

## STATISTICAL METHOD CERTIFICATION

(40 CFR §257.93(f)(6))

Limestone Station

Jewett, Texas

NRG Texas Power, LLC

The United States Environmental Protection Agency's (EPA's) "Disposal of Coal Combustion Residuals from Electric Utilities" Final Rule (40 C.F.R. Part 257 and Part 261), §257.93(f)(6), requires the owner or operator of an existing coal combustion residual (CCR) unit to 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. The certification must include a narrative description of the statistical method selected to evaluate the groundwater monitoring data.

The following provides a description of the statistical method selected to evaluate the groundwater quality data for the CCR management area at Limestone Station. The selected statistical method for Limestone Station was developed in accordance with 40 CFR §257.93(f) using methodology presented in EPA's Statistical Analysis of Groundwater Data at RCRA Facilities, Unified Guidance, March 2009, EPA 530/R-09-007 (Unified Guidance).

### *STATISTICAL METHODS*

A prediction interval with a 1-of-2 retesting scheme will be used to evaluate the groundwater monitoring data. Data from the downgradient wells will be compared to background groundwater quality. Using this approach, background data from the network of upgradient wells may be pooled to calculate an Upper Prediction Limit (UPL) for each Appendix III constituent if there is no significant spatial heterogeneity. In cases where significant spatial heterogeneity exists, an intrawell prediction limit will be used. Before UPLs are calculated, the data assumptions of the calculation will carefully be checked using graphical and statistical methods §257.93(g).

### *DECISION MAKING*

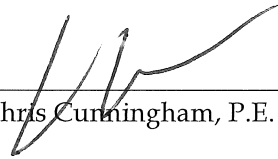
Data from the downgradient monitoring wells will be evaluated by comparing individual results to the UPL each monitoring event. An "initial exceedance" occurs when any downgradient well data exceeds the background UPL.

If data from a downgradient well exceeds the UPL, a 1-of-2 resampling strategy will be used to verify the result. In 1-of-2 resampling, one independent resample will be collected and evaluated within 90 days to determine whether the initial exceedance is verified. A statistically significant increase (SSI) is determined only if the resample verifies the initial exceedance (i.e., the resample also exceeds the UPL).

Further details regarding the prediction interval approach are presented in the Unified Guidance.

**CERTIFICATION**

I hereby certify that the selected statistical method is appropriate for evaluating groundwater monitoring data for the CCR management area in accordance with the requirements of 40 CFR §257.93.

  
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Chris Cunningham, P.E.

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