MEMORANDUM

Revision 1: April 19, 2024
Original: October 12, 2017

Montrose Generating Station
400 SW Highway P Road
Clinton, Missouri 64735
Evergy Metro, Inc.

SUBJECT:  Certification of Statistical Methods - 40 CFR 257.93(f)(6)
          CCR Landfill

Evergy Metro, Inc. (Evergy) operates the Montrose Generating Station near Clinton, Missouri. The CCR Landfill (CCR LF) at the station is classified as a coal combustion residual (CCR) unit under the Coal Combustion Residuals Rule (Rule) published by the United States Environmental Protection Agency (US EPA) on April 17, 2015 (US EPA, 2015, 40 CFR Part 257 Subpart D) effective October 19, 2015, and subsequent revisions.

This document addresses the requirements of 40 CFR 257.93 *Groundwater Sampling and Analysis Requirements*, specifically 257.93(f) of the Rule, requiring the selection of one of the five statistical methods identified in the Rule for evaluating groundwater monitoring data. Furthermore, 257.93(f)(6) requires the selected statistical method to be certified by a qualified professional engineer as being appropriate for evaluating the groundwater monitoring data for the CCR management area.

The selected statistical method is Prediction Limits:

> 257.93(f)(3) *A tolerance or prediction interval procedure, in which an interval for each constituent is established from the distribution of the background data and the level of each constituent in each compliance well is compared to the upper tolerance or prediction limit.*

Interwell prediction limits compare concentrations of each specified constituent for each downgradient monitoring well to a concentration limit constructed from pooled historical concentrations in upgradient/background monitoring wells. Prediction limits with retesting include retesting strategies in order to achieve a lower facility-wide false positive rate while maintaining adequate statistical power. Significant upward changes in the analyzed constituent concentrations over time identify a statistical result above the prediction limit known as a statistically significant increase (SSI) over background concentrations. This statistical approach will be applied to both detection monitoring and assessment monitoring.

Statistical evaluation will be performed using the commercially available *Sanitas for Groundwater*[©] (or similar) software program in general accordance with the USEPA's *Unified Guidance for Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities* dated March 2009 (Unified Guidance) (USEPA, 2009) and generally accepted procedures.

## Limitations

SCS Engineers has been retained by Evergy Metro, Inc. to select and certify appropriate statistical methodology to meet the requirements of 40 CFR 257.93(f). The signature of the authorized representative on this document represents that, to the best of their knowledge, information, and belief in the exercise of their professional judgment in accordance with the standard of practice, it is their professional opinion that the aforementioned information is accurate as of the date of such signature. Any opinions or decisions by them are made on the basis of their experience, qualifications, and professional judgment and are not to be construed as warranties or guarantees. In addition, opinions relating to regulatory, environmental, geologic, and geotechnical conditions interpretations or other estimates are based on available data, and actual conditions may vary from those encountered at the times and locations where data are obtained, despite the use of due care.

## Qualified Professional Engineer's Certification

I, Floyd Cotter, being a licensed Professional Engineer in the State of Missouri, hereby certify that the selected statistical method as described herein is appropriate for evaluating the groundwater monitoring data for the CCR Landfill at the Montrose Generating Station and is in accordance with generally accepted good engineering practices.
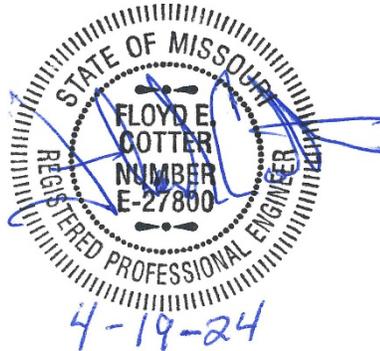
Floyd Cotter, P.E.
SCS Engineers

## Geologist's Certification

I, John R. Rockhold, being a Registered Geologist in the State of Missouri, hereby certify that the selected statistical method as described herein is appropriate for evaluating the groundwater monitoring data for the CCR Landfill at the Montrose Generating Station and is in accordance with generally accepted good groundwater monitoring practices.

John R. Rockhold, R.G.
SCS Engineers

| Revision Number | Revision Date | Summary of Revisions |
|---|---|---|
| 0 | October 12, 2017 | Original |
| 1 | April 19, 2024 | Revised the statistical method from intrawell prediction limits to interwell prediction limits. |
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