Groundwater Monitoring Data Statistical Analysis Plan Certification

for the

SCE&G
Wateree Station
Ash Pond

in

Eastover, SC

County of Richland

October 17, 2017

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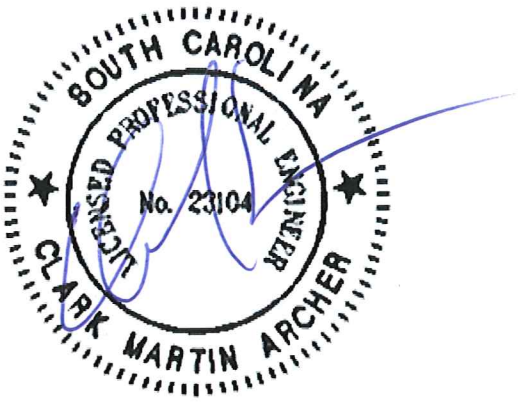
Certification

In accordance with 40 CFR Part 257.93 (f) (6) I certify that the Statistical Analysis Plan using the selected statistical methods are appropriate for evaluating the groundwater monitoring data for the Ash Pond at the Wateree Station and are appropriate for the distribution of constituents. Furthermore, the levels of confidence and percentages of population using a tolerance or prediction interval approach or using a control chart approach are at least as effective as any other approach to evaluate groundwater monitoring data.



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Background

SCANA owns and operates an Ash Pond at the Wateree Station that is subject to the Coal Combustion Residuals (CCR) Rule 40 CFR Part 257. Groundwater is monitored at this facility to ensure the protection of human health and the environment. Collected groundwater data is statistically analyzed to identify if there is a Statistically Significant Increase (SSI) above the applicable groundwater protection standard.

Narrative of Statistical Analysis Plan

The Statistical Analysis Plan (SAP) developed for the Wateree Station Ash Pond is prepared in accordance with the CCR Rule. The statistical approaches in the plan are consistent with EPA's Unified Guidance and EPRI's 2015 monitoring guidance for Detection Monitoring, Assessment Monitoring, and Corrective Action Monitoring. The SAP is developed with the goal of minimizing false positive results while maximizing groundwater protection for the site.

The SAP details the analysis approach for interwell comparison of downgradient compliance wells to upgradient background wells using box-whisker plots for initial graphical identification of outliers and data grouping as well as use of the Shapiro-Wilk method to determine normality along with the Shapiro-Francia as the data set grows.

The SAP for Detection Monitoring includes verification of resampling, passing 1 of 2 and 2 0f 2 method; processing of non-detects based on percentages with consideration to normality using ½ multiplier and Kaplan-Meier when data is parametric; and parametric/non-parametric statistical comparison tests for determination of whether or not a result is an SSI using prediction intervals and/or the Shewhart-CUSUM tests.

The SAP for Assessment Monitoring includes how Groundwater Protection Standards (GWPS) will be determined, Determination of background for constituents without MCLs or to test if background is higher than the MCL, processing of non-detects based on percentages with consideration to normality, how SSL will be evaluated when all background results are non-detect, criteria for selection of compliance data, criteria for selection of appropriate confidence intervals (e.g., parametric, non-parametric, trend-based), and criteria for determining whether or not an SSL has occurred.

The SAP for Corrective Action Monitoring includes how GWPS will be determined, determination

of background for constituents without MCLs or to test if background is higher than the MCL, how compliance will be evaluated when all background results are non-detect, criteria for selection of compliance data, criteria for selection of appropriate confidence intervals (e.g., parametric, non-parametric, trend-based), and criteria for determining whether or not the facility is in compliance. The SAP establishes criteria for periodically updating the background data set, when it should be updated and evaluation of the data to insure that new data does not reflect CCR impacts.