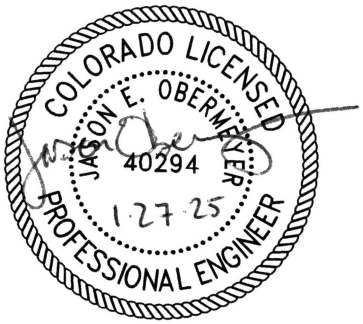
REPORT

Annual Groundwater Monitoring Report – 2024

Nucla Station Ash Disposal Facility
Nucla, Colorado



Submitted to:

Tri-State Generation and Transmission Association, Inc.
PO Box 33695, Denver, Colorado, USA 80233

Submitted by:

WSP USA Inc.
7245 W Alaska Drive, Suite 200, Lakewood, Colorado, USA 80226

+1 303 980-0540

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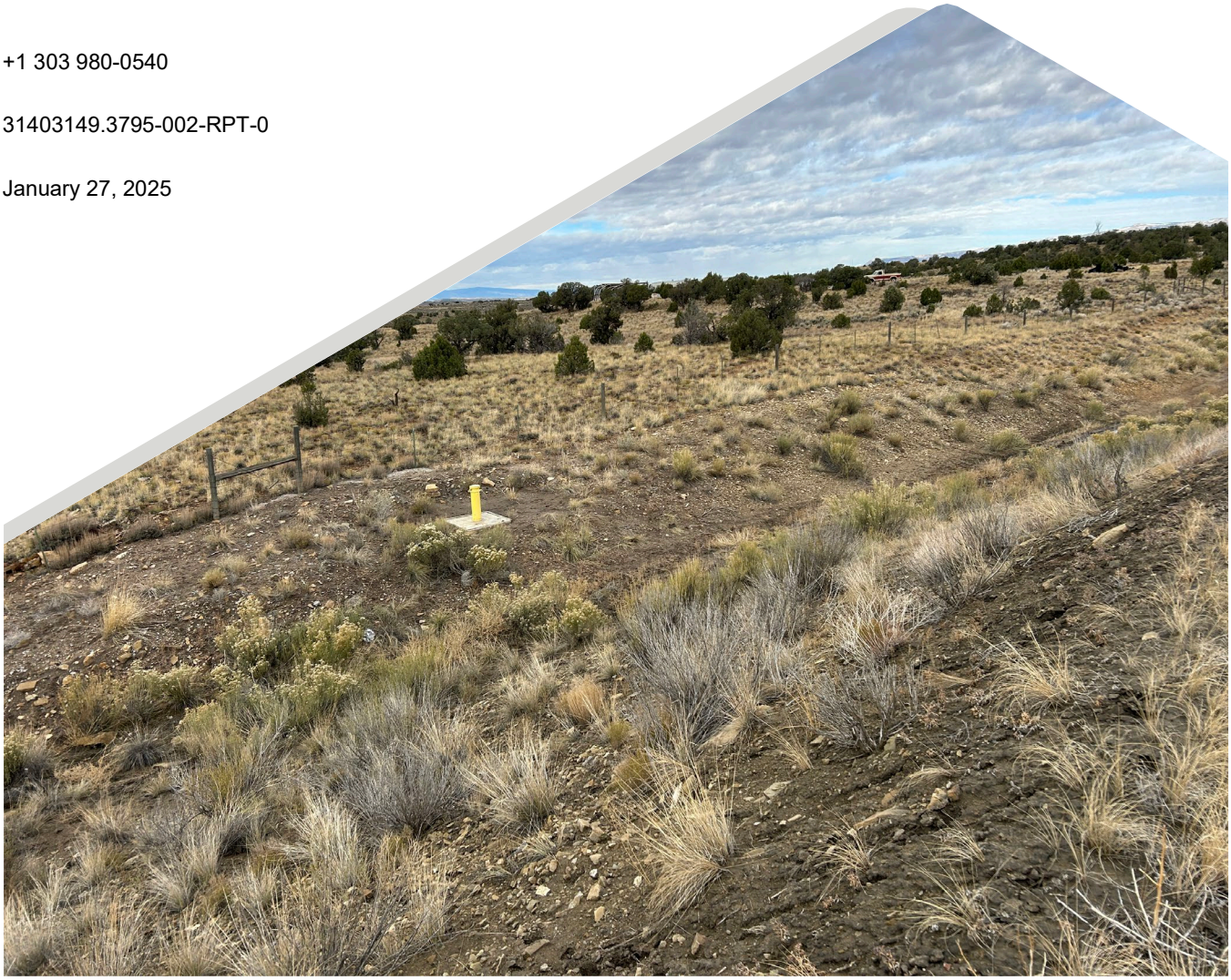

Executive Summary

This report summarizes the 2024 groundwater monitoring activities and results for the detection monitoring program for the closed coal combustion residuals (CCR) landfill that served the former Nucla Station, along with the comparative statistical analysis. The CCR landfill, which is owned by Tri-State Generation and Transmission Association, Inc., is currently in detection monitoring. No program transitions occurred in 2024.

Fluoride at MO-1 was identified as a potential exceedance following the first semi-annual 2024 sampling event. Confirmatory resampling conducted in July 2024 indicated that the first semi-annual 2024 detection monitoring result was a false-positive statistically significant increase (SSI). No further action is needed.

Total recoverable boron and fluoride at MO-3 and total recoverable boron at MO-5 were identified as potential exceedances following the second semi-annual 2024 sampling event. Confirmatory resampling conducted in December 2024 indicated that the second semi-annual 2024 detection monitoring results were false-positive SSIs. No further action is needed.

Field-measured pH in MO-4 was identified as potential exceedance following the second semi-annual 2024 sampling event. This potential exceedance was verified with confirmatory resampling in December 2024. In accordance with 40 CFR 257 Subpart D, an evaluation will be conducted within 90 days of confirmation of the verified SSI to ascertain if a source other than the regulated CCR unit caused the SSI or if the SSI was a result of an error in sampling, analysis, or statistical evaluation or was caused by natural variability in groundwater quality that was not fully captured during the baseline data collection period. If a successful alternative source demonstration cannot be completed, an assessment monitoring program will be initiated.

No other potential exceedances, false-positive SSIs, or verified SSIs were identified for the 2024 detection monitoring program.

As described in the Groundwater Monitoring System Certification (Golder 2019) and the Groundwater Statistical Method Certification (Golder 2020), the groundwater monitoring and analytical procedures for the program meet the requirements of 40 CFR 257 Subpart D (the CCR Rule). Modifications to the monitoring network and sampling program are not necessary at this time.

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TABLES

FIGURES

1.0 INTRODUCTION

WSP USA Inc. (WSP) prepared this report to describe the 2024 groundwater monitoring activities and comparative statistical analysis for the Nucla Station Ash Disposal Facility (the Facility), which is a coal combustion residuals (CCR) landfill owned by Tri-State Generation and Transmission Association, Inc. (Tri-State) and subject to regulation under 40 CFR 257 Subpart D (the CCR Rule). This report was prepared to meet the requirements of 40 CFR 257.90(e).

1.1 Facility Information

The Facility serves as the location for containment of CCRs that were generated at Tri-State's Nucla Station, which was a 110-megawatt coal-fired electric generation plant located near Nucla, Colorado. Nucla Station was retired in September 2019 and subsequently demolished. Within the 81.65-acre property of the Facility, the CCR disposal footprint comprises approximately 61 acres. Closure of the Facility was completed in 2022.

1.2 Purpose

The CCR Rule establishes specific requirements for reporting of groundwater monitoring activities and corrective action in 40 CFR 257.90. Per 40 CFR 257.90(e), no later than January 31, 2018, and annually thereafter, owners or operators of CCR units must prepare an annual groundwater monitoring and corrective action report.

2.0 GROUNDWATER MONITORING PROGRAM STATUS

The groundwater monitoring system for the Facility consists of five monitoring wells, as described in the Groundwater Monitoring System Certification (Golder 2019). The two upgradient monitoring wells are MO-1 and MO-2. The three downgradient monitoring wells are MO-3, MO-4, and MO-5.

2.1 Completed Key Actions in 2024

The following key actions were completed in 2024:

- The 2023 Annual Groundwater Monitoring Report (WSP 2024) was finalized and placed within the operating record and on Tri-State's publicly accessible CCR website.
- Sampling events for the detection monitoring program were conducted in the second quarter, on April 9, and in the fourth quarter, on October 22 and 23.
- Confirmatory resampling was conducted on July 31 for the potential exceedance identified from the first semi-annual 2024 sampling event and on December 11 for the potential exceedances identified from the second semi-annual 2024 sampling event.

2.2 Installation and Decommissioning of Monitoring Wells

No monitoring wells were installed or decommissioned for the Facility in 2024.

2.3 Problems and Resolutions

The groundwater monitoring program uses pressure transducers installed in the monitoring wells to measure the static water level in each monitoring well during each sampling event. While reviewing the field notes for the December 2024 confirmatory resampling event at MO-3, WSP identified a potential inconsistency in the measurements recorded by the pressure transducer installed in MO-3. This prompted further review of the

pressure transducer readings recorded in the field notes for each monitoring well. Based on this review, the following shifts in the transducer readings were identified:

- MO-3: A new transducer was installed in the well prior to the December 2024 confirmatory resampling event. The new transducer indicates a pressure head approximately 8 feet higher than the transducer that was previously installed in the well at approximately the same elevation. However, a manual water level measurement obtained in January 2025 indicated that the water level has not increased in the monitoring well when compared to the previous manual water level measurement for MO-3.
- MO-4: The pressure head measured by the transducer increased approximately 15 feet between the October 2022 and April 2023 sampling events. However, a manual water level measurement obtained in January 2025 indicated that the water level has not increased in the monitoring well when compared to the previous manual water level measurement for MO-4.

An investigation into the cause of the discrepancies between the transducer readings and manual water level measurements is ongoing.

2.4 Proposed Key Activities for 2025

The following key actions are expected to be completed in 2025:

- Sampling events for the detection monitoring program are planned to occur in the second and fourth quarters of 2025.
- In accordance with the CCR Rule, an evaluation will be conducted within 90 days of confirmation of the verified statistically significant increase (SSI) for field-measured pH in MO-4 (refer to Section 3.4.4) to ascertain if a source other than the regulated CCR unit caused the SSI or if the SSI was a result of an error in sampling, analysis, or statistical evaluation or was caused by natural variability in groundwater quality that was not fully captured during the baseline data collection period. If a successful alternative source demonstration (ASD) cannot be completed, an assessment monitoring program will be initiated.

3.0 GROUNDWATER MONITORING RESULTS AND ANALYSIS

Results from the groundwater monitoring program in 2024 are described in this section.

3.1 Groundwater Flow

The depth to groundwater was measured in each monitoring well prior to purging during each sampling event. Static water elevations are presented in Table 1 through Table 5. Static water elevations from the first semi-annual 2024 sampling event and the second semi-annual 2024 sampling event are shown in Figure 1 and Figure 2, respectively.

The Morrison aquifer is characterized as highly heterogeneous with zones that are variably transmissive and/or subjected to variable amounts of confining pressure. This characterization is supported by the significant differences in static water levels, water column heights, and recovery times observed in the monitoring wells that have been installed to serve as the groundwater monitoring system for the Facility. Sandstone lenses in the Morrison aquifer vary considerably with respect to transmissivity (i.e., thickness and hydraulic conductivity) and horizontal extent due to the alluvial, shoreline, and lacustrine environments that deposited the Salt Wash and Brushy Basin Members of the Morrison Formation, resulting in interbedded siltstone, mudstone, claystone, and shale units. Static water elevation data suggest a general southerly groundwater flow direction in the Morrison

aquifer near the Facility. However, the heterogeneity and interbedded nature of the Morrison Formation beneath the Facility and the significant differences in recharge characteristics between monitoring wells suggest a lack of horizontal continuity and confound the ability to precisely discern groundwater flow direction and rate.

3.2 Monitoring Data (Analytical Results)

Analytical results from detection monitoring in 2024 are shown in Table 1 through Table 5.

3.3 Samples Collected

The sampling events for detection monitoring were conducted in April 2024 (first semi-annual 2024 sampling event) and October 2024 (second semi-annual 2024 sampling event). Additionally, samples were collected from MO-1 in July 2024 and from MO-3, MO-4, and MO-5 in December 2024 for confirmatory resampling associated with the detection monitoring program.

3.4 Comparative Statistical Analysis

The comparative statistical analysis is summarized below, and the results are presented in Table 6 through Table 10. A full description of the steps taken for the comparative statistical analysis can be found in the Groundwater Statistical Method Certification (Golder 2020).

3.4.1 Definitions

The following definitions are used in discussion of the comparative statistical analysis:

- SSI – is a statistically significant increase and is defined as an analytical result that exceeds the parametric or non-parametric statistical limit established by the baseline statistical analysis.
- Potential Exceedance – is defined as an initial analytical result that exceeds the parametric or non-parametric statistical limit established by the baseline statistical analysis. Confirmatory resampling is used to determine whether the potential exceedance is a false-positive SSI or a verified SSI.
- False-positive SSI – is defined as an analytical result that exceeds the statistical limit but can clearly be attributed to laboratory error or changes in analytical precision or is invalidated through confirmatory resampling.
- Confirmatory resampling – is designated as the resampling event that occurs within 90 days of identifying an SSI over the statistical limit for determination of a verified SSI [1].
- Verified SSI – is interpreted as two consecutive SSIs (the original sample and the confirmatory resample for analytical results) for the same constituent at the same monitoring well.

If the data are assessed with a trend test, confirmatory resampling is generally not applicable, and a verified SSI is defined as a statistically significant increasing trend in the eight most recent results.

[1] Confirmatory resampling might not occur within 90 days of the sampling event that resulted in the potential exceedance because of the additional time required for activities that must occur before a potential exceedance can be identified. These activities include sample delivery, analytical testing, review of results, and comparative statistical analysis.

3.4.2 Potential Exceedances

The fluoride concentration for the sample collected from MO-1 during the first semi-annual 2024 sampling event was greater than the statistical limit and was therefore identified as a potential exceedance. Results of the confirmatory resampling conducted in July 2024 are discussed in Section 3.4.3.

Total recoverable boron and fluoride concentrations for the sample collected from MO-3 during the second semi-annual 2024 sampling event, the field-measured pH in MO-4 during the second semi-annual 2024 sampling event, and the total recoverable boron concentration for the sample collected from MO-5 during the second semi-annual 2024 sampling event were greater than the respective statistical limits and were therefore identified as potential exceedances. Results of the confirmatory resampling conducted in December 2024 are discussed in Sections 3.4.3 and 3.4.4.

3.4.3 False-positive Statistically Significant Increases

Confirmatory resampling for the potential exceedance associated with the first semi-annual 2024 sampling event occurred on July 31, 2024. The confirmatory resampling identified the fluoride result for the sample collected from MO-1 during the first semi-annual 2024 sampling event as a false-positive SSI. No further action is needed.

Confirmatory resampling for the potential exceedances associated with the second semi-annual 2024 detection monitoring event occurred on December 11, 2024. The confirmatory resampling identified the following results from the second semi-annual 2024 sampling event as false-positive SSIs: the total recoverable boron and fluoride results for the sample collected from MO-3 and the total recoverable boron result for the sample collected from MO-5. No further action is needed.

3.4.4 Verified Statistically Significant Increases

No verified SSIs were identified for the first semi-annual 2024 sampling event.

A potential exceedance for field-measured pH in MO-4 was identified following the second semi-annual 2024 sampling event. This potential exceedance was verified with confirmatory resampling in December 2024. In accordance with the CCR Rule, an evaluation will be conducted within 90 days of confirmation of the verified SSI to ascertain if a source other than the regulated CCR unit caused the SSI or if the SSI was a result of an error in sampling, analysis, or statistical evaluation or was caused by natural variability in groundwater quality that was not fully captured during the baseline data collection period. If a successful ASD cannot be completed, an assessment monitoring program will be initiated.

4.0 PROGRAM TRANSITIONS

In the fourth quarter of 2017, the groundwater monitoring program for the Facility transitioned from the baseline period to detection monitoring. The Facility remains in detection monitoring, and no program transitions occurred in 2024.

4.1 Detection Monitoring

Samples for the detection monitoring program are collected on a semi-annual basis, beginning with the sample collected in October 2017. Tri-State plans to collect samples for the detection monitoring program in the second and fourth quarters of 2025.

4.2 Assessment Monitoring

The groundwater monitoring program for the Facility is not in assessment monitoring. Assessment monitoring has not been triggered as described in 40 CFR 257.95. As such, no ASDs have been made under an assessment monitoring program, and no actions are required.

4.3 Corrective Measures and Assessment

The groundwater monitoring program for the Facility does not indicate the need for corrective measures. An assessment of corrective measures, as described in 40 CFR 257.96, is not required.

5.0 RECOMMENDATIONS AND CLOSING

This report presents the groundwater monitoring activities and results for the 2024 detection monitoring program for the Nucla Station Ash Disposal Facility, along with the comparative statistical analysis. The significant findings from the 2024 monitoring activities and comparative statistical analysis are as follows:

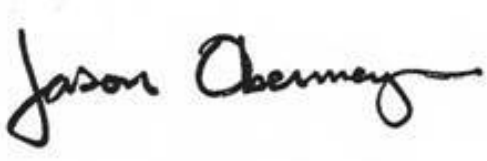
- Fluoride at MO-1 was identified as a potential exceedance following the first semi-annual 2024 sampling event. Confirmatory resampling conducted in July 2024 indicated that this result was a false-positive SSI. No further action is needed.
- Total recoverable boron and fluoride at MO-3 and total recoverable boron at MO-5 were identified as potential exceedances following the second semi-annual 2024 sampling event. Confirmatory resampling conducted in December 2024 indicated that these results were false-positive SSIs. No further action is needed.
- Field-measured pH in MO-4 was identified as a potential exceedance following the second semi-annual 2024 sampling event. This potential exceedance was verified with confirmatory resampling in December 2024. In accordance with the CCR Rule, an evaluation will be conducted within 90 days of confirmation of the verified SSI to ascertain if a source other than the regulated CCR unit caused the SSI or if the SSI was a result of an error in sampling, analysis, or statistical evaluation or was caused by natural variability in groundwater quality that was not fully captured during the baseline data collection period. If a successful ASD cannot be completed, an assessment monitoring program will be initiated.
- No other potential exceedances, false-positive SSIs, or verified SSIs were identified for the 2024 detection monitoring program.

As described in the Groundwater Monitoring System Certification (Golder 2019) and the Groundwater Statistical Method Certification (Golder 2020), the groundwater monitoring and analytical procedures meet the requirements of the CCR Rule. Modifications to the monitoring network and sampling program are not necessary at this time.

Signature Page

WSP USA Inc.

Sara Harkins, PG (WY)
Senior Geochemist/Geologist



Jason Obermeyer, PE (CO, ID, KS, MI, NM, TX)
Practice Leader, Senior Technical Principal

Brendan Purcell, PE (CO)
Senior Consultant

SAH/JEO/BJP/rm

https://wsponlinenam.sharepoint.com/sites/us-tirstategroundwater/shared documents/project files/nucla ccr/2024-31403149.3795/6_deliverables/002-rpt-2024_annual_groundwater_rpt/rev0/31403149.3795-002-rpt-0-2024_annual_groundwater_report_27jan25.docx

6.0 REFERENCES

Golder (Golder Associates Inc.). 2019. Coal Combustion Residuals Landfill Groundwater Monitoring System Certification, Nucla Station Ash Disposal Facility. Report prepared for Tri-State Generation and Transmission Association, Inc. May 2.

Golder. 2020. Coal Combustion Residuals Landfill Groundwater Statistical Method Certification, Nucla Station Ash Disposal Facility. Report prepared for Tri-State Generation and Transmission Association, Inc. June 19.

WSP (WSP USA Inc.). 2024. Annual Groundwater Monitoring Report – 2023, Nucla Station Ash Disposal Facility, Nucla, Colorado. Report prepared for Tri-State Generation and Transmission Association, Inc. January 27.

Tables

Table 1: Sample Results Summary Table – MO-1

Analytes	Units	4/9/2024	7/31/2024	10/23/2024
		Compliance Event	Resampling Event	Compliance Event
Static Water Elevation	ft amsl	5715.7	5715.4	5715.3
Appendix III				
Boron, Total Recoverable	mg/L	0.409	--	0.383
Calcium, Total Recoverable	mg/L	8.82	--	4.98
Chloride	mg/L	261	--	204
Fluoride	mg/L	3.23	2.55	2.54
pH, Field-Measured	pH units	11.5	11.6	11.5
Sulfate	mg/L	446	--	343
Total Dissolved Solids	mg/L	1610	--	1520

Notes:

--: not analyzed

ft amsl: feet above mean sea level

mg/L: milligrams per liter

Table 2: Sample Results Summary Table – MO-2

Analytes	Units	4/9/2024	10/22/2024
		Compliance Event	Compliance Event
Static Water Elevation	ft amsl	5737.2	5737.5
Appendix III			
Boron, Total Recoverable	mg/L	0.337	0.274 B
Calcium, Total Recoverable	mg/L	53.1	51.3
Chloride	mg/L	2030	1590
Fluoride	mg/L	< 25 U	< 25 U
pH, Field-Measured	pH units	8.0	8.0
Sulfate	mg/L	1750	1430
Total Dissolved Solids	mg/L	6160	6130

Notes:

ft amsl: feet above mean sea level

mg/L: milligrams per liter

Non-detects are reported as less than the practical quantitation limit.

B: Analyte was detected between the method detection limit and the practical quantitation limit.

U: Analyte was not detected above the method detection limit.

Table 3: Sample Results Summary Table – MO-3

Analytes	Units	4/9/2024	10/22/2024	12/11/2024
		Compliance Event	Compliance Event	Resampling Event
Static Water Elevation	ft amsl	5636.9	5636.8	5636.6
Appendix III				
Boron, Total Recoverable	mg/L	0.714	0.725	0.671
Calcium, Total Recoverable	mg/L	18.7	18.4	--
Chloride	mg/L	151	127	--
Fluoride	mg/L	< 12.5 U	3.92 B	2.93
pH, Field-Measured	pH units	7.8	7.9	7.9
Sulfate	mg/L	689	629	--
Total Dissolved Solids	mg/L	2380	2380	--

Notes:

ft amsl: feet above mean sea level

mg/L: milligrams per liter

Non-detects are reported as less than the practical quantitation limit.

B: Analyte was detected between the method detection limit and the practical quantitation limit.

U: Analyte was not detected above the method detection limit.

Table 4: Sample Results Summary Table – MO-4

Analytes	Units	4/9/2024	10/22/2024	12/11/2024
		Compliance Event	Compliance Event	Resampling Event
Static Water Elevation	ft amsl	5637.8	5637.8	5637.8
Appendix III				
Boron, Total Recoverable	mg/L	0.374	0.489 B	--
Calcium, Total Recoverable	mg/L	45.5	50.2	--
Chloride	mg/L	939	891	--
Fluoride	mg/L	< 50 U	< 50 U	--
pH, Field-Measured	pH units	7.7	7.8	7.8
Sulfate	mg/L	1670	1820	--
Total Dissolved Solids	mg/L	5100	4780 H	--

Notes:

ft amsl: feet above mean sea level

mg/L: milligrams per liter

Non-detects are reported as less than the practical quantitation limit

B: Analyte was detected between the method detection limit and the practical quantitation limit.

H: Analyte was analyzed outside of hold time due to laboratory reanalysis.

U: Analyte was not detected above the method detection limit.

Table 5: Sample Results Summary Table – MO-5

Analytes	Units	4/9/2024	10/22/2024	12/11/2024
		Compliance Event	Compliance Event	Resampling Event
Static Water Elevation	ft amsl	5664.6	5664.4	5660.7
Appendix III				
Boron, Total Recoverable	mg/L	0.355	1.78	0.379 B
Calcium, Total Recoverable	mg/L	12.5	59.8	--
Chloride	mg/L	901	694	--
Fluoride	mg/L	< 25 U	< 25 U	--
pH, Field-Measured	pH units	8.4	8.5	8.6
Sulfate	mg/L	1580	1320	--
Total Dissolved Solids	mg/L	4760	4540	--

Notes:

ft amsl: feet above mean sea level

mg/L: milligrams per liter

Non-detects are reported as less than the practical quantitation limit.

B: Analyte was detected between the method detection limit and the practical quantitation limit.

U: Analyte was not detected above the method detection limit.

Table 6: Statistics Summary Table – MO-1

Analytes	Units	Selected Statistical Method	Statistical Limit	April 2024		July 2024		October 2024	
				Compliance Event (4/9/2024)	SSI Determination	Resampling Event (7/31/2024)	SSI Determination	Compliance Event (10/23/2024)	SSI Determination
Appendix III									
Boron, Total Recoverable	mg/L	P-PL	0.45	0.409	No	--	--	0.383	No
Calcium, Total Recoverable	mg/L	P-PL	24	8.82	No	--	--	4.98	No
Chloride	mg/L	Trend(1)	NL	261	No	--	--	204	No
Fluoride	mg/L	P-PL	2.7	3.23	False-positive SSI	2.55	No	2.54	No
pH, Field-Measured	pH units	P-PL	11.5, 12.2	11.5	No	11.6	--(2)	11.5	No
Sulfate	mg/L	Trend(1)	NL	446	No	--	--	343	No
Total Dissolved Solids	mg/L	P-PL	2056	1610	No	--	--	1520	No

Notes:

NL: Statistical limit was not calculated for analytes for which the Sen's Slope methodology was selected

P-PL: Parametric Prediction Limit

mg/L: milligrams per liter

1) Baseline data exhibited a statistically significant decreasing trend. Therefore, a trend analysis is used for the determination of SSIs.

2) Field-measured pH is reported for informational purposes. SSI determination for the confirmatory resampling event only applies to parameters identified as potential exceedances from the preceding sampling event.

Table 7: Statistics Summary Table – MO-2

Analytes	Units	Selected Statistical Method	Statistical Limit	April 2024		October 2024	
				Compliance Event (4/9/2024)	SSI Determination	Compliance Event (10/22/2024)	SSI Determination
Appendix III							
Boron, Total Recoverable	mg/L	P-PL	0.44	0.337	No	0.274 B	No
Calcium, Total Recoverable	mg/L	P-PL	61	53.1	No	51.3	No
Chloride	mg/L	P-PL	2223	2030	No	1590	No
Fluoride	mg/L	NP-PL	12.5	< 25 U[(1)]	No	< 25 U[(1)]	No
pH, Field-Measured	pH units	P-PL	7.6, 8.6	8.0	No	8.0	No
Sulfate	mg/L	P-PL	2227	1750	No	1430	No
Total Dissolved Solids	mg/L	P-PL	6652	6160	No	6130	No

Notes:

P-PL: Parametric Prediction Limit

NP-PL: Non-parametric Prediction Limit

mg/L: milligrams per liter

Non-detects are reported as less than the practical quantitation limit

B: Analyte was detected between the method detection limit and the practical quantitation limit.

U: Analyte was not detected above the practical quantitation limit.

1) Result is not considered an SSI because it is a non-detect with a method detection limit of 5 mg/L, which is below the statistical limit.

Table 8: Statistics Summary Table – MO-3

Analytes	Units	Selected Statistical Method	Statistical Limit	April 2024		October 2024		December 2024	
				Compliance Event (4/9/2024)	SSI Determination	Compliance Event (10/22/2024)	SSI Determination	Resampling Event (12/11/2024)	SSI Determination
Appendix III									
Boron, Total Recoverable	mg/L	P-PL	0.72	0.714	No	0.725	False-positive SSI	0.671	No
Calcium, Total Recoverable	mg/L	P-PL	21	18.7	No	18.4	No	--	--
Chloride	mg/L	P-PL	179	151	No	127	No	--	--
Fluoride	mg/L	P-PL	3.2	< 12.5 U(1)	No	3.92 B	False-positive SSI	2.93	No
pH, Field-Measured	pH units	NP-PL	7.8, 8.1	7.8	No	7.9	No	7.9	--(2)
Sulfate	mg/L	P-PL	855	689	No	629	No	--	--
Total Dissolved Solids	mg/L	P-PL	2598	2380	No	2380	No	--	--

Notes:

P-PL: Parametric Prediction Limit

NP-PL: Non-parametric Prediction Limit

mg/L: milligrams per liter

Non-detects are reported as less than the practical quantitation limit.

B: Analyte was detected between the method detection limit and the practical quantitation limit.

U: Analyte was not detected above the practical quantitation limit.

1) Result is not considered an SSI because it is a non-detect with a method detection limit of 2.5 mg/L, which is below the statistical limit.

2) Field-measured pH is reported for informational purposes. SSI determination for the confirmatory resampling event only applies to parameters identified as potential exceedances from the preceding sampling event.

Table 9: Statistics Summary Table – MO-4

Analytes	Units	Selected Statistical Method	Statistical Limit	April 2024		October 2024		December 2024	
				Compliance Event (4/9/2024)	SSI Determination	Compliance Event (10/22/2024)	SSI Determination	Resampling Event (12/11/2024)	SSI Determination
Appendix III									
Boron, Total Recoverable	mg/L	P-PL	0.50	0.374	No	0.489 B	No	--	--
Calcium, Total Recoverable	mg/L	P-PL	51	45.5	No	50.2	No	--	--
Chloride	mg/L	P-PL	1072	939	No	891	No	--	--
Fluoride	mg/L	NP-PL	12.5	< 50 U(1)	No	< 50 U(1)	No	--	--
pH, Field-Measured	pH units	NP-PL	7.4, 7.7	7.7	No	7.8	Verified SSI	7.8	Verified SSI
Sulfate	mg/L	P-PL	2056	1670	No	1820	No	--	--
Total Dissolved Solids	mg/L	P-PL	5328	5100	No	4780 H	No	--	--

Notes:

P-PL: Parametric Prediction Limit

NP-PL: Non-parametric Prediction Limit

mg/L: milligrams per liter

Non-detects are reported as less than the practical quantitation limit.

B: Analyte was detected between the method detection limit and the practical quantitation limit

H: Analyte was analyzed outside of hold time due to laboratory reanalysis.

U: Analyte was not detected above the practical quantitation limit.

1) Result is not considered an SSI because it is a non-detect with a method detection limit of 10 mg/L, which is below the statistical limit.

Table 10: Statistics Summary Table – MO-5

Analytes	Units	Selected Statistical Method	Statistical Limit	April 2024		October 2024		December 2024	
				Compliance Event (4/9/2024)	SSI Determination	Compliance Event (10/22/2024)	SSI Determination	Resampling Event (12/11/2024)	SSI Determination
Appendix III									
Boron, Total Recoverable	mg/L	P-PL	0.52	0.355	No	1.78	False-positive SSI	0.379 B	No
Calcium, Total Recoverable	mg/L	Trend[1]	NL	12.5	No	59.8	No	--	--
Chloride	mg/L	P-PL	1180	901	No	694	No	--	--
Fluoride	mg/L	NP-PL	12.5	< 25 U[2]	No	< 25 U[2]	No	--	--
pH, Field-Measured	pH units	P-PL	7.6, 9.3	8.4	No	8.5	No	8.6	--[3]
Sulfate	mg/L	P-PL	1996	1580	No	1320	No	--	--
Total Dissolved Solids	mg/L	P-PL	5468	4760	No	4540	No	--	--

Notes:

NL: Statistical limit was not calculated for analytes for which the Sen's Slope methodology was selected.

P-PL: Parametric Prediction Limit

NP-PL: Non-parametric Prediction Limit

mg/L: milligrams per liter

Non-detects are reported as less than the practical quantitation limit.

B: Analyte was detected between the method detection limit and the practical quantitation limit.

U: Analyte was not detected above the practical quantitation limit.

1) Baseline data exhibited a statistically significant decreasing trend. Therefore, a trend analysis is used for the determination of SSIs.

2) Result is not considered an SSI because it is a non-detect with a method detection limit of 5 mg/L, which is below the statistical limit.

3) Field-measured pH is reported for informational purposes. SSI determination for the confirmatory resampling event only applies to parameters identified as potential exceedances from the preceding sampling event.

Figures

LEGEND

- PROPERTY BOUNDARY
- 5990 — EXISTING GROUND TOPOGRAPHY (REFERENCE 1)
- MO-1 — MONITORING WELL
- 5715.7 — STATIC WATER ELEVATION (NOTES 1 AND 2)

NOTE(S)

1. STATIC WATER LEVELS AT MO-1, MO-2, MO-3, MO-4, AND MO-5 WERE MEASURED ON APRIL 9, 2024.
2. STATIC WATER ELEVATIONS ARE IN FEET ABOVE MEAN SEA LEVEL.

REFERENCE(S)

1. THE EXISTING GROUND TOPOGRAPHY WAS OBTAINED BY EPP & ASSOCIATES ON MAY 13, 2022.
2. THE AERIAL IMAGERY WAS OBTAINED FROM THE ESRI BASEMAP SERVICE, MAXAR VIVID. AERIAL IMAGERY WAS CAPTURED ON NOVEMBER 15, 2023.

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0 150 300
SCALE FEET

CLIENT
TRI-STATE GENERATION AND TRANSMISSION ASSOCIATION
1100 WEST 116TH AVENUE
WESTMINSTER, COLORADO 80234

CONSULTANT
wsp

YYYY-MM-DD	2025-01-25
DESIGNED	BJP
PREPARED	BJP
REVIEWED	SAH
APPROVED	JEO

PROJECT
NUCLA STATION ASH DISPOSAL FACILITY
COAL COMBUSTION RESIDUALS LANDFILL
2024 ANNUAL GROUNDWATER MONITORING REPORT

TITLE
MONITORING WELL LOCATIONS AND STATIC WATER ELEVATIONS (FIRST SEMI-ANNUAL 2024 SAMPLING EVENT)

PROJECT NO.	REV.	FIGURE
31403149.3795	B	1

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LEGEND

- PROPERTY BOUNDARY
- 5990 — EXISTING GROUND TOPOGRAPHY (REFERENCE 1)
- MO-1 — MONITORING WELL
- 5715.3 — STATIC WATER ELEVATION (NOTES 1 AND 2)

NOTE(S)

1. THE STATIC WATER LEVEL AT MO-1 WAS MEASURED ON OCTOBER 23, 2024. STATIC WATER LEVELS AT MO-2, MO-3, MO-4, AND MO-5 WERE MEASURED ON OCTOBER 22, 2024.
2. STATIC WATER ELEVATIONS ARE IN FEET ABOVE MEAN SEA LEVEL.

REFERENCE(S)

1. THE EXISTING GROUND TOPOGRAPHY WAS OBTAINED BY EPP & ASSOCIATES ON MAY 13, 2022.
2. THE AERIAL IMAGERY WAS OBTAINED FROM THE ESRI BASEMAP SERVICE, MAXAR VIVID. AERIAL IMAGERY WAS CAPTURED ON NOVEMBER 15, 2023.

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CLIENT
TRI-STATE GENERATION AND TRANSMISSION ASSOCIATION
1100 WEST 116TH AVENUE
WESTMINSTER, COLORADO 80234

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wsp

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COAL COMBUSTION RESIDUALS LANDFILL
2024 ANNUAL GROUNDWATER MONITORING REPORT

TITLE
MONITORING WELL LOCATIONS AND STATIC WATER ELEVATIONS (SECOND SEMI-ANNUAL 2024 SAMPLING EVENT)

PROJECT NO.	REV.	FIGURE
31403149.3795	B	2

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