17 October 2017
File No. 129778-004

SUBJECT: Tecumseh Energy Center – Selection of Statistical Method Certification
Bottom Ash Settling Pond and Ash Landfill 322
Westar Energy, Inc.

Westar Energy, Inc. (Westar) operates the existing coal combustion residuals (CCR) management units referred to as the Bottom Ash Settling Pond and Ash Landfill 322 at the Tecumseh Energy Center (TEC) located in Tecumseh, Kansas. 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 CCR management area groundwater monitoring data for both the Bottom Ash Settling Pond and Ash Landfill 322. Any change in the statistical methods will be documented in a subsequent certification once the full data set has been assessed. 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 an upper prediction limit (or UPL), which is a type of prediction interval tolerance interval, will be used to perform the statistical evaluation for constituents at the Bottom Ash Settling Pond and Ash Landfill 322. A prediction interval procedure is one in which concentration limits [0, PL] for each constituent is established from the distribution of the background data, with a specified confidence level (e.g., 95 percent). The upper endpoint of concentration limits is called the upper prediction limit or UPL. Depending on the background data distribution, parametric or non-parametric prediction limits procedures are used to evaluate groundwater monitoring data using this method. Parametric prediction 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 prediction limit. If all the background data are non-detect, a maximum reporting limit (RL) may serve as an approximate upper prediction limit.

Signed: _____

Certifying Engineer

Print Name: Steven F. Putrich, P.E.
Kansas License No.:   PE24363
Title: Senior Associate
Company: Haley & Aldrich, Inc.

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[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."