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17 October 2017
 File No. 129778-002

SUBJECT: Jeffrey Energy Center – Selection of Statistical Method Certification
 Bottom Ash Area 1 Impoundment, Bottom Ash Area 1 Landfill, Fly Ash Landfill, and Flue Gas Desulfurization Landfill – Westar Energy, Inc.

Westar Energy, Inc. (Westar) operates the existing coal combustion residuals (CCR) management units referred to as the Bottom Ash (BA) Area 1 Impoundment, BA Area 1 Landfill, Fly Ash (FA) Landfill, and Flue Gas Desulfurization (FGD) Landfill at the Jeffrey Energy Center (JEC) located in St. Marys, 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 the FA Landfill, FGD Landfill, and the multi-unit system at the BA Area 1 Impoundment and Landfill. 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 FA Landfill, FGD Landfill, and the multi-unit system at the BA Area 1 Impoundment and Landfill. 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.



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."