LCS	5					%Rec		
Analyte				Added		Result	Qua	lifier	Unit		D	%Rec	Limits		
Total Dissolved Solids				1000		978			mg/L		_	98	90 - 110		

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

AnalyteSpike AddedLCSD ResultLCSD ResultUnit QuiliferD%Rec wildRPD Limits RPD QuilificitLab Sample ID: Total Dission/ed Solids300986mg/LD99.0111Lab Sample ID: Sample SampleSample Sample 260DUDURPD ResultClient Sample ID: DUDuplicate Prep Type: Total/NAAnalyteResult Catal Dission/ed Solids260264mg/L01100Method: SM 4500 H+ B - pH260264mg/L011000Method: SM 4500 H+ B - pH260264mg/L010000Method: SM 4500 H+ B - pH260264mg/L0100000Matrix: Water Analytis Batch: 325023Spike AddedLCSSRM Result Result QuilifierClient Sample ID: Lab Control Sample Prep Type: Total/NA0%Rec %Rec Himits 96.5.101.%Rec %Rec Himits 96.5.101.%Rec %Rec Matrix: Water Analysis Batch: 325023Sample Sample Sample Sample AddedDUDU Result Quilifier0%Rec %Rec Method:%Rec Method:%Rec Method:%Rec Method:%Rec Method:%Rec Method:%Rec Method:%Rec Method:%Rec Method:%Rec Method:%Rec Method:%Rec Method:%Rec Method:%Rec Method:%Rec Method:%Rec Method:%R	Lab Sample ID: LCSD 550- Matrix: Water Analysis Batch: 324837	-324837/3				C	Client Sa	ample	ID: La	b Control S Prep Ty	Sample pe: Tot	∍ Dup al/NA
AnalyteAddedResultQualifierUnitD%RecLimitsRPDLimitTotal Dissolved Solids1000986mg/LD9990.110111Lab Sample (D: 550-222239-S-1 DUMatrix: WaterAnalysis Batch: 324837Sample SampleDUDUClient Sample (D: DuplicateAnalyteResult QualifierResult QualifierResult QualifierUnitDRPDRPDAnalyteResult QualifierResult QualifierUnitDRPDLimit010Method: SM 4500 H+ B - pHClient Sample (D: LoSSRM 550-325023/1Client Sample (D: Lab Control SamplePrep Type: Total/NAAnalyteResult Qualifier7.007.1SUD%RecMatrix:pH7.207.1SUD%RecRPDAnalyteResult QualifierResult QualifierUnitD%RecpH7.27.3SUDRPDLimitspH7.27.3SUDRPDLimitspH7.27.07.0SUD%RecLimitsAnalyteResult QualifierResult QualifierSUD%RecRPDLab Sample (D: LSSRM 550-325138/1KadedResult QualifierDRPDLimitspH7.27.07.0SUD%RecLimitsAnalyteResult QualifierResult QualifierSUD%RecSinter </th <th></th> <th></th> <th></th> <th>Spike</th> <th>LCSD</th> <th>LCSD</th> <th></th> <th></th> <th></th> <th>%Rec</th> <th></th> <th>RPD</th>				Spike	LCSD	LCSD				%Rec		RPD
Total Dissolved Solids 1000 986 mg/L 99 90.110 1 100 Lab Sample ID: 550-222239-S-1 DU Matrix: Water Analysis Batch: 324837 Sample Sample Result Qualifier DU DU Result Qualifier Client Sample ID: Duplicate Prep Type: Total/NA Analyte Result Qualifier Muit D RPD RPD Limit Total Dissolved Solids 260 264 mg/L 0 10 Method: SM 4500 H+ B - pH Etab Sample ID: LCSSRM 550-325023/1 Matrix: Water Analyte Spike Added LCSSRM LCSSRM Result Qualifier Client Sample ID: Lab Control Sample Prep Type: Total/NA Analyte Added Result Qualifier Unit D %Rec Limits	Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Lab Sample ID: 550-222239-S-1 DU Matrix: Water Sample Sample DU DU RPD Total NA Analysis Batch: 324837 Sample Sample DU DU Result Qualifier D RPD Limit Total Dissolved Solids 260 264 mg/L 0 10 Method: SM 4500 H+ B - pH Client Sample ID: Lab Control Sample Prep Type: Total/NA Lab Sample ID: LCSSRM 550-325023/1 Client Sample ID: Lab Control Sample Prep Type: Total/NA Analyte Added Result Qualifier 0 %Rec Analyte Added Result Qualifier Unit D %Rec Lab Sample ID: 550-222271-A-1 DU Katrix: Water Site Client Sample ID: Duplicate Prep Type: Total/NA Analyte Result Qualifier NU D %Rec Prep Type: Total/NA Analyte Result Qualifier NU DU NU D RPD Analyte Result Qualifier NU DU NU D RPD Analyte Result Qualifier NU <t< th=""><th>Total Dissolved Solids</th><th></th><th></th><th>1000</th><th>986</th><th></th><th>mg/L</th><th></th><th>99</th><th>90 - 110</th><th>1</th><th>10</th></t<>	Total Dissolved Solids			1000	986		mg/L		99	90 - 110	1	10
Lab Sample ID: 550-222293-S-1 DU Matrix: Water Client Sample ID: Duplicate Prep Type: Total/NA Analyte Result Qualifier Unit D RPD Analyte Result Qualifier Unit D RPD Method: SM 4500 H+ B - pH Client Sample ID: LCSSRM 550-325023/1 Client Sample ID: Lab Control Sample Prep Type: Total/NA Analyte Result Qualifier Unit D %Rec Analyte Added Result Qualifier Unit D %Rec Analyte Added Result Qualifier Unit D %Rec Limits pH 7:0 7:1 SU D %Rec Limits 5 Lab Sample ID: 550-222271-A-1 DU Matrix: Water Result Qualifier Unit D %Rec Prep Type: Total/NA Analyte Result Qualifier Result Qualifier Unit D RPD Limits pH 7:2 7:3 SU DU DU Result Result Qualifier NU D RPD Limits SU 0.							•					
Matrix: Water Analysis Batch: 324837 Sample Result Sample Qualifier Sample Prep Type: Total/NA Analyte Result Qualifier U DU DU RPD Limit Analyte 260 260 264 O 10 P RPD Limit Method: SM 4500 H+ B - pH 264 264 O 10 Prep Type: Total/NA Lab Sample ID: LCSSRM 550-325023/1 Matrix: Water Spike LCSSRM LCSSRM LCSSRM Prep Type: Total/NA Analyte Added Result Qualifier Unit D %Rec Merc Analyte Added 7.00 7.1 SU D %Rec Limits - Lab Sample ID: 550-222271-A-1 DU Matrix: Water Analyte Result Qualifier Unit D %Rec RPD Limit - Analyte Result Qualifier NU DU NU DU RPD RPD Limit - - - - - - - - - - - - - - -	Lab Sample ID: 550-22223	9-S-1 DU							Client	Sample II	D: Dup	licate
Analysis Batch: 324837 Sample Sample Result Qualifier DU DU RPD RPD Limit D Result Valuer Result Valuer Result Result Value Result CSSRM Client Sample ID: Lab Control Sample Result Imits Limits Limits Limits Result Result Result Result Result CSSRM Result Result CSSRM Result Result Result Result Result Result Qualifier Matrix: Water Result Qualifier DU DU Result Qualifier Result Qualifier Result Result Qualifier Result Qualifier RPD Limit <	Matrix: Water									Prep Ty	pe: Tot	al/NA
Sample AnalyteDUDURPDTotal Dissolved Solids260264mg/L010Method: SM 4500 H+ B - pH264mg/L010Lab Sample ID: LCSSRM 550-325023/1 Matrix: Water AnalyteClient Sample ID: Lab Control Sample Prep Type: Total/NAClient Sample ID: Lab Control Sample Prep Type: Total/NAAnalyte pHAdded 7.00Result QualifierU IUIt 7.1D SU%Rec with the sample ID: Duplicate Prep Type: Total/NAAnalyte pHResult QualifierResult QualifierDU UU Result QualifierClient Sample ID: Duplicate Prep Type: Total/NAAnalyte pHResult QualifierResult QualifierDU UU Result QualifierRPD Limit Prep Type: Total/NAAnalyte pHResult QualifierResult QualifierDU UU Result QualifierRPD Limit Prep Type: Total/NAAnalyte pHResult QualifierResult QualifierDU UU Result QualifierRPD Limit Prep Type: Total/NAAnalyte pHResult QualifierResult QualifierDRPD Prep Type: Total/NAAnalyte pHClient Sample ID: Lab Control Sample Prep Type: Total/NASUD%Rec Prep Type: Total/NAAnalyte pHResult QualifierResult QualifierU UIt TotalD%Rec Prep Type: Total/NAAnalyte pHResult QualifierResult QualifierU UU Total/NAPrep Type: Total/NAAnalyte pHResult QualifierResult QualifierD%Rec Prep Type: Total/NAAna	Analysis Batch: 324837											
Analyte Result Qualifier Unit D RPD Limit Total Dissolved Solids 260 260 264 mg/L 0 10 Method: SM 4500 H+ B - pH 264 264 mg/L 0 10 Lab Sample ID: LCSSRM 550-325023/1 Matrix: Water Client Sample ID: Lab Control Sample Prep Type: Total/NA Analyte Added Result Qualifier Unit D %Rec Limits Lab Sample ID: 550-222271-A-1 DU Matrix: Water Analyte Result Qualifier Unit D %Rec Limits - Analyte Result Qualifier DU DU With D %Rec Imits - Lab Sample ID: 550-222271-A-1 DU Matrix: Water Sample Sample DU DU DU Method: SU Prep Type: Total/NA Analyte Result Qualifier Unit D %Rec RPD Limit DH 7.2 7.3 GU DU Unit D %Rec RPD Limits - - - - - - -		Sample	Sample		DU	DU						RPD
Total Dissolved Solids 260 264 mg/L 0 10 Method: SM 4500 H+ B - pH Item to the second sec	Analyte	Result	Qualifier		Result	Qualifier	Unit	D			RPD	Limit
Method: SM 4500 H+ B - pH Lab Sample ID: LCSSRM 550-325023/1 Matrix: Water Client Sample ID: Lab Control Sample Prep Type: Total/NA Analyte Added pH 7.00 Analyte Added pH 7.00 Analyte Result Qualifier Unit DU DU Matrix: Water Result Analyte Result Analyte Result Analyte Result Qualifier Unit PH 7.2 T.2 7.3 Site LCSSRM Sample Sample DU PH 7.2 T.2 7.3 Sample ID: LCSSRM 550-325138/1 Client Sample ID: Lab Control Sample Matrix: Water Analyte Analyte Result PH 7.00 T.00 7.0 Site LCSSRM LCSSRM Spike Analyte Result Qualifier Unit Site Client Sample ID: Lab Control Sample <tr< td=""><td>Total Dissolved Solids</td><td>260</td><td></td><td></td><td>264</td><td></td><td>mg/L</td><td></td><td></td><td></td><td>0</td><td>10</td></tr<>	Total Dissolved Solids	260			264		mg/L				0	10
Lab Sample ID: LCSSRM 550-325023/1 Matrix: Water Analysis Batch: 325023 Spike Added LCSSRM Result LCSSRM Qualifier LCSSRM Unit D %Rec Umits Limits	Method: SM 4500 H+ B	- pH										
Matrix: Water Analysis Batch: 325023 Spike Added LCSSRM Result 7.00 LCSSRM Result 7.1 LCSSRM SU D 9, Kec 100.8 %Rec 98.5 - 101. 5 Lab Sample ID: 550-222271-A-1 DU Matrix: Water Analysis Batch: 325023 Sample Sample Result PH DU 7.2 DU 7.3 DU 7.3 DU SU D 9 Client Sample ID: Duplicate Prep Type: Total/NA Analyte Result Qualifier Qualifier 7.2 DU 7.3 DU 7.3 DU SU D 9 RPD 8.5 - 101. 5 Lab Sample ID: LCSSRM 550-325138/1 Matrix: Water Analyte Spike Added LCSSRM 7.0 Client Sample ID: Lab Control Sample Prep Type: Total/NA Analyte Added PH 7.00 7.0 SU D 9, Kec 100.4 %Rec 9, Kec 100.4 Limit 9, So Lab Sample ID: 550-222139-B-1 DU Matrix: Water Analysis Batch: 325138 Sample Sample 10.4 D 9, So U DU 10.4 D 9, So %Rec 100.4 Limits 9, So	Lab Sample ID: LCSSRM 5	50-325023/	'1				Clie	ent Sar	nple IC): Lab Cor	trol Sa	ample
Analysis Batch: 325023 Spike LCSSRM LCSSRM Qualifier Unit D %Rec Limits Analyte 7.0 7.1 SU D %Rec Limits - Lab Sample ID: 550-222271-A-1 DU 7.1 SU D %Rec Limits - Matrix: Water Analyte Result Qualifier DU DU Client Sample ID: D: Duplicate Prep Type: Total/NA Analyte Result Qualifier 7.3 Qualifier D RPD Analyte Result Qualifier 7.3 Client Sample ID: Lab Control Sample Limits Analyte Result Qualifier 7.3 Client Sample ID: Lab Control Sample Limits Analyte Added Result Qualifier Unit D %Rec - Analyte Added Result Qualifier Unit D %Rec - - PH 7.0 7.0 7.0 7.0 Prep Type: Total/NA Analyte Result Qualifier Unit D %Rec - - <td>Matrix: Water</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>· ·</td> <td>Prep Ty</td> <td>pe: Tot</td> <td>al/NA</td>	Matrix: Water								· ·	Prep Ty	pe: Tot	al/NA
Analyte pHSpike AddedLCSSRM ResultLCSSRM QualifierUnit SUD %Rec Limits%Rec LimitsAnalyte pH7.007.017.11SUD SU%Rec 100.8Limits 98.5-101	Analysis Batch: 325023											
AnalyteAddedResultQualifierUnitD%RecLimitspH7.007.1SU010.898.5.101.Lab Sample ID: 550-222271-A-1 DU Matrix: Water Analysis Batch: 325023SampleSampleDU Perep Type: Total/NAAnalyteResult QualifierQualifierDU Result QualifierDU Result T.2DU T.3DClient Sample ID: Duplicate Prep Type: Total/NAAnalyteResult QualifierQualifierMint T.2DClient Sample ID: Lab Control Sample Prep Type: Total/NALab Sample ID: LCSSRM 550-325138/1 Matrix: Water AnalyteSpikeLCSSRM Result AddedLCSSRM Result Result QualifierClient Sample ID: Lab Control Sample Prep Type: Total/NAAnalyte pH7.007.07.0SUD%Rec wRecAnalyte pHSample ID: 550-222139-B-1 DU Matrix: Water Analysis Batch: 325138Sample SampleDUDUClient Sample ID: Duplicate Prep Type: Total/NAAnalyte pHResult QualifierSample Result QualifierDUDURepRPDAnalyte pHResult QualifierQualifier QualifierUDURPDRPDAnalyte pHResult QualifierQualifier QualifierDUDURPDAnalyte pHResult QualifierQualifier QualifierDUDURPDAnalyte pHResult QualifierQualifier QualifierDUDURPD <t< td=""><td>-</td><td></td><td></td><td>Spike</td><td>LCSSRM</td><td>LCSSRM</td><td></td><td></td><td></td><td>%Rec</td><td></td><td></td></t<>	-			Spike	LCSSRM	LCSSRM				%Rec		
pH7.007.1SU100.898.5-101.Lab Sample ID: 550-222271-A-1 DU Matrix: Water Analysis Batch: 325023Sample Result QualifierDU Result Result 7.2Client Sample ID: Duplicate Prep Type: Total/NAAnalyte pHResult 7.2QualifierU Result Result 7.3DU SUDU DUClient Sample ID: Duplicate 	Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits		
Lab Sample ID: 550-222271-A-1 DU Matrix: Water Analysis Batch: 325023Sample Result QualifierDU Result QualifierDU Result QualifierDU Result QualifierDU Result QualifierDU QualifierDU Nit SUD PRPD RPD Limit SURPD RPD Limit SURPD PAnalyte pHResult 7.2Qualifier 7.3Unit SUD PD RPD Nit SUClient Sample ID: Lab Control Sample Prep Type: Total/NA Analysis Batch: 325138Analyte pHAdded 7.00Spike 7.00LCSSRM 7.0LCSSRM SUD P Water SUD P WRec Limit 98.5-101. 5Lab Sample ID: 550-222139-B-1 DU Matrix: Water Analysis Batch: 325138Sample Sample QualifierDU DU Nut Result QualifierDU Qualifier UDUD WRec Limit SUClient Sample ID: Duplicate Prep Type: Total/NA SUAnalyte pHResult QualifierQualifier Result QualifierDU Qualifier SUDU SURPD RPD Limit SU	рН			7.00	7.1		SU		100.8	98.5 - 101. 5		
Lab Sample ID: 500-222139-B-1 DU Matrix: Water Analysis Batch: 325138Sample Sample QualifierDU 	L ah Sample ID: 550-22227								Client	Sample II		licato
Analysis Batch: 325023Sample SampleDUDURPDAnalyteResultQualifierResultQualifierUnitD	Matrix: Water								onem	Pron Tv	ne: Tot	
AnalyteResultQualifierDUDUDURPDAnalyteResultQualifier0.10.100.35Lab Sample ID: LCSSRM 550-325138/1Client Sample ID: LCSSRM 550-325138/1Client Sample ID: Lab Control Sample Prep Type: Total/NAMatrix: Water Analytes Batch: 325138SpikeLCSSRMLCSSRM ResultClient Sample ID: Lab Control Sample Prep Type: Total/NAAnalyte pHAddedResultQualifier VinitUnit SUD%Rec 98.5-101. 5Lab Sample ID: 550-222139-B-1 DU Matrix: Water Analysis Batch: 325138SampleDUDUClient Sample ID: Duplicate Prep Type: Total/NAMatrix: Water Analysis Batch: 325138SampleDUDUDURPDAnalyte pHResultQualifier QualifierDUDURPDAnalyte pHResultQualifier 12.2NaiSuDRPDAnalyte pHResultQualifier 12.2NaiSuDMatrix NA	Analysis Batch: 325023									перту	pc. 101	
Analyte pHResult 7.2Qualifier 7.3Result Result 7.3Qualifier Unit SUUnit DDRPD 0.3Limit 5Lab Sample ID: LCSSRM 550-325138/1 Matrix: Water Analysis Batch: 325138Spike AddedLCSSRM Result Result 7.00Client Sample ID: Lab Control Sample Prep Type: Total/NA SUPrep Type: Total/NA 98.5 - 101. 5Lab Sample ID: 550-222139-B-1 DU Matrix: Water Analysis Batch: 325138Spike Added 7.00LCSSRM Result 7.00LCSSRM Qualifier Unit ToD wRec Unit SUMarc bit SULimits Limits Prep Type: Total/NA 98.5 - 101. 5Lab Sample ID: 550-222139-B-1 DU Matrix: Water Analysis Batch: 325138Sample Sample QualifierDU Result QualifierDU Qualifier Unit SUD Prep Type: Total/NA Prep Type: Total/NA SUAnalyte pHResult QualifierQualifier Analysis Batch: 325138Sample SupelDU Result QualifierDU Qualifier SUP Prep Type: Total/NA Prep Type: Total/NA SU		Sample	Sample		DU	DU						RPD
Initial pH7.27.3Initial pHpH7.27.3SU0.35Lab Sample ID: LCSSRM 550-325138/1 Matrix: Water Analysis Batch: 325138Client Sample ID: Lab Control Sample Prep Type: Total/NAAnalyte pHAddedSpike AddedLCSSRM Result 7.00Unit 7.0D SU%Rec 100.4Lab Sample ID: 550-222139-B-1 DU Matrix: Water Analysis Batch: 325138Sample SampleDU DUUnit SUD SU%Rec Limits 98.5-101. 5Lab Sample ID: 550-222139-B-1 DU Matrix: Water Analysis Batch: 325138Sample SampleDU DUDU Result QualifierClient Sample ID: Duplicate Prep Type: Total/NA SUAnalyte pHResult 12.2QualifierUnit Result QualifierD SURPD Client Result SURPD Client SU	Analyte	Result	Qualifier		Result	Qualifier	Unit	D			RPD	Limit
Lab Sample ID: LCSSRM 550-325138/1 Matrix: Water Analysis Batch: 325138 Analyte pH Client Sample ID: Lab Control Sample Prep Type: Total/NA Result Qualifier T.0 Client Sample ID: Lab Control Sample Prep Type: Total/NA Matrix: Water Analysis Batch: 325138 Sample Sample Matrix: Water Analysis Batch: 325138 Sample Sample DU DU Client Sample ID: Duplicate Prep Type: Total/NA Client Sample ID: Duplicate Prep Type: Total/NA Prep Type: Total/NA Prep Type: Total/NA Prep Type: Total/NA Prep Type: Total/NA Analysis Batch: 325138 Natrix: Water Analysis Batch: 325138 Natrix: Water	pH	7.2			7.3		SU				0.3	5
Lab Sample ID: LCSSRM 550-325138/1 Matrix: Water Analysis Batch: 325138Client Sample ID: Lab Control Sample Prep Type: Total/NAAnalysis Batch: 325138Spike Added 7.00LCSSRM Result QualifierUnit SUD %Rec 100.4Merce 98.5-101. 5Lab Sample ID: 550-222139-B-1 DU Matrix: Water Analysis Batch: 325138Sample SampleDU DUDU UClient Sample ID: Duplicate Prep Type: Total/NAAnalyte pHResult 12.2Qualifier 12.3DU 12.3DU Result QualifierDU UDU UAnalyte pHResult 12.2Qualifier 12.3Unit Result QualifierD Unit SUD P PRPD RPD Limit SU												
Matrix: Water Analysis Batch: 325138Prep Type: Total/NAAnalyte pHSpike AddedLCSSRM Result 7.00LCSSRM VolLCSSRM Unit SUD P Matrix%Rec Matrix: 98.5 - 101. 5Lab Sample ID: 550-222139-B-1 DU Matrix: Water Analysis Batch: 325138Sample SampleDU DU DUClient Sample ID: Duplicate Prep Type: Total/NAAnalyte pHResult 12.2Qualifier QualifierDU Result QualifierClient Sample ID: Duplicate Prep Type: Total/NA	Lab Sample ID: LCSSRM 5	5 <mark>50-3251</mark> 38/	1				Clie	nt Sar	nple IC): Lab Cor	itrol Sa	ample
Analysis Batch: 325138SpikeLCSSRMLCSSRMLCSSRMLCSSRMLCSSRMLCSSRMLCSSRMLCSSRMLCSSRMLCSSRMUnitD%RecLimitsPH7.007.007.007.007.0098.5 - 101.55	Matrix: Water									Prep Ty	pe: Tot	al/NA
Analyte pHAdded AddedLCSSRM ResultLCSSRM QualifierUnit SUD %Rec 100.4%Rec 98.5.101. 5Lab Sample ID: 550-222139-B-1 DU Matrix: Water Analysis Batch: 325138SampleClient Sample ID: Duplicate Prep Type: Total/NASample PHDU 12.2DU 12.2Client Sample ID: Duplicate Result 12.3Result QualifierMatrix: Water Analysis Batch: 325138Sample 12.2DU 12.2DU 12.3Client Sample ID: Duplicate Prep Type: Total/NA	Analysis Batch: 325138											
Analyte pHAdded 7.00Result 7.00Qualifier SUUnit SUD %Rec 100.4Limits 98.5-101. 5Lab Sample ID: 550-222139-B-1 DU Matrix: Water Analysis Batch: 325138Client Sample ID: Duplicate Prep Type: Total/NASample PHDU 12.2DU 12.2DU Result 12.3Client Sample ID: Duplicate Prep Type: Total/NA				Spike	LCSSRM	LCSSRM				%Rec		
pH7.007.0SU100.498.5 - 101. 98.5 - 101.Lab Sample ID: 550-222139-B-1 DU Matrix: Water Analysis Batch: 325138Client Sample ID: Duplicate Prep Type: Total/NASample PHDU 12.2DU HDU Result 12.3Client Sample ID: Duplicate Prep Type: Total/NA	Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits		
5 Lab Sample ID: 550-222139-B-1 DU Matrix: Water Client Sample ID: Duplicate Prep Type: Total/NA Analysis Batch: 325138 Sample DU DU RPD Analyte Result 12.2 Qualifier Result 12.3 Qualifier Unit D RPD Matrix: Water Result 12.3 Qualifier Unit D RPD RPD	рН			7.00	7.0		SU		100.4	98.5 - 101.		
Lab Sample ID: 550-222139-B-1 DU Matrix: Water Analysis Batch: 325138Client Sample ID: Duplicate Prep Type: Total/NASample SampleDU DURPDAnalyteResultQualifierNatrix: Prep Type: Total/NAAnalyteResultQualifierUnitDPH12.212.3SumpleSumple	L									5		
Matrix: Water Prep Type: Total/NA Analysis Batch: 325138 Sample DU DU RPD Analyte Result Qualifier Unit D RPD Image: Prep Type: Total/NA Image: Prep Type: Total/NA	Lab Sample ID: 550-22213	9-B-1 DU							Client	Sample II		licate
Analysis Batch: 325138SampleDUDURPDAnalyteResultQualifierResultQualifierUnitDRPDPH12.212.312.3SUD0.65	Matrix: Water								Sherr	Pren Tv	ne: Tot	al/NA
Sample DU DU RPD Analyte Result Qualifier Result Qualifier Unit D RPD PH 12.2 Qualifier 12.3 Qualifier Unit D RPD Limit	Analysis Batch: 325138									i isp iy		
Analyte Result Qualifier Result Qualifier Unit D RPD Limit pH 12.2 12.3 12.3 SU D 0.6 5	analysis Batom of 100	Sample	Sample		DU	DU						RPD
$\frac{1}{\text{pH}} \frac{1}{12.2} \frac{1}{12.3} \frac{1}{12.3} \frac{1}{\text{SU}} \frac{1}{12.3} \frac{1}{12$	Analyte	Result	Qualifier		Result	Qualifier	Unit	D			RPD	Limit
	pH	12.2			12.3		SU				0.6	5

9

HPLC/IC

Analysis Batch: 324901

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-222252-1	CCR-1D	Total/NA	Water	300.0	
550-222252-1	CCR-1D	Total/NA	Water	300.0	
550-222252-2	CCR-1D-Dup	Total/NA	Water	300.0	
550-222252-2	CCR-1D-Dup	Total/NA	Water	300.0	
550-222252-3	CCR-3D	Total/NA	Water	300.0	
550-222252-3	CCR-3D	Total/NA	Water	300.0	
550-222252-4	CCR-1U	Total/NA	Water	300.0	
550-222252-4	CCR-1U	Total/NA	Water	300.0	
550-222252-5	CCR-2U	Total/NA	Water	300.0	
550-222252-5	CCR-2U	Total/NA	Water	300.0	
550-222252-6	CCR-2D	Total/NA	Water	300.0	
550-222252-6	CCR-2D	Total/NA	Water	300.0	
MB 550-324901/2	Method Blank	Total/NA	Water	300.0	
LCS 550-324901/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 550-324901/6	Lab Control Sample Dup	Total/NA	Water	300.0	
550-222252-1 MS	CCR-1D	Total/NA	Water	300.0	
550-222252-1 MSD	CCR-1D	Total/NA	Water	300.0	

Metals

Prep Batch: 324867

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-222252-1	CCR-1D	Total/NA	Water	200.7	
550-222252-2	CCR-1D-Dup	Total/NA	Water	200.7	
550-222252-3	CCR-3D	Total/NA	Water	200.7	
550-222252-4	CCR-1U	Total/NA	Water	200.7	
550-222252-5	CCR-2U	Total/NA	Water	200.7	
550-222252-6	CCR-2D	Total/NA	Water	200.7	
MB 550-324867/1-A	Method Blank	Total/NA	Water	200.7	
LCS 550-324867/2-A	Lab Control Sample	Total/NA	Water	200.7	
LCSD 550-324867/3-A	Lab Control Sample Dup	Total/NA	Water	200.7	
550-222252-1 MS	CCR-1D	Total/NA	Water	200.7	
550-222252-1 MSD	CCR-1D	Total/NA	Water	200.7	

Analysis Batch: 325057

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-222252-1	CCR-1D	Total/NA	Water	200.7 Rev 4.4	324867
550-222252-2	CCR-1D-Dup	Total/NA	Water	200.7 Rev 4.4	324867
550-222252-3	CCR-3D	Total/NA	Water	200.7 Rev 4.4	324867
550-222252-4	CCR-1U	Total/NA	Water	200.7 Rev 4.4	324867
550-222252-5	CCR-2U	Total/NA	Water	200.7 Rev 4.4	324867
550-222252-6	CCR-2D	Total/NA	Water	200.7 Rev 4.4	324867
MB 550-324867/1-A	Method Blank	Total/NA	Water	200.7 Rev 4.4	324867
LCS 550-324867/2-A	Lab Control Sample	Total/NA	Water	200.7 Rev 4.4	324867
LCSD 550-324867/3-A	Lab Control Sample Dup	Total/NA	Water	200.7 Rev 4.4	324867
550-222252-1 MS	CCR-1D	Total/NA	Water	200.7 Rev 4.4	324867
550-222252-1 MSD	CCR-1D	Total/NA	Water	200.7 Rev 4.4	324867

QC Association Summary

General Chemistry

Analysis Batch: 324837

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-222252-1	CCR-1D	Total/NA	Water	SM 2540C	
550-222252-2	CCR-1D-Dup	Total/NA	Water	SM 2540C	
550-222252-3	CCR-3D	Total/NA	Water	SM 2540C	
550-222252-4	CCR-1U	Total/NA	Water	SM 2540C	
550-222252-5	CCR-2U	Total/NA	Water	SM 2540C	
550-222252-6	CCR-2D	Total/NA	Water	SM 2540C	
MB 550-324837/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 550-324837/2	Lab Control Sample	Total/NA	Water	SM 2540C	
LCSD 550-324837/3	Lab Control Sample Dup	Total/NA	Water	SM 2540C	
550-222239-S-1 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 325023

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-222252-1	CCR-1D	Total/NA	Water	SM 4500 H+ B	
550-222252-2	CCR-1D-Dup	Total/NA	Water	SM 4500 H+ B	
550-222252-3	CCR-3D	Total/NA	Water	SM 4500 H+ B	
550-222252-4	CCR-1U	Total/NA	Water	SM 4500 H+ B	
550-222252-5	CCR-2U	Total/NA	Water	SM 4500 H+ B	
LCSSRM 550-325023/1	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	
550-222271-A-1 DU	Duplicate	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 325138

Lab Sample ID 550-222252-6	Client Sample ID	Prep Type Total/NA	Matrix Water	Method SM 4500 H+ B	Prep Batch
LCSSRM 550-325138/1	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	
550-222139-B-1 DU	Duplicate	Total/NA	Water	SM 4500 H+ B	

Job ID: 550-222252-1 SDG: TEPS

Prep Type

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Total/NA

Client Sample ID: CCR-1D Date Collected: 08/13/24 08:35 Date Received: 08/14/24 17:15

Batch

Туре

Analysis

Analysis

Analysis

Analysis

Analysis

Prep

Batch

300.0

300.0

200.7

200.7 Rev 4.4

Method

08/15/24 15:41 - 08/21/24 10:58 1

Lab Sample ID: 550-222252-2

Lab Sample ID: 550-222252-3

Lab Sample ID: 550-222252-1

Prepared

or Analyzed

08/16/24 15:24

08/16/24 15:52

08/16/24 05:51

08/20/24 17:05

08/20/24 13:27

Matrix: Water

Matrix: Water

Matrix: Water

SM 2540C 1 324837 HKT EET PHX SM 4500 H+ B 1 325023 KMS EET PHX

Dilution

Factor

1

20

1

Run

Batch

Number Analyst

324901 AG

324901 AG

324867 SGO

325057 JAC

Lab

EET PHX

EET PHX

EET PHX

EET PHX

Client Sample ID: CCR-1D-Dup Date Collected: 08/13/24 08:40

Date Received: 08/14/24 17:15

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	300.0		1	324901	AG	EET PHX	08/16/24 17:15
Total/NA	Analysis	300.0		20	324901	AG	EET PHX	08/16/24 17:43
Total/NA	Prep	200.7			324867	SGO	EET PHX	08/16/24 05:51
Total/NA	Analysis	200.7 Rev 4.4		1	325057	JAC	EET PHX	08/20/24 17:08
Total/NA	Analysis	SM 2540C		1	324837	НКТ	EET PHX	08/15/24 15:41 - 08/21/24 10:58 ¹
Total/NA	Analysis	SM 4500 H+ B		1	325023	KMS	EET PHX	08/20/24 13:18

Client Sample ID: CCR-3D Date Collected: 08/13/24 11:40

Date Received: 08/14/24 17:15

_	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	300.0			324901	AG	EET PHX	08/16/24 18:11
Total/NA	Analysis	300.0		20	324901	AG	EET PHX	08/16/24 18:39
Total/NA	Prep	200.7			324867	SGO	EET PHX	08/16/24 05:51
Total/NA	Analysis	200.7 Rev 4.4		1	325057	JAC	EET PHX	08/20/24 17:12
Total/NA	Analysis	SM 2540C		1	324837	НКТ	EET PHX	08/15/24 15:41 - 08/21/24 10:58
Total/NA	Analysis	SM 4500 H+ B		1	325023	KMS	EET PHX	08/20/24 13:15

Client Sample ID: CCR-1U Date Collected: 08/13/24 13:05 Date Received: 08/14/24 17:15

_	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	300.0		1	324901	AG	EET PHX	08/16/24 19:07
Total/NA	Analysis	300.0		50	324901	AG	EET PHX	08/16/24 20:59
Total/NA	Prep	200.7			324867	SGO	EET PHX	08/16/24 05:51
Total/NA	Analysis	200.7 Rev 4.4		1	325057	JAC	EET PHX	08/20/24 17:15
Total/NA	Analysis	SM 2540C		1	324837	нкт	EET PHX	08/15/24 15:41 - 08/21/24 10:58 ¹
Total/NA	Analysis	SM 4500 H+ B		1	325023	KMS	EET PHX	08/20/24 13:11

Lab Sample ID: 550-222252-4

Matrix: Water

Dilution

Factor

1

Batch

Number Analyst

324901 AG

Lab

EET PHX

Prep Type

Total/NA

Client Sample ID: CCR-2U Date Collected: 08/14/24 12:30 Date Received: 08/14/24 17:15

Batch

Туре

Analysis

Batch

300.0

Method

Lab Sample ID: 550-222252-5 Matrix: Water

08/15/24 15:41 - 08/21/24 10:58 1

Matrix: Water

Lab Sample ID: 550-222252-6

Prepared

or Analyzed

08/16/24 21:27

08/16/24 21:55 08/16/24 05:51

08/20/24 17:18

08/20/24 13:09

Total/NA Analysis 300.0 25 324901 AG EET PHX Total/NA 200.7 324867 SGO Prep EET PHX Total/NA EET PHX Analysis 200.7 Rev 4.4 325057 JAC 1 Total/NA Analysis SM 2540C 1 324837 HKT EET PHX EET PHX Total/NA Analysis SM 4500 H+ B 1 325023 KMS

Run

Client Sample ID: CCR-2D Date Collected: 08/14/24 08:40 Date Received: 08/14/24 17:15

-	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	300.0		1	324901	AG	EET PHX	08/16/24 22:22
Total/NA	Analysis	300.0		20	324901	AG	EET PHX	08/16/24 22:50
Total/NA	Prep	200.7			324867	SGO	EET PHX	08/16/24 05:51
Total/NA	Analysis	200.7 Rev 4.4		1	325057	JAC	EET PHX	08/20/24 17:22
Total/NA	Analysis	SM 2540C		1	324837	НКТ	EET PHX	08/15/24 15:41 - 08/21/24
Total/NA	Analysis	SM 4500 H+ B		1	325138	KMS	EET PHX	08/22/24 11:40

⁺This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Laboratory References:

EET PHX = Eurofins Phoenix, 4625 East Cotton Center Boulevard, Suite #189, Phoenix, AZ 85040, TEL (602)437-3340

Laboratory: Eurofins Phoenix

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arizona	State	AZ0728	06-10-25

Method Summary

Client: Tucson Electric Power Project/Site: Springerville

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	EPA	EET PHX
200.7 Rev 4.4	Metals (ICP)	EPA	EET PHX
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET PHX
SM 4500 H+ B	рН	SM	EET PHX
200.7	Preparation, Total Metals	EPA	EET PHX

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

EET PHX = Eurofins Phoenix, 4625 East Cotton Center Boulevard, Suite #189, Phoenix, AZ 85040, TEL (602)437-3340

																									1								
Relinquished by:	Relinquished by:	Relinquished by: Connol Plant Conch	Custody Seals Intact: Ves INo		Special Instructions/QC Requirements & Con	Won-Hazard Fammable S	Possible Hazard Identification: Are any samples from a listed EPA Hazardous V	Preservation Used: 1= Ice, 2= HCI; 3= H2SO			20-02	COR-2D	CCR-2W	(7) CR - 2R CIR	CCR-14	CCR- 30	CCR-1D-Dup	CCR-IP	Sample Identification		PO#	Site: TEPS	Project Name: SPP Second //	Phone	City/State/Zip Phoenicy A 2	Address you E. Vin Burn	Company Name Hung 1 Aldrich	Client Contact		Phoenix, AZ 85040-4807 phone 602.437.3340	Suite 189	Appendent Orthon Contra Bouldward	2 3 4 5 6 7
		R	-		nments:	the sample	Vaste? Ple)4; 4=HNO:		01	4	-ole	-05		her	22	13-	6															8
Company:	Company:	Company: CE1	Custody Seal No .:		5 ==	Poison B	ase List any EPA \	3; 5=NaOH; 6= Other		0610 10/10	d/why makes	8/ 14/40 840	8/11/W 1230	0/14/64 0010	1 1305	1 1140	0840	8/13/20 08 35	Date Time					TAT if different f	CALENDAR DAYS	Analysis T	Tel/Fax:	Email: Mn dols	Project Manager:/*	Regulatory Pro			
		17			50-222252			日本というと		C	2	o	6	G	6	0	6	0	(C=Comp, G=Grab)	Sample Type	t day	2 days	2 weeks 1 week	from Below	WOR	lurnaround	0	e halara	うれて	ogram:		ļ	13
Date/Time:	Date/Time:	Date/Time:			Chain of Cus			Calebookitedo		:	25	 8	R 2	2	2	< ~	٤	8	Matrix Col	•					KING DAYS	Time		Jorieha	ichells			Chai	
Rectiver in Laboratory by:	Received by:	17: Received by:	Cooler Temp. (°C): Ot		stody		A fee may b				2 2 2	I AXXX	N N X X X		Z X X MM	MXXXMM	R R R R N N	R R R R W M	Filte Peri 300 264	Form F 0.7 0.7 0.7 0.0 0.7 0.0 0.7 0.0 0.7 0.7	amp NS / Cup Solo	le (MSC MS- - - - - - -	Y/N D (Y E] T H+-) / N 3.0 ()) 5 - p-) crid	4	Lab Contact: Emily Petronin	Site Contact:		DES RCRA Dother:		n of Custody Record	
	Company:	Company:	os'd: Corr'd:	6-6		sposal by Lab	e assessed if samples are retai			10 acre A June	XXXXXXXX								200 253 5 5 200 200 200 200 200	0.7. 1	Chi Cali	A	109 300 H 2 2 1 4	226 CW/	he and he a and he and he and he and he and he and he a and he and he and he a and he and he a and he and he and he and he and he and he and he and he and he and he and he and he and he and he and he and he and he and ha ha ha ha ha ha ha ha ha ha ha ha ha	×4 8 1 7	Carrier:	Date: 8//3/24		7 6226			g
BILLYIN OITIS	Date/Time:	Date/Time:	Therm ID No.:	-elice/cho		Months	ned longer than 1 month)												Sample Specific Notes:			Job / SDG No.:		Valk-In Client:	For Lab Use Only:	Sampler:	TALS Project #:		COC: No:	Eurofins Environment Testing America	America	urofins Finvironment Testing	2

.7

8/30/2024

Please have bottles shipped to by Thursday, August 8, 2024:

Confluence Environmental 353 W pacific Coast HWY Long Beach, CA 90806 Door code- 12521#

Appendix III constituents:

Boron Calcium Chloride Fluoride pH Sulfate Total Dissolved Solids (TDS)

Appendix IV constituents:

Antimony Arsenic Barium Beryllium Cadmium Chromium Cobalt Fluoride Lead Lithium Mercury Molybdenum Selenium Thallium Radium 226 & 228

Project Bottle Order Breakdown:

- 1. Ash Landfill 6 samples (5 wells plus 1 duplicate):
 - a. Analyzed for all Appendix III constituents Wells:
 - CCR-IU
 - CCR-2U
 - CCR-1D
 - CCR-2D
 - CCR-3D

2. Ash Landfill Shallow Well - 1 sample

- a. Analyzed for all Appendix III constituents
- b. Analyzed for all Appendix IV constituents Wells:

Page 22 of 27

• CCR-4D (shallow well)

13

Appendix IV constituents:

- CCR-4D
 - $\circ \quad \text{Boron}$
 - o Calcium
 - o Chloride
 - o Fluoride
 - o pH
 - o Sulfate
 - o Total Dissolved Solids (TDS)
 - o Antimony
 - o Arsenic
 - o Barium
 - o Beryllium
 - o Cadmium
 - o Chromium
 - o Cobalt
 - o Lead
 - o Lithium
 - o Mercury
 - o Molybdenum
 - o Selenium
 - o Thallium
 - o Radium 226 & 228

Appendix III constituents:

- CCR-1U, CCR-2U, CCR-1D, CCR-2D, CCR-3D
 - o Boron
 - o Calcium
 - $\circ \quad \text{Chloride} \quad$
 - o Fluoride
 - о рН
 - o Sulfate
 - o Total Dissolved Solids (TDS)



Eurofins Phoenix			建訂建	Loc 550
40.20 cast Cottor Certrer Boulevard Suite #18% Phoenix, AZ 85040 Phone: 602.437-3340	Chain of Ci	ustody Record		eurotins
Client Information (Sub Contract Lab)	Sampier	Lab PM: Petrunia Emily A	Carrier Tracking No(s):	COC No. 550-40239.1
client contact Shipping/Receiving	Phone:	E-Mail: Emily.Petrunia@et.eurofinsus.cor	State of Origin: M Arizona	Page: Page 1 of 1
Company: Eurofins Environment Testing Southwest,		Accreditations Required (See note) State Program Arizona		Job #: 550-22252-1
Address: 2841 Dow Avenue, Suite 100,	Due Date Requested: 9/11/2024	Anal	lysis Requested	Preservation Codes:
Chy: Tustin	TAT Requested (days):			
State, Zip: CA, 92780				
Phone: 714-895-5494(Tel)	PO#	91/201		
Enait	#0#	N 10 (OV VI) VI)		
Project Name: Springerville	Project #: 55011633	0 (Yes 0 (Yes 10 mu 10 mu		
Site:	SSOW#	• มา_ๆ หม_ค ชาย เสการร		other-
Sample Identification (Client ID (1 sh ID)	Samp Type C=Con Sample (C=Con	0.0.1/200.8_LL/200.8_ Matrix Mat		Cenocial Incentions (Notes
		ervation Code: XX		
CCR-4D (550-222252-7)	8/14/24 09:50 Arizona	Water X X		
				ł
			550-222252	Chain of Custody
Note: Since laboratory accreditations are subject to change. Eurofins Environmer laboratory does not currently maintain accreditation in the State of Origin isted at accreditation status should be brought to Eurofins Environment Testing Southwest	In Testing Southwest LLC places the ownershi bove for analyzis/tests/matrix being analyzed, the st. LLC attention immediately If all requested a	ip of method, analyte & accreditation compliance upon or the samples must be shipped back to the Eurofins Enviro accreditations are current to date, return the signed Chair	ir subcontract laboratories. This sample shipment is nment Testing Southwest, LLC laboratory or other it n of Custody attesting to said compliance to Eurofins	forwarded under chain-of-custody. If the structions will be provided. Any changes to : Environment Testing Southwest, LLC.
Possible Hazard Identification		Sample Disposal (A fee	e may be assessed if samples are retain	ed longer than 1 month)
Unconfirmed Deliverable Requested: i IV Other (specify)	Primary Deliverable Rank: 2	Return To Client Special Instructions/OC F	Pisposal By Lab I Arc	hive For Months
Emmin Vit Ballion riskand hur			togen of the second of the second	
Einpy hu reinquished by Reinquished by A A A A A A A A A A A A A A A A A A	- Date/Time: / /	I Ime: Company Received by:		Сотрати
Relinnished hr	Patertine. 14.00	EEA PHY STATE D	ANN Contract	
Palimiend be	Cale The		8/16/2	require the
		company received by:	l'any ime	Company
Custody Seals Intact: Custody Seal No. A Yes: A No		Cooler Temperature(s) °C:	and Other Remarks:	-5/3 5- 5012
	Second Second	12 13 14	7 8 9 10 11	1 2 5 6

Client: Tucson Electric Power

Login Number: 222252 List Number: 1 Creator: Vela, Jorge

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	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.	True	
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	
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.	False	Check done at department level as required.

Job Number: 550-222252-1 SDG Number: TEPS

List Source: Eurofins Phoenix



Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: James Thomas Tucson Electric Power Attn: Accounts Payable Mail Drop HQE703 PO BOX 3033 Tucson, Arizona 85702-3033 Generated 9/27/2024 12:24:29 PM

JOB DESCRIPTION

Springerville TEPS

JOB NUMBER

550-222252-3

Eurofins Phoenix 4625 East Cotton Center Boulevard Suite #189 Phoenix AZ 85040





Eurofins Phoenix

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 Environment Testing Southwest, LLC Project Manager.

Authorization

Authorized for release by Emily Petrunia, Project Manager I Emily.Petrunia@et.eurofinsus.com (602)659-7629 Generated

9/27/2024 12:24:29 PM

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Method Summary	14
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Qualifiara

Quaimers		3
HPLC/IC		
Qualifier	Qualifier Description	
E8	Analyte reported to MDL per project specification. Target analyte was not detected in the sample.	
H1	Sample analysis performed past holding time.	5
General Che	mistry	
Qualifier	Qualifier Description	
E5	Concentration estimated. Analyte was detected below laboratory minimum reporting level (MRL), but not confirmed by alternate analysis.	
H5	This test is specified to be performed in the field within 15 minutes of sampling; sample was received and analyzed past the regulatory holding time.	7
Glossary		8
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	9
%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)	

EPA recommended "Maximum Contaminant Level" MCL

MDA Minimum Detectable Activity (Radiochemistry)

MDC Minimum Detectable Concentration (Radiochemistry)

MDL Method Detection Limit

Minimum Level (Dioxin) ML

MPN Most Probable Number Method Quantitation Limit MQL

Not Calculated NC

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

TEF Toxicity Equivalent Factor (Dioxin)

Toxicity Equivalent Quotient (Dioxin) TEQ

TNTC Too Numerous To Count

Job ID: 550-222252-3

Eurofins Phoenix

Job Narrative 550-222252-3

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these
 situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise
 specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 8/14/2024 5:15 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.7°C.

HPLC/IC

Method 300_ORGFMS: Reanalysis of the following sample(s) was performed outside of the analytical holding time due to due to client asking for confirmation on fluoride. When comparing the results to the original result, the fluoride results confirm with the original. : CCR-1D (550-222252-1), CCR-3D (550-222252-3), CCR-1U (550-222252-4) and CCR-2D (550-222252-6).

Method SM4500: Sample rerun results confirm previous results.

CCR-1U (550-222252-4)

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

General Chemistry

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

Sample Summary

Client: Tucson Electric Power Project/Site: Springerville

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
550-222252-1	CCR-1D	Water	08/13/24 08:35	08/14/24 17:15
550-222252-3	CCR-3D	Water	08/13/24 11:40	08/14/24 17:15
550-222252-4	CCR-1U	Water	08/13/24 13:05	08/14/24 17:15
550-222252-6	CCR-2D	Water	08/14/24 08:40	08/14/24 17:15

Detection Summary

Client: Tucson Electric Power Project/Site: Springerville Job ID: 550-222252-3 SDG: TEPS

Client Sample ID: CCR-1D						Lab Sar	nple ID: 550)-222252-1
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	Method	Prep Type
Fluoride	3.4	H1 –	0.40	0.11	mg/L	1	300.0	Total/NA
Fluoride	3.4	H1	0.40	0.11	mg/L	1	300.0	Total/NA
Client Sample ID: CCR-3D						Lab Sar	mple ID: 550	-222252-3
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	Method	Prep Type
Fluoride	3.5	H1	0.40	0.11	mg/L	1	300.0	Total/NA
Fluoride	3.5	H1	0.40	0.11	mg/L	1	300.0	Total/NA
Client Sample ID: CCR-1U						Lab Sar	mple ID: 550	-222252-4
– Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	Method	Prep Type
Fluoride	4.1	H1	0.40	0.11	mg/L	1	300.0	Total/NA
Fluoride	4.1	H1	0.40	0.11	mg/L	1	300.0	Total/NA
рН	>1.7	E5 H5	1.7	1.7	SU	1	SM 4500 H+ B	Total/NA
рН	>1.7	E5 H5	1.7	1.7	SU	1	SM 4500 H+ B	Total/NA
Client Sample ID: CCR-2D						Lab Sar	nple ID: 550	-222252-6
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	Method	Prep Type
Fluoride	2.5	H1	0.40	0.11	mg/L	1	300.0	Total/NA
Fluoride	2.5	H1	0.40	0.11	mg/L	1	300.0	Total/NA

Client Sample Results

Client: Tucson Electric Power

Fluoride

Job ID: 550-222252-3 SDG: TEPS

Project/Site: Springerville								SDG	: TEPS
Client Sample ID: CCR-1D Date Collected: 08/13/24 08:35 Date Received: 08/14/24 17:15						Lat	o Sample	ID: 550-222 Matrix:	252-1 Water
Method: EPA 300.0 - Anions, Ion	Chroma	tography							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	3.4	H1	0.40	0.11	mg/L			09/19/24 16:56	1
Fluoride	3.4	H1	0.40	0.11	mg/L			09/19/24 16:56	1
Client Sample ID: CCR-3D Date Collected: 08/13/24 11:40 Date Received: 08/14/24 17:15						Lat	o Sample	ID: 550-222 Matrix:	252-3 Water
Method: EPA 300.0 - Anions, Ion	Chroma	tography							
Analyte	Result	Qualifier		MDL	Unit	<u>D</u>	Prepared	Analyzed	Dil Fac
Fluoride	3.5	H1	0.40	0.11	mg/L			09/19/24 17:33	1
Fluoride	3.5	H1	0.40	0.11	mg/L			09/19/24 17:33	1
Client Sample ID: CCR-1U						Lat	Sample	ID: 550-222	252-4
Date Collected: 08/13/24 13:05 Date Received: 08/14/24 17:15							-	Matrix:	Water
Method: EPA 300.0 - Anions Ion	Chroma	tography							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	4.1	H1	0.40	0.11	mg/L			09/19/24 18:10	1
Fluoride	4.1	H1	0.40	0.11	mg/L			09/19/24 18:10	1
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	>1.7	E5 H5	1.7	1.7	SU			09/20/24 18:39	1
рН (SM 4500 H+ B)	>1.7	E5 H5	1.7	1.7	SU			09/20/24 18:39	1
Client Sample ID: CCR-2D						Lat	Sample	ID: 550-222	252-6
Date Collected: 08/14/24 08:40								Matrix	Water
Date Received: 08/14/24 17:15									
Method: EPA 300.0 - Anione Jon	Chrome	tography							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	2.5	H1 -	0.40	0.11	mg/L			09/19/24 19:23	1

0.40

0.11 mg/L

2.5 H1

1

09/19/24 19:23

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 550-326	095/2									C	Clie	ent Sam	ple ID: M	ethod	Blank
Matrix: Water													Prep Ty	pe: Tot	al/NA
Analysis Batch: 326095															
	I	MB	MB												
Analyte	Res	sult	Qualifier		RL		MDL	Unit		_ <u>D</u>	Р	repared	Analy	zed	Dil Fac
Fluoride		ND	E8		0.40		0.11	mg/L					09/19/24	13:52	1
Lab Sample ID: MB 550-326	102/1-A									c	Clie	ent Sam	ple ID: M	ethod	Blank
Matrix: Water													Prep Ty	pe: Tot	al/NA
Analysis Batch: 326095															
-	I	MB	MB												
Analyte	Res	sult	Qualifier		RL		MDL	Unit		D	Ρ	repared	Analy	zed	Dil Fac
Fluoride		ND	E8		0.40		0.11	mg/L					09/20/24	01:50	1
Lab Sample ID: LCS 550-320	6095/5								CI	ient S	Sai	nple ID	: Lab Cor	ntrol Sa	ample
Matrix: Water													Prep Tv	pe: Tot	al/NA
Analysis Batch: 326095															
· ·····, ···· · ···· · ·····				Spike		LCS	LCS	5					%Rec		
Analyte				Added		Result	Qua	lifier	Unit		D	%Rec	Limits		
Fluoride				4.00		4.11			mg/L		_	103	90 - 110		
										_				•	
Lab Sample ID: LCSD 550-3	26095/6							C	lient	Samp	DIe	ID: Lab	Control	Sample	e Dup
Matrix: Water													Prep Ty	pe: Tot	al/NA
Analysis Batch: 326095															
				Spike		LCSD	LCS	D					%Rec		RPD
Analyte				Added		Result	Qua	lifier	Unit		D	%Rec	Limits	RPD	Limit
Fluoride				4.00		4.13			mg/L			103	90 - 110	0	20
Lab Sample ID: 550-223665-	D-2 MS										СІ	ient Sa	mple ID:	Matrix	Spike
Matrix: Water											_		Pren Tv	pe: Tot	al/NA
Analysis Batch: 326095															
	Sample	Sam	nle	Snike		MS	MS						%Rec		
Analyte	Result	Qua	lifier	babbA		Result	Qua	lifier	Unit		п	%Rec	Limits		
Fluoride	ND	E8		4.00		4.11	gut		mg/L		_	103	80 - 120		
														_	
Lab Sample ID: 550-223665-	D-2 MSD								Clien	it Sar	np		latrix Spi	ke Dup	licate
Matrix: Water													Prep Ty	pe: Tot	al/NA
Analysis Batch: 326095															
	Sample 3	Sam	ple	Spike		MSD	MSI)					%Rec		RPD
Analyte	Result	Qua	lifier	Added		Result	Qua	lifier	Unit		D	%Rec	Limits	RPD	Limit
Fluoride	ND	E8		4.00		4.12			mg/L			103	80 - 120	0	20
Method: SM 4500 H+ B -	рН														
	00044014								~						

Lab Sample ID: LCSSRM 550-326118/1 Matrix: Water Analysis Batch: 326118				Client	Sar	nple IC	: Lab Control Sa Prep Type: Tot	ample al/NA
	Spike	LCSSRM	LCSSRM				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
рН	7.00	7.1		SU		101.4	98.5 - 101.	
							5	

Method: SM 4500 H+ B - pH (Continued)

Lab Sample ID: 380-11266 Matrix: Water Analysis Batch: 326118	4-H-2 DU					•	Client Sa P	mple ID Prep Typ): Dup e: Tot	licate al/NA
	Sample	Sample	DU	DU						RPD
Analyte	Result	Qualifier	Result	Qualifier	Unit	D			RPD	Limit
рН	7.3		 7.3		SU				0	5

QC Association Summary

Client: Tucson Electric Powe
Project/Site: Springerville

HPLC/IC

Analysis Batch: 326095

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-222252-1	CCR-1D	Total/NA	Water	300.0	
550-222252-3	CCR-3D	Total/NA	Water	300.0	
550-222252-4	CCR-1U	Total/NA	Water	300.0	
550-222252-6	CCR-2D	Total/NA	Water	300.0	
MB 550-326095/2	Method Blank	Total/NA	Water	300.0	
MB 550-326102/1-A	Method Blank	Total/NA	Water	300.0	326102
LCS 550-326095/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 550-326095/6	Lab Control Sample Dup	Total/NA	Water	300.0	
550-223665-D-2 MS	Matrix Spike	Total/NA	Water	300.0	
550-223665-D-2 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Filtration Batch: 326102

Lab Sample ID	Client Sample ID	Prep Туре	Matrix	Method	Prep Batch
MB 550-326102/1-A	Method Blank	Total/NA	Water	Filtration	

General Chemistry

Analysis Batch: 326118

Lab Sample ID 550-222252-4	Client Sample ID CCR-1U	Prep Type Total/NA	Matrix Water	Method SM 4500 H+ B	Prep Batch
LCSSRM 550-326118/1	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	
380-112664-H-2 DU	Duplicate	Total/NA	Water	SM 4500 H+ B	

Client Sample ID: CCR-1D Date Collected: 08/13/24 08:35

|1 |2 |3

Lab Sample ID: 550-222252-1

Date Collecte	ed: 08/13/24 0	8:35							Matrix: Water
Date Receive	ed: 08/14/24 1	7:15							
Γ	Batch	Batch		Dilution	Batch			Prepared	
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed	
Total/NA	Analysis	300.0		1	326095	AG	EET PHX	09/19/24 16:56	
Client Sam	ple ID: CC	R-3D					Lab	Sample ID:	550-222252-3
Date Collecte	d: 08/13/24 1	1:40							Matrix: Water
Date Receive	ed: 08/14/24 1	7:15							
	Batch	Batch		Dilution	Batch			Prepared	
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed	
Total/NA	Analysis	300.0		1	326095	AG	EET PHX	09/19/24 17:33	
Client Sam	ple ID: CC	R-1U					Lab	Sample ID:	550-222252-4
Date Collecte Date Receive	ed: 08/13/24 1 ed: 08/14/24 1	3:05 7:15							Matrix: Water
Γ	Batch	Batch		Dilution	Batch			Prepared	
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed	
Total/NA	Analysis	300.0		1	326095	AG	EET PHX	09/19/24 18:10	
Total/NA	Analysis	SM 4500 H+ B		1	326118	KMS	EET PHX	09/20/24 18:39	
Client Sam	ple ID: CC	R-2D					Lab	Sample ID:	550-222252-6
Date Collecte Date Receive	ed: 08/14/24 0 ed: 08/14/24 1)8:40 7:15						1	Matrix: Water
Γ	Batch	Batch		Dilution	Batch			Prepared	
Pren Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed	

i leb i î be	iype	Methoa	Run	i actor	Number	Analysi	Lab	of Analyzeu
Total/NA	Analysis	300.0		1	326095	AG	EET PHX	09/19/24 19:23

Laboratory References:

EET PHX = Eurofins Phoenix, 4625 East Cotton Center Boulevard, Suite #189, Phoenix, AZ 85040, TEL (602)437-3340

Laboratory: Eurofins Phoenix

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arizona	State	AZ0728	06-10-25

Accreditation/Certification Summary

Method Summary

Client: Tucson Electric Power Project/Site: Springerville

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	EPA	EET PHX
SM 4500 H+ B	pH	SM	EET PHX

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

EET PHX = Eurofins Phoenix, 4625 East Cotton Center Boulevard, Suite #189, Phoenix, AZ 85040, TEL (602)437-3340
Client: Tucson Electric Power

Login Number: 222252 List Number: 1 Creator: Vela, Jorge

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	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.	True	
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	
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.	False	Check done at department level as required.

Job Number: 550-222252-3 SDG Number: TEPS

List Source: Eurofins Phoenix



Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Samantha Kaney Haley & Aldrich, Inc. 400 E Van Buren St. Suite 545 Phoenix, Arizona 85004 Generated 10/17/2024 5:06:10 PM

JOB DESCRIPTION

Springerville - Detection and Assessment

JOB NUMBER

550-224641-1

Eurofins Phoenix 4625 East Cotton Center Boulevard Suite #189 Phoenix AZ 85040



Page 1 of 16

See page two for job notes and contact information.

Eurofins Phoenix

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 Environment Testing Southwest, LLC Project Manager.

Authorization

Authorized for release by Derek Johnson, Project Manager Derek.Johnson@et.eurofinsus.com Designee for Amanda Seawright, Project Manager I amanda.seawright@et.eurofinsus.com (602)437-3340 Generated 10/17/2024 5:06:10 PM

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Definitions/Glossary

Client: Haley & Aldrich, Inc. Project/Site: Springerville - Detection and Assessment

Job ID: 550-224641-1

3

13

Qualifiers	
HPLC/IC	
Qualifier	Qualifier Description
D2	Sample required dilution due to high concentration of analyte.
General Che	mistry
Qualifier	Qualifier Description
H5	This test is specified to be performed in the field within 15 minutes of sampling; sample was received and analyzed past the regulatory holding time.
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

Minimum Level (Dioxin) ML

MPN Most Probable Number

MQL Method Quantitation Limit

NC Not Calculated ND Not Detected at the reporting limit (or MDL or EDL if shown)

Negative / Absent NEG

POS Positive / Present

PQL Practical Quantitation Limit PRES Presumptive

QC **Quality Control**

RER Relative Error Ratio (Radiochemistry)

Reporting Limit or Requested Limit (Radiochemistry) RL

Relative Percent Difference, a measure of the relative difference between two points RPD

TEF Toxicity Equivalent Factor (Dioxin)

TEQ Toxicity Equivalent Quotient (Dioxin)

TNTC Too Numerous To Count

Job ID: 550-224641-1

Eurofins Phoenix

Job Narrative 550-224641-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these
 situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise
 specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 10/11/2024 4:20 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.2°C.

HPLC/IC

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

General Chemistry

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

Sample Summary

Client: Haley & Aldrich, Inc. Project/Site: Springerville - Detection and Assessment

Job ID: 550-224641-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
550-224641-1	CCR-2D	Water	10/10/24 11:15	10/11/24 16:20
550-224641-2	CCR-3D	Water	10/10/24 13:55	10/11/24 16:20
550-224641-3	CCR-1D	Water	10/10/24 16:10	10/11/24 16:20
550-224641-4	CCR-1U	Water	10/10/24 12:20	10/11/24 16:20

Detection Summary

Client: Haley & Aldrich, Inc. Project/Site: Springerville - Detection and Assessment

Chloride

pН

Job ID: 550-224641-1

20

1

300.0

SM 4500 H+ B

Total/NA

Total/NA

Client Sample ID: CCR-2D						Lab Sa	am	ple ID: 5	50-224641-1	
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type	
Fluoride	3.4		0.40		mg/L	1	_	300.0	Total/NA	
Chloride	530	D2	40		mg/L	20		300.0	Total/NA	
Client Sample ID: CCR-3D						Lab Sa	am	ple ID: 5	50-224641-2	Э
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type	6
Fluoride	3.9		0.40		mg/L	1	_	300.0	Total/NA	
Chloride	560	D2	40		mg/L	20		300.0	Total/NA	
Client Sample ID: CCR-1D						Lab Sa	am	ple ID: 5	50-224641-3	8
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type	0
Fluoride	3.1		0.40		mg/L	1	_	300.0	Total/NA	3
Chloride	510	D2	40		mg/L	20		300.0	Total/NA	
Client Sample ID: CCR-1U						Lab Sa	am	ple ID: 5	50-224641-4	
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type	
Fluoride	4.1		0.40		mg/L	1	_	300.0	Total/NA	

40

1.7

mg/L

SU

560 D2

7.1 H5

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Haley & Aldrich, Inc. Project/Site: Springerville - Detection and Assessment Job ID: 550-224641-1

Client Sample ID: CCR-2D Date Collected: 10/10/24 11:15 Date Received: 10/11/24 16:20						La	b Sample	ID: 550-224 Matrix	641-1 Water
Method: EPA 300.0 - Anions, I Analyte	on Chroma Result	<mark>tography</mark> Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	3.4		0.40		mg/L			10/15/24 15:09	1
Chloride	530	D2	40		mg/L			10/15/24 15:28	20
Client Sample ID: CCR-3D Date Collected: 10/10/24 13:55 Date Received: 10/11/24 16:20						La	b Sample	ID: 550-224 Matrix	641-2 Water
Method: EPA 300.0 - Anions, I	on Chroma	tography							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	3.9		0.40		mg/L			10/15/24 15:46	1
Chloride	560	D2	40		mg/L			10/15/24 16:05	20
Date Collected: 10/10/24 16:10 Date Received: 10/11/24 16:20						La	b Sample	D: 550-224 Matrix	641-3 : Water
Method: EPA 300.0 - Anions, I	on Chroma	tography Qualifier	RI	мпі	Unit	п	Propared	Analyzod	Dil Fac
Fluoride	3 1		0.40		ma/l		Tepared	10/15/24 16:23	1
Chloride	510	D2	40		mg/L			10/15/24 17:18	20
Client Sample ID: CCR-1U						La	b Sample	ID: 550-224	641-4
Date Collected: 10/10/24 12:20 Date Received: 10/11/24 16:20								Matrix	Water
Method: EPA 300.0 - Anions, I Analyte	on Chroma Result	tography Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	4.1		0.40		mg/L			10/15/24 17:38	1
Chloride	560	D2	40		mg/L			10/15/24 17:56	20
General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.1	H5	1.7		SU			10/17/24 12:56	1

QC Sample Results

Client: Haley & Aldrich, Inc. Project/Site: Springerville - Detection and Assessment

Job ID: 550-224641-1

Client Sample ID: Method Blank

8	}
9	
	2

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

Prep Type: Total/NA

Prep Type: Total/NA

Client Sample ID: Lab Control Sample Dup

Client Sample ID: Matrix Spike Duplicate

Method: 300.0 - Anions, Ion Chromatography Lab Sample ID: MB 550-326992/2 Matrix: Water

Matrix: Water Analysis Batch: 326992								Prep Type: To	otal/NA
Analysis Baten: 020002	МВ	МВ							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	ND		0.40		mg/L			10/15/24 12:05	1
Chloride	ND		2.0		mg/L			10/15/24 12:05	1
Lab Sample ID: LCS 550-3269 Matrix: Water	992/5					Client	Sample ID	: Lab Control S Prep Type: To	Sample otal/NA

Matrix: Water Analysis Batch: 326992

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Fluoride	4.00	3.99		mg/L		100	90 - 110	
Chloride	20.0	20.5		mg/L		103	90 - 110	

Lab Sample ID: LCSD 550-326992/6 Matrix: Water Analysis Batch: 326992

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Fluoride	4.00	4.00		mg/L		100	90 - 110	0	20
Chloride	20.0	20.5		mg/L		103	90 - 110	0	20

Lab Sample ID: 550-224638-A-9 MS Matrix: Water

	alei	
Analysis	Batch:	326992

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Fluoride	ND		4.00	3.88		mg/L		97	80 - 120	
Chloride	4.7		20.0	25.0		mg/L		102	80 - 120	

Lab Sample ID: 550-224638-A-9 MS	D
Matrix: Water	
Analysis Batch: 326992	

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Fluoride	ND		4.00	4.00		mg/L		100	80 - 120	3	20
Chloride	4.7		20.0	25.5		mg/L		104	80 - 120	2	20

Method: SM 4500 H+ B - pH

Lab Sample ID: LCSSRM 550-327076/13 Matrix: Water Analysis Batch: 327076				Clier	Client Sample ID:			trol Sample be: Total/NA
	Spike	LCSSRM	LCSSRM				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
рН	7.00	7.1		SU		100.9	98.5 - 101.	
							5	

QC Sample Results

Client: Haley & Aldrich, Inc. Project/Site: Springerville - Detection and Assessment

Job ID: 550-224641-1

Method: SM 4500 H+ B - pH (Continued)

Lab Sample ID: LCSSRM 5 Matrix: Water Analysis Batch: 327076	550-327076/	16				Clie	ent Sai	mple II	D: Lab Con Prep Typ	trol Sa be: Tot	ample al/NA
-			Spike	LCSSRM	LCSSRM				%Rec		
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits		
pH			7.00	7.1		SU		100.9	98.5 - 101.		
_									5		
	1-4 DU						Client Sample ID: CCR-			R-1U	
Matrix: Water									Prep Typ	be: Tot	al/NA
Analysis Batch: 327076											
	Sample	Sample		DU	DU						RPD
Analyte	Result	Qualifier		Result	Qualifier	Unit	D			RPD	Limit
pH	7.1	H5		7.1		SU				0.6	5

QC Association Summary

Client: Haley & Aldrich, Inc. Project/Site: Springerville - Detection and Assessment Job ID: 550-224641-1

9

HPLC/IC

Analysis Batch: 326992

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-224641-1	CCR-2D	Total/NA	Water	300.0	
550-224641-1	CCR-2D	Total/NA	Water	300.0	
550-224641-2	CCR-3D	Total/NA	Water	300.0	
550-224641-2	CCR-3D	Total/NA	Water	300.0	
550-224641-3	CCR-1D	Total/NA	Water	300.0	
550-224641-3	CCR-1D	Total/NA	Water	300.0	
550-224641-4	CCR-1U	Total/NA	Water	300.0	
550-224641-4	CCR-1U	Total/NA	Water	300.0	
MB 550-326992/2	Method Blank	Total/NA	Water	300.0	
LCS 550-326992/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 550-326992/6	Lab Control Sample Dup	Total/NA	Water	300.0	
550-224638-A-9 MS	Matrix Spike	Total/NA	Water	300.0	
550-224638-A-9 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

General Chemistry

Analysis Batch: 327076

Lab Sample ID 550-224641-4	Client Sample ID CCR-1U	Prep Type Total/NA	Matrix Water	Method SM 4500 H+ B	Prep Batch
LCSSRM 550-327076/13	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	
LCSSRM 550-327076/16	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	
550-224641-4 DU	CCR-1U	Total/NA	Water	SM 4500 H+ B	

Client: Haley & Aldrich, Inc. Project/Site: Springerville - Detection and Assessment

> Batch Method

300.0

300.0

Batch

300.0

300.0

Method

Client Sample ID: CCR-2D Date Collected: 10/10/24 11:15 Date Received: 10/11/24 16:20

Client Sample ID: CCR-3D Date Collected: 10/10/24 13:55 Date Received: 10/11/24 16:20

Client Sample ID: CCR-1D Date Collected: 10/10/24 16:10 Date Received: 10/11/24 16:20

Prep Type

Total/NA

Total/NA

Prep Type

Total/NA

Total/NA

Batch

Туре

Analysis

Analysis

Batch

Туре

Analysis

Analysis

				Lab	Sample ID:	550-224641-1 Matrix: Water
	Dilution	Batch			Prepared	
Run	Factor	Number	Analyst	Lab	or Analyzed	
		326992	RDC	EET PHX	10/15/24 15:09	
	20	326992	RDC	EET PHX	10/15/24 15:28	
				Lab	Sample ID:	550-224641-2
					-	Matrix: Water
	Dilution	Batch			Prepared	
Run	Factor	Number	Analyst	Lab	or Analyzed	
	1	326992	RDC	EET PHX	10/15/24 15:46	
	20	326992	RDC	EET PHX	10/15/24 16:05	
				Lab	Sample ID:	550-224641-3 Matrix: Water
	Dilution	Batch			Prepared	
					• • • •	

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	300.0		1	326992	RDC	EET PHX	10/15/24 16:23
Total/NA	Analysis	300.0		20	326992	RDC	EET PHX	10/15/24 17:18

Client Sample ID: CCR-1U Date Collected: 10/10/24 12:20 Date Received: 10/11/24 16:20

Batch Dilution Batch Batch Prepared Prep Type Туре Method Run Factor Number Analyst Lab or Analyzed Total/NA Analysis 300.0 1 326992 RDC EET PHX 10/15/24 17:38 Total/NA Analysis 300.0 20 326992 RDC EET PHX 10/15/24 17:56 Total/NA Analysis SM 4500 H+ B 1 327076 KMS EET PHX 10/17/24 12:56

Laboratory References:

EET PHX = Eurofins Phoenix, 4625 East Cotton Center Boulevard, Suite #189, Phoenix, AZ 85040, TEL (602)437-3340

10/17/2024

Lab Sample ID: 550-224641-4

Matrix: Water

10/17/2024

Accreditation/Certification Summary

Client: Haley & Aldrich, Inc. Project/Site: Springerville - Detection and Assessment

Laboratory: Eurofins Phoenix

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arizona	State	AZ0728	06-10-25

		ļ	ć	5	
			9		
	1				

Job ID: 550-224641-1

Method Summary

Client: Haley & Aldrich, Inc. Project/Site: Springerville - Detection and Assessment

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	EPA	EET PHX
SM 4500 H+ B	pH	SM	EET PHX

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

EET PHX = Eurofins Phoenix, 4625 East Cotton Center Boulevard, Suite #189, Phoenix, AZ 85040, TEL (602)437-3340

Eurofine Dhoaniv 5 6 7 8 9	10 11 12 13 14			
4625 East Cotton Center Boulevard Suite #189 Phoenix, AZ 85040 Phone: 602-437-3340	Chain of Cu	stody Record	(h)ht	eurofins Environment Testin
Client Information	Sampler. Marse	Lab PM. Petrunia, Emily A	Carrier Tracking No(s):	COC No: 550-92790-28209.1
Client Contact Samantha Kaney	Phone: 916-276-301	7 E-Mail: Emily.Petrunia@et.eurofinsus.com	State of Origin: AZ	Page: Page 1 of 1
Company: Haley & Aldrich, Inc.	PWSID:	Analysis	s Requested	Job #
Address: 6420 S. Macadam Ave. Suite #100	Due Date Requested:			Preservation Codes: N - None
City: Portland	TAT Requested (days): ハ メ ハ 、 /			
State, Zip: OR, 97239	Compliance Project: \(\Delta\) Yes \(\Delta\) No			
Phone:	PO # 149836)		
Email SKaney@haleyaldrich.com	WO #	or No No) pride	8	
Project Name: Springerville - Detection and Assessment	Project #: 55011633	(Yess or I	aiñer	
Site:	SSOW#:	Sample ISD (Ye	of con	Other:
	Sample	(Warater, Filtered MS/N RGFMS -	Number	
Sample Identification	Sample Date Time G=grab)	Personal BT=Trasue, A=Air) Field Parto 300_0 P	Total	Special Instructions/Note:
10-91-11-11-11-11-11-11-11-11-11-11-11-11-	In here of	Water		10
(CR-3D	5251 1355 G	Water XX N		102
CCR-1D	9 0191 J	Water NXN		53
UCR-IU	1 1206	Water X X N		PO-
*** j				
550-224641 Chain	of Custody			
Non-Hazard Flammable Skin Irritant Pois	on B Unknown Radiologic	al Return To Client	Disposal By Lab	ive For Months
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requi	lirements:	
Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:	
Relinquished by	Date/Time 1/2 ye1 620	Company Received by	Date/Time:	Company
Relinquished by:	Date/Time:	Company Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company Received by UL	- Date Time the	2Y Company
Custody Seals Intact: Custody Seal No.: ∆ Yes ∆ No		Cooler Temperature(s) °C and O	Other Remarks:	11. Da EEm
		-		Ver: 05/06/2024

Client: Haley & Aldrich, Inc.

Login Number: 224641 List Number: 1 Creator: Gravlin, Andrea

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	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.	True	
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	
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.	False	Check done at department level as required.

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