

**CERTIFICATION OF SELECTED STATISTICAL METHOD FOR  
GROUNDWATER MONITORING DATA EVALUATION  
HOOSIER ENERGY MEROM GENERATING STATION  
AREA 3 RWS I LANDFILL**

ATC Group Services LLC ("Consultant") has been retained by Hoosier Energy Rural Electric Cooperative, Inc. to prepare a narrative description of the statistical method that will be used to evaluate groundwater quality data from the detection monitoring system installed at Merom Generating Station's Area 3 RWS I Landfill to comply with 40 CFR § 257.91. A certification that the selected statistical method is appropriate for evaluating the groundwater monitoring data is also included below.

**1.0 NARRATIVE DESCRIPTION OF STATISTICAL METHOD**

Pursuant to 40 CFR § 257.90(b), owners and operators of new and existing CCR landfills, and new and existing CCR surface impoundments, and all lateral expansions of a CCR unit must install a groundwater monitoring system and begin evaluating groundwater data for statistically significant increases over background levels. 40 CFR § 257.93(f) requires owners and operators of a CCR unit to select one of the following statistical methods to be used in evaluating groundwater quality data:

1. A parametric analysis of variance followed by multiple comparison procedures
2. An analysis of variance based on ranks followed by multiple comparison procedures
3. A tolerance or prediction interval procedure
4. A control chart approach
5. Another statistical test method

The selected statistical test method must meet the performance standard in 40 CFR § 257.93(g).

Pursuant to 40 CFR 257.93(f), an intrawell control chart procedure will be used to evaluate groundwater quality at this landfill. For each parameter at each well, a combined Shewhart-CUSUM control chart will be used. Background data will be screened for outliers. Future compliance monitoring concentrations will be compared to the Shewhart limit. The procedure will allow for collection of verification resamples. Control limits will be regularly updated as new background data are available.

**2.0 LIMITATIONS**

The signature of Consultant's authorized representative on this document represents that to the best of Consultant's knowledge, information, and belief in the exercise of its professional judgment, it is Consultant's professional opinion that the aforementioned information is accurate as of the date of such signature. Any opinion or decisions by Consultant are made on the basis of Consultant's experience, qualifications, and professional judgment and are not to be construed as warranties or guaranties. In addition, opinions relating to environmental, geologic, and geotechnical conditions or other estimates are based on available data. Actual conditions may vary from those encountered at the times and locations where data are obtained, despite the use of due care.

**3.0 CERTIFICATION**

I, Donald L. Bryenton, being a Registered Professional Engineer, in accordance with the Indiana Professional Engineer's Registration, do hereby certify to the best of my knowledge, information, and belief, that the statistical method is appropriate for the CCR unit that is the subject of this certification dated October 16, 2017, meets the performance standard of 40 CFR § 257.93(g), and that this certification is true and correct and has been prepared in accordance with generally accepted good engineering practices.

SIGNATURE



DATE

10/16/17

