

19 April 2019
File No. 129420-011

SUBJECT: F.B. Culley Generating Station Selection of Statistical Procedures Certification for the West Ash Pond, Southern Indiana Gas and Electric Company (SIGECO)

Pursuant to CFR Title 40 Chapter I Subchapter I Part 257 Subpart D §257.93 (f)(6)¹, I certify that the selected statistical method described herein will be appropriate for evaluating the groundwater monitoring data for the CCR management area for the F.B. Culley West Ash Pond. This certification and the underlying evaluation to select a statistical procedure 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.

It is anticipated that a tolerance interval will be used to perform the statistical evaluation for the F.B. Culley West Ash Pond. Any change in the statistical methods will be documented in a subsequent certification once the full data set has been assessed. A tolerance interval is a concentration range, with a specified confidence level, designed to contain a pre-specified proportion (e.g., 95 percent) of the underlying population from which the statistical sample is drawn (background). The upper endpoint of a tolerance interval is called the upper tolerance limit or UTL. Depending on the data distribution, parametric or non-parametric tolerance limits procedures are used to evaluate groundwater monitoring data using this method. Parametric tolerance 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 tolerance limit. If all the background data are non-detect, a reporting limit (RL) may serve as an approximate upper tolerance limit.

Signed: 

Certifying Engineer

Print Name: Steven F. Putrich, P.E.
Indiana License No.: PE11200566
Title: CCR Program Manager
Company: Haley & Aldrich, Inc.



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."