SANTEE COOPER
SLURRY POND 3 & 4
SELECTION OF STATISTICAL METHOD CERTIFICATION
Winyah Generating Station

Haley & Aldrich, Inc. (Haley & Aldrich [Consultant]) has been retained by Santee Cooper to prepare the following assessment of the Slurry Pond 3 & 4 located at the Winyah Generating Station to determine if the selection of statistical methods is appropriate for evaluating groundwater monitoring data as required by Title 40 Code of Federal Regulations (40 CFR) Chapter I Subchapter I Part 257 Subpart D § 257.93.

BACKGROUND

Pursuant to 40 CFR § 257.93(f)(6), the owner or operator of the coal combustion residual (CCR) unit must obtain a certification from a qualified professional engineer stating that the selected statistical method is appropriate for evaluating the groundwater monitoring data for the CCR management area for the Slurry Pond 3 & 4. This certification and the underlying evaluation to select a statistical procedure were conducted under the Consultant according to a system designed to assure that qualified personnel selected the statistical procedure pursuant to 40 CFR § 257.93. The certification submitted is, to the best of the Consultants knowledge, accurate and complete.

NARRATIVE DESCRIPTION OF STATISTICAL METHOD SELECTION

Santee Cooper provided Haley & Aldrich with groundwater monitoring data collected from a groundwater monitoring system that has been designed and constructed to meet the requirements of 40 CFR § 257.91. Based on this certification, background groundwater monitoring data for Appendix IV constituents for Slurry Pond 3 & 4 were evaluated and, with the exception of arsenic and lithium, were found to exhibit sufficient sampling frequency, data distributions, and detection frequencies that support the selection of upper tolerance limits (UTL) (40 CFR § 257.93(f)(3)) as an appropriate statistical method to evaluate the groundwater data at each downgradient monitoring location for Slurry Pond 3 & 4. Appendix IV constituents arsenic and lithium have been attributed to naturally occurring sources and exhibit sufficient sampling frequency, data distributions, and detection frequencies to support the selection of upper prediction limits (UPLs) (40 CFR § 257.93(f)(3)) as the appropriate statistical method for evaluating groundwater data for arsenic and lithium at each downgradient monitoring location for Slurry Pond 3 & 4.

A tolerance interval is a concentration range, with a specified confidence level, designed to contain a pre-specified proportion (e.g., 95 percent) of the underlying population from which the statistical sample is drawn (background). The upper endpoint of a tolerance interval is the UTL. Depending on the data distribution, parametric or non-parametric tolerance limits procedures are used to evaluate groundwater monitoring data using this method. Parametric tolerance limits utilize normally distributed data or normalized data via a transformation of the sample background data used to construct the limit. If the data are non-normal and a transformation is not indicated, non-parametric procedures (order statistics or bootstrap methods) are used to calculate the tolerance limit. If all the background data are non-detect, a reporting limit may serve as an approximate UPL.

A prediction interval is a procedure in which a concentration limit [0, PL] for each constituent is established from the distribution of the background data, with a specified confidence level (e.g., 95 percent). The upper endpoint of a concentration limit is the UPL. Depending on the background data distribution, parametric or non-parametric prediction limits procedures are used to evaluate groundwater monitoring data using this method. Parametric prediction limits utilize normally distributed data or normalized data via a transformation of the sample background data used to construct the

limit. If the data are non-normal and a transformation is not indicated, non-parametric procedures (order statistics or bootstrap methods) are used to calculate the prediction limit. If all the background data are non-detect, a maximum reporting limit may serve as an approximate UPL

The data distribution (40 CFR § 257.93(g)(1)) and the frequency of results below detection limits (40 CFR § 257.93(g)(5)) for the groundwater data from Slurry Pond 3 & 4 support the application of UTLs for the majority of Appendix IV constituents. For arsenic and lithium, which are more frequently detected and attributable to naturally occurring sources, the data characteristics support the use of UPLs. For the Appendix IV constituents (excluding arsenic and lithium), UTLs were calculated from the background data and are estimated to represent the 95th UTL with 99 percent coverage. These UTLs are used for comparison to data from each compliance well. For arsenic and lithium, UPLs were calculated from the background data at the upgradient monitoring locations to provide a 95 percent confidence level with 99 percent coverage. These UPLs are likewise used for comparison to data from each compliance well. As required by 40 CFR § 257.93(g)(4), the confidence levels and coverage of both statistical procedures make them at least as effective as any other statistical method outlined in 40 CFR § 257.93(f) and (g).

LIMITATIONS

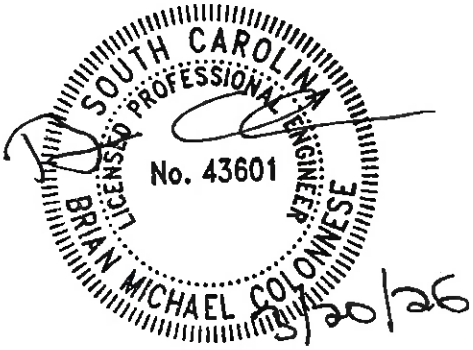
The signature of Consultant's authorized representative on this document represents that to the best of Consultant's knowledge, information, and belief in the exercise of its professional judgment; it is Consultant's professional opinion that the aforementioned information is accurate as of the date of such signature. Opinions or decisions by Consultant are made on the basis of Consultant's experience, qualifications, and professional judgment and are not to be construed as warranties or guaranties.

CERTIFICATION

I, Brian Colonnese, a Registered Professional Engineer, in accordance with the South Carolina Professional Engineer's Registration, do hereby certify to the best of my knowledge, information, and belief, that, pursuant to 40 CFR § 257.93, the selected statistical method is appropriate for evaluating the groundwater monitoring data for the Slurry Pond 3 & 4 dated March 20, 2026.

Any change in the statistical methods will be documented in a subsequent certification, if necessary and appropriate.

HALEY & ALDRICH, INC.



Signature

Brian Colonnese, P.E.
Name

March 20, 2026
Date

43601
Professional Engineer Registration Number