

ENGINEER CERTIFICATION

Statistical Methods Selected for Possum Point Power Station (Ponds ABC)	
Lead	Non-Parametric Tolerance Limit
Lithium	Parametric Upper Tolerance Limit
Mercury	Non-Parametric Tolerance Limit (DQR)
Molybdenum	Non-Parametric Tolerance Limit (DQR)
pH	Parametric Prediction Limit
Radium	Parametric Upper Tolerance Limit
Selenium	Non-Parametric Tolerance Limit (DQR)
Sulfate	Parametric Upper Tolerance Limit
Thallium	Non-Parametric Tolerance Limit
Total Dissolved Solids	Parametric Upper Tolerance Limit

DQR – Double Quantification Rule

As presented, the statistical test methods used for the 2021 biennial evaluation of groundwater monitoring data at the Possum Point Power Station (Ponds ABC) are based on the interwell tolerance limit methods, meaning that data from downgradient wells will be compared to upgradient background groundwater quality. Using this approach, background data from the network of upgradient wells is used to calculate an upper Tolerance Limit (TL) or an upper and lower Prediction Limit (PL; for pH) for each parameter/constituent. The background data set for each constituent/parameter was first tested for the presence of outliers. Extreme values identified during outlier testing were evaluated and removed from the dataset if warranted. The background datasets for each constituent/parameter were then tested for normality. The selected statistical method for each constituent/parameter is based on the results of normality testing. For constituent/parameter datasets that exhibited a normal or log-normal distribution, a parametric statistical procedure has been selected. For constituent/parameter datasets that exhibited a non-normal distribution, a non-parametric statistical procedure has been selected. Constituent/parameter datasets with 100 percent non-detects (mercury) use the Double Quantification Rule (DQR) in accordance with the Unified Guidance. A confirmed compliance well exceedance under the DQR is determined if any compliance well with 100 percent non-detect data exhibits quantified measurements (*i.e.*, at or above the reporting limit) in two (2) consecutive sample events.

Further details regarding the statistical methods used to evaluate the groundwater monitoring data are presented in the Unified Guidance and the groundwater monitoring plan prepared for the Unit.

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CERTIFICATION

I hereby certify that the selected statistical methods are appropriate for evaluating the groundwater monitoring data for the CCR management area in accordance with the requirements of 40 CFR §257.93.

As used herein, the word “certify” shall mean an expression of the Engineer’s professional opinion to the best of his or her information, knowledge, and belief, and does not constitute a warranty or guarantee by the Engineer.

GOLDER ASSOCIATES INC.



Ron DiFrancesco, P.E.

Principal and Practice Leader