STATISTICAL ANALYSIS METHOD CERTIFICATION
40 CFR §257.93(f) and ADEM Admin Code r. 335-13-15-.06(4)(f)
PLANT GADSDEN ASH POND
ALABAMA POWER COMPANY

Environmental Protection Agency's (EPA's) "Disposal of Coal Combustion Residuals from Electric Utilities" Final Rule (40 CFR Part 257 and Part 261), §257.93, and Alabama Department of Environmental Management's "Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments" (ADEM Admin. Code r. 335-13-15), r. 335-13-15-.06(4)(f), require the owner or operator of an existing CCR Unit to identify a statistical method to be used in evaluating groundwater monitoring data for each specified constituent. The owner or operator 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 unit meeting the requirements and performance standards of 40 CFR §257.93 and ADEM Admin Code r. 335-13-15-.06(4)(g).

Statistical Methodology

The selected statistical method for Plant Gadsden Ash Pond was developed in accordance with 40 CFR §257.93(f) and ADEM Admin Code r. 335-13-15-.06(4)(f)1. through .5 using methodology presented in *Statistical Analysis of Groundwater Data at RCRA Facilities, Unified Guidance*, March 2009, EPA 530/R-09-007 (Unified Guidance).

For the detection monitoring program, the statistical test used to evaluate the groundwater monitoring data will be both the interwell and intrawell prediction limit (PL) method combined with a 1-of-2 or 1-of-3 resample plan, respectively. The interwell PLs pool background data from the network of upgradient wells to calculate a PL, while the intrawell PLs utilize historical data from within a given well to establish a statistical limit for comparison of compliance data at the same well. An "initial exceedance" occurs when any downgradient well data exceed the PL.

If data from a sampling event initially exceed the PL, the 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. In the 1-of-3 resampling, up to two independent resamples will be collected. If both resamples exceed the PL, the initial exceedance is verified. When the resample result does not verify the initial result, the initial exceedance is considered an erroneous result and the resample values will replace the initial

result. When the resample confirms the initial finding, a statistically significant increase (SSI) is determined. An SSI is determined only if the resample verifies the initial exceedance (i.e. the resample also exceeds the PL).

In the event a confirmed SSI over background is identified, assessment monitoring will be initiated within 90 days unless a demonstration is made within that same timeframe that the SSI resulted from a source other than the CCR Unit.

Professional Engineer's Certification

I, Gregory T. Whetstone, certify that this report was prepared under my supervision and that the information contained herein is true and accurate to the best of my knowledge. Further, based on my experience and knowledge of the site, and pursuant to 40 CFR 257.93 and ADEM Admin Code r. 335-13-15-.06(4)(f), the selected statistical methods are appropriate for evaluating groundwater monitoring data collected at the site.

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4/17/2019