June 24, 2025
File No. 0213269-000

Tucson Electric Power Company
Tucson, Arizona

Attention: Greg Guimond, P.E. – Manager, Corporate Environmental Compliance & Permits

Subject: Certification of Statistical Methods – Ash Landfill
               Springerville Generating Station, Springerville, Arizona

Dear Mr. Guimond:

Tucson Electric Power Company (TEP) operates one existing coal combustion residuals (CCR) management unit at the Springerville Generating Station located in Springerville, Arizona. This CCR management unit is referred to as the Ash Landfill. Pursuant to Title 40 Code of Federal Regulations (40 CFR) Chapter I, Subchapter I, Part 257, Subpart D § 257.93(f)(6),[1] I certify that the selected statistical methods described herein are appropriate for evaluating the groundwater monitoring data for the subject CCR management units. The statistical methods described below were selected for the evaluation of the groundwater quality data collected from monitoring wells constructed in accordance with requirements of 40 CFR 257.91 *Groundwater Monitoring Systems* at the subject unit.

Based on attributes of the water quality dataset, one statistical method has been selected to evaluate groundwater quality data obtained from monitoring wells completed at the subject CCR units. The statistical method is prediction limit in accordance with 40 CFR § 257.93(f)(3) and the performance standards outlined in 40 CFR § 257.93(g). A prediction limit procedure is one in which concentration limits for each constituent are established from the distribution of the background data, with a specified confidence level (e.g., 95 percent). The upper endpoint of concentration limits is called the upper prediction limit (UPL). As required by § 257.93(g)(1), this method is appropriate for the data distribution observed, accounts for data below the limit of detection, and controls the experiment-wise error rate. Depending on the background data distribution, parametric or non-parametric prediction limit procedures are used to evaluate groundwater monitoring data.

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[1] "The owner or operator of the CCR unit must obtain a certification from a qualified professional engineer stating the selected statistical method is appropriate for evaluating the groundwater for the CCR management area. The certification must include a narrative description of the statistical method selected to evaluate the groundwater monitoring data."

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. In compliance with § 257.93(g)(3), these methods are applied consistently at each monitoring well and constituent over time. If all the background data are non-detect, a maximum reporting limit may serve as an approximate UPL, as permitted under the statistical method and consistent with the regulatory framework. The UPL statistical method is conducted in conformance with the document titled *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance*[2] (U.S. Environmental Protection Agency, 2009).

This certification and the evaluation to select the statistical procedures were conducted under my direction or supervision 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 my knowledge, accurate and complete.

Signed: _____
        Certifying Engineer

        Print Name: Steven F. Putrich, P.E.
Arizona License No.:   60715
        Title: Principal Consultant
     Company: Haley & Aldrich, Inc.

Expires: 12/31/2027

Signed: _____
        Registered Geologist

        Print Name: Mark D. Nicholls, R.G.
Arizona License No.:   39869
        Title: Principal Consultant
     Company: Haley & Aldrich, Inc.

Exp. 9/30/27

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[2] U.S. Environmental Protection Agency, 2009. *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance.* March.

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ALDRICH