

40 C.F.R. § 257.93(f)(6) STATISTICAL METHOD CERTIFICATION ASH POND EDWARDS POWER PLANT

In accordance with Title 40 of the Code of Federal Regulations (40 C.F.R.) § 257.93(f)(6), the owner or operator of a coal combustion residuals (CCR) management unit must obtain a certification from a qualified professional engineer that the selected statistical method is appropriate for evaluating the groundwater monitoring data for the CCR management area.

This certification is based on the description of the statistical methods selected to evaluate groundwater as presented in the *Multi-Site Statistical Analysis Plan*, prepared for the facility owner, and dated December 28, 2022. The methods described in the plan will be used to establish background conditions and implement detection, assessment, and corrective action monitoring as necessary and required by 40 C.F.R. § 257.93-257.95. These methods include sample independence criteria, non-detect processing, considerations for normally distributed and non-normally distributed data, outlier testing, trend analysis, considerations for spatial and temporal variation, and background updates, as well as those referenced below. The *Multi-Site Statistical Analysis Plan* was prepared in accordance with the requirements of 40 C.F.R. § 257.93, with reference to the acceptable statistical procedures provided in United States Environmental Protection Agency's *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance* (March 2009).

In accordance with 40 C.F.R. § 257.93(f), the statistical method chosen for analysis of background groundwater monitoring data for detection monitoring in accordance with 40 C.F.R. § 257.94 is the prediction interval procedure. Calculated upper prediction limits for each monitoring parameter, with the exception of pH, for which both upper and lower prediction limits will be calculated, will be compared to individual sampling event concentrations detected in the downgradient monitoring wells. Retesting/resampling will be at the facility owner's discretion.

The statistical method chosen for analysis of background groundwater monitoring data for assessment monitoring in accordance with 40 C.F.R. § 257.95 is the tolerance interval procedure. The statistical method chosen for analysis of assessment monitoring compliance groundwater monitoring data for the purpose of comparison to a groundwater protection standard established in accordance with 40 C.F.R. § 257.95(h) is a confidence interval procedure. Retesting/resampling will be at the facility owner's discretion.

I, Eric J. Tlachac, a qualified professional engineer in good standing in the State of Illinois, certify that the statistical methods described in this document, as supported by the Multi-Site Statistical Analysis Plan in the facility's Operating Record, are appropriate for evaluating the groundwater monitoring data for the CCR management area.

Eric J. Tlachac
Qualified Professional Engineer
062-063091
Illinois
Date: December 28, 2022



I, Brian G. Hennings, a qualified professional geologist in good standing in the State of Illinois, certify that the statistical methods described in this document, as supported by the Multi-Site Statistical Analysis Plan in the facility's Operating Record, are appropriate for evaluating the groundwater monitoring data for the CCR management area.

Brian G. Hennings
Licensed Professional Geologist
196-001482
Illinois
Date: December 28, 2022



I, Rachel A. Banoff, a qualified professional, certify that the statistical methods described in this document, as supported by the Multi-Site Statistical Analysis Plan in the facility's Operating Record, are appropriate for evaluating the groundwater monitoring data for the CCR management area.

Rachel A. Banoff, EIT
Project Statistician
Date: December 28, 2022