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Memorandum

Date:	January 8, 2026
To:	Pryce Warren, American Electric Power (AEP)
From:	Beth Gross, PhD, PE (OK) and Allison Kreinberg, Geosyntec
Subject:	Alternative Source Demonstration Update – 1st Semiannual Event 2025 Northeastern Power Station Bottom Ash Pond Oologah, Rogers County, Oklahoma

The Bottom Ash Pond (BAP) is a regulated coal combustion residual (CCR) management unit at the Northeastern Power Station (NPS) in Oologah, Oklahoma. A semiannual assessment monitoring event was completed at the BAP on June 18, 2025, in accordance with the assessment monitoring requirements of Oklahoma Administrative Code (OAC) 252:517-9-6. Analysis of the June 2025 data identified statistically significant levels (SSLs) above the groundwater protection standards (GWPSs) for lithium, fluoride, and barium at SP-10 (**Attachment A**). The following SSLs were identified at the Northeastern BAP:

- The lower confidence limit (LCL) for lithium exceeded the GWPS of 0.163 milligrams per liter (mg/L) at SP-10 (0.235 mg/L).
- The LCL for fluoride exceeded the GWPS of 4.39 mg/L at SP-10 (5.71 mg/L).
- The LCL for barium exceeded the GWPS of 2.77 mg/L at SP-10 (4.50 mg/L).

Key analytical results for samples collected from the BAP and from SP-10 are provided in **Table 1**. As described in previous alternative source demonstrations (ASDs) (Geosyntec 2019, Geosyntec 2021a, Geosyntec 2021b, Geosyntec 2021c, Geosyntec 2022, Geosyntec 2023a, Geosyntec 2023b, Geosyntec 2023c, Geosyntec 2024a, Geosyntec 2024b, Geosyntec 2025), concentrations of lithium, fluoride, and barium in the BAP water (including pore water) and BAP sediments that are lower than concentrations observed at SP-10 suggest that the BAP is not the source of these exceedances. These previous ASDs demonstrate that the release of lithium from the clay minerals in the shale lens located at 46 feet below ground surface in the screened interval of SP-10 is the likely source of lithium in groundwater at that location. Analytical results suggest that naturally occurring barium and fluoride are also associated with the shale lenses and are contributing to aqueous barium and fluoride concentrations at SP-10.

The Oklahoma Department of Environmental Quality (DEQ) previously noted in a letter to the NPS dated June 4, 2021, that "[i]f lithium and fluoride continue to exceed their relative GWPS in

the future and conditions have not changed, NPS may refer to the October 29, 2019 ASD approval for lithium and this [June 4, 2021] approval for fluoride and continue assessment monitoring for the BAP in accordance with OAC 252:517-6(g)(3)(B)" (DEQ 2021). DEQ provided a similar letter to the NPS dated September 20, 2022, that indicated that the July 14, 2022 ASD "is applicable for the barium exceedance in SP-10 of the GWPS if conditions do not change. AEP may refer to the ASD approval for barium and continue assessment monitoring for the BAP in accordance with OAC 252:517-9-6(g)(3)(B)" (DEQ 2022). This ASD update presents an evaluation of the BAP for changing conditions that may affect previously approved ASDs for lithium, fluoride, and barium exceedances at SP-10.

The sample collected from the June 2025 monitoring event at SP-10 contained a lithium concentration of 0.184 mg/L, fluoride concentration of 6.8 mg/L, and barium concentration of 6.09 mg/L. The lithium concentration (**Figure 1**) and fluoride concentration (**Figure 2**) are consistent with previous results collected during the assessment monitoring period and continue to show no statistically significant positive trends. This is an indication that conditions have not changed substantially since the preceding ASD was submitted (Geosyntec 2025), and the arguments presented in the previous ASDs are still valid. Therefore, the lithium and fluoride concentrations at SP-10 during the June 2025 assessment monitoring event are not attributed to a release from the BAP.

A time series plot of the barium concentrations at SP-10 and a Mann-Kendall statistical analysis of the reported barium results over time are shown in **Figure 3**. The analysis determined that barium concentrations at SP-10 display a statistically significant increasing trend. However, based on a Piper diagram showing select events where the full suite of major cations and anions were sampled (**Figure 4**), the geochemistry at monitoring well SP-10 does not change over time in a manner indicative of a release from the BAP. The June 2025 sample is displayed on the plot as the purple diamond. **Figure 4** demonstrates that the geochemistry of SP-10 has remained consistent over the past several years, indicating that groundwater condition at SP-10 is geochemically stable.

The information above, as well as the information presented in previous ASDs (Geosyntec 2019, Geosyntec 2021a, Geosyntec 2021b, Geosyntec 2021c, Geosyntec 2022, Geosyntec 2023a, Geosyntec 2023b, Geosyntec 2023c, Geosyntec 2024a, Geosyntec 2024b, Geosyntec 2025), continues to support the position that barium, fluoride, and lithium concentrations are a result of natural variation in the underlying lithology, including the presence of shale lenses containing barium, fluoride, and lithium within the screened interval at SP-10. Therefore, no further action is warranted. Certification of this ASD memorandum by a qualified professional engineer is in **Attachment B**.

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REFERENCES

DEQ. 2021. Alternate Source Demonstration for Fluoride and Lithium Exceedance – Bottom Ash Pond, Public Service Company of Oklahoma Northeastern Power Station, Rogers County. Oklahoma Department of Environmental Quality. June 4.

DEQ. 2022. Alternative Source Demonstration for Barium, Fluoride, and Lithium Exceedances – Bottom Ash Pond, Public Service Company of Oklahoma – Northeastern Power Station, Rogers County. Oklahoma Department of Environmental Quality. September 20.

Geosyntec. 2019. Alternative Source Demonstration. Bottom Ash Pond – Northeastern Power Station, Oologah, Oklahoma. Geosyntec Consultants. April.

Geosyntec. 2021a. Alternative Source Demonstration. Bottom Ash Pond – Northeastern Power Station, Oologah, Oklahoma. Geosyntec Consultants. January.

Geosyntec. 2021b. Alternative Source Demonstration. Bottom Ash Pond – Northeastern Power Station, Oologah, Oklahoma. Geosyntec Consultants. May.

Geosyntec. 2021c. Alternative Source Demonstration. Bottom Ash Pond – Northeastern Power Station, Oologah, Oklahoma. Geosyntec Consultants. October.

Geosyntec. 2022. Alternative Source Demonstration. Bottom Ash Pond – Northeastern Power Station, Oologah, Oklahoma. Geosyntec Consultants. July.

Geosyntec. 2023a. Alternative Source Demonstration. Bottom Ash Pond – Northeastern Power Station, Oologah, Oklahoma. Geosyntec Consultants. January.

Geosyntec. 2023b. Alternative Source Demonstration. Bottom Ash Pond – Northeastern Power Station, Oologah, Oklahoma. Geosyntec Consultants. May.

Geosyntec. 2023c. Alternative Source Demonstration. Bottom Ash Pond – Northeastern Power Station, Oologah, Oklahoma. Geosyntec Consultants. December.

Geosyntec. 2024a. Alternative Source Demonstration. Bottom Ash Pond – Northeastern Power Station, Oologah, Oklahoma. Geosyntec Consultants. May.

Geosyntec. 2024b. Alternative Source Demonstration. Bottom Ash Pond – Northeastern Power Station, Oologah, Oklahoma. Geosyntec Consultants. September.

Geosyntec. 2025. Alternative Source Demonstration. Bottom Ash Pond – Northeastern Power Station, Oologah, Oklahoma. Geosyntec Consultants. May.

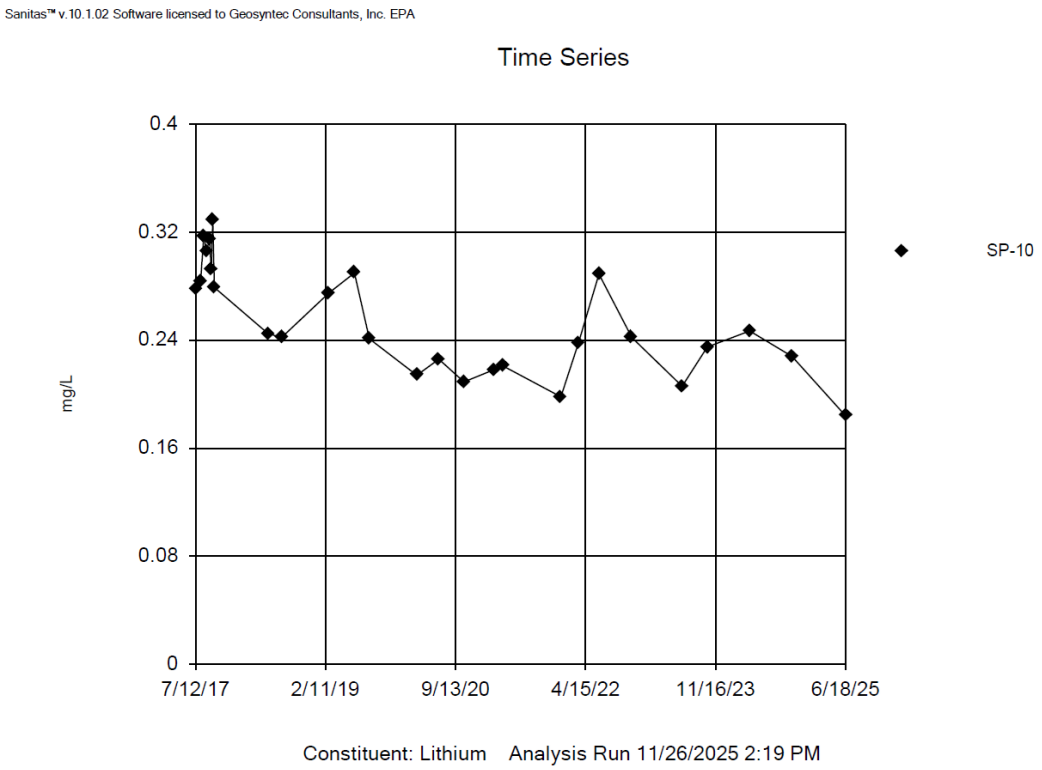
TABLES

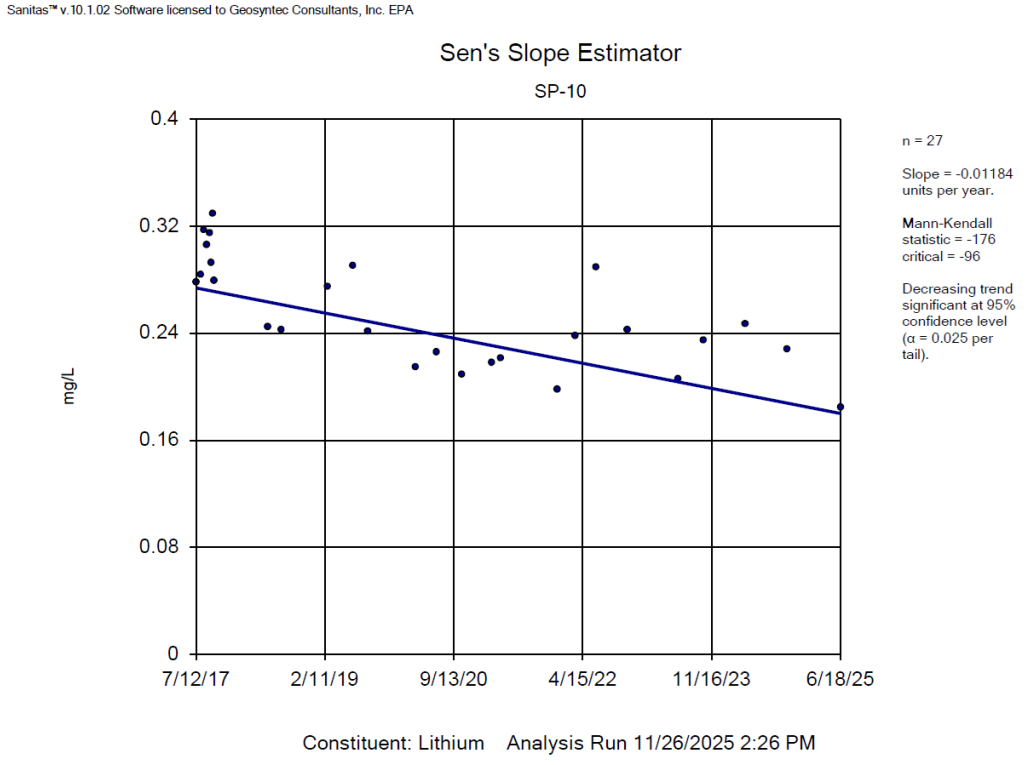
Table 1. Summary of Key Analytical Data
Alternative Source Demonstration Update Memorandum
Northeastern Power Station Bottom Ash Pond, Oologah, Oklahoma

Sample	Sample Date	Lithium Concentration (mg/L)	Fluoride Concentration (mg/L)	Barium Concentration (mg/L)
SPLP Leachate of Bottom Ash	7/10/2019	0.001	0.458	0.352
	8/25/2022	< 0.5	NA	0.22
BAP Surface Water	2/5/2019	0.00874	0.37	0.315
BAP Pore Water	7/10/2019	0.003	< 0.83	0.083
SP-10 June 2025 Result	6/18/2025	0.184	6.8	6.09

Notes:
1. Nondetect results are shown as less than the reporting limit.
BAP: Bottom Ash Pond
mg/L: milligram per liter
NA: not analyzed
SPLP: synthetic precipitation leaching procedure

FIGURES





Notes: Lithium results from monitoring well SP-10 are displayed on the plots.

AEP: American Electric Power
mg/L: milligrams per liter

Lithium Time Series and Trend Test: SP-10
Northeastern Bottom Ash Pond

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Columbus, Ohio | December 2025

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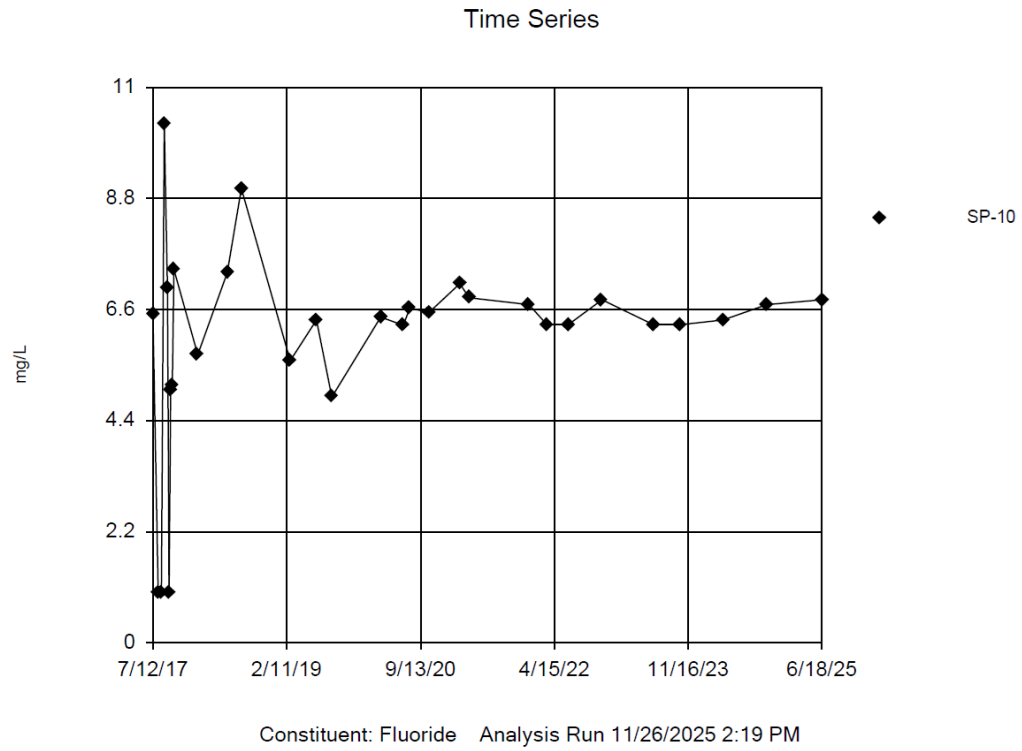

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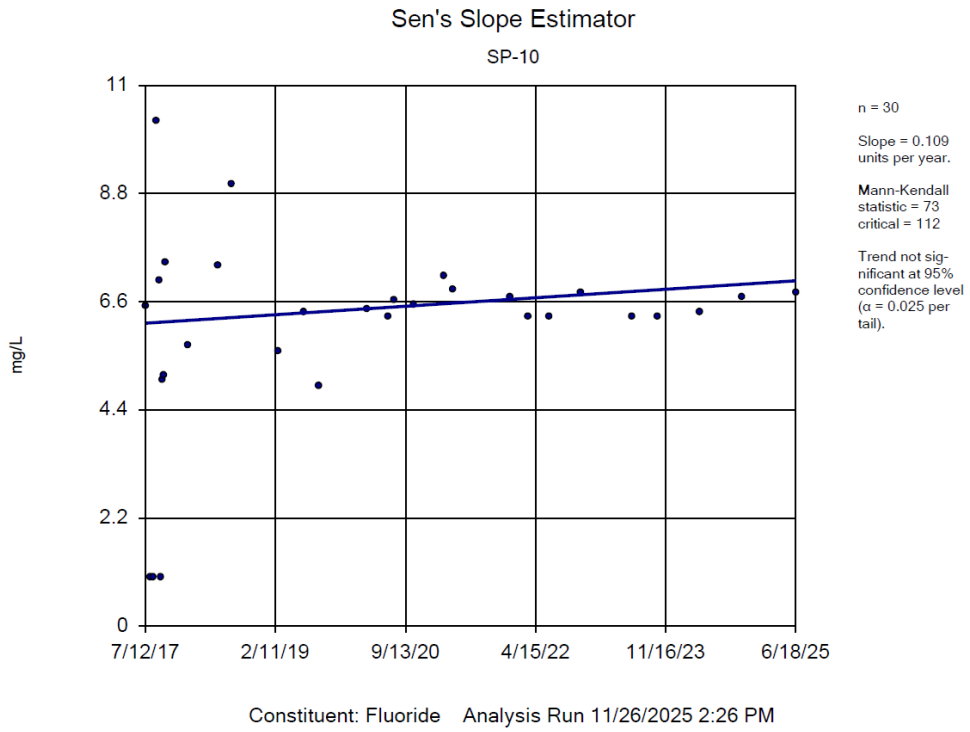

Notes: Fluoride results from monitoring well SP-10 are displayed on the plots.

AEP: American Electric Power
mg/L: milligrams per liter

Fluoride Time Series and Trend Test: SP-10
Northeastern Bottom Ash Pond

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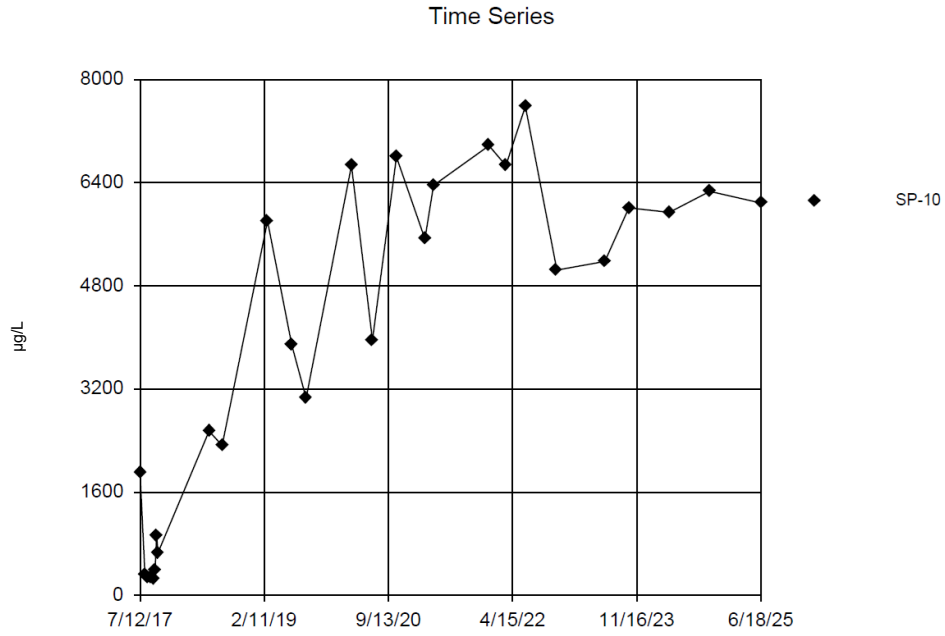

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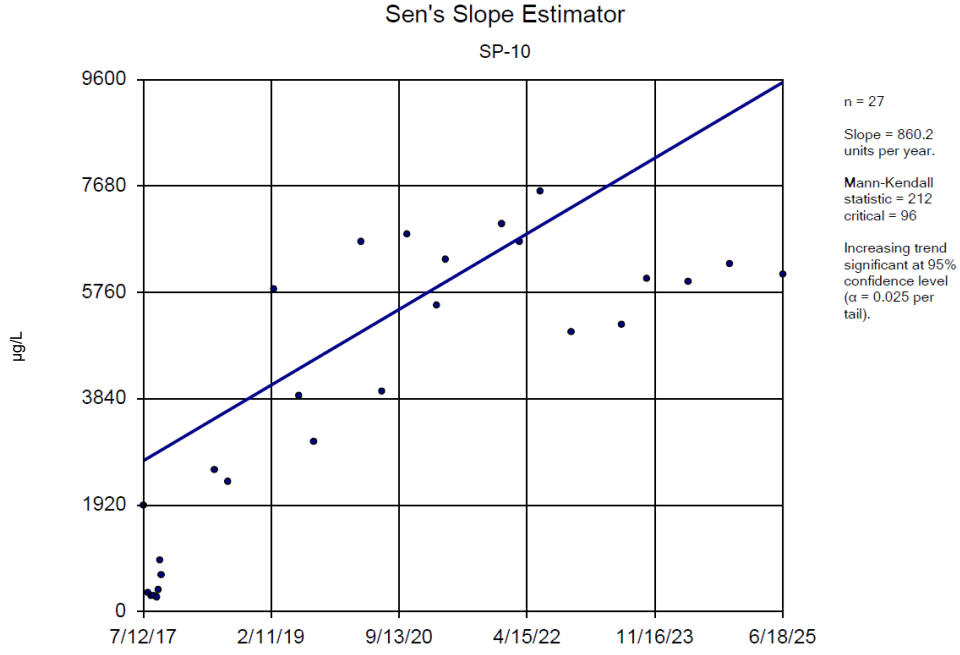
Sanitas™ v.10.1.02 Software licensed to Geosyntec Consultants, Inc. EPA



Constituent: Barium Analysis Run 11/26/2025 2:26 PM

Notes: Barium results from monitoring well SP-10 are displayed on the plots.

AEP: American Electric Power
µg/L: micrograms per liter

Barium Time Series and Trend Test: SP-10
Northeastern Bottom Ash Pond

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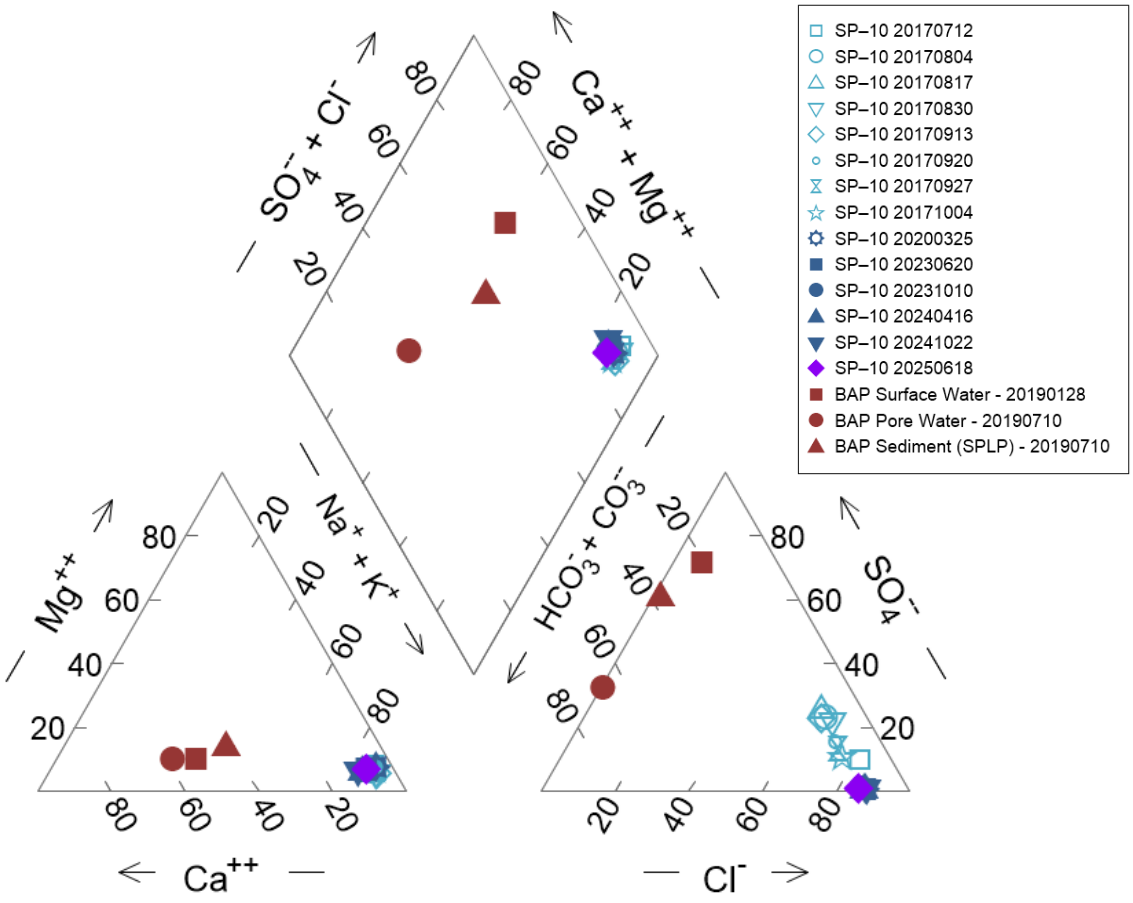
Figure 3



Notes:
% meq/kg: percent milliequivalents per kilogram
SPLP: synthetic precipitation leaching procedure

Piper Diagram – SP-10 and BAP Samples
Northeastern Bottom Ash Pond

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Figure **4**

Attachment A

Assessment Statistics Summary

2025 First Semiannual Event

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STATISTICAL ANALYSIS SUMMARY, 2025 1ST SEMIANNUAL EVENT BOTTOM ASH POND

Northeastern Power Station

Oologah, Oklahoma

Prepared for

American Electric Power
1 Riverside Plaza
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Prepared by

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Project Number: CHA1147H

October 2025

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ACRONYMS AND ABBREVIATIONS

ASD	alternative source demonstration
BAP	Bottom Ash Pond
CCR	coal combustion residuals
GWPS	groundwater protection standard
LCL	lower confidence limit
LPL	lower prediction limit
mg/L	milligrams per liter
NPS	Northeastern Power Station
OAC	Oklahoma Administrative Code
ODEQ	Oklahoma Department of Environmental Quality
QA/QC	quality assurance and quality control
SSI	statistically significant increase
SSL	statistically significant level
TDS	total dissolved solids
UPL	upper prediction limit

1. INTRODUCTION

In accordance with Oklahoma Department of Environmental Quality (ODEQ) requirements regarding the disposal of coal combustion residuals (CCRs) in landfills and surface impoundments (Oklahoma Administrative Code [OAC] 252:517), groundwater monitoring has been conducted at the Bottom Ash Pond (BAP), an existing CCR unit at the Northeastern Power Station (NPS) in Oologah, Oklahoma. Recent groundwater monitoring results were used to identify concentrations of Appendix B constituents that are above site-specific groundwater protection standards (GWPSs).

Based on detection monitoring conducted in 2017 and 2018, statistically significant increases (SSIs) over background were concluded for boron, chloride, fluoride, total dissolved solids (TDS), and sulfate at the BAP. In addition, pH values below the lower prediction limit (LPL) resulted in SSIs below background as well. GWPSs were set in accordance with OAC 252:517-9-6(h) and a statistical evaluation of the assessment monitoring data was conducted.

During 2024, a sampling event for both Appendix A parameters and Appendix B parameters, as required by OAC 252:517-9-6(d), was completed in October. During the October 2024 assessment monitoring event, statistically significant levels (SSLs) were observed for barium, fluoride, and lithium (Geosyntec 2025a). An alternative source demonstration (ASD) was successfully completed (Geosyntec 2025b), and the unit therefore remained in assessment monitoring. One assessment monitoring event was conducted at the BAP in June 2025, in accordance with OAC 252:517-9-6(d). Results of this event are documented in this report.

Prior to conducting the statistical analyses, the groundwater data underwent several validation tests, including those for completeness, sample tracking accuracy, transcription errors, and consistent use of measurement units. No data quality issues were identified which would impact data usability.

The monitoring data were submitted to Groundwater Stats Consulting, LLC for statistical analysis. Confidence intervals were calculated for Appendix B parameters at the compliance wells to assess whether SSLs of Appendix B parameters were present above previously established GWPSs. SSLs were identified for barium, fluoride, and lithium. Therefore, either the unit will move to an assessment of corrective measures, or an ASD will be conducted to evaluate if the unit can remain in assessment monitoring. Certification of the selected statistical methods by a qualified professional engineer is documented in Attachment A.

2. BOTTOM ASH POND EVALUATION

2.1 Data Validation and QA/QC

During the June 2025 assessment monitoring event, one set of samples was collected for analysis from each background and compliance well to meet the requirements of OAC 252:517-9-6(d)(1). Samples from the June 2025 sampling event were analyzed for all Appendix A and Appendix B parameters. A summary of data collected during this assessment monitoring event are presented in Table 1.

Chemical analysis was completed by a National Environmental Laboratory Accreditation Program–certified analytical laboratory. The laboratory completed analysis of quality assurance and quality control (QA/QC) samples such as laboratory reagent blanks, continuing calibration verification samples, and laboratory fortified blanks.

The analytical data were imported into a Microsoft Access database, where checks were completed to assess the accuracy of sample location identification and analyte identification. Where necessary, unit conversions were applied to standardize reported units across all sampling events. Exported data files were created for use with the Sanitas™ v.10.0.27 statistics software. The export file was checked against the analytical data for transcription errors and completeness.

2.2 Statistical Analysis

Statistical analyses for the BAP were conducted in accordance with the November 2021 *Statistical Analysis Plan* (Geosyntec 2021). Time series plots and results for all completed statistical tests are provided in Attachment B. The data obtained in June 2025 were screened for potential outliers. No outliers were identified for this event.

2.2.1 Evaluation of Potential Appendix B SSLs

A confidence interval was constructed for each Appendix B parameter at each compliance well. Confidence limits were generally calculated parametrically ($\alpha = 0.01$). However, nonparametric confidence limits were calculated in some cases (e.g., when the data did not appear to be normally distributed or when the nondetect frequency was too high). Select datasets were truncated if significant serial correlation was observed among the background samples that were collected on an approximately monthly basis in 2017. The dataset for barium at SP-10 was also truncated as higher concentrations were observed in more recent samples compared to initial results. A list of the truncated well/constituent pairs used for calculation of the confidence limits is provided in Attachment B.

An SSL was concluded if the lower confidence limit (LCL) was above the GWPS (i.e., if the entire confidence interval was above the GWPS). The calculated confidence limits (Attachment B) were compared to the GWPSs provided in Table 3. The GWPSs were established during a previous statistical analysis as either (a) the background concentration or (b) the maximum contaminant level and risk-based levels specified in OAC 252:517-9-6(h), whichever was greater (Geosyntec 2025a).

The following SSLs were identified at the Northeastern BAP:

- The LCL for barium was above the GWPS of 2.77 milligrams per liter (mg/L) at SP-10 (4.50 mg/L).

- The LCL for fluoride was above the GWPS of 4.39 mg/L at SP-10 (5.71 mg/L).

- The LCL for lithium was above the GWPS of 0.163 mg/L at SP-10 (0.235 mg/L).

ODEQ previously noted in a letter provided to the NPS that "[i]f lithium and fluoride continue to exceed their relative GWPS in the future and conditions have not changed, NPS may refer to the October 29, 2019 ASD approval for lithium and June 4, 2021 approval for fluoride and continue assessment monitoring for the BAP in accordance with OAC 252:517-6(g)(3)(B)" (ODEQ 2021). ODEQ provided a similar letter dated September 20, 2022 documenting ASD approval for a barium SSL at SP-10 which is applicable in the future if conditions do not change (ODEQ 2022). Therefore, an ASD will be submitted to ODEQ demonstrating that conditions at the BAP remain unchanged so that the unit will continue assessment monitoring.

2.2.2 Evaluation of Potential Appendix A SSIs

While SSLs were identified, a review of the Appendix A results was also completed to assess whether concentrations of Appendix A parameters at the compliance wells were above background concentrations. Data collected during the June 2025 assessment monitoring event from each compliance well were compared to previously calculated prediction limits to assess whether the results are above background values (Table 3).

The following concentrations were above the upper prediction limits (UPLs):

- Boron concentrations were above the interwell UPL of 0.491 mg/L at SP-10 (0.965 mg/L) and SP-11 (0.549 mg/L).

- The chloride concentration was above the interwell UPL of 1,010 mg/L at SP-10 (1,750 mg/L).

- The fluoride concentration was above the interwell UPL of 4.39 mg/L at SP-10 (6.8 mg/L).

- Sulfate concentrations were above the interwell UPL of 83.0 mg/L at SP-1 (83.9 mg/L) and SP-11 (231 mg/L).

- The TDS concentration was above the interwell UPL of 1,940 mg/L at SP-10 (3,480 mg/L).

While the prediction limits were calculated for a one-of-two retesting procedure, SSIs were conservatively assumed if the June 2025 sample was above the UPL or, in the case of pH, below the LPL.

2.3 Conclusions

A semiannual assessment monitoring event was conducted in accordance with the CCR rule. The laboratory and field data were reviewed prior to statistical analysis, and no QA/QC issues that

impacted data usability were identified. A review of outliers identified no potential outliers in the June 2025 data. A confidence interval was constructed at each compliance well for each Appendix B parameter; SSLs were concluded if the entire confidence interval was above the GWPSs. SSLs were identified for barium, fluoride, and lithium. Appendix A parameters were compared to prediction limits, with concentrations of boron, chloride, fluoride, sulfate, and TDS above background levels.

Based on this evaluation, the Northeastern BAP CCR unit will either move to an assessment of corrective measures or an ASD will be conducted to evaluate if the unit can remain in assessment monitoring.

3. REFERENCES

Geosyntec. 2021. Statistical Analysis Plan – Northeastern Power Station, Oologah, Oklahoma. Geosyntec Consultants, Inc. November.

Geosyntec. 2025a. Statistical Analysis Summary, 2024 2nd Semiannual Event – Bottom Ash Pond, Northeastern Power Station, Oologah, Oklahoma. Geosyntec Consultants, Inc. February.

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ODEQ. 2023. Letter Transmittal – Alternate Source Demonstration for Fluoride, and Lithium Exceedance – Bottom Ash Pond. Public Service Company of Oklahoma – Northeastern Power Station. Oklahoma Department of Environmental Quality. March.

TABLES

Table 1. Groundwater Data Summary
Statistical Analysis Summary
Northeastern – Bottom Ash Pond

Parameter	Unit	SP-1	SP-2	SP-4	SP-5R	SP-10	SP-11
		6/18/2025	6/18/2025	6/18/2025	6/18/2025	6/18/2025	6/18/2025
Antimony	µg/L	0.754	0.855	0.166	0.102	0.034 J1	0.092 J1
Arsenic	µg/L	0.75	1.36	0.80	14.7	0.16	2.28
Barium	µg/L	146	1,090	210	2,240	6,090	243
Beryllium	µg/L	0.081	0.075	0.057	0.059	0.035 J1	0.028 J1
Boron	mg/L	0.240	0.129	0.356	0.226	0.965	0.549
Cadmium	µg/L	0.058	0.050	0.026	0.022	0.005 J1	0.007 J1
Calcium	mg/L	113	99.7	87.3	73.8	82.5	78.5
Chloride	mg/L	49.3	956	439	797	1,750	106
Chromium	µg/L	0.76	0.66	0.56	0.57	0.33	0.43
Cobalt	µg/L	1.45	0.676	0.369	1.56	0.035	0.369
Combined Radium	pCi/L	2.45	6.89	3.29	12.27	21.22	1.36
Fluoride	mg/L	0.98	3.11	2.9	3.31	6.8	1.7
Lead	µg/L	0.67	0.23	0.17 J1	0.91	0.2 U1	0.16 J1
Lithium	mg/L	0.00801	0.0416	0.0544	0.0922	0.184	0.0172
Mercury	µg/L	0.005 U1	0.005 U1	0.005 U1	0.005 U1	0.005 U1	0.005 U1
Molybdenum	µg/L	21.3	13.0	2.4	0.7	0.3 J1	1.2
Selenium	µg/L	6.28	1.78	0.30 J1	0.05 J1	0.5 U1	0.11 J1
Sulfate	mg/L	83.9	10.5	79	2.8	14.3	231
Thallium	µg/L	0.13 J1	0.03 J1	0.02 J1	0.2 U1	0.2 U1	0.2 U1
Total Dissolved Solids	mg/L	500 S7	1,870	1,190	1,590	3,480	960
pH	SU	7.5	7.6	7.5	7.7	7.8	7.6

Notes:
J1: Estimated value. Parameter was detected in concentrations below the reporting limit.
mg/L: milligrams per liter
pCi/L: picocuries per liter
S7: Sample did not achieve constant weight.
SU: standard unit
U1: Non-detect value. For statistical analysis, parameters which were not detected were replaced with the reporting limit.
µg/L: micrograms per liter

Table 2. Appendix B Groundwater Protection Standards *Geosyntec Consultants, Inc.*
Statistical Analysis Summary
Northeastern Plant – Bottom Ash Pond

Constituent Name	MCL	CCR Rule-Specified	Calculated UTL	GWPS
Antimony, Total (mg/L)	0.00600		0.00388	0.00600
Arsenic, Total (mg/L)	0.0100		0.0599	0.0599
Barium, Total (mg/L)	2.00		2.77	2.77
Beryllium, Total (mg/L)	0.00400		0.00212	0.00400
Cadmium, Total (mg/L)	0.00500		0.000168	0.00500
Chromium, Total (mg/L)	0.100		0.00339	0.100
Cobalt, Total (mg/L)	n/a	0.00600	0.0179	0.0179
Combined Radium, Total (pCi/L)	5.00		19.1	19.1
Fluoride, Total (mg/L)	4.00		4.39	4.39
Lead, Total (mg/L)	n/a	0.0150	0.00857	0.0150
Lithium, Total (mg/L)	n/a	0.0400	0.163	0.163
Mercury, Total (mg/L)	0.00200		0.0000300	0.00200
Molybdenum, Total (mg/L)	n/a	0.100	0.0100	0.100
Selenium, Total (mg/L)	0.0500		0.00499	0.0500
Thallium, Total (mg/L)	0.00200		0.00162	0.00200

Notes:
1. Calculated UTL (upper tolerance limit) represents site-specific background values.
2. Grey cells indicate the GWPS is based on the calculated UTL, which is higher than the MCL or CCR Rule-specified value.
CCR: coal combustion residuals
GWPS: groundwater protection standard
MCL: maximum contaminant level
mg/L: milligrams per liter
n/a: not applicable
pCi/L: picocuries per liter

Table 3. Appendix A Data Summary
Statistical Analysis Summary
Northeastern – Bottom Ash Pond

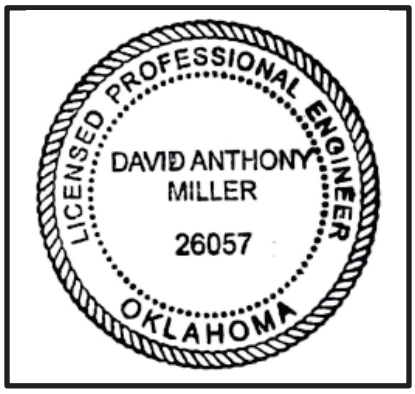
Analyte	Unit	Description	SP-1	SP-2	SP-10	SP-11
			6/18/2025	6/18/2025	6/18/2025	6/18/2025
Boron	mg/L	Interwell Background Value (UPL)	0.491			
		Analytical Result	0.240	0.129	**0.965**	**0.549**
Calcium	mg/L	Intrawell Background Value (UPL)	139	172	177	146
		Analytical Result	113	99.7	82.5	78.5
Chloride	mg/L	Interwell Background Value (UPL)	1,010			
		Analytical Result	49.3	956	**1,750**	106
Fluoride	mg/L	Interwell Background Value (UPL)	4.39			
		Analytical Result	0.98	3.11	**6.8**	1.7
pH	SU	Interwell Background Value (UPL)	9.1			
		Interwell Background Value (LPL)	7.0			
		Analytical Result	7.5	7.6	7.8	7.6
Sulfate	mg/L	Interwell Background Value (UPL)	83.0			
		Analytical Result	**83.9**	10.5	14.3	**231**
Total Dissolved Solids	mg/L	Interwell Background Value (UPL)	1,940			
		Analytical Result	500	1,870	**3,480**	960

Notes:
1. Bold values exceed the background value.
2. Background values are shaded gray.
LPL: lower prediction limit
mg/L: milligrams per liter
SU: standard units
UPL: upper prediction limit

ATTACHMENT A
Certification by Qualified Professional Engineer

Certification by Qualified Professional Engineer

I certify that selected and above described statistical method is appropriate for evaluating the groundwater monitoring data for the Northeastern Bottom Ash Pond CCR management area and that the requirements of OAC 252:517-9-4(g) have been met.



David Anthony Miller

Printed Name of Licensed Professional Engineer

David Anthony Miller

Signature

26057	Oklahoma	10.14.2025
License Number	Licensing State	Date

ATTACHMENT B
Statistical Analysis Output

Date Ranges

Date: 9/9/2025 1:42 PM

Northeastern BAP Client: Geosyntec Data: Northeastern BAP

Barium (mg/L)
- SP-10 overall:5/30/2018-6/18/2025
- SP-11 overall:5/30/2018-6/18/2025
- SP-4 overall:5/30/2018-6/18/2025

Cadmium (mg/L)
- SP-1 overall:5/30/2018-6/18/2025
- SP-10 overall:5/30/2018-6/18/2025
- SP-4 overall:5/30/2018-6/18/2025
- SP-5R overall:5/30/2018-6/18/2025

Chromium (mg/L)
- SP-4 overall:5/30/2018-6/18/2025

Lead (mg/L)
- SP-10 overall:5/30/2018-6/18/2025

Lithium (mg/L)
- SP-11 overall:5/30/2018-6/18/2025
- SP-4 overall:5/30/2018-6/18/2025

Molybdenum (mg/L)
- SP-2 overall:5/30/2018-6/18/2025

Selenium (mg/L)
- SP-2 overall:5/30/2018-6/18/2025
- SP-5R overall:5/30/2018-6/18/2025

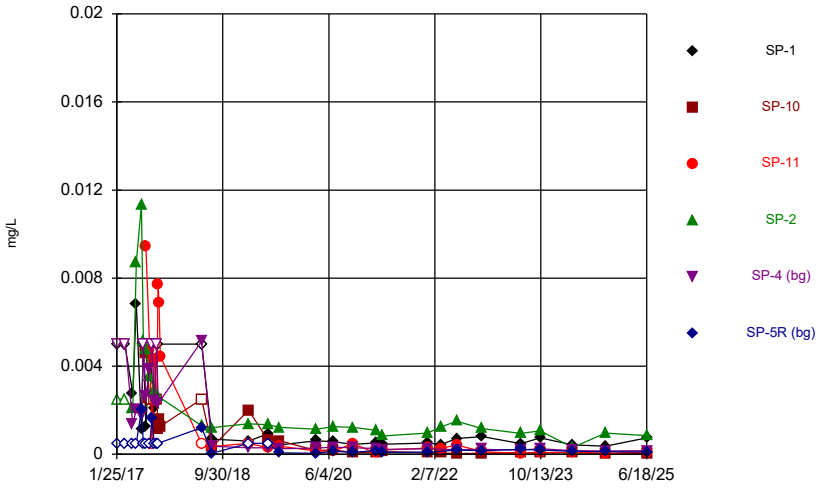
Thallium (mg/L)
- overall:5/30/2018-6/18/2025

FIGURE A

Time Series

Sanitas™ v.10.0.27 Sanitas software utilized by Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

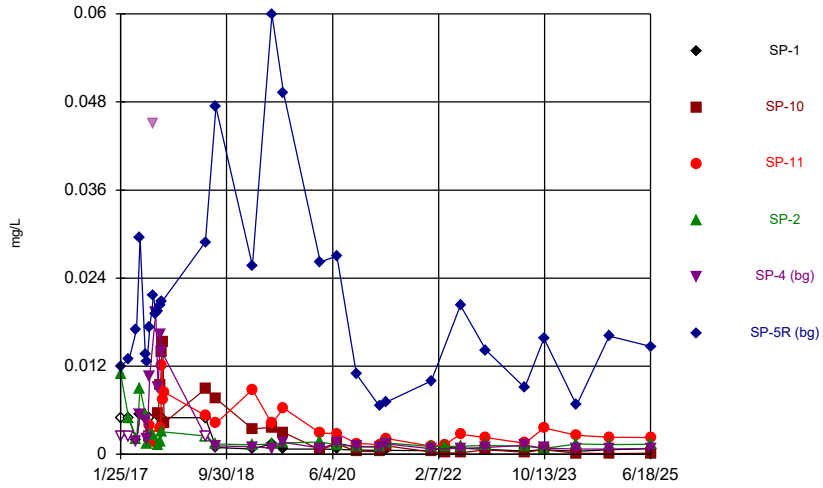
Time Series



Constituent: Antimony Analysis Run 8/29/2025 5:22 PM View: Appendix B
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

Sanitas™ v.10.0.27 Sanitas software utilized by Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

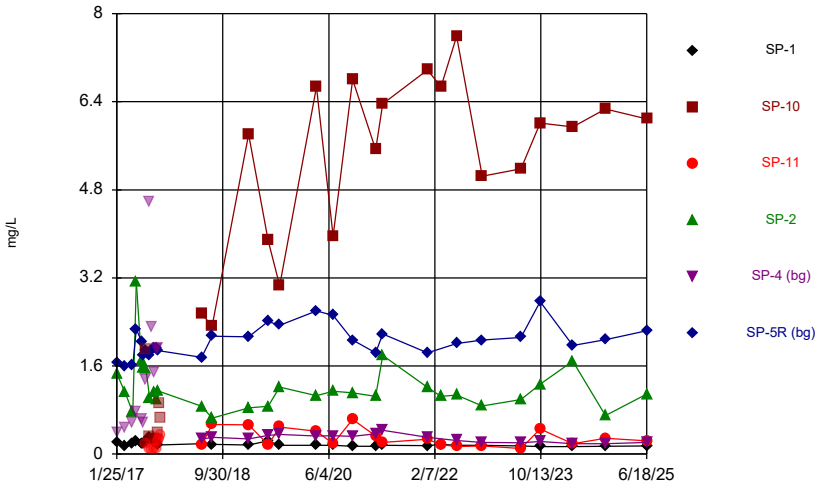
Time Series



Constituent: Arsenic Analysis Run 8/29/2025 5:22 PM View: Appendix B
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

Sanitas™ v.10.0.27 Sanitas software utilized by Groundwater Stats Consulting. UG

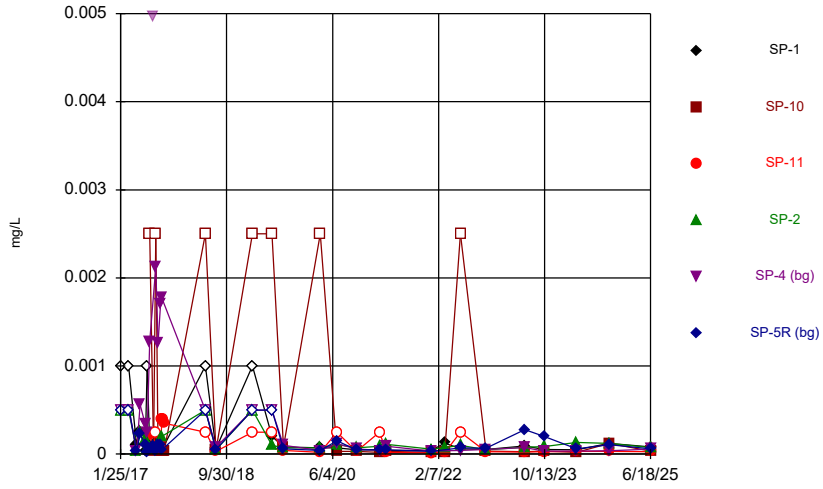
Time Series



Constituent: Barium Analysis Run 8/29/2025 5:22 PM View: Appendix B
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

Sanitas™ v.10.0.27 Sanitas software utilized by Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

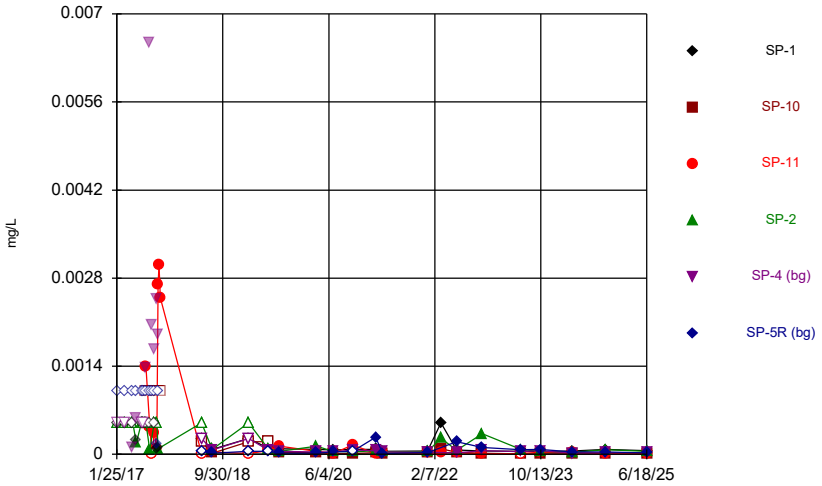
Time Series



Constituent: Beryllium Analysis Run 8/29/2025 5:22 PM View: Appendix B
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

Sanitas™ v.10.0.27 Sanitas software utilized by Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

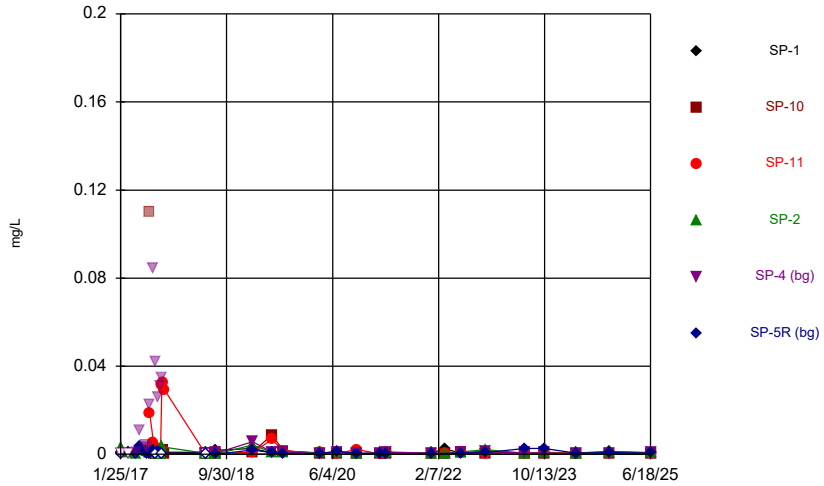
Time Series



Constituent: Cadmium Analysis Run 8/29/2025 5:22 PM View: Appendix B
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

Sanitas™ v.10.0.27 Sanitas software utilized by Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

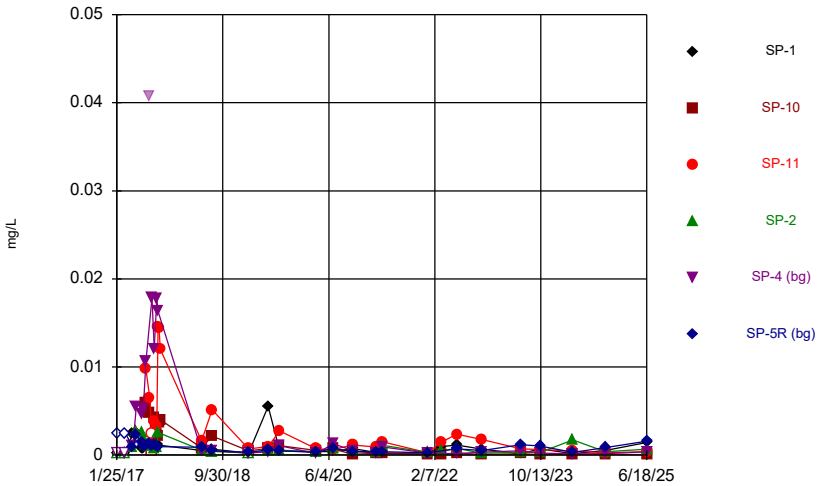
Time Series



Constituent: Chromium Analysis Run 8/29/2025 5:22 PM View: Appendix B
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

Sanitas™ v.10.0.27 Sanitas software utilized by Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

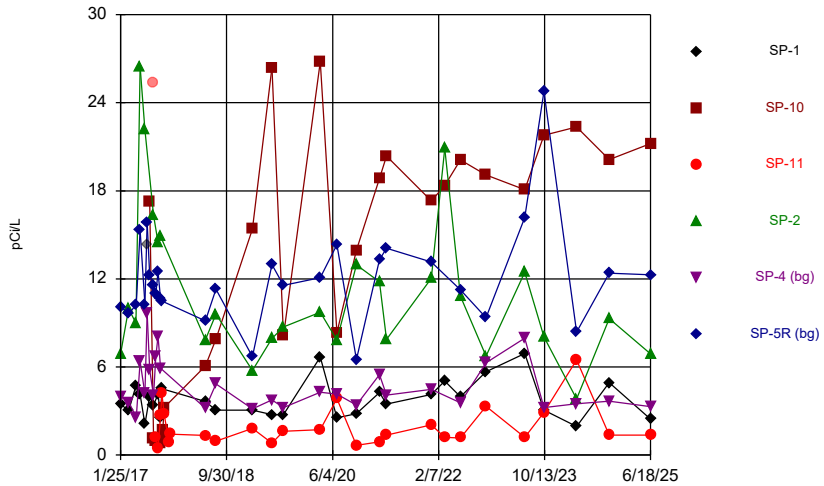
Time Series



Constituent: Cobalt Analysis Run 8/29/2025 5:22 PM View: Appendix B
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

Sanitas™ v.10.0.27 Sanitas software utilized by Groundwater Stats Consulting. UG

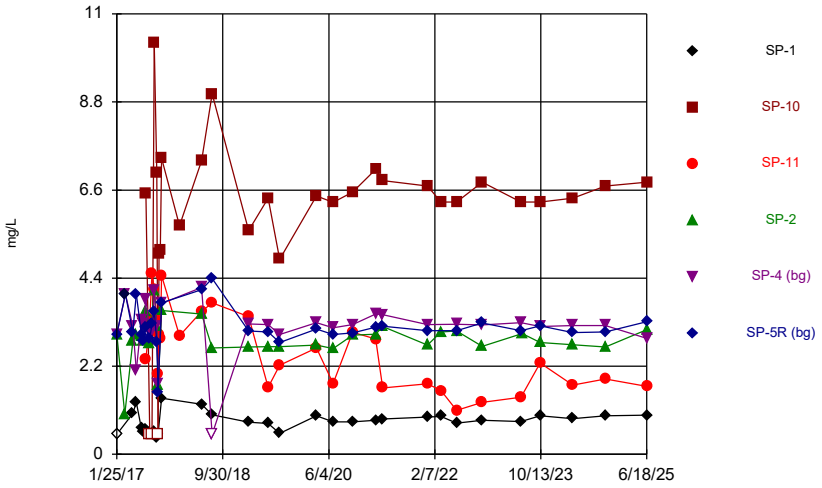
Time Series



Constituent: Combined Radium 226 + 228 Analysis Run 8/29/2025 5:22 PM View: Appendix B
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

Sanitas™ v.10.0.27 Sanitas software utilized by Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

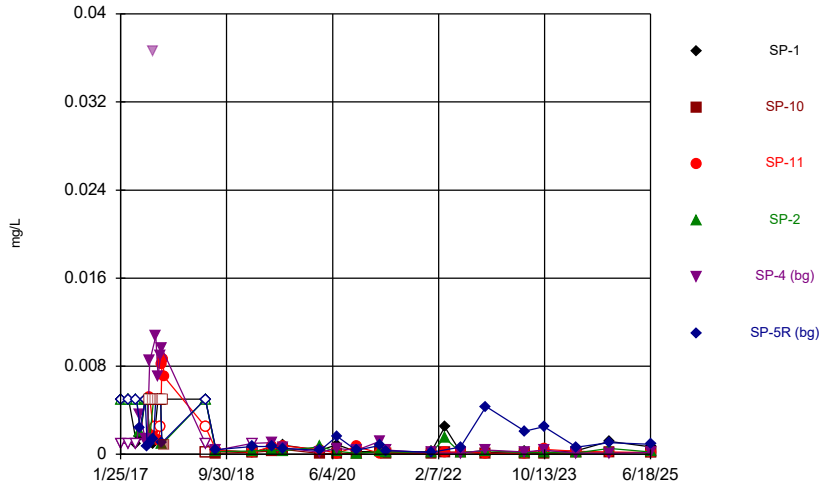
Time Series



Constituent: Fluoride Analysis Run 8/29/2025 5:22 PM View: Appendix B
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

Sanitas™ v.10.0.27 Sanitas software utilized by Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

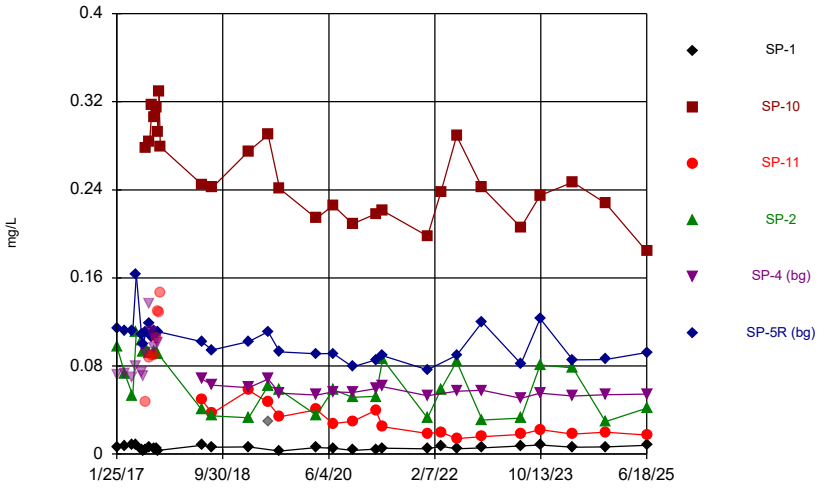
Time Series



Constituent: Lead Analysis Run 8/29/2025 5:22 PM View: Appendix B
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

Sanitas™ v.10.0.27 Sanitas software utilized by Groundwater Stats Consulting. UG

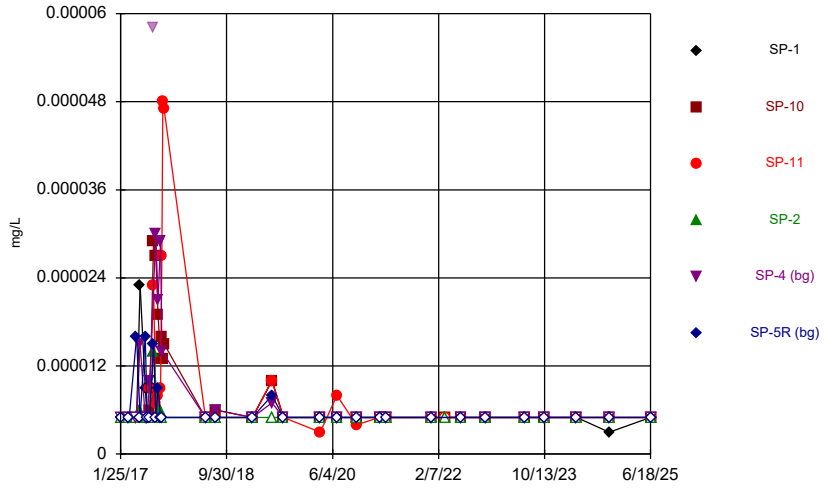
Time Series



Constituent: Lithium Analysis Run 8/29/2025 5:22 PM View: Appendix B
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

Sanitas™ v.10.0.27 Sanitas software utilized by Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

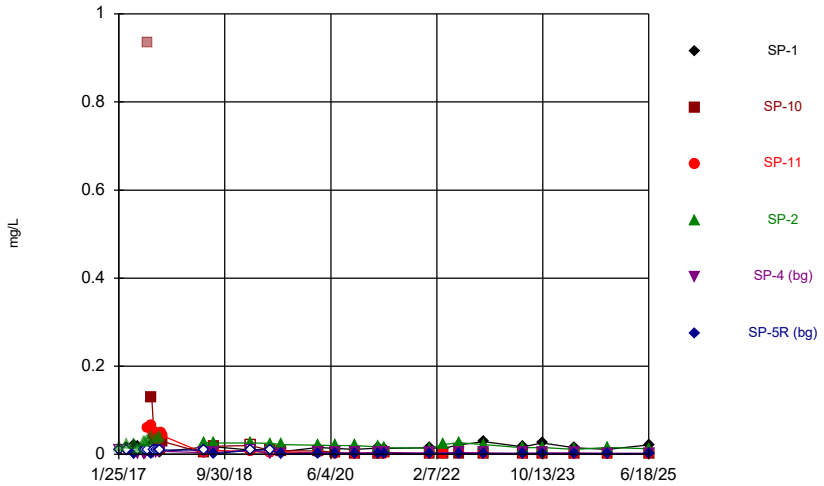
Time Series



Constituent: Mercury Analysis Run 8/29/2025 5:22 PM View: Appendix B
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

Sanitas™ v.10.0.27 Sanitas software utilized by Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

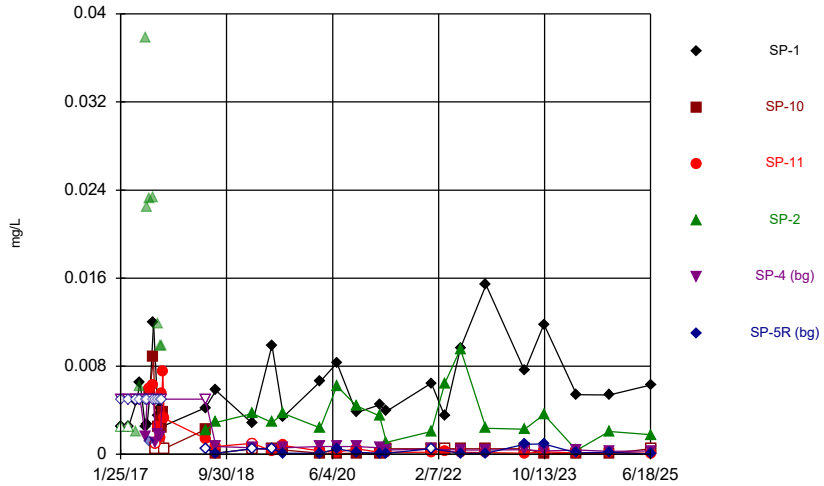
Time Series



Constituent: Molybdenum Analysis Run 8/29/2025 5:22 PM View: Appendix B
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

Sanitas™ v.10.0.27 Sanitas software utilized by Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

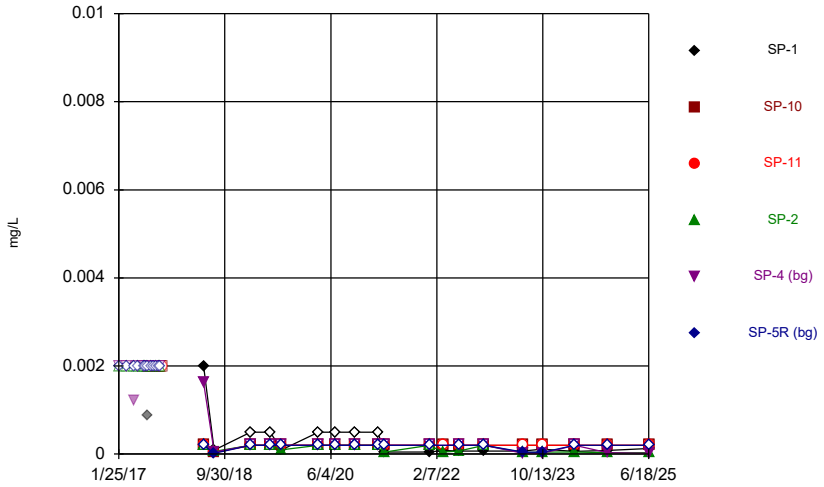
Time Series



Constituent: Selenium Analysis Run 8/29/2025 5:22 PM View: Appendix B
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

Sanitas™ v.10.0.27 Sanitas software utilized by Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Time Series

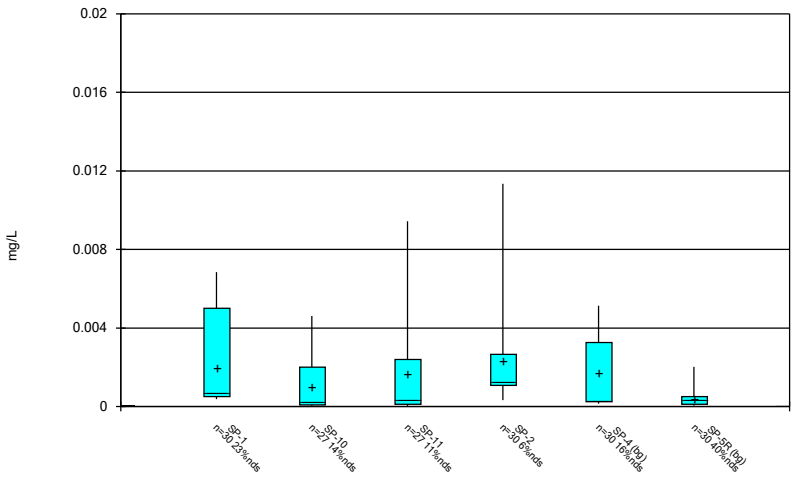


Constituent: Thallium Analysis Run 8/29/2025 5:22 PM View: Appendix B
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

FIGURE B

Box Plots

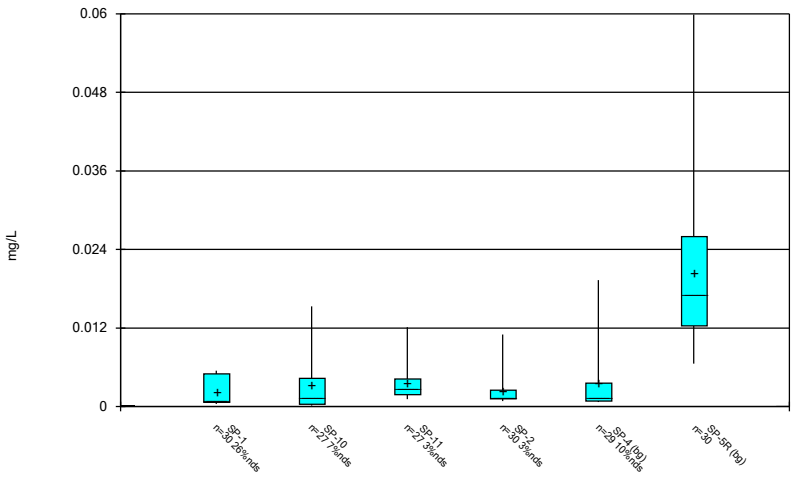
Box & Whiskers Plot



Constituent: Antimony Analysis Run 8/29/2025 5:23 PM View: Appendix B
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

Sanitas™ v.10.0.27 Sanitas software utilized by Groundwater Stats Consulting. UG

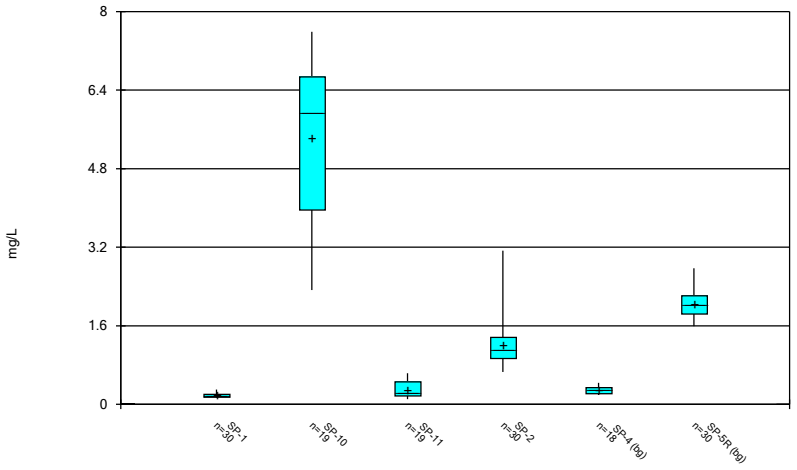
Box & Whiskers Plot



Constituent: Arsenic Analysis Run 8/29/2025 5:23 PM View: Appendix B
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

Sanitas™ v.10.0.27 Sanitas software utilized by Groundwater Stats Consulting. UG

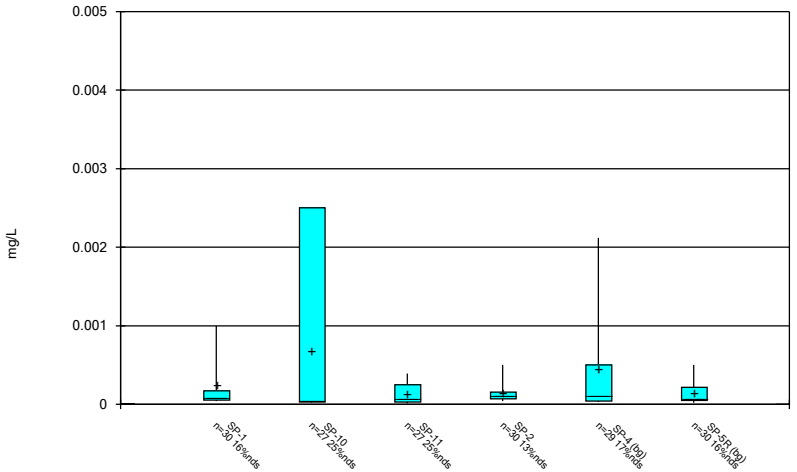
Box & Whiskers Plot



Constituent: Barium Analysis Run 8/29/2025 5:23 PM View: Appendix B
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

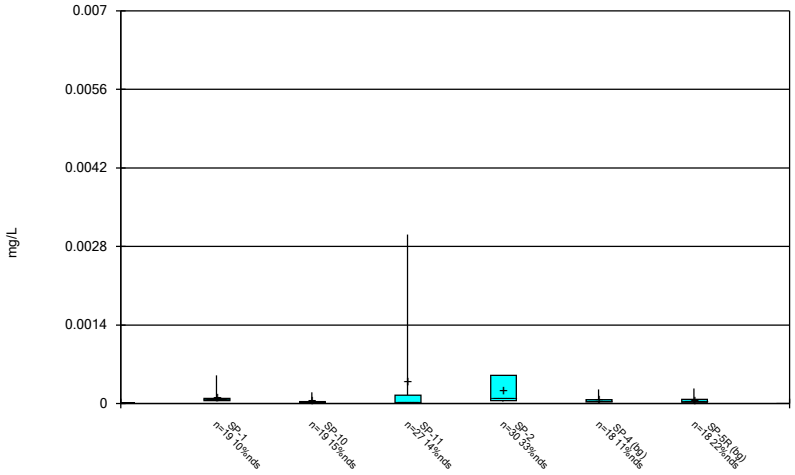
Sanitas™ v.10.0.27 Sanitas software utilized by Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Beryllium Analysis Run 8/29/2025 5:23 PM View: Appendix B
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

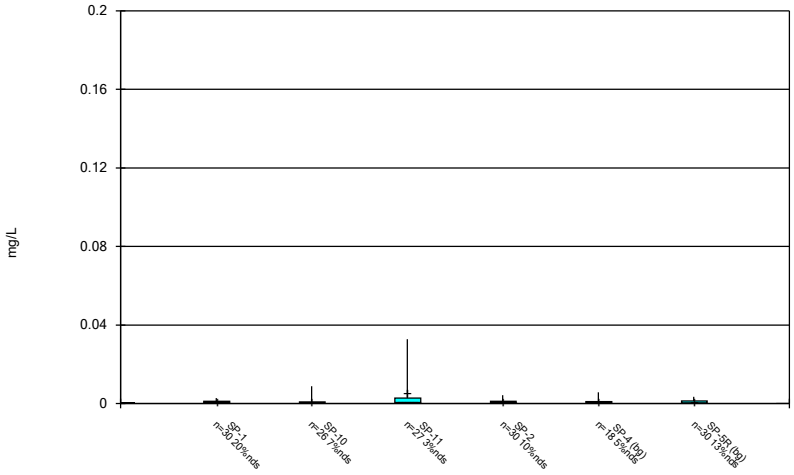
Box & Whiskers Plot



Constituent: Cadmium Analysis Run 8/29/2025 5:23 PM View: Appendix B
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

Sanitas™ v.10.0.27 Sanitas software utilized by Groundwater Stats Consulting. UG

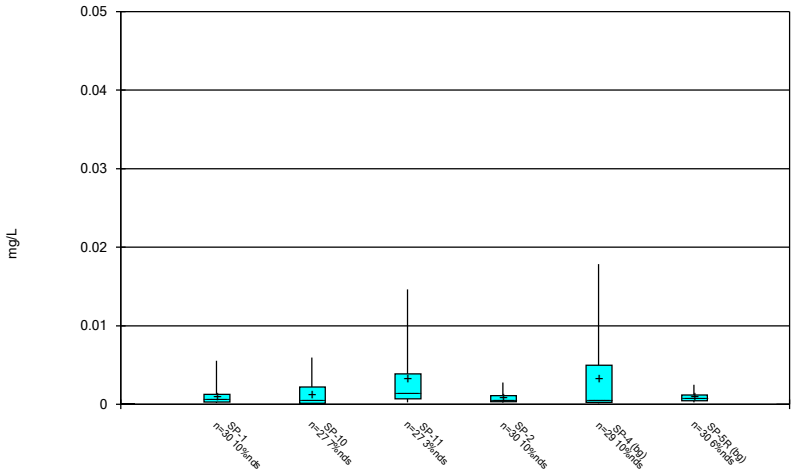
Box & Whiskers Plot



Constituent: Chromium Analysis Run 8/29/2025 5:23 PM View: Appendix B
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

Sanitas™ v.10.0.27 Sanitas software utilized by Groundwater Stats Consulting. UG

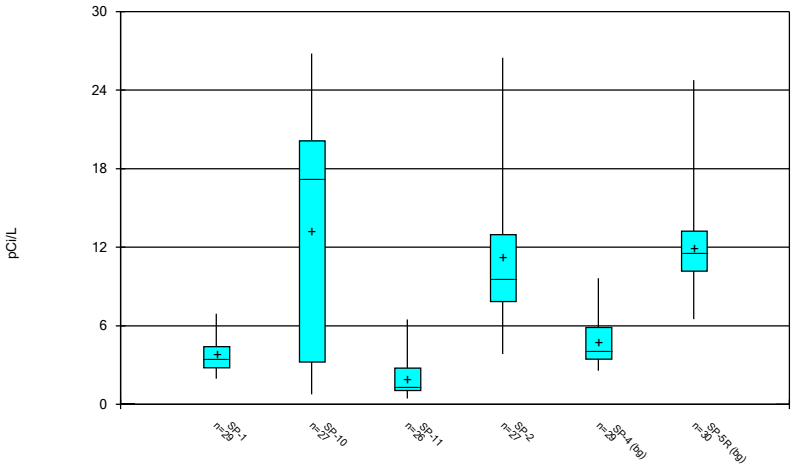
Box & Whiskers Plot



Constituent: Cobalt Analysis Run 8/29/2025 5:23 PM View: Appendix B
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

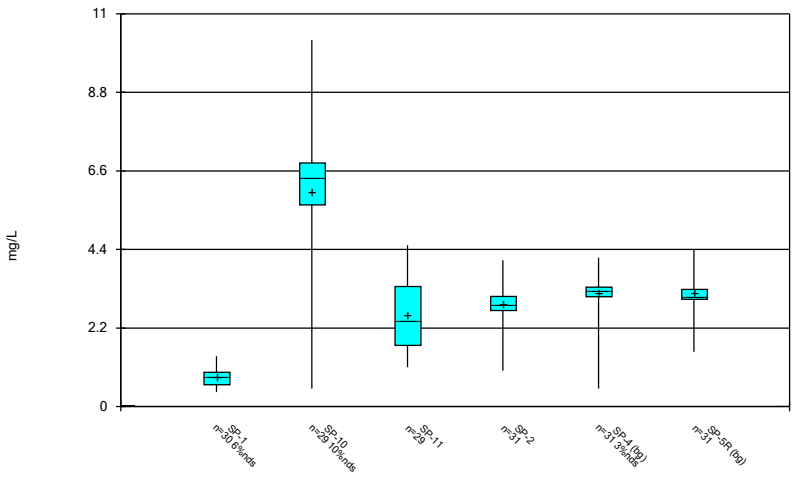
Sanitas™ v.10.0.27 Sanitas software utilized by Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Combined Radium 226 + 228 Analysis Run 8/29/2025 5:23 PM View: Appendix B
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

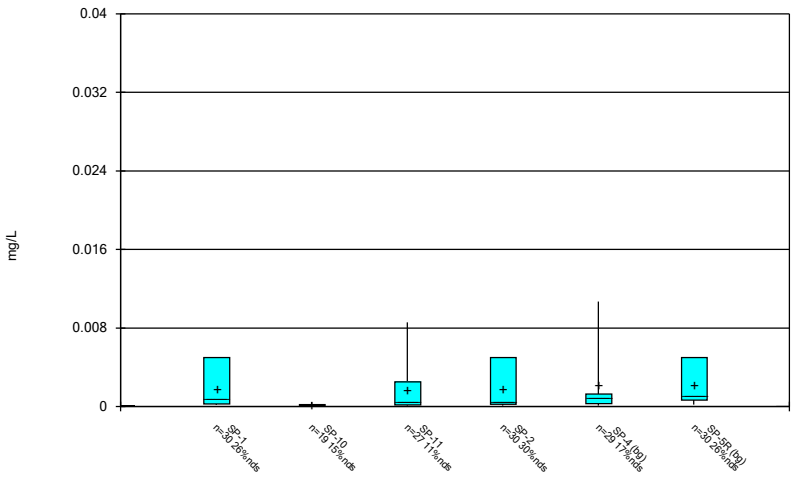
Box & Whiskers Plot



Constituent: Fluoride Analysis Run 8/29/2025 5:23 PM View: Appendix B
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

Sanitas™ v.10.0.27 Sanitas software utilized by Groundwater Stats Consulting. UG

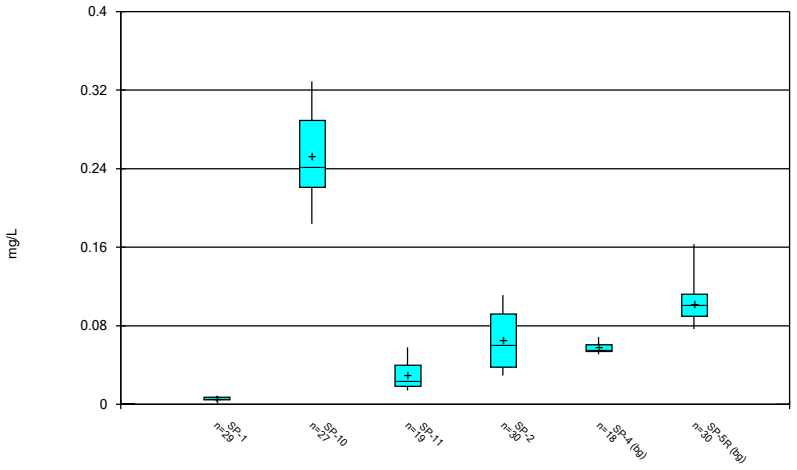
Box & Whiskers Plot



Constituent: Lead Analysis Run 8/29/2025 5:23 PM View: Appendix B
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

Sanitas™ v.10.0.27 Sanitas software utilized by Groundwater Stats Consulting. UG

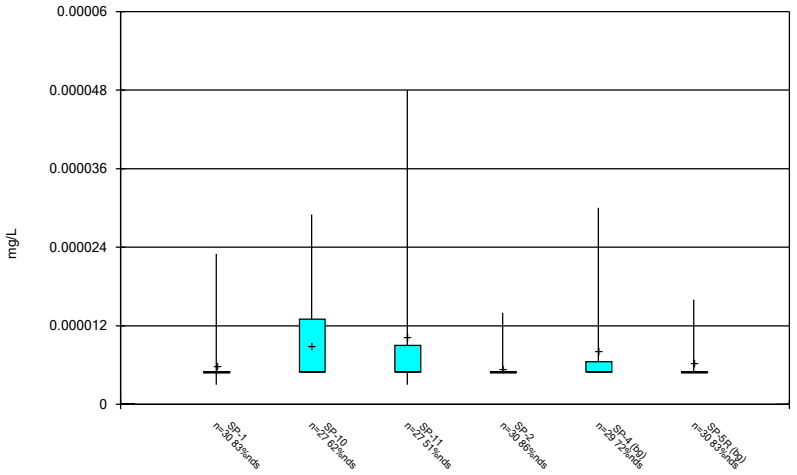
Box & Whiskers Plot



Constituent: Lithium Analysis Run 8/29/2025 5:23 PM View: Appendix B
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

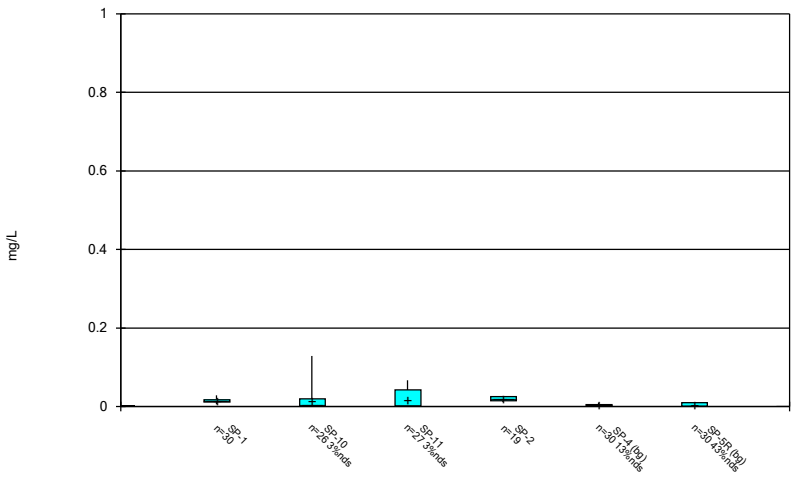
Sanitas™ v.10.0.27 Sanitas software utilized by Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Mercury Analysis Run 8/29/2025 5:23 PM View: Appendix B
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

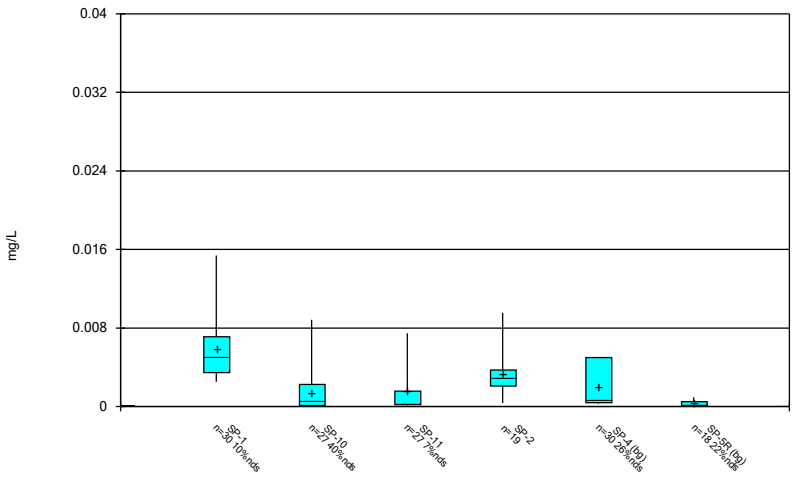
Box & Whiskers Plot



Constituent: Molybdenum Analysis Run 8/29/2025 5:23 PM View: Appendix B
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

Sanitas™ v.10.0.27 Sanitas software utilized by Groundwater Stats Consulting. UG

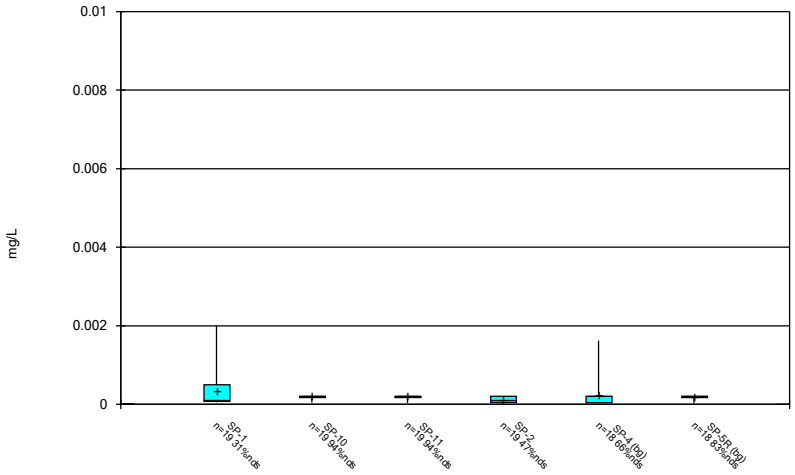
Box & Whiskers Plot



Constituent: Selenium Analysis Run 8/29/2025 5:23 PM View: Appendix B
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

Sanitas™ v.10.0.27 Sanitas software utilized by Groundwater Stats Consulting. UG

Box & Whiskers Plot



Constituent: Thallium Analysis Run 8/29/2025 5:23 PM View: Appendix B
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

FIGURE C
Outlier Summary

Outlier Summary

Northeastern BAP Client: Geosyntec Data: Northeastern BAP Printed 8/29/2025, 5:23 PM

	SP-4 Arsenic (mg/L)	SP-4 Beryllium (mg/L)	SP-10 Chromium (mg/L)	SP-4 Cobalt (mg/L)	SP-1 Combined Radium 226 + 228 (pCi/L)	SP-11 Combined Radium 226 + 228 (pCi/L)	SP-1 Fluoride (mg/L)	SP-4 Lead (mg/L)	SP-1 Lithium (mg/L)	SP-4 Mercury (mg/L)
3/13/2017							4 (o)			
6/27/2017					14.29 (o)					
7/13/2017			0.11 (o)							
8/4/2017	0.04498 (o)	0.00497 (o)		0.04069 (o)		25.367 (o)		0.03663 (o)		5.8E-05 (o)
6/20/2019									0.03 (J,o)	

	SP-10 Molybdenum (mg/L)
3/13/2017	
6/27/2017	
7/13/2017	0.934 (o)
8/4/2017	
6/20/2019	

FIGURE D

SP-10 Trend Test

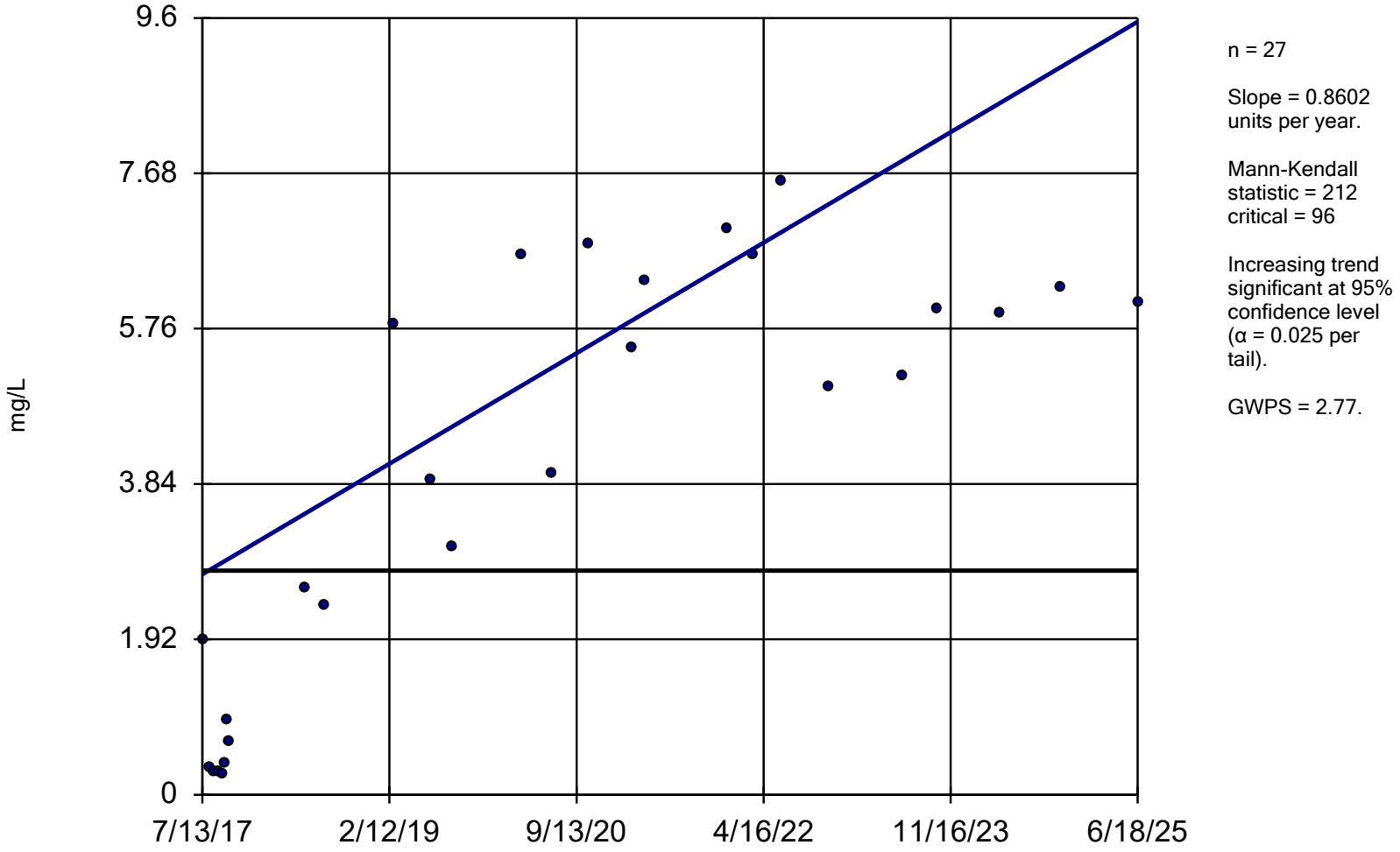
SP-10 Trend Test - All/Significant Results

Northeastern BAP Client: Geosyntec Data: Northeastern BAP Printed 9/8/2025, 9:00 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Alpha	Method
Barium (mg/L)	**SP-10**	**0.8602**	**212**	**96**	**Yes**	**27**	**0**	**n/a**	**0.05**	**NP**

Sen's Slope Estimator

SP-10



n = 27

Slope = 0.8602 units per year.

Mann-Kendall statistic = 212
critical = 96

Increasing trend significant at 95% confidence level (α = 0.025 per tail).

GWPS = 2.77.

Constituent: Barium Analysis Run 9/8/2025 8:59 AM View: Trend Tests

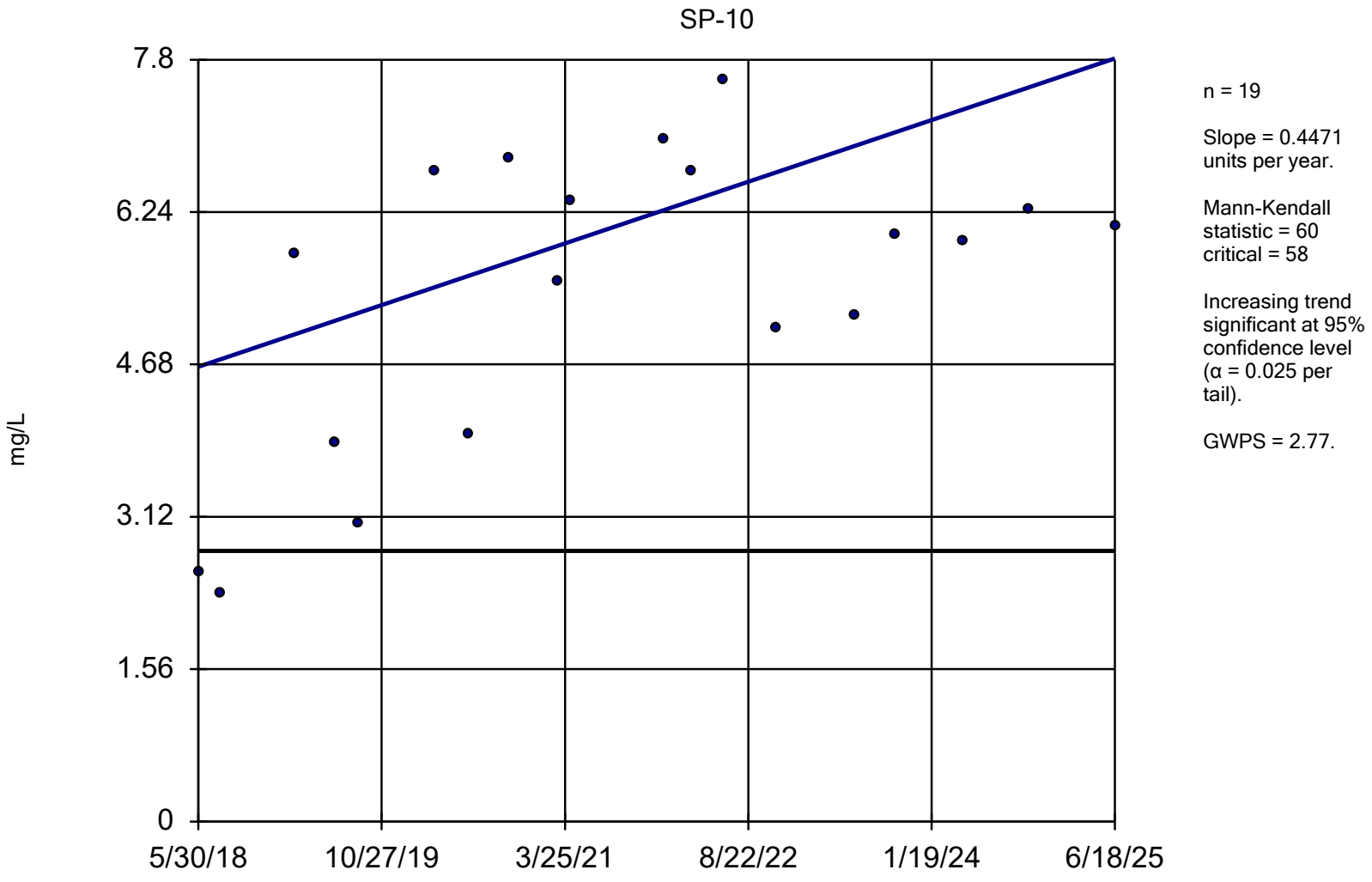
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

SP-10 Trend Test - Truncated Record - All/Significant Results

Northeastern BAP Client: Geosyntec Data: Northeastern BAP Printed 9/8/2025, 9:02 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Alpha	Method
Barium (mg/L)	**SP-10**	**0.4471**	**60**	**58**	**Yes**	**19**	**0**	**n/a**	**0.05**	**NP**

Sen's Slope Estimator



Constituent: Barium Analysis Run 9/8/2025 9:02 AM View: Trend Tests

Northeastern BAP Client: Geosyntec Data: Northeastern BAP

FIGURE E

UTLs

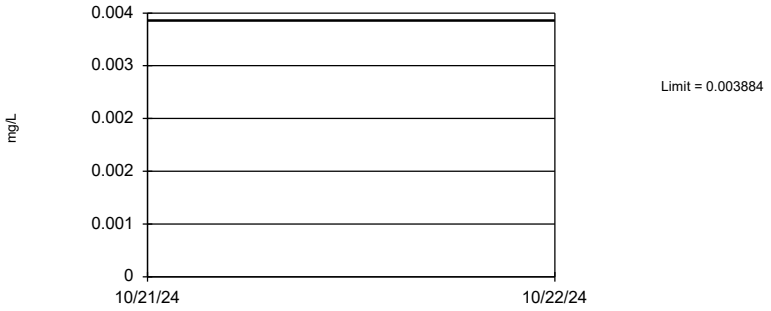
Upper Tolerance Limits Summary Table

Northeastern BAP Client: Geosyntec Data: Northeastern BAP Printed 1/14/2025, 2:29 PM

Constituent	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Antimony (mg/L)	0.003884	n/a	n/a	n/a	n/a	58	29.31	ln(x)	0.05	Inter
Arsenic (mg/L)	0.0599	n/a	n/a	n/a	n/a	57	5.263	n/a	0.05373	NP Inter(normality)
Barium (mg/L)	2.77	n/a	n/a	n/a	n/a	46	0	n/a	0.09447	NP Inter(normality)
Beryllium (mg/L)	0.00212	n/a	n/a	n/a	n/a	57	17.54	n/a	0.05373	NP Inter(normality)
Cadmium (mg/L)	0.000168	n/a	n/a	n/a	n/a	34	17.65	ln(x)	0.05	Inter
Chromium (mg/L)	0.00339	n/a	n/a	n/a	n/a	46	10.87	ln(x)	0.05	Inter
Cobalt (mg/L)	0.01786	n/a	n/a	n/a	n/a	57	8.772	n/a	0.05373	NP Inter(normality)
Combined Radium 226 + 228 (pCi/L)	19.05	n/a	n/a	n/a	n/a	57	0	sqrt(x)	0.05	Inter
Fluoride (mg/L)	4.39	n/a	n/a	n/a	n/a	60	1.667	n/a	0.04607	NP Inter(normality)
Lead (mg/L)	0.008571	n/a	n/a	n/a	n/a	57	22.81	ln(x)	0.05	Inter
Lithium (mg/L)	0.163	n/a	n/a	n/a	n/a	46	0	n/a	0.09447	NP Inter(normality)
Mercury (mg/L)	0.00003	n/a	n/a	n/a	n/a	57	77.19	n/a	0.05373	NP Inter(NDs)
Molybdenum (mg/L)	0.01	n/a	n/a	n/a	n/a	58	29.31	n/a	0.05105	NP Inter(normality)
Selenium (mg/L)	0.00499	n/a	n/a	n/a	n/a	46	26.09	n/a	0.09447	NP Inter(normality)
Thallium (mg/L)	0.00162	n/a	n/a	n/a	n/a	34	76.47	n/a	0.1748	NP Inter(NDs)

Tolerance Limit

Interwell Parametric

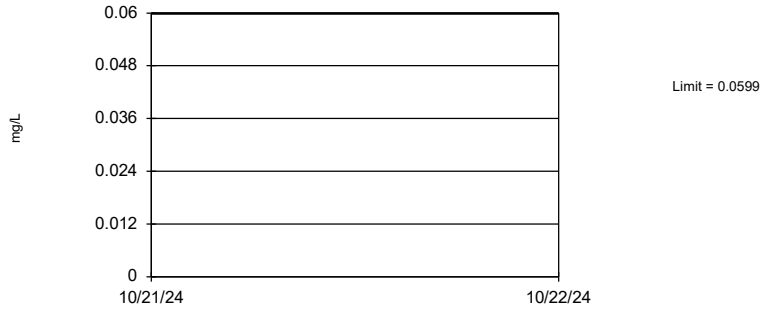


95% coverage. Background Data Summary (based on natural log transformation) (after Kaplan-Meier Adjustment): Mean=-8.101, Std. Dev.=1.259, n=58, 29.31% NDs. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9551, critical = 0.944. Report alpha = 0.05.

Constituent: Antimony Analysis Run 1/14/2025 2:28 PM View: Upper Tolerance Limits
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

Tolerance Limit

Interwell Non-parametric

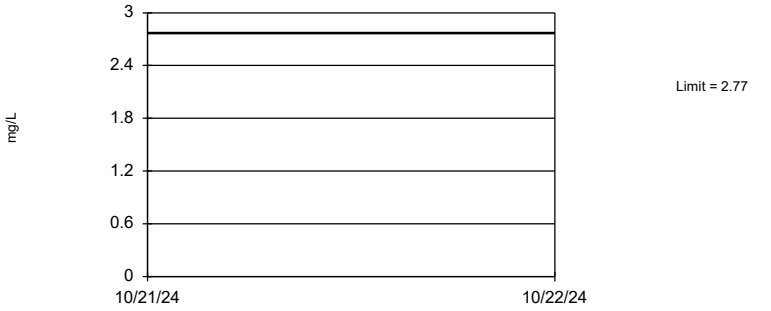


Non-parametric test used in lieu of parametric tolerance limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 57 background values. 5.263% NDs. 92.38% coverage at alpha=0.01; 94.73% coverage at alpha=0.05; 98.63% coverage at alpha=0.5. Report alpha = 0.05373.

Constituent: Arsenic Analysis Run 1/14/2025 2:28 PM View: Upper Tolerance Limits
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

Tolerance Limit

Interwell Non-parametric

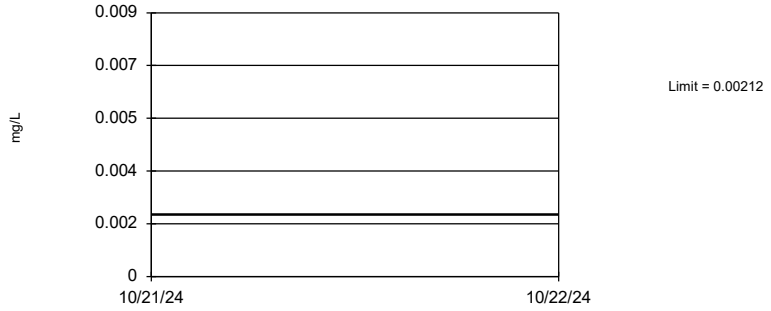


Non-parametric test used in lieu of parametric tolerance limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 46 background values. 90.43% coverage at alpha=0.01; 93.55% coverage at alpha=0.05; 98.63% coverage at alpha=0.5. Report alpha = 0.09447.

Constituent: Barium Analysis Run 1/14/2025 2:28 PM View: Upper Tolerance Limits
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

Tolerance Limit

Interwell Non-parametric

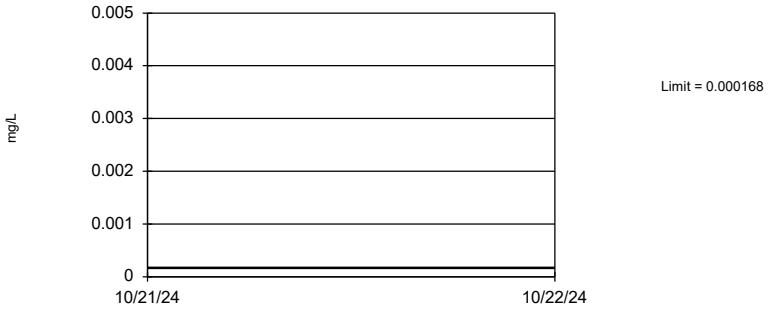


Non-parametric test used in lieu of parametric tolerance limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 57 background values. 17.54% NDs. 92.38% coverage at alpha=0.01; 94.73% coverage at alpha=0.05; 98.63% coverage at alpha=0.5. Report alpha = 0.05373.

Constituent: Beryllium Analysis Run 1/14/2025 2:28 PM View: Upper Tolerance Limits
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

Tolerance Limit

Interwell Parametric

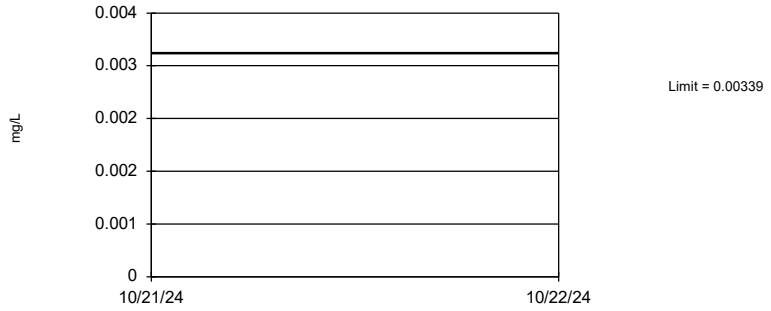


95% coverage. Background Data Summary (based on natural log transformation) (after Kaplan-Meier Adjustment): Mean=-10.33, Std. Dev.=0.7505, n=34, 17.65% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9488, critical = 0.908. Report alpha = 0.05.

Constituent: Cadmium Analysis Run 1/14/2025 2:28 PM View: Upper Tolerance Limits
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

Tolerance Limit

Interwell Parametric

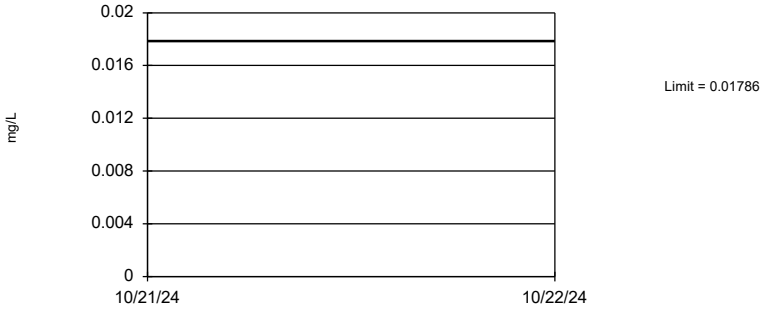


95% coverage. Background Data Summary (based on natural log transformation): Mean=-7.303, Std. Dev.=0.7743, n=46, 10.87% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9536, critical = 0.927. Report alpha = 0.05.

Constituent: Chromium Analysis Run 1/14/2025 2:28 PM View: Upper Tolerance Limits
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

Tolerance Limit

Interwell Non-parametric

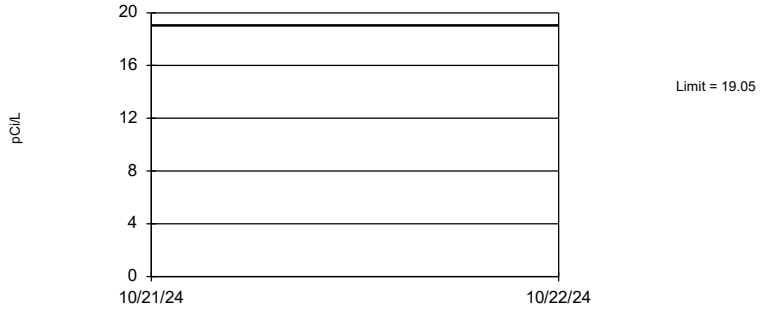


Non-parametric test used in lieu of parametric tolerance limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 57 background values. 8.772% NDs. 92.38% coverage at alpha=0.01; 94.73% coverage at alpha=0.05; 98.63% coverage at alpha=0.5. Report alpha = 0.05373.

Constituent: Cobalt Analysis Run 1/14/2025 2:28 PM View: Upper Tolerance Limits
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

Tolerance Limit

Interwell Parametric



95% coverage. Background Data Summary (based on square root transformation): Mean=2.801, Std. Dev.=0.7708, n=57. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.947, critical = 0.944. Report alpha = 0.05.

Constituent: Combined Radium 226 + 228 Analysis Run 1/14/2025 2:28 PM View: Upper Tolerance Limits
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

Tolerance Limit

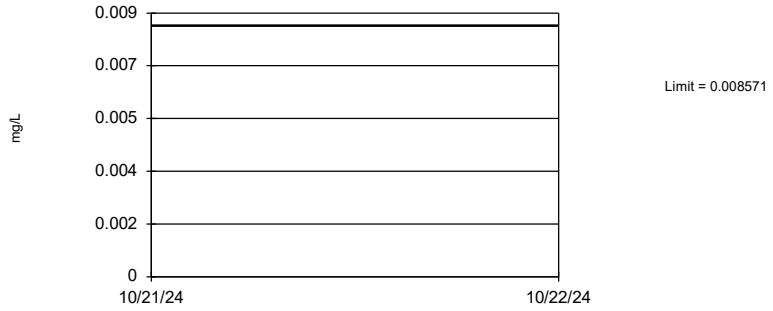
Interwell Non-parametric

Non-parametric test used in lieu of parametric tolerance limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 60 background values. 1.667% NDs. 92.77% coverage at alpha=0.01; 95.12% coverage at alpha=0.05; 99.02% coverage at alpha=0.5. Report alpha = 0.04607.

Constituent: Fluoride Analysis Run 1/14/2025 2:28 PM View: Upper Tolerance Limits
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

Tolerance Limit

Interwell Parametric



95% coverage. Background Data Summary (based on natural log transformation) (after Kaplan-Meier Adjustment): Mean=-7.232, Std. Dev.=1.219, n=57, 22.81% NDs. Normality test: Shapiro Francia @alpha = 0.01, calculated = 0.9454, critical = 0.944. Report alpha = 0.05.

Constituent: Lead Analysis Run 1/14/2025 2:28 PM View: Upper Tolerance Limits
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

Tolerance Limit

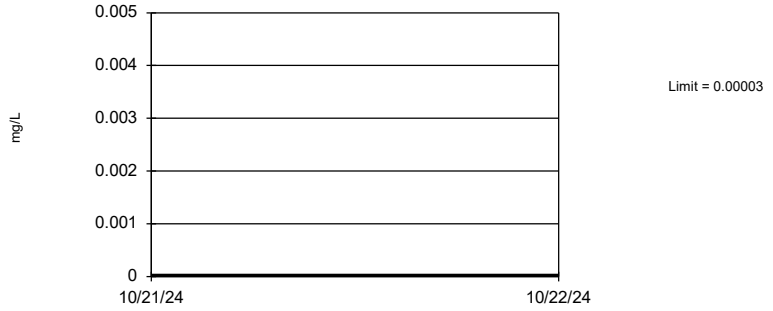
Interwell Non-parametric

Non-parametric test used in lieu of parametric tolerance limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 46 background values. 90.43% coverage at alpha=0.01; 93.55% coverage at alpha=0.05; 98.63% coverage at alpha=0.5. Report alpha = 0.09447.

Constituent: Lithium Analysis Run 1/14/2025 2:28 PM View: Upper Tolerance Limits
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

Tolerance Limit

Interwell Non-parametric

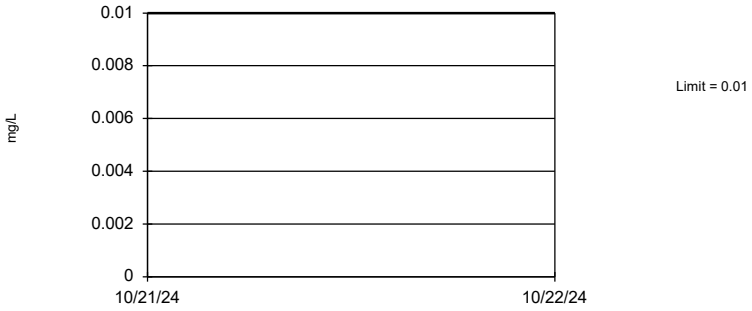


Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. Limit is highest of 57 background values. 77.19% NDs. 92.38% coverage at alpha=0.01; 94.73% coverage at alpha=0.05; 98.63% coverage at alpha=0.5. Report alpha = 0.05373.

Constituent: Mercury Analysis Run 1/14/2025 2:28 PM View: Upper Tolerance Limits
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

Tolerance Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 58 background values. 29.31% NDs. 92.38% coverage at alpha=0.01; 95.12% coverage at alpha=0.05; 98.63% coverage at alpha=0.5. Report alpha = 0.05105.

Constituent: Molybdenum Analysis Run 1/14/2025 2:28 PM View: Upper Tolerance Limits
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

Sanitas™ v.10.0.24 Software licensed to Groundwater Stats Consulting. UG

Tolerance Limit

Interwell Non-parametric

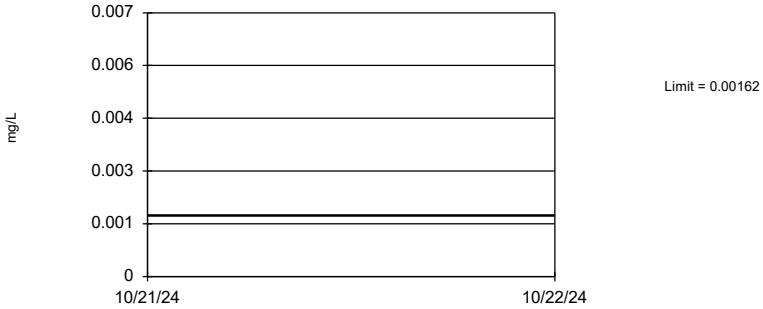
Non-parametric test used in lieu of parametric tolerance limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 46 background values. 26.09% NDs. 90.43% coverage at alpha=0.01; 93.55% coverage at alpha=0.05; 98.63% coverage at alpha=0.5. Report alpha = 0.09447.

Constituent: Selenium Analysis Run 1/14/2025 2:28 PM View: Upper Tolerance Limits
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

Sanitas™ v.10.0.24 Software licensed to Groundwater Stats Consulting. UG

Tolerance Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric tolerance limit because censored data exceeded 50%. Limit is highest of 34 background values. 76.47% NDs. 87.3% coverage at alpha=0.01; 91.6% coverage at alpha=0.05; 97.85% coverage at alpha=0.5. Report alpha = 0.1748.

Constituent: Thallium Analysis Run 1/14/2025 2:28 PM View: Upper Tolerance Limits
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

FIGURE F

GWPS

NORTHEASTERN BAP GWPS				
Constituent Name	**MCL**	**CCR- Rule Specified Level**	**Background Limit**	**GWPS**
Antimony, Total (mg/L)	0.006		0.0039	0.006
Arsenic, Total (mg/L)	0.01		0.06	0.06
Barium, Total (mg/L)	2		2.77	2.77
Beryllium, Total (mg/L)	0.004		0.0021	0.004
Cadmium, Total (mg/L)	0.005		0.00017	0.005
Chromium, Total (mg/L)	0.1		0.0034	0.1
Cobalt, Total (mg/L)	n/a	0.006	0.018	0.018
Combined Radium, Total (pCi/L)	5		19.05	19.05
Fluoride, Total (mg/L)	4		4.39	4.39
Lead, Total (mg/L)	n/a	0.015	0.0086	0.015
Lithium, Total (mg/L)	n/a	0.04	0.16	0.16
Mercury, Total (mg/L)	0.002		0.00003	0.002
Molybdenum, Total (mg/L)	n/a	0.1	0.01	0.1
Selenium, Total (mg/L)	0.05		0.005	0.05
Thallium, Total (mg/L)	0.002		0.0016	0.002

**Grey cell indicates Background Limit is higher than MCL*

**GWPS = Groundwater Protection Standard*

**MCL = Maximum Contaminant Level*

**CCR = Coal Combustion Residuals*

FIGURE G
Confidence Intervals

Confidence Intervals - Significant Results

Northeastern BAP Client: Geosyntec Data: Northeastern BAP Printed 8/29/2025, 5:30 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Barium (mg/L)	**SP-10**	**6.312**	**4.501**	**2.77**	**Yes**	**19**	**5.407**	**1.547**	**0**	**None**	**No**	**0.01**	**Param.**
Fluoride (mg/L)	**SP-10**	**6.8**	**5.71**	**4.39**	**Yes**	**29**	**5.985**	**2.169**	**10.34**	**None**	**No**	**0.01**	**NP (normality)**
Lithium (mg/L)	**SP-10**	**0.2727**	**0.2346**	**0.16**	**Yes**	**27**	**0.2536**	**0.03997**	**0**	**None**	**No**	**0.01**	**Param.**

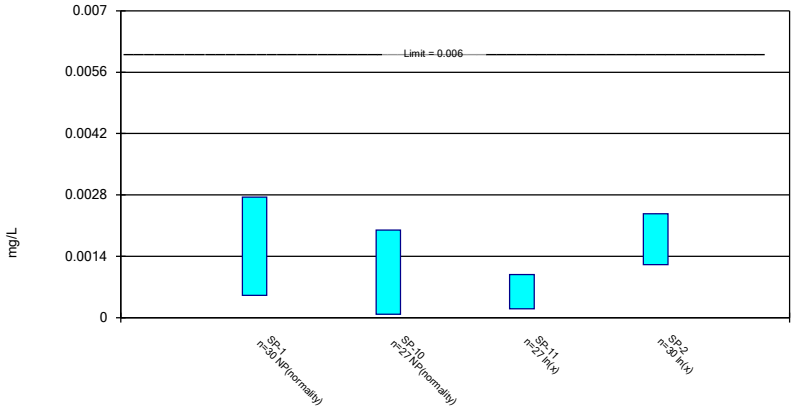
Confidence Intervals - All Results

Northeastern BAP Client: Geosyntec Data: Northeastern BAP Printed 8/29/2025, 5:30 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	SP-1	0.00275	0.00051	0.006	No	30	0.001987	0.002075	23.33	None	No	0.01	NP (normality)
Antimony (mg/L)	SP-10	0.002	0.000076	0.006	No	27	0.0009596	0.001213	14.81	None	No	0.01	NP (normality)
Antimony (mg/L)	SP-11	0.0009831	0.0002004	0.006	No	27	0.001662	0.002699	11.11	None	ln(x)	0.01	Param.
Antimony (mg/L)	SP-2	0.002373	0.00121	0.006	No	30	0.002328	0.002402	6.667	None	ln(x)	0.01	Param.
Arsenic (mg/L)	SP-1	0.00211	0.00065	0.06	No	30	0.002118	0.001994	26.67	None	No	0.01	NP (normality)
Arsenic (mg/L)	SP-10	0.003531	0.0008343	0.06	No	27	0.003308	0.004238	7.407	None	x^(1/3)	0.01	Param.
Arsenic (mg/L)	SP-11	0.004532	0.002318	0.06	No	27	0.003722	0.002743	3.704	None	sqrt(x)	0.01	Param.
Arsenic (mg/L)	SP-2	0.00208	0.00125	0.06	No	30	0.002349	0.002358	3.333	None	No	0.01	NP (normality)
Barium (mg/L)	SP-1	0.1915	0.1598	2.77	No	30	0.1775	0.03797	0	None	x^(1/3)	0.01	Param.
Barium (mg/L)	**SP-10**	**6.312**	**4.501**	**2.77**	**Yes**	**19**	**5.407**	**1.547**	**0**	**None**	**No**	**0.01**	**Param.**
Barium (mg/L)	SP-11	0.3748	0.1964	2.77	No	19	0.2982	0.162	0	None	sqrt(x)	0.01	Param.
Barium (mg/L)	SP-2	1.315	0.9886	2.77	No	30	1.204	0.4673	0	None	ln(x)	0.01	Param.
Beryllium (mg/L)	SP-1	0.000126	0.000054	0.004	No	30	0.0002389	0.0003494	16.67	None	No	0.01	NP (normality)
Beryllium (mg/L)	SP-10	0.000121	0.00003	0.004	No	27	0.0006782	0.001099	25.93	None	No	0.01	NP (normality)
Beryllium (mg/L)	SP-11	0.00025	0.000028	0.004	No	27	0.0001355	0.0001305	25.93	None	No	0.01	NP (normality)
Beryllium (mg/L)	SP-2	0.000121	0.00007	0.004	No	30	0.0001523	0.0001462	13.33	None	No	0.01	NP (normality)
Cadmium (mg/L)	SP-1	0.0001	0.000051	0.005	No	19	0.0001094	0.0001122	10.53	None	No	0.01	NP (normality)
Cadmium (mg/L)	SP-10	0.000089	0.000009	0.005	No	19	0.00004968	0.00006939	15.79	None	No	0.01	NP (normality)
Cadmium (mg/L)	SP-11	0.00015	0.00001	0.005	No	27	0.0004129	0.0008831	14.81	None	No	0.01	NP (normality)
Cadmium (mg/L)	SP-2	0.000328	0.00006	0.005	No	30	0.0002284	0.0002051	33.33	None	No	0.01	NP (normality)
Chromium (mg/L)	SP-1	0.001052	0.0005593	0.1	No	30	0.0009769	0.0006408	20	Kaplan-Meier	sqrt(x)	0.01	Param.
Chromium (mg/L)	SP-10	0.000837	0.0003242	0.1	No	26	0.000949	0.001694	7.692	None	ln(x)	0.01	Param.
Chromium (mg/L)	SP-11	0.00276	0.00043	0.1	No	27	0.005235	0.01004	3.704	None	No	0.01	NP (normality)
Chromium (mg/L)	SP-2	0.001281	0.0005834	0.1	No	30	0.001117	0.001036	10	None	x^(1/3)	0.01	Param.
Cobalt (mg/L)	SP-1	0.001103	0.0004817	0.018	No	30	0.0009737	0.001062	10	None	x^(1/3)	0.01	Param.
Cobalt (mg/L)	SP-10	0.001369	0.0002864	0.018	No	27	0.001321	0.001734	7.407	None	x^(1/3)	0.01	Param.
Cobalt (mg/L)	SP-11	0.003003	0.0009638	0.018	No	27	0.003376	0.0043	3.704	None	ln(x)	0.01	Param.
Cobalt (mg/L)	SP-2	0.0009709	0.0004717	0.018	No	30	0.0008442	0.000726	10	None	x^(1/3)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	SP-1	4.338	3.197	19.05	No	29	3.768	1.244	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	SP-10	20.13	3.226	19.05	No	27	13.24	8.757	0	None	No	0.01	NP (normality)
Combined Radium 226 + 228 (pCi/L)	SP-11	2.332	1.221	19.05	No	26	1.912	1.356	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	SP-2	13.04	8.497	19.05	No	27	11.16	5.263	0	None	sqrt(x)	0.01	Param.
Fluoride (mg/L)	SP-1	0.9369	0.7209	4.39	No	30	0.8289	0.2403	6.667	None	No	0.01	Param.
Fluoride (mg/L)	**SP-10**	**6.8**	**5.71**	**4.39**	**Yes**	**29**	**5.985**	**2.169**	**10.34**	**None**	**No**	**0.01**	**NP (normality)**
Fluoride (mg/L)	SP-11	3.017	2.125	4.39	No	29	2.571	0.9734	0	None	No	0.01	Param.
Fluoride (mg/L)	SP-2	3.06	2.7	4.39	No	31	2.88	0.5326	0	None	No	0.01	NP (normality)
Lead (mg/L)	SP-1	0.00247	0.000259	0.015	No	30	0.001814	0.002016	26.67	None	No	0.01	NP (normality)
Lead (mg/L)	SP-10	0.0001783	0.00007778	0.015	No	19	0.0001553	0.00009929	15.79	Kaplan-Meier	sqrt(x)	0.01	Param.
Lead (mg/L)	SP-11	0.001183	0.0002857	0.015	No	27	0.001671	0.002542	11.11	None	ln(x)	0.01	Param.
Lead (mg/L)	SP-2	0.00202	0.000245	0.015	No	30	0.00185	0.002143	30	None	No	0.01	NP (normality)
Lithium (mg/L)	SP-1	0.006467	0.004989	0.16	No	29	0.005728	0.001613	0	None	No	0.01	Param.
Lithium (mg/L)	**SP-10**	**0.2727**	**0.2346**	**0.16**	**Yes**	**27**	**0.2536**	**0.03997**	**0**	**None**	**No**	**0.01**	**Param.**
Lithium (mg/L)	SP-11	0.03537	0.02103	0.16	No	19	0.02902	0.01297	0	None	sqrt(x)	0.01	Param.
Lithium (mg/L)	SP-2	0.07759	0.05414	0.16	No	30	0.06587	0.02608	0	None	No	0.01	Param.
Mercury (mg/L)	SP-1	0.000009	0.000005	0.002	No	30	0.000005967	0.000003508	83.33	None	No	0.01	NP (NDs)
Mercury (mg/L)	SP-10	0.00001	0.000005	0.002	No	27	0.000008852	0.000006882	62.96	None	No	0.01	NP (NDs)
Mercury (mg/L)	SP-11	0.000009	0.000005	0.002	No	27	0.0000103	0.00001201	51.85	None	No	0.01	NP (NDs)
Mercury (mg/L)	SP-2	0.000005	0.000005	0.002	No	30	0.000005367	0.00000165	86.67	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	SP-1	0.01706	0.01204	0.1	No	30	0.01455	0.005581	0	None	No	0.01	Param.
Molybdenum (mg/L)	SP-10	0.01398	0.002109	0.1	No	26	0.01467	0.02655	3.846	None	x^(1/3)	0.01	Param.
Molybdenum (mg/L)	SP-11	0.04214	0.0018	0.1	No	27	0.01667	0.0225	3.704	None	No	0.01	NP (normality)
Molybdenum (mg/L)	SP-2	0.02258	0.01671	0.1	No	19	0.01965	0.005013	0	None	No	0.01	Param.
Selenium (mg/L)	SP-1	0.006794	0.004191	0.05	No	30	0.005788	0.003231	10	None	sqrt(x)	0.01	Param.
Selenium (mg/L)	SP-10	0.0005561	0.00009923	0.05	No	27	0.001302	0.002046	40.74	Kaplan-Meier	ln(x)	0.01	Param.
Selenium (mg/L)	SP-11	0.00155	0.0002	0.05	No	27	0.001503	0.002188	7.407	None	No	0.01	NP (normality)
Selenium (mg/L)	SP-2	0.004295	0.002018	0.05	No	19	0.003344	0.002137	0	None	sqrt(x)	0.01	Param.
Thallium (mg/L)	SP-1	0.0005	0.00007	0.002	No	19	0.0003137	0.0004542	31.58	None	No	0.01	NP (normality)
Thallium (mg/L)	SP-10	0.0002	0.00004	0.002	No	19	0.0001916	0.00003671	94.74	None	No	0.01	NP (NDs)
Thallium (mg/L)	SP-11	0.0002	0.00003	0.002	No	19	0.0001911	0.000039	94.74	None	No	0.01	NP (NDs)
Thallium (mg/L)	SP-2	0.0002	0.00005	0.002	No	19	0.0001221	0.00007743	47.37	None	No	0.01	NP (normality)

Parametric and Non-Parametric (NP) Confidence Interval

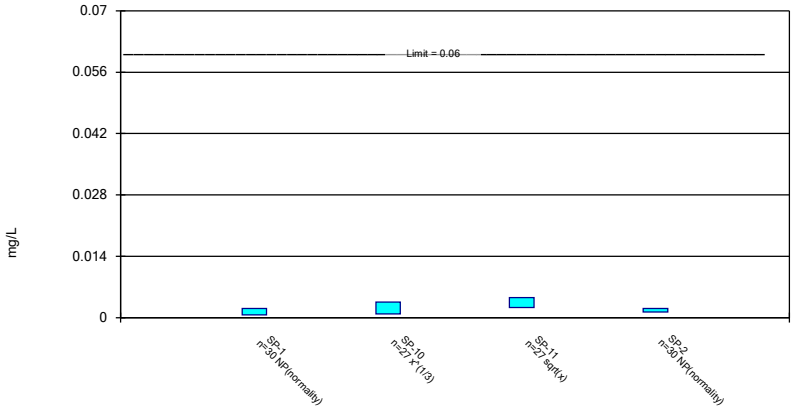
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Antimony Analysis Run 8/29/2025 5:29 PM View: Appendix B Confidence Intervals
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

Parametric and Non-Parametric (NP) Confidence Interval

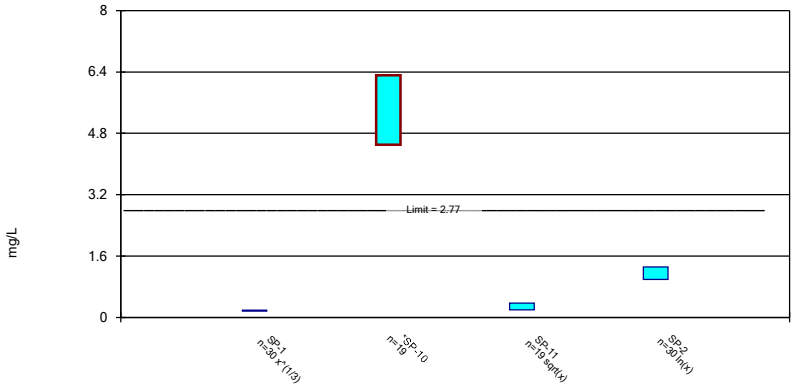
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Arsenic Analysis Run 8/29/2025 5:29 PM View: Appendix B Confidence Intervals
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

Parametric Confidence Interval

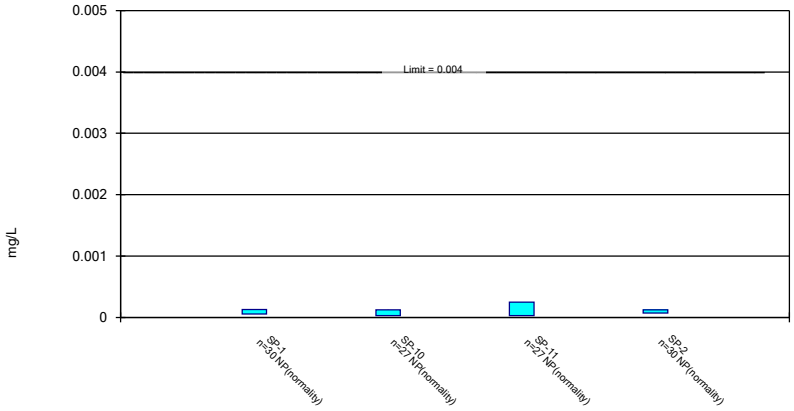
Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 8/29/2025 5:29 PM View: Appendix B Confidence Intervals
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

Non-Parametric Confidence Interval

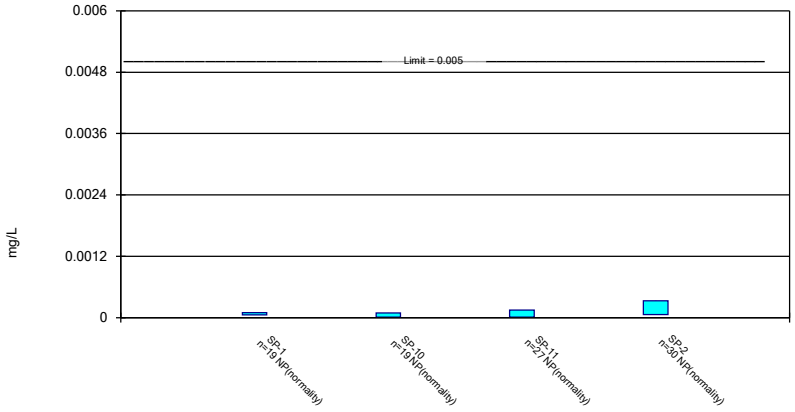
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Beryllium Analysis Run 8/29/2025 5:29 PM View: Appendix B Confidence Intervals
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

Non-Parametric Confidence Interval

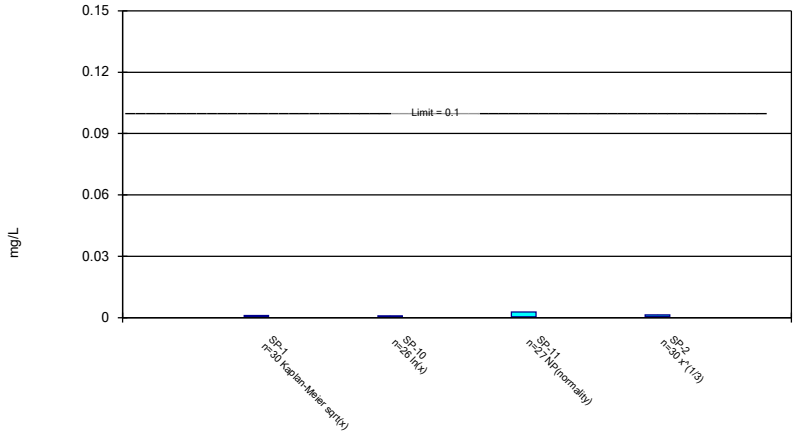
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Cadmium Analysis Run 8/29/2025 5:29 PM View: Appendix B Confidence Intervals
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

Parametric and Non-Parametric (NP) Confidence Interval

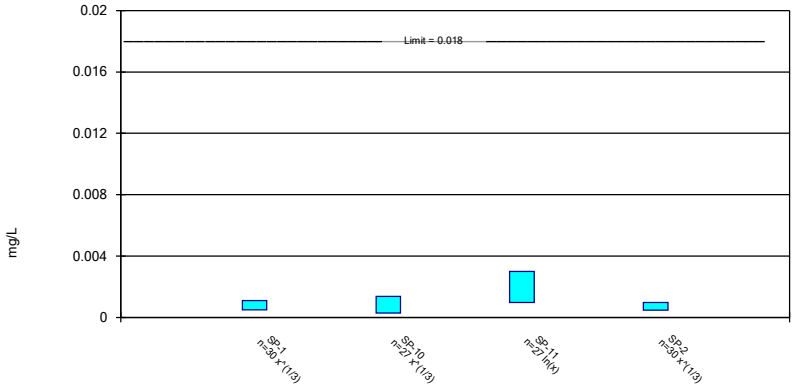
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Chromium Analysis Run 8/29/2025 5:29 PM View: Appendix B Confidence Intervals
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

Parametric Confidence Interval

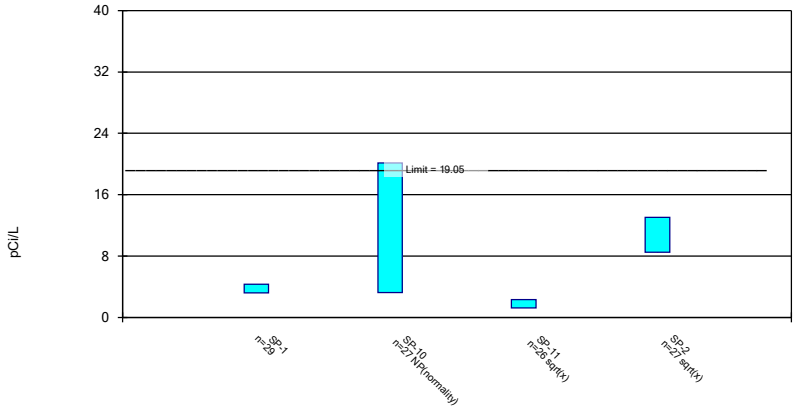
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 8/29/2025 5:29 PM View: Appendix B Confidence Intervals
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

Parametric and Non-Parametric (NP) Confidence Interval

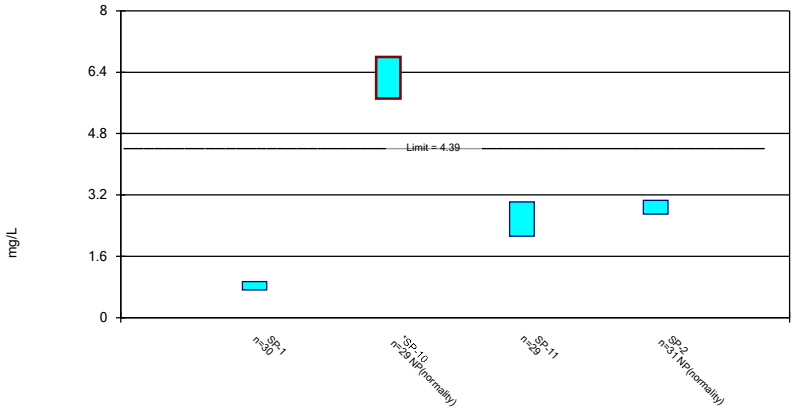
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 8/29/2025 5:29 PM View: Appendix B Confidence
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

Parametric and Non-Parametric (NP) Confidence Interval

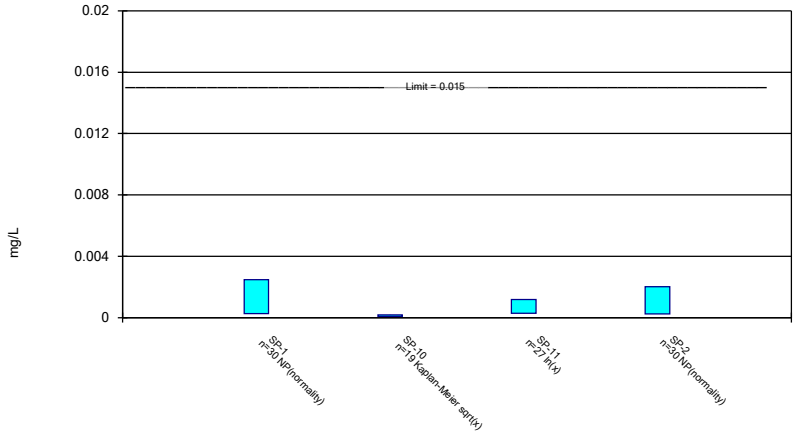
Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride Analysis Run 8/29/2025 5:29 PM View: Appendix B Confidence Intervals
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

Parametric and Non-Parametric (NP) Confidence Interval

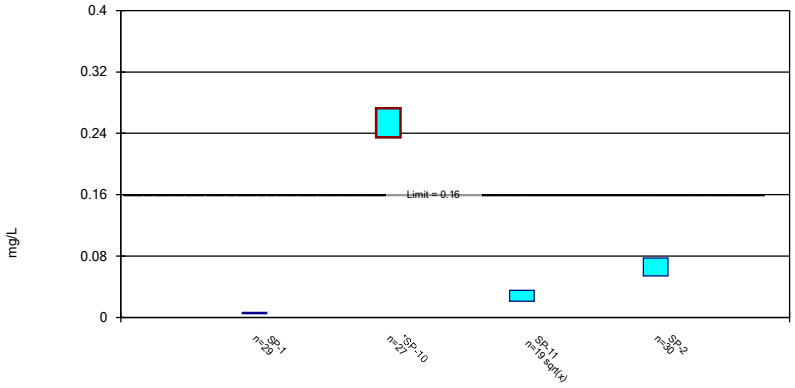
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lead Analysis Run 8/29/2025 5:29 PM View: Appendix B Confidence Intervals
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

Parametric Confidence Interval

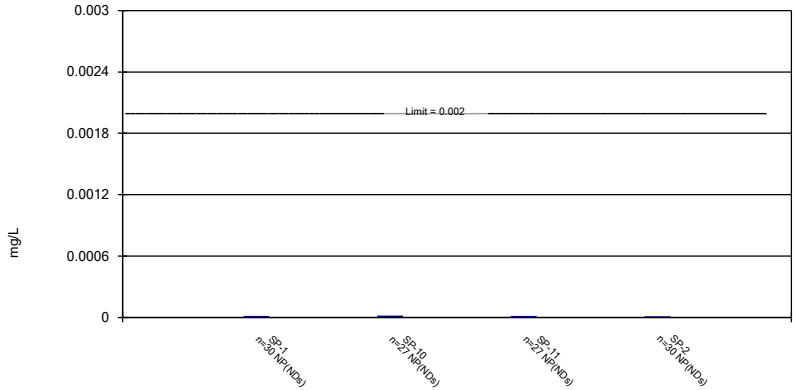
Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 8/29/2025 5:29 PM View: Appendix B Confidence Intervals
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

Non-Parametric Confidence Interval

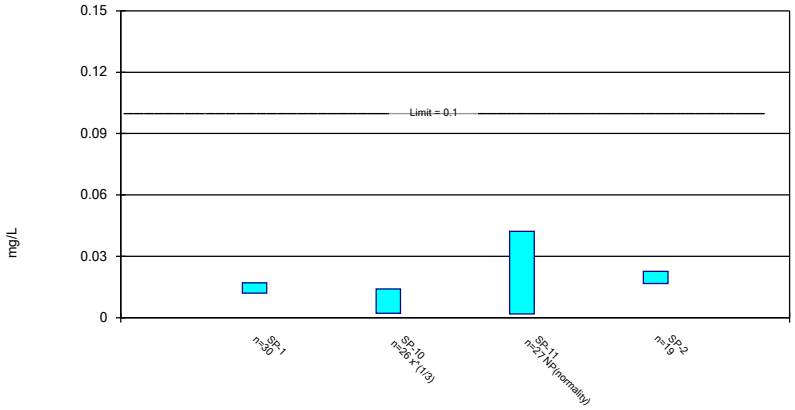
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Mercury Analysis Run 8/29/2025 5:29 PM View: Appendix B Confidence Intervals
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

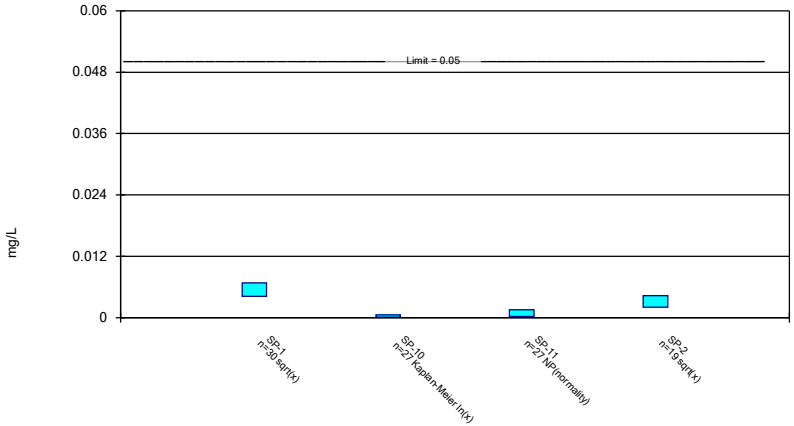


Constituent: Molybdenum Analysis Run 8/29/2025 5:29 PM View: Appendix B Confidence Intervals
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

Sanitas™ v.10.0.27 Sanitas software utilized by Groundwater Stats Consulting. UG

Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.

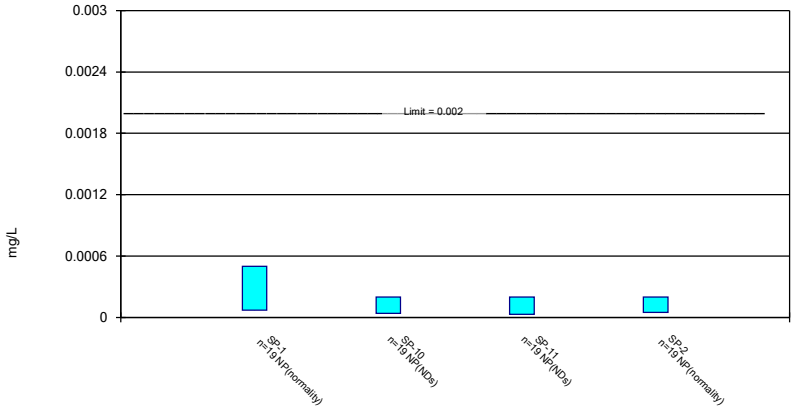


Constituent: Selenium Analysis Run 8/29/2025 5:29 PM View: Appendix B Confidence Intervals
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

Sanitas™ v.10.0.27 Sanitas software utilized by Groundwater Stats Consulting. UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Thallium Analysis Run 8/29/2025 5:29 PM View: Appendix B Confidence Intervals
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

FIGURE H
Trend Tests – Appendix B

Appendix B Trend Tests - Significant Results

Northeastern BAP Client: Geosyntec Data: Northeastern BAP Printed 9/5/2025, 4:48 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Barium (mg/L)	**SP-10**	**0.8602**	**212**	**96**	**Yes**	**27**	**0**	**n/a**	**n/a**	**0.05**	**NP**
Barium (mg/L)	**SP-4 (bg)**	**-0.01676**	**-64**	**-53**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.05**	**NP**
Barium (mg/L)	**SP-5R (bg)**	**0.05659**	**167**	**112**	**Yes**	**30**	**0**	**n/a**	**n/a**	**0.05**	**NP**
Lithium (mg/L)	**SP-10**	**-0.01184**	**-176**	**-96**	**Yes**	**27**	**0**	**n/a**	**n/a**	**0.05**	**NP**
Lithium (mg/L)	**SP-4 (bg)**	**-0.001352**	**-72**	**-53**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.05**	**NP**
Lithium (mg/L)	**SP-5R (bg)**	**-0.004347**	**-209**	**-112**	**Yes**	**30**	**0**	**n/a**	**n/a**	**0.05**	**NP**

Appendix B Trend Tests - All Results

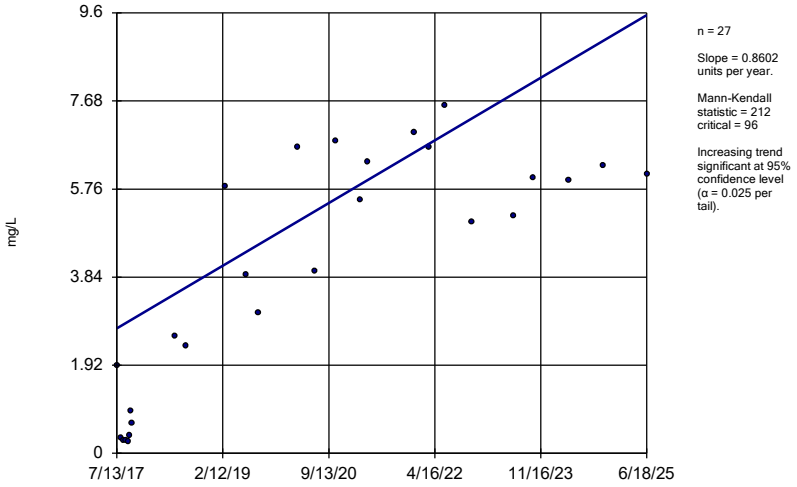
Northeastern BAP Client: Geosyntec Data: Northeastern BAP Printed 9/5/2025, 4:48 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Barium (mg/L)	**SP-10**	**0.8602**	**212**	**96**	**Yes**	**27**	**0**	**n/a**	**n/a**	**0.05**	**NP**
Barium (mg/L)	**SP-4 (bg)**	**-0.01676**	**-64**	**-53**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.05**	**NP**
Barium (mg/L)	**SP-5R (bg)**	**0.05659**	**167**	**112**	**Yes**	**30**	**0**	**n/a**	**n/a**	**0.05**	**NP**
Fluoride (mg/L)	SP-10	0.1114	66	106	No	29	10.34	n/a	n/a	0.05	NP
Fluoride (mg/L)	SP-4 (bg)	-0.003946	-26	-117	No	31	3.226	n/a	n/a	0.05	NP
Fluoride (mg/L)	SP-5R (bg)	0.005849	27	117	No	31	0	n/a	n/a	0.05	NP
Lithium (mg/L)	**SP-10**	**-0.01184**	**-176**	**-96**	**Yes**	**27**	**0**	**n/a**	**n/a**	**0.05**	**NP**
Lithium (mg/L)	**SP-4 (bg)**	**-0.001352**	**-72**	**-53**	**Yes**	**18**	**0**	**n/a**	**n/a**	**0.05**	**NP**
Lithium (mg/L)	**SP-5R (bg)**	**-0.004347**	**-209**	**-112**	**Yes**	**30**	**0**	**n/a**	**n/a**	**0.05**	**NP**

Sanitas™ v.10.0.27 Sanitas software utilized by Groundwater Stats Consulting. UG

Sen's Slope Estimator

SP-10



n = 27

Slope = 0.8602 units per year.

Mann-Kendall statistic = 212
critical = 96

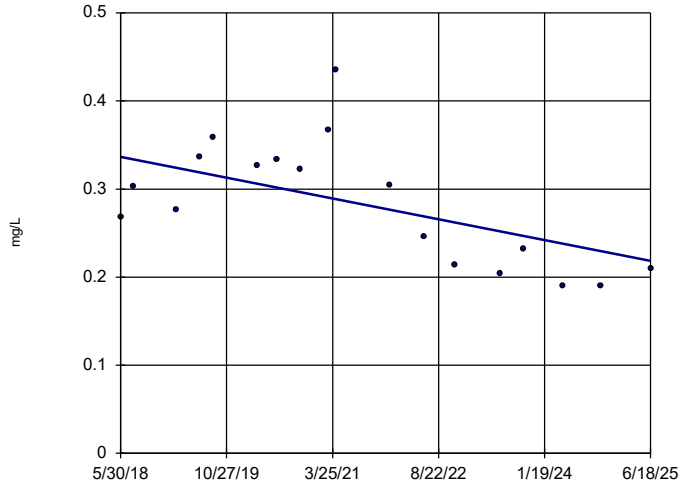
Increasing trend significant at 95% confidence level (α = 0.025 per tail).

Constituent: Barium Analysis Run 9/5/2025 4:47 PM View: Appendix B Trend Tests
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

Sanitas™ v.10.0.27 Sanitas software utilized by Groundwater Stats Consulting. UG

Sen's Slope Estimator

SP-4 (bg)



n = 18

Slope = -0.01676 units per year.

Mann-Kendall statistic = -64
critical = -53

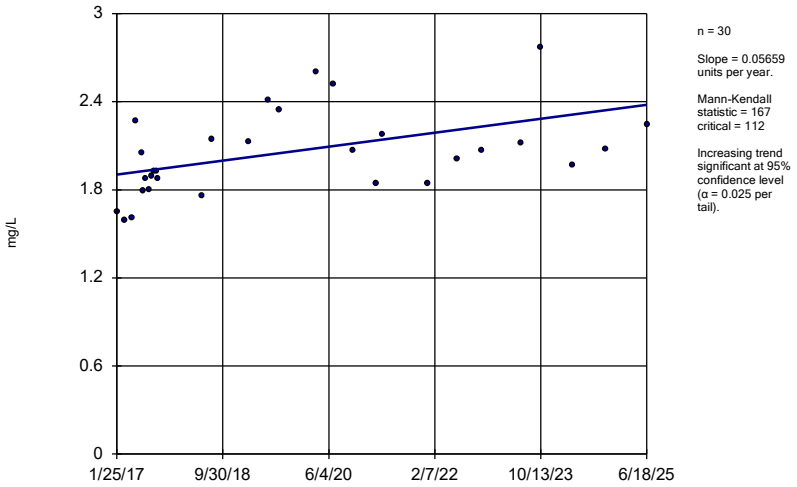
Decreasing trend significant at 95% confidence level (α = 0.025 per tail).

Constituent: Barium Analysis Run 9/5/2025 4:47 PM View: Appendix B Trend Tests
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

Sanitas™ v.10.0.27 Sanitas software utilized by Groundwater Stats Consulting. UG

Sen's Slope Estimator

SP-5R (bg)



n = 30

Slope = 0.05659 units per year.

Mann-Kendall statistic = 167
critical = 112

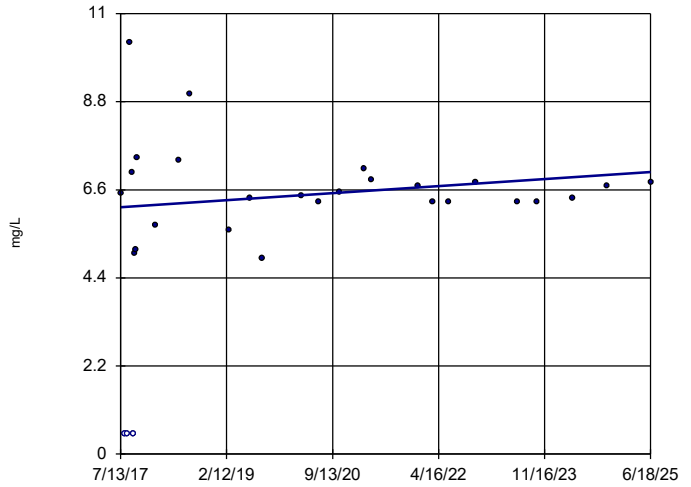
Increasing trend significant at 95% confidence level (α = 0.025 per tail).

Constituent: Barium Analysis Run 9/5/2025 4:47 PM View: Appendix B Trend Tests
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

Sanitas™ v.10.0.27 Sanitas software utilized by Groundwater Stats Consulting. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

SP-10



n = 29

Slope = 0.1114 units per year.

Mann-Kendall statistic = 66
critical = 106

Trend not significant at 95% confidence level (α = 0.025 per tail).

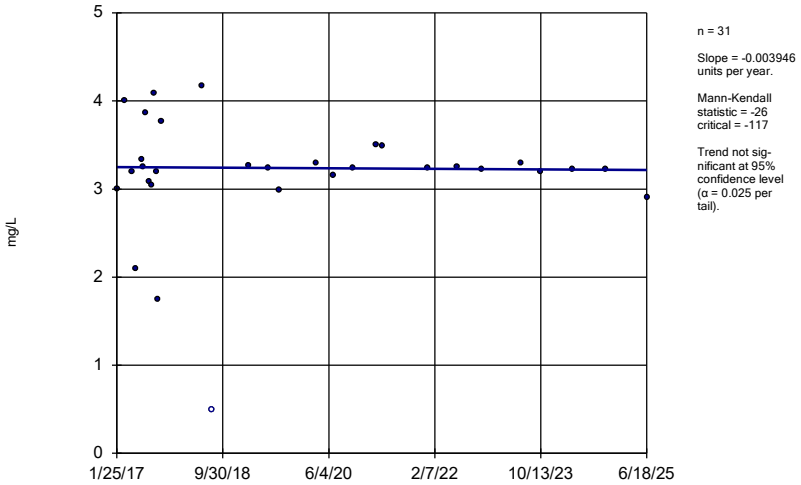
Constituent: Fluoride Analysis Run 9/5/2025 4:47 PM View: Appendix B Trend Tests
Northeastern BAP Client: Geosyntec Data: Northeastern BAP

Sanitas™ v.10.0.27 Sanitas software utilized by Groundwater Stats Consulting. UG

Hollow symbols indicate censored values.

Sen's Slope Estimator

SP-4 (bg)



n = 31

Slope = -0.003946 units per year.

Mann-Kendall statistic = -26
critical = -117

Trend not significant at 95% confidence level (α = 0.025 per tail).

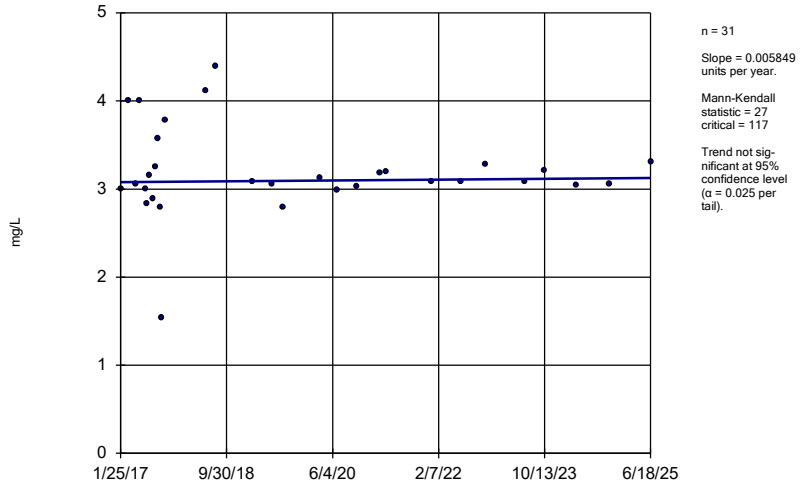
Constituent: Fluoride Analysis Run 9/5/2025 4:47 PM View: Appendix B Trend Tests

Northeastern BAP Client: Geosyntec Data: Northeastern BAP

Sanitas™ v.10.0.27 Sanitas software utilized by Groundwater Stats Consulting. UG

Sen's Slope Estimator

SP-5R (bg)



n = 31

Slope = 0.005849 units per year.

Mann-Kendall statistic = 27
critical = 117

Trend not significant at 95% confidence level (α = 0.025 per tail).

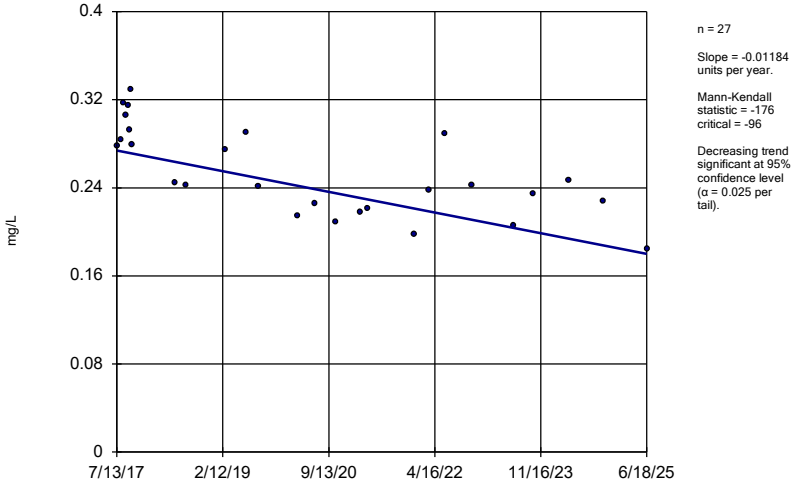
Constituent: Fluoride Analysis Run 9/5/2025 4:47 PM View: Appendix B Trend Tests

Northeastern BAP Client: Geosyntec Data: Northeastern BAP

Sanitas™ v.10.0.27 Sanitas software utilized by Groundwater Stats Consulting. UG

Sen's Slope Estimator

SP-10



n = 27

Slope = -0.01184 units per year.

Mann-Kendall statistic = -176
critical = -96

Decreasing trend significant at 95% confidence level (α = 0.025 per tail).

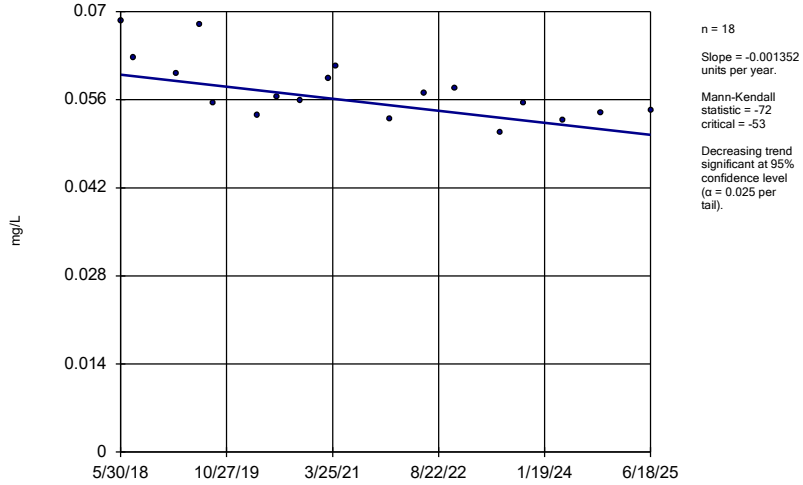
Constituent: Lithium Analysis Run 9/5/2025 4:47 PM View: Appendix B Trend Tests

Northeastern BAP Client: Geosyntec Data: Northeastern BAP

Sanitas™ v.10.0.27 Sanitas software utilized by Groundwater Stats Consulting. UG

Sen's Slope Estimator

SP-4 (bg)



n = 18

Slope = -0.001352 units per year.

Mann-Kendall statistic = -72
critical = -53

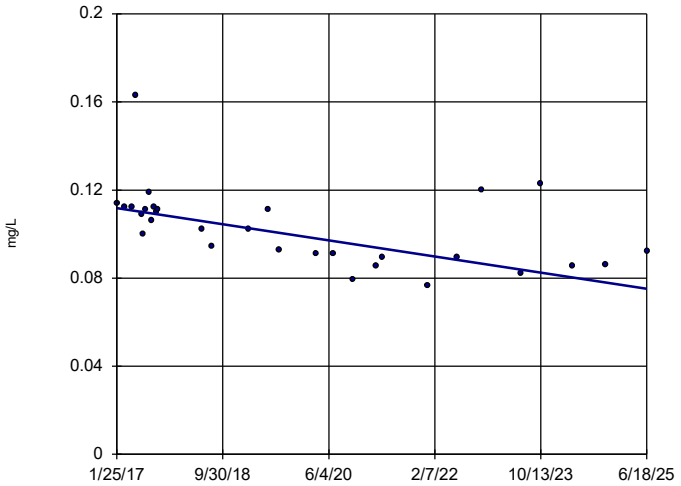
Decreasing trend significant at 95% confidence level (α = 0.025 per tail).

Constituent: Lithium Analysis Run 9/5/2025 4:47 PM View: Appendix B Trend Tests

Northeastern BAP Client: Geosyntec Data: Northeastern BAP

Sen's Slope Estimator

SP-5R (bg)



n = 30

Slope = -0.004347 units per year.

Mann-Kendall statistic = -209
critical = -112

Decreasing trend significant at 95% confidence level (α = 0.025 per tail).

Constituent: Lithium Analysis Run 9/5/2025 4:47 PM View: Appendix B Trend Tests

Northeastern BAP Client: Geosyntec Data: Northeastern BAP

Attachment B

Certification by Qualified Professional Engineer

CERTIFICATION BY A QUALIFIED PROFESSIONAL ENGINEER

I certify that the above described alternative source demonstration is appropriate for evaluating the groundwater monitoring data for the Bottom Ash Pond CCR management area at the Northeastern Power Station and that the requirements of OAC 252:517-9-6(g)(3)(B) have been met.

Beth Ann Gross
Printed Name of Licensed Professional Engineer

Beth Ann Gross
Signature

Geosyntec Consultants
2039 Centre Pointe Boulevard, Suite 103
Tallahassee, Florida 32308

Oklahoma Firm Certificate of
Authorization No. 1996
Exp. 6/30/2026

18167	Oklahoma	January 8, 2025
License Number	Licensing State	Date

* * * * *