



HALEY & ALDRICH, INC.  
6500 Rockside Road  
Suite 200  
Cleveland, OH 44131  
216.739.0555

## MEMORANDUM

14 January 2019  
File No. 130116

TO: AES Ohio Generation, LLC  
745 US Route 52  
Manchester, Ohio 45144  
Attn: Troy Williams

FROM: Haley & Aldrich, Inc.  
[Steven F. Putrich, P.E., Project Principal  
Mark Miesfeldt, P.G., Lead Hydrogeologist]

SUBJECT: Notification of Statistically Significant Levels of Appendix IV Constituents  
Pursuant to 40 CFR § 257.95(g) and 40 CFR § 257.105(h)(8)  
J.M. Stuart Station – Pond 5, Manchester, Ohio

AES Ohio Generation, LLC (AES) is implementing the 17 April 2015 U.S. Environmental Protection Agency (U.S. EPA) Federal Coal Combustion Residuals (CCR) Rule (40 CFR § 257 and 261) for the J.M. Stuart Station, in Adams County near Manchester, Ohio. AES provided Haley & Aldrich, Inc. with assessment monitoring data collected from a groundwater monitoring system constructed at Pond 5 that meets the requirements of 40 CFR §257.91 and 40 CFR §257.93. This memorandum documents the results of statistical tests conducted to determine if Appendix IV groundwater monitoring constituents detected in samples collected from wells located downgradient of Pond 5 are present at a statistically significant levels (SSL) above groundwater protection standards (GWPS) consistent with the requirements in 40 CFR § 257.95.

As required by 40 CFR § 257.95(b) and 40 CFR § 257.95(d)(1), two rounds of groundwater sampling and analysis were completed by October 15, 2018. GWPSs, pursuant to 40 CFR § 257.95(d)(2) and in accordance with Phase I, Part 1 CCR Rule Revisions dated 17 July 2018, effective 16 August 2018, were generated for each Appendix IV constituent detected during assessment monitoring. The GWPSs were set at the maximum contaminant level (MCL) or regional screening level (RSL) for those constituents that did not have a promulgated MCL since the background values for the detected Appendix IV constituents did not exceed those values.

For Pond 5, which was in assessment monitoring in 2018, analytical results from downgradient wells were compared to each respective GWPS. If the detected constituent was greater than the GWPS for that Unit, pursuant to 40 CFR § 257.93 (f)(5), the confidence interval method was used to evaluate if that Appendix IV constituent was present at a statistically significant level (SSL). The statistical

procedures chosen to evaluate the assessment monitoring results differ from the procedures certified to evaluate the detection monitoring results. As a result, and as required by 40 CFR § 257.93 (f)(5), the certification of the statistical method for the Pond 5 has been updated and is provided with this notification as Attachment A.

Consistent with the Unified Guidance and in response to the certified Alternative Source Determination (ASD) conducted for arsenic, an intra-well statistical analysis, which compares the most recent background values calculated for arsenic in the individual wells, was performed. Since the ASD did not address the other detected Appendix IV constituents, they were evaluated using an inter-well statistical analysis, which compares the most recent assessment monitoring results to background. The results of the statistical analyses conducted for those detected Appendix IV constituents indicate that barium, cobalt and radium are present at statistically significant levels above GWPSs in one or more wells downgradient of Pond 5. A summary of the assessment monitoring sampling results and the statistical analysis is provided with this notification as Attachment B.

Enclosures:

Attachment A – Selection of Statistical Procedures Certification for Pond 5

Attachment B – Summary of Assessment Monitoring Sampling Results and Statistical Analysis

**ATTACHMENT A**

**Selection of Statistical Procedures Certification for Pond 5**



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6500 Rockside Road  
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SUBJECT: Selection of Statistical Procedures Certification for Pond 5  
AES Ohio Generation, LLC (AES)  
J.M. Stuart Station, Manchester, Ohio

Pursuant to CFR Title 40 Chapter I Subchapter I Part 257 Subpart D §257.93 (f)(6)<sup>1</sup>, I certify that the selected statistical method described herein will be appropriate for evaluating the groundwater monitoring data collected for detection and assessment monitoring for the CCR management area for J.M. Stuart Station (JMSS) Pond 5. 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 a tolerance interval is a concentration range, with a specified confidence level, designed to contain a pre-specified proportion (e.g., 95 percent) of the underlying population from which the statistical sample is drawn (background). The upper endpoint of a tolerance interval is called the upper tolerance limit or UTL. Depending on the data distribution, parametric or non-parametric tolerance limits procedures are used to evaluate groundwater monitoring data using this method. Parametric tolerance 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 tolerance limit. If all the background data are non-detect, a reporting limit (RL) may serve as an approximate upper tolerance limit.


Groundwater protection standards (GWPS), generated pursuant to 40 CFR § 257.95(d)(2) and in accordance with Phase I, Part 1 CCR Rule Revisions dated 17 July 2018, effective 16 August 2018, were generated for each Appendix IV constituent detected during assessment monitoring at JMSS Pond 5. Analytical results from downgradient wells will be compared to each respective GWPS. If a constituent is greater than the GWPS for that Unit, pursuant to 40 CFR § 257.93 (f)(5), the confidence interval method will be used to evaluate if that Appendix IV constituent is present at a statistically significant level (SSL).

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<sup>1</sup> "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."

Specifically, the lower confidence limit (LCL) from each downgradient well will be compared to the GWPS. A confidence interval is an estimated concentration range intended to contain true mean or median of the population from which the sample is drawn. The confidence interval range is designed to locate the true population mean or median with a high degree of statistical confidence or conversely, with a low probability of error. The LCL is the lower end of the confidence interval range. A LCL greater than the GWPS would indicate a SSL for that constituent. By requiring that a LCL be used as the basis of comparison, the statistical test will account for data variability and ensure that the potential statistical exceedance is unlikely to have occurred by chance. A parametric confidence interval on the mean is used if the data is normal with or without transformation. If no transformation is appropriate, the non-parametric confidence interval on the median is used. Pursuant to 40 CFR § 257.93 (g)(2), if an individual well comparison procedure is used to compare an individual compliance well constituent concentration with background constituent concentrations or a groundwater protection standard, the test shall be done at a Type I error level no less than 0.01 for each testing period. If a multiple comparison procedure is used, the Type I experiment error rate for each testing period shall be no less than 0.05; however, the Type I error of no less than 0.01 for individual well comparisons will be maintained.

Any change in the statistical methods will be documented in a subsequent certification, if necessary and appropriate.

Signed:   
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Certifying Engineer

Print Name: Steven F. Putrich, P.E.  
Ohio License No.: 67329  
Title: Vice President  
Company: Haley & Aldrich, Inc.

Professional Engineer's Seal



**ATTACHMENT B**  
**Summary of Assessment Monitoring Sampling Results**  
**And Statistical Analysis**

**TABLE 1**  
**SUMMARY OF ANALYTICAL RESULTS**  
**J.M. STUART STATION - POND 5**  
**AES OHIO GENERATION LLC, MANCHESTER, OHIO**

| Chemical Group                  |             |                   | Assessment Monitoring - EPA Appendix IV Constituents |                |               |                  |                |                 |                  |               |               |                |                |                   |                 | Radiological    |                        |                        |
|---------------------------------|-------------|-------------------|--|----------------|---------------|------------------|----------------|-----------------|------------------|---------------|---------------|----------------|----------------|-------------------|-----------------|-----------------|------------------------|------------------------|
| Chemical Name                   |             |                   | Antimony, Total                                      | Arsenic, Total | Barium, Total | Beryllium, Total | Cadmium, Total | Chromium, Total | Cobalt, Total    | Fluoride      | Lead, Total   | Lithium, Total | Mercury, Total | Molybdenum, Total | Selenium, Total | Thallium, Total | Radium-226 & 228       |                        |
| Groundwater Protection Standard |             |                   | 0.006  | 0.01           | 2             | 0.004            | 0.005          | 0.1             | 0.006            | 4             | 0.015         | 0.04           | 0.002          | 0.1               | 0.05            | 0.002           | 5                      |                        |
| US EPA MCL                      |             |                   | 0.006  | 0.01           | 2             | 0.004            | 0.005          | 0.1             |                  | 4             |               |                | 0.002          |                   | 0.05            | 0.002           | 5                      |                        |
| US EPA RSL                      |             |                   |  |                |               |                  |                |                 | 0.006            |               | 0.015         | 0.04           |                | 0.1               |                 |                 |                        |                        |
| Units                           |             |                   | mg/L   | mg/L           | mg/L          | mg/L             | mg/L           | mg/L            | mg/L             | mg/L          | mg/L          | mg/L           | mg/L           | mg/L              | mg/L            | mg/L            | pCi/L                  |                        |
| Well Location                   | Sample Date | Sample Name       |  |                |               |                  |                |                 |                  |               |               |                |                |                   |                 |                 |                        |                        |
| Upgradient                      | MW11-10     | 05/22/2018        | MW11-10-052218-1036                                  | < 0.002        | < 0.005       | <b>0.06</b>      | < 0.001        | < 0.001         | < 0.002          | < 0.001       | <b>0.16</b>   | < 0.001        | < 0.008        | < 0.0002          | < 0.01          | < 0.005         | < 0.001                | 0.268 U ± 0.247        |
|                                 | MW11-10     | 08/21/2018        | MW11-10-082118-1215                                  | -              | -             | <b>0.071</b>     | -              | -               | < 0.0028         | < 0.001       | <b>0.17</b>   | < 0.001        | < 0.008        | -                 | < 0.005         | < 0.005         | -                      | 0.808 R ± 0.25         |
|                                 | MW11-9      | 05/21/2018        | MW11-9-052118-1300                                   | < 0.002        | < 0.005       | <b>0.068</b>     | < 0.001        | < 0.001         | < 0.002          | < 0.001       | <b>0.12</b>   | < 0.001        | < 0.008        | < 0.0002          | < 0.01          | < 0.005         | < 0.001                | <b>0.525 ± 0.261</b>   |
|                                 | MW11-9      | 08/21/2018        | MW11-9-082118-1345                                   | -              | -             | <b>0.064</b>     | -              | -               | < 0.0026         | < 0.001       | <b>0.13</b>   | < 0.001        | < 0.008        | -                 | < 0.005         | < 0.005         | -                      | 0.468 R ± 0.244        |
| Downgradient                    | MW5-1       | 05/15/2018        | MW5-1-051518-1347                                    | < 0.002        | <b>0.012</b>  | <b>0.18</b>      | < 0.001        | < 0.001         | <b>0.0028</b>    | <b>0.0059</b> | <b>0.14</b>   | <b>0.0018</b>  | < 0.008        | < 0.0002          | < 0.005         | < 0.005         | < 0.001                | 0.393 UJ ± 0.261       |
|                                 | MW5-1       | 08/28/2018        | MW5-1-082818-0955                                    | -              | <b>0.012</b>  | <b>0.15</b>      | -              | -               | < 0.0029         | <b>0.0041</b> | <b>0.14</b>   | < 0.001        | < 0.008        | -                 | < 0.005         | -               | -                      | <b>1.38 ± 0.442</b>    |
|                                 | MW5-2       | 05/15/2018        | MW5-2-051518-1600                                    | < 0.002        | <b>0.024</b>  | <b>0.93</b>      | < 0.001        | < 0.001         | < 0.002          | <b>0.0035</b> | <b>0.35</b>   | < 0.001        | < 0.008        | < 0.0002          | <b>0.026</b>    | < 0.005         | < 0.001                | <b>1.52 ± 0.319</b>    |
|                                 | MW5-2       | 08/28/2018        | MW5-2-082818-1115                                    | -              | <b>0.053</b>  | <b>1.2</b>       | -              | -               | < 0.0024         | <b>0.0022</b> | <b>0.38</b>   | < 0.001        | < 0.008        | -                 | <b>0.022</b>    | -               | -                      | <b>1.94 ± 0.351</b>    |
|                                 | MW5-3       | 05/16/2018        | MW5-3-051618-1411                                    | < 0.002        | <b>0.076</b>  | <b>2.6</b>       | < 0.001        | < 0.001         | < 0.002          | <b>0.031</b>  | <b>0.42</b>   | <b>0.0013</b>  | < 0.008        | < 0.0002          | <b>0.0091</b>   | < 0.005         | < 0.001                | <b>6.87 ± 0.823</b>    |
|                                 | MW5-3       | 08/28/2018        | MW5-3-082818-1035                                    | -              | <b>0.067</b>  | <b>2.6</b>       | -              | -               | < 0.0026         | <b>0.029</b>  | <b>0.45</b>   | < 0.001        | < 0.008        | -                 | <b>0.0098</b>   | -               | -                      | <b>7.13 ± 0.748</b>    |
|                                 | MW5-4       | 05/16/2018        | MW5-4-051618-1609                                    | < 0.002        | <b>0.09</b>   | <b>0.57</b>      | < 0.001        | < 0.001         | <b>0.0021</b>    | <b>0.0028</b> | <b>0.33</b>   | <b>0.0027</b>  | < 0.008        | < 0.0002          | < 0.005         | < 0.005         | < 0.001                | <b>1.57 ± 0.485</b>    |
|                                 | MW5-4       | 08/27/2018        | MW5-4-082718-1720                                    | -              | <b>0.076</b>  | <b>0.54</b>      | -              | -               | < 0.0027         | < 0.001       | <b>0.29</b>   | < 0.001        | < 0.008        | -                 | < 0.005         | -               | -                      | <b>2.3 ± 0.482</b>     |
|                                 | MW5-5       | 05/16/2018        | MW5-5-051618-1202                                    | < 0.002        | <b>0.084</b>  | <b>0.74</b>      | < 0.001        | < 0.001         | <b>0.0081</b>    | <b>0.029</b>  | <b>0.13</b>   | <b>0.0057</b>  | <b>0.012</b>   | < 0.0002          | <b>0.0063</b>   | < 0.005         | < 0.001                | <b>1.82 ± 0.517</b>    |
|                                 | MW5-5       | 08/28/2018        | MW5-5-082818-1230                                    | -              | <b>0.1</b>    | <b>0.78</b>      | -              | -               | <b>0.0063 J+</b> | <b>0.021</b>  | <b>0.22</b>   | <b>0.0046</b>  | < 0.008        | -                 | < 0.005         | -               | -                      | <b>2.61 ± 0.571</b>    |
|                                 | MW5-6       | 05/17/2018        | MW5-6-051718-1216                                    | < 0.002        | < 0.005       | <b>0.12</b>      | < 0.001        | < 0.001         | < 0.002          | <b>0.0051</b> | <b>0.23</b>   | < 0.001        | <b>0.014</b>   | < 0.0002          | < 0.005         | < 0.005         | < 0.001                | <b>0.516 ± 0.288</b>   |
|                                 | MW5-6       | 08/27/2018        | MW5-6-082718-1605                                    | -              | < 0.005       | <b>0.07</b>      | -              | -               | < 0.0038         | <b>0.0059</b> | <b>0.33</b>   | <b>0.0036</b>  | <b>0.013</b>   | -                 | < 0.005         | -               | -                      | <b>1.16 J+ ± 0.384</b> |
| MW5-7                           | 05/17/2018  | MW5-7-051718-1544 | < 0.002  | < 0.005        | <b>0.053</b>  | < 0.001          | < 0.001        | < 0.002         | < 0.001          | <b>0.37</b>   | < 0.001       | < 0.008        | < 0.0002       | < 0.005           | < 0.005         | < 0.001         | 0.289 U ± 0.264        |                        |
| MW5-7                           | 08/27/2018  | MW5-7-082718-1315 | -  | < 0.005        | <b>0.057</b>  | -                | -              | < 0.0026        | <b>0.0016</b>    | <b>0.39</b>   | <b>0.0013</b> | < 0.008        | -              | < 0.005           | -               | -               | <b>1.39 J+ ± 0.483</b> |                        |

**NOTES:**

**Bold** indicates concentration detected above laboratory reporting limit  
 mg/L: milligram per liter  
 MCL: Maximum Contaminant Level  
 pCi/L: picoCurie per liter  
 RSL: Regional Screening Level  
 US EPA: United States Environmental Protection Agency

**TABLE 2**  
**SUMMARY OF ASSESSMENT MONITORING STATISTICAL ANALYSIS**  
**J.M. STUART STATION - POND 5**  
**AES OHIO GENERATION, LLC - MANCHESTER, OHIO**

| Location Id                                     | Frequency of Detection | Percent Non-Detects | Range of Non-Detect | Mean | 50th Percentile (Median) | 95th Percentile | Maximum Detect | Variance | Standard Deviation | Coefficient of Variance | CCR MCL/RSL | Report Result Unit | Compliance Samples          |                                 |                                     | Trend      | Distribution Well* | Inter-well Analysis    |                       |   | Intra-well Analysis                            |       |                        |  |
|---|------------------------|---------------------|---------------------|------|--------------------------|-----------------|----------------|----------|--------------------|-------------------------|-------------|--------------------|-----------------------------|---------------------------------|-------------------------------------|------------|--------------------|------------------------|-----------------------|---|--|-------|------------------------|--|
|   |                        |                     |                     |      |                          |                 |                |          |                    |                         |             |                    | Detection Exceedances (Y/N) | Number of Detection Exceedances | Number of Non-Detection Exceedances |            |                    | Lower Confidence Limit | Upper Tolerance Limit | Background Limit (Higher of MCL/RSL or Upper Tolerance Limit) | Exceedance above Background at Individual Well | SSL   | Upper Prediction Limit | Exceedance above Background at Individual Well |
| <b>CCR Appendix-IV: Antimony, Total (µg/L)</b>  |                        |                     |                     |      |                          |                 |                |          |                    |                         |             |                    |                             |                                 |                                     |            |                    |                        |                       |   |  |       |                        |  |
| MW11-10   | 0/10                   | 100%                | 2-2                 | 2    | 2                        | 2               |                | 0        | 0                  | 0                       | 6           | µg/L               | N                           | 0                               | 0                                   | NA         | Non-parametric     |                        | 2.0                   | 6.0   |  |       |                        |  |
| MW11-9  | 0/10                   | 100%                | 2-2                 | 2    | 2                        | 2               |                | 0        | 0                  | 0                       | 6           | µg/L               | N                           | 0                               | 0                                   | NA         |                    |                        |                       |   |  |       |                        |  |
| MW5-1   | 0/10                   | 100%                | 2-2                 | 2    | 2                        | 2               |                | 0        | 0                  | 0                       | 6           | µg/L               | N                           | 0                               | 0                                   | NA         |                    |                        | 2.000                 |   |  | N     | FALSE                  |  |
| MW5-2   | 0/10                   | 100%                | 2-2                 | 2    | 2                        | 2               |                | 0        | 0                  | 0                       | 6           | µg/L               | N                           | 0                               | 0                                   | NA         |                    |                        | 2.000                 |   |  | N     | FALSE                  |  |
| MW5-3   | 0/10                   | 100%                | 2-2                 | 2    | 2                        | 2               |                | 0        | 0                  | 0                       | 6           | µg/L               | N                           | 0                               | 0                                   | NA         |                    |                        | 2.000                 |   |  | N     | FALSE                  |  |
| MW5-4   | 0/10                   | 100%                | 2-2                 | 2    | 2                        | 2               |                | 0        | 0                  | 0                       | 6           | µg/L               | N                           | 0                               | 0                                   | NA         |                    |                        | 2.000                 |   |  | N     | FALSE                  |  |
| MW5-5   | 0/10                   | 100%                | 2-2                 | 2    | 2                        | 2               |                | 0        | 0                  | 0                       | 6           | µg/L               | N                           | 0                               | 0                                   | NA         |                    |                        | 2.000                 |   |  | N     | FALSE                  |  |
| MW5-6   | 0/10                   | 100%                | 2-2                 | 2    | 2                        | 2               |                | 0        | 0                  | 0                       | 6           | µg/L               | N                           | 0                               | 0                                   | NA         |                    |                        | 2.000                 |   |  | N     | FALSE                  |  |
| MW5-7   | 0/10                   | 100%                | 2-2                 | 2    | 2                        | 2               |                | 0        | 0                  | 0                       | 6           | µg/L               | N                           | 0                               | 0                                   | NA         |                    | 2.000                  |                       |   | N  | FALSE |                        |  |
| <b>CCR Appendix-IV: Arsenic, Total (µg/L)</b>   |                        |                     |                     |      |                          |                 |                |          |                    |                         |             |                    |                             |                                 |                                     |            |                    |                        |                       |   |  |       |                        |  |
| MW11-10   | 0/10                   | 100%                | 5-5                 | 5    | 5                        | 5               |                | 0        | 0                  | 0                       | 10          | µg/L               | N                           | 0                               | 0                                   | NA         | Non-parametric     |                        | 5.0                   | 10.0  |  |       |                        |  |
| MW11-9  | 0/10                   | 100%                | 5-5                 | 5    | 5                        | 5               |                | 0        | 0                  | 0                       | 10          | µg/L               | N                           | 0                               | 0                                   | NA         |                    |                        |                       |   |  |       |                        |  |
| MW5-1   | 11/11                  | 0%                  | -                   | 8.82 | 8.2                      | 13.5            | 15             | 11.09    | 3.33               | 0.3776                  | 10          | µg/L               | Y                           | 2                               | 0                                   | Stable     | Normal             | 7.050                  |                       |   | N  | FALSE | 22.191                 |  |
| MW5-2   | 11/11                  | 0%                  | -                   | 45.5 | 44                       | 58              | 63             | 91.07    | 9.543              | 0.21                    | 10          | µg/L               | Y                           | 2                               | 0                                   | Stable     | Normal             | 39.881                 |                       |   | Y  | TRUE  | 76.264                 |  |
| MW5-3   | 11/11                  | 0%                  | -                   | 65.6 | 64                       | 75              | 76             | 27.65    | 5.259              | 0.08012                 | 10          | µg/L               | Y                           | 2                               | 0                                   | Stable     | Normal             | 63.273                 |                       |   | Y  | TRUE  | 83.039                 |  |
| MW5-4   | 11/11                  | 0%                  | -                   | 74.5 | 76                       | 86              | 90             | 71.87    | 8.478              | 0.1139                  | 10          | µg/L               | Y                           | 2                               | 0                                   | Stable     | Normal             | 69.892                 |                       |   | Y  | TRUE  | 104.462                |  |
| MW5-5   | 11/11                  | 0%                  | -                   | 96.2 | 93                       | 145             | 150            | 1593     | 39.91              | 0.415                   | 10          | µg/L               | Y                           | 2                               | 0                                   | Stable     | Normal             | 69.974                 |                       |   | Y  | TRUE  | 287.592                |  |
| MW5-6   | 0/11                   | 100%                | 5-5                 | 5    | 5                        | 5               |                | 0        | 0                  | 0                       | 10          | µg/L               | N                           | 0                               | 0                                   | NA         | Non-parametric     | 5.000                  |                       |   | N  | FALSE | 5.000                  |  |
| MW5-7   | 0/11                   | 100%                | 5-5                 | 5    | 5                        | 5               |                | 0        | 0                  | 0                       | 10          | µg/L               | N                           | 0                               | 0                                   | NA         | Non-parametric     | 5.000                  |                       |   | N  | FALSE | 5.000                  |  |
| <b>CCR Appendix-IV: Barium, Total (µg/L)</b>    |                        |                     |                     |      |                          |                 |                |          |                    |                         |             |                    |                             |                                 |                                     |            |                    |                        |                       |   |  |       |                        |  |
| MW11-10   | 11/11                  | 0%                  | -                   | 65.7 | 62                       | 79              | 87             | 63.82    | 7.989              | 0.1215                  | 2000        | µg/L               | N                           | 0                               | 0                                   | Stable     | Non-parametric     |                        | 78.4                  | 2000.0  |  |       |                        |  |
| MW11-9  | 11/11                  | 0%                  | -                   | 69.2 | 69                       | 73.5            | 74             | 10.56    | 3.25               | 0.04698                 | 2000        | µg/L               | N                           | 0                               | 0                                   | Stable     |                    |                        |                       |   |  |       |                        |  |
| MW5-1   | 11/11                  | 0%                  | -                   | 184  | 180                      | 230             | 240            | 965.5    | 31.07              | 0.1692                  | 2000        | µg/L               | N                           | 0                               | 0                                   | Decreasing |                    |                        | 168.182               |   |  | N     | FALSE                  |  |
| MW5-2   | 11/11                  | 0%                  | -                   | 1290 | 1300                     | 1500            | 1600           | 30650    | 175.1              | 0.1353                  | 2000        | µg/L               | N                           | 0                               | 0                                   | Stable     |                    |                        | 1190.000              |   |  | N     | FALSE                  |  |
| MW5-3   | 11/11                  | 0%                  | -                   | 2360 | 2400                     | 2700            | 2700           | 142500   | 377.6              | 0.1597                  | 2000        | µg/L               | Y                           | 2                               | 0                                   | Stable     |                    |                        | 2054.545              |   |  | Y     | TRUE                   |  |
| MW5-4   | 11/11                  | 0%                  | -                   | 608  | 600                      | 700             | 720            | 3396     | 58.28              | 0.09582                 | 2000        | µg/L               | N                           | 0                               | 0                                   | Stable     |                    |                        | 578.743               |   |  | N     | FALSE                  |  |
| MW5-5   | 11/11                  | 0%                  | -                   | 903  | 930                      | 1150            | 1200           | 35340    | 188                | 0.2083                  | 2000        | µg/L               | N                           | 0                               | 0                                   | Stable     |                    |                        | 779.287               |   |  | N     | FALSE                  |  |
| MW5-6   | 11/11                  | 0%                  | -                   | 66.4 | 59                       | 103.5           | 120            | 448.1    | 21.17              | 0.319                   | 2000        | µg/L               | N                           | 0                               | 0                                   | Stable     |                    |                        | 58.066                |   |  | N     | FALSE                  |  |
| MW5-7   | 11/11                  | 0%                  | -                   | 52.1 | 53                       | 71.5            | 77             | 145.1    | 12.05              | 0.2312                  | 2000        | µg/L               | N                           | 0                               | 0                                   | Stable     |                    | 46.000                 |                       |   | N  | FALSE |                        |  |
| <b>CCR Appendix-IV: Beryllium, Total (µg/L)</b> |                        |                     |                     |      |                          |                 |                |          |                    |                         |             |                    |                             |                                 |                                     |            |                    |                        |                       |   |  |       |                        |  |
| MW11-10   | 0/10                   | 100%                | 1-1                 | 1    | 1                        | 1               |                | 0        | 0                  | 0                       | 4           | µg/L               | N                           | 0                               | 0                                   | NA         | Non-parametric     |                        | 1.0                   | 4.0   |  |       |                        |  |
| MW11-9  | 0/10                   | 100%                | 1-1                 | 1    | 1                        | 1               |                | 0        | 0                  | 0                       | 4           | µg/L               | N                           | 0                               | 0                                   | NA         |                    |                        |                       |   |  |       |                        |  |
| MW5-1   | 0/10                   | 100%                | 1-1                 | 1    | 1                        | 1               |                | 0        | 0                  | 0                       | 4           | µg/L               | N                           | 0                               | 0                                   | NA         |                    |                        | 1.000                 |   |  | N     | FALSE                  |  |
| MW5-2   | 0/10                   | 100%                | 1-1                 | 1    | 1                        | 1               |                | 0        | 0                  | 0                       | 4           | µg/L               | N                           | 0                               | 0                                   | NA         |                    |                        | 1.000                 |   |  | N     | FALSE                  |  |
| MW5-3   | 0/10                   | 100%                | 1-1                 | 1    | 1                        | 1               |                | 0        | 0                  | 0                       | 4           | µg/L               | N                           | 0                               | 0                                   | NA         |                    |                        | 1.000                 |   |  | N     | FALSE                  |  |
| MW5-4   | 0/10                   | 100%                | 1-1                 | 1    | 1                        | 1               |                | 0        | 0                  | 0                       | 4           | µg/L               | N                           | 0                               | 0                                   | NA         |                    |                        | 1.000                 |   |  | N     | FALSE                  |  |
| MW5-5   | 0/10                   | 100%                | 1-1                 | 1    | 1                        | 1               |                | 0        | 0                  | 0                       | 4           | µg/L               | N                           | 0                               | 0                                   | NA         |                    |                        | 1.000                 |   |  | N     | FALSE                  |  |
| MW5-6   | 0/10                   | 100%                | 1-1                 | 1    | 1                        | 1               |                | 0        | 0                  | 0                       | 4           | µg/L               | N                           | 0                               | 0                                   | NA         |                    |                        | 1.000                 |   |  | N     | FALSE                  |  |
| MW5-7   | 0/10                   | 100%                | 1-1                 | 1    | 1                        | 1               |                | 0        | 0                  | 0                       | 4           | µg/L               | N                           | 0                               | 0                                   | NA         |                    | 1.000                  |                       |   | N  | FALSE |                        |  |
| <b>CCR Appendix-IV: Cadmium, Total (µg/L)</b>   |                        |                     |                     |      |                          |                 |                |          |                    |                         |             |                    |                             |                                 |                                     |            |                    |                        |                       |   |  |       |                        |  |
| MW11-10   | 0/10                   | 100%                | 1-1                 | 1    | 1                        | 1               |                | 0        | 0                  | 0                       | 5           | µg/L               | N                           | 0                               | 0                                   | NA         | Non-parametric     |                        | 1.0                   | 5.0   |  |       |                        |  |
| MW11-9  | 0/10                   | 100%                | 1-1                 | 1    | 1                        | 1               |                | 0        | 0                  | 0                       | 5           | µg/L               | N                           | 0                               | 0                                   | NA         |                    |                        |                       |   |  |       |                        |  |
| MW5-1   | 0/10                   | 100%                | 1-1                 | 1    | 1                        | 1               |                | 0        | 0                  | 0                       | 5           | µg/L               | N                           | 0                               | 0                                   | NA         |                    |                        | 1.000                 |   |  | N     | FALSE                  |  |
| MW5-2   | 0/10                   | 100%                | 1-1                 | 1    | 1                        | 1               |                | 0        | 0                  | 0                       | 5           | µg/L               | N                           | 0                               | 0                                   | NA         |                    |                        | 1.000                 |   |  | N     | FALSE                  |  |
| MW5-3   | 0/10                   | 100%                | 1-1                 | 1    | 1                        | 1               |                | 0        | 0                  | 0                       | 5           | µg/L               | N                           | 0                               | 0                                   | NA         |                    |                        | 1.000                 |   |  | N     | FALSE                  |  |
| MW5-4   | 0/10                   | 100%                | 1-1                 | 1    | 1                        | 1               |                | 0        | 0                  | 0                       | 5           | µg/L               | N                           | 0                               | 0                                   | NA         |                    |                        | 1.000                 |   |  | N     | FALSE                  |  |
| MW5-5   | 0/10                   | 100%                | 1-1                 | 1    | 1                        | 1               |                | 0        | 0                  | 0                       | 5           | µg/L               | N                           | 0                               | 0                                   | NA         |                    |                        | 1.000                 |   |  | N     | FALSE                  |  |
| MW5-6   | 2/10                   | 80%                 | 1-1                 | 1.06 | 1                        | 1.32            | 1.5            | 0.02489  | 0.1578             | 0.1488                  | 5           | µg/L               | N                           | 0                               | 0                                   | NA         |                    |                        | 1.000                 |   |  | N     | FALSE                  |  |
| MW5-7   | 0/10                   | 100%                | 1-1                 | 1    | 1                        | 1               |                | 0        | 0                  | 0                       | 5           | µg/L               | N                           | 0                               | 0                                   | NA         |                    | 1.000                  |                       |   | N  | FALSE |                        |  |
| <b>CCR Appendix-IV: Chromium, Total (µg/L)</b>  |                        |                     |                     |      |                          |                 |                |          |                    |                         |             |                    |                             |                                 |                                     |            |                    |                        |                       |   |  |       |                        |  |
| MW11-10   | 0/11                   | 100%                | 2-2.8               | 2.07 | 2                        | 2.4             |                | 0.05818  | 0.2412             | 0.1164                  | 100         | µg/L               | N                           | 0                               | 0                                   | NA         | Non-parametric     |                        | 2.8                   | 100.0   |  |       |                        |  |
| MW11-9  | 0/11                   | 100%                | 2-2.6               | 2.05 | 2                        | 2.3             |                | 0.03273  | 0.1809             | 0.08805                 | 100         | µg/L               | N                           | 0                               | 0                                   | NA         |                    |                        |                       |   |  |       |                        |  |
| MW5-1   | 4/11                   | 64%                 | 2-2.9               | 2.32 | 2                        | 2.85            | 2.8            | 0.1656   | 0.407              | 0.1756                  | 100         | µg/L               | N                           | 0                               | 0                                   | Stable     |                    |                        | 2.109                 |   |  | N     | FALSE                  |  |
| MW5-2   | 0/11                   | 100%                | 2-2.4               | 2.04 | 2                        | 2.2             |                | 0.01455  | 0.1206             | 0.05923                 | 100         | µg/L               | N                           | 0                               | 0                                   | NA         |                    |                        | 2.000                 |   |  | N     | FALSE                  |  |
| MW5-3   | 1/11                   | 91%                 | 2-2.6               | 2.06 | 2                        | 2.35            | 2.1            | 0.03255  | 0.1804             | 0.08742                 | 100         | µg/L               | N                           | 0                               | 0                                   | NA         |                    |                        | 2.000                 |   |  | N     | FALSE                  |  |
| MW5-4   | 2/11                   | 82%                 | 2-2.7               | 2.14 | 2                        | 2.7             | 2.7            | 0.07855  | 0.2803             | 0.1312                  | 100         | µg/L               | N                           | 0                               | 0                                   | NA         |                    |                        | 2.009                 |   |  | N     | FALSE                  |  |
| MW5-5   | 9/11                   | 18%                 | 2-2                 | 3.55 | 2.7                      | 7.2             | 8.1            | 4.133    | 2.033              | 0.5734                  | 100         | µg/L               | N                           | 0                               | 0                                   | Stable     |                    |                        | 2.855                 |   |  | N     | FALSE                  |  |
| MW5-6   | 3/11                   | 73%                 | 2-3.8               | 2.38 | 2                        | 3.75            | 3.7            | 0.5016   | 0.7083             | 0.2974                  | 100         | µg/L               | N                           | 0                               | 0                                   | Stable     |                    |                        | 2.064                 |   |  | N     | FALSE                  |  |
| MW5-7   | 0/11                   | 100%                | 2-2.6               | 2.05 | 2                        | 2.3             |                | 0.03273  | 0.1809             | 0.08805                 | 100         | µg/L               | N                           | 0                               | 0                                   | NA         |                    | 2.000                  |                       |   | N  | FALSE |                        |  |



**TABLE 2**  
**SUMMARY OF ASSESSMENT MONITORING STATISTICAL ANALYSIS**  
**J.M. STUART STATION - POND 5**  
**AES OHIO GENERATION, LLC - MANCHESTER, OHIO**

| Location Id                                      | Frequency of Detection | Percent Non-Detects | Range of Non-Detect | Mean  | 50th Percentile (Median) | 95th Percentile | Compliance Samples |           |                    |                         |             |                    |                             | Trend | Distribution Well* | Inter-well Analysis             |                                     |                        | Intra-well Analysis   |   | SSL |  |                        |  |
|--|------------------------|---------------------|---------------------|-------|--------------------------|-----------------|--------------------|-----------|--------------------|-------------------------|-------------|--------------------|-----------------------------|-------|--------------------|---------------------------------|-------------------------------------|------------------------|-----------------------|---|-----|--|------------------------|--|
|  |                        |                     |                     |       |                          |                 | Maximum Detect     | Variance  | Standard Deviation | Coefficient of Variance | CCR MCL/RSL | Report Result Unit | Detection Exceedances (Y/N) |       |                    | Number of Detection Exceedances | Number of Non-Detection Exceedances | Lower Confidence Limit | Upper Tolerance Limit | Background Limit (Higher of MCL/RSL or Upper Tolerance Limit) |     | Exceedance above Background at Individual Well | Upper Prediction Limit | Exceedance above Background at Individual Well |
| <b>CCR Appendix-IV: Cobalt, Total (µg/L)</b>     |                        |                     |                     |       |                          |                 |                    |           |                    |                         |             |                    |                             |       |                    |                                 |                                     |                        |                       |   |     |  |                        |  |
| MW11-10  | 0/11                   | 100%                | 1-1                 | 1     | 1                        | 1               |                    | 0         | 0                  | 0                       | 6           | µg/L               | N                           | 0     | 0                  | NA                              | Non-parametric                      |                        | 1.0                   | 6.0   |     |  |                        |  |
| MW11-9   | 0/11                   | 100%                | 1-1                 | 1     | 1                        | 1               |                    | 0         | 0                  | 0                       | 6           | µg/L               | N                           | 0     | 0                  | NA                              |                                     |                        |                       |   |     |  |                        |  |
| MW5-1  | 11/11                  | 0%                  | -                   | 5.89  | 5.9                      | 7.25            | 7.6                | 1.219     | 1.104              | 0.1874                  | 6           | µg/L               | N                           | 0     | 0                  | Stable                          |                                     | 5.219                  |                       |   | N   | FALSE  |                        |  |
| MW5-2  | 9/11                   | 18%                 | 1-1                 | 1.73  | 1.5                      | 3.2             | 3.5                | 0.6822    | 0.8259             | 0.4782                  | 6           | µg/L               | N                           | 0     | 0                  | Stable                          |                                     | 1.432                  |                       |   | N   | FALSE  |                        |  |
| MW5-3  | 11/11                  | 0%                  | -                   | 24.4  | 26                       | 32              | 33                 | 51.44     | 7.172              | 0.2942                  | 6           | µg/L               | Y                           | 2     | 0                  | Stable                          |                                     | 19.549                 |                       |   | Y   | TRUE   |                        |  |
| MW5-4  | 5/11                   | 55%                 | 1-1                 | 1.54  | 1                        | 3.5             | 4.2                | 1.061     | 1.03               | 0.6703                  | 6           | µg/L               | N                           | 0     | 0                  | Stable                          |                                     | 1.118                  |                       |   | N   | FALSE  |                        |  |
| MW5-5  | 11/11                  | 0%                  | -                   | 21.5  | 21                       | 27.5            | 29                 | 19.27     | 4.39               | 0.2038                  | 6           | µg/L               | Y                           | 2     | 0                  | Stable                          |                                     | 19.273                 |                       |   | Y   | TRUE   |                        |  |
| MW5-6  | 11/11                  | 0%                  | -                   | 3.58  | 3                        | 6               | 6.1                | 2.154     | 1.468              | 0.4097                  | 6           | µg/L               | N                           | 0     | 0                  | Stable                          |                                     | 2.855                  |                       |   | N   | FALSE  |                        |  |
| MW5-7  | 4/11                   | 64%                 | 1-1                 | 1.15  | 1                        | 1.7             | 1.8                | 0.08273   | 0.2876             | 0.2491                  | 6           | µg/L               | N                           | 0     | 0                  | Stable                          |                                     | 1.055                  |                       |   | N   | FALSE  |                        |  |
| <b>CCR Appendix-IV: Fluoride (µg/L)</b>          |                        |                     |                     |       |                          |                 |                    |           |                    |                         |             |                    |                             |       |                    |                                 |                                     |                        |                       |   |     |  |                        |  |
| MW11-10  | 8/11                   | 27%                 | 1000-1000           | 387   | 160                      | 1000            | 180                | 155000    | 393.7              | 1.017                   | 4000        | µg/L               | N                           | 0     | 0                  | Stable                          | Non-parametric                      |                        | 1000.0                | 4000.0  |     |  |                        |  |
| MW11-9   | 8/11                   | 27%                 | 1000-1000           | 361   | 130                      | 1000            | 130                | 168700    | 410.7              | 1.138                   | 4000        | µg/L               | N                           | 0     | 0                  | Stable                          |                                     |                        |                       |   |     |  |                        |  |
| MW5-1  | 7/11                   | 36%                 | 250-1000            | 360   | 210                      | 1000            | 210                | 110200    | 331.9              | 0.922                   | 4000        | µg/L               | N                           | 0     | 0                  | Stable                          |                                     | 151.111                |                       |   | N   | FALSE  |                        |  |
| MW5-2  | 8/11                   | 27%                 | 500-1000            | 512   | 420                      | 1000            | 490                | 61700     | 248.4              | 0.4853                  | 4000        | µg/L               | N                           | 0     | 0                  | Stable                          |                                     | 348.125                |                       |   | N   | FALSE  |                        |  |
| MW5-3  | 7/11                   | 36%                 | 500-1000            | 541   | 450                      | 1000            | 450                | 54050     | 232.5              | 0.4298                  | 4000        | µg/L               | N                           | 0     | 0                  | Stable                          |                                     | 362.727                |                       |   | N   | FALSE  |                        |  |
| MW5-4  | 8/11                   | 27%                 | 500-1000            | 433   | 290                      | 1000            | 330                | 83400     | 288.8              | 0.6674                  | 4000        | µg/L               | N                           | 0     | 0                  | Stable                          |                                     | 260.000                |                       |   | N   | FALSE  |                        |  |
| MW5-5  | 7/11                   | 36%                 | 500-1000            | 382   | 190                      | 1000            | 220                | 110800    | 332.8              | 0.8717                  | 4000        | µg/L               | N                           | 0     | 0                  | Stable                          |                                     | 145.000                |                       |   | N   | FALSE  |                        |  |
| MW5-6  | 7/11                   | 36%                 | 500-1000            | 459   | 330                      | 1000            | 360                | 79870     | 282.6              | 0.6156                  | 4000        | µg/L               | N                           | 0     | 0                  | Stable                          |                                     | 243.125                |                       |   | N   | FALSE  |                        |  |
| MW5-7  | 9/11                   | 18%                 | 1000-1000           | 477   | 370                      | 1000            | 390                | 67400     | 259.6              | 0.544                   | 4000        | µg/L               | N                           | 0     | 0                  | Stable                          |                                     | 337.500                |                       |   | N   | FALSE  |                        |  |
| <b>CCR Appendix-IV: Lead, Total (µg/L)</b>       |                        |                     |                     |       |                          |                 |                    |           |                    |                         |             |                    |                             |       |                    |                                 |                                     |                        |                       |   |     |  |                        |  |
| MW11-10  | 0/11                   | 100%                | 1-1                 | 1     | 1                        | 1               |                    | 0         | 0                  | 0                       | 15          | µg/L               | N                           | 0     | 0                  | NA                              | Non-parametric                      |                        | 1.0                   | 15.0  |     |  |                        |  |
| MW11-9   | 0/11                   | 100%                | 1-1                 | 1     | 1                        | 1               |                    | 0         | 0                  | 0                       | 15          | µg/L               | N                           | 0     | 0                  | NA                              |                                     |                        |                       |   |     |  |                        |  |
| MW5-1  | 7/11                   | 36%                 | 1-1                 | 1.48  | 1.4                      | 2.35            | 2.4                | 0.2956    | 0.5437             | 0.3669                  | 15          | µg/L               | N                           | 0     | 0                  | Stable                          |                                     | 1.362                  |                       |   | N   | FALSE  |                        |  |
| MW5-2  | 1/11                   | 91%                 | 1-1                 | 1.12  | 1                        | 1.65            | 2.3                | 0.1536    | 0.392              | 0.3505                  | 15          | µg/L               | N                           | 0     | 0                  | NA                              |                                     | 1.000                  |                       |   | N   | FALSE  |                        |  |
| MW5-3  | 5/11                   | 55%                 | 1-1                 | 1.15  | 1                        | 1.4             | 1.5                | 0.03473   | 0.1864             | 0.1614                  | 15          | µg/L               | N                           | 0     | 0                  | Stable                          |                                     | 1.055                  |                       |   | N   | FALSE  |                        |  |
| MW5-4  | 2/11                   | 82%                 | 1-1                 | 1.16  | 1                        | 1.9             | 2.7                | 0.2605    | 0.5104             | 0.4387                  | 15          | µg/L               | N                           | 0     | 0                  | NA                              |                                     | 1.000                  |                       |   | N   | FALSE  |                        |  |
| MW5-5  | 6/11                   | 45%                 | 1-1                 | 2.24  | 1.9                      | 5.15            | 5.7                | 2.611     | 1.616              | 0.7225                  | 15          | µg/L               | N                           | 0     | 0                  | Stable                          |                                     | 1.991                  |                       |   | N   | FALSE  |                        |  |
| MW5-6  | 8/11                   | 27%                 | 1-1                 | 1.78  | 1.6                      | 3.85            | 4.1                | 1.14      | 1.068              | 0.5991                  | 15          | µg/L               | N                           | 0     | 0                  | Stable                          |                                     | 1.482                  |                       |   | N   | FALSE  |                        |  |
| MW5-7  | 2/11                   | 82%                 | 1-1                 | 1.07  | 1                        | 1.4             | 1.5                | 0.02818   | 0.1679             | 0.1565                  | 15          | µg/L               | N                           | 0     | 0                  | NA                              |                                     | 1.000                  |                       |   | N   | FALSE  |                        |  |
| <b>CCR Appendix-IV: Lithium, Total (µg/L)</b>    |                        |                     |                     |       |                          |                 |                    |           |                    |                         |             |                    |                             |       |                    |                                 |                                     |                        |                       |   |     |  |                        |  |
| MW11-10  | 0/11                   | 100%                | 8-8                 | 8     | 8                        | 8               |                    | 0         | 0                  | 0                       | 40          | µg/L               | N                           | 0     | 0                  | NA                              | Non-parametric                      |                        | 8.0                   | 40.0  |     |  |                        |  |
| MW11-9   | 0/11                   | 100%                | 8-8                 | 8     | 8                        | 8               |                    | 0         | 0                  | 0                       | 40          | µg/L               | N                           | 0     | 0                  | NA                              |                                     |                        |                       |   |     |  |                        |  |
| MW5-1  | 0/11                   | 100%                | 8-8                 | 8     | 8                        | 8               |                    | 0         | 0                  | 0                       | 40          | µg/L               | N                           | 0     | 0                  | NA                              |                                     | 8.000                  |                       |   | N   | FALSE  |                        |  |
| MW5-2  | 0/11                   | 100%                | 8-8                 | 8     | 8                        | 8               |                    | 0         | 0                  | 0                       | 40          | µg/L               | N                           | 0     | 0                  | NA                              |                                     | 8.000                  |                       |   | N   | FALSE  |                        |  |
| MW5-3  | 0/11                   | 100%                | 8-8                 | 8     | 8                        | 8               |                    | 0         | 0                  | 0                       | 40          | µg/L               | N                           | 0     | 0                  | NA                              |                                     | 8.000                  |                       |   | N   | FALSE  |                        |  |
| MW5-4  | 0/11                   | 100%                | 8-8                 | 8     | 8                        | 8               |                    | 0         | 0                  | 0                       | 40          | µg/L               | N                           | 0     | 0                  | NA                              |                                     | 8.000                  |                       |   | N   | FALSE  |                        |  |
| MW5-5  | 3/11                   | 73%                 | 8-8                 | 8.49  | 8                        | 10.5            | 12                 | 1.451     | 1.205              | 0.1419                  | 40          | µg/L               | N                           | 0     | 0                  | Stable                          |                                     | 8.091                  |                       |   | N   | FALSE  |                        |  |
| MW5-6  | 11/11                  | 0%                  | -                   | 15.3  | 14                       | 22              | 23                 | 15.02     | 3.875              | 0.2537                  | 40          | µg/L               | N                           | 0     | 0                  | Stable                          |                                     | 13.273                 |                       |   | N   | FALSE  |                        |  |
| MW5-7  | 0/11                   | 100%                | 8-8                 | 8     | 8                        | 8               |                    | 0         | 0                  | 0                       | 40          | µg/L               | N                           | 0     | 0                  | NA                              |                                     | 8.000                  |                       |   | N   | FALSE  |                        |  |
| <b>CCR Appendix-IV: Mercury, Total (µg/L)</b>    |                        |                     |                     |       |                          |                 |                    |           |                    |                         |             |                    |                             |       |                    |                                 |                                     |                        |                       |   |     |  |                        |  |
| MW11-10  | 0/10                   | 100%                | 0.2-0.2             | 0.2   | 0.2                      | 0.2             |                    | 2.467E-17 | 4.967E-09          | 2.484E-08               | 2           | µg/L               | N                           | 0     | 0                  | NA                              | Non-parametric                      |                        | 0.2                   | 2.0   |     |  |                        |  |
| MW11-9   | 0/10                   | 100%                | 0.2-0.2             | 0.2   | 0.2                      | 0.2             |                    | 2.467E-17 | 4.967E-09          | 2.484E-08               | 2           | µg/L               | N                           | 0     | 0                  | NA                              |                                     |                        |                       |   |     |  |                        |  |
| MW5-1  | 0/10                   | 100%                | 0.2-0.2             | 0.2   | 0.2                      | 0.2             |                    | 2.467E-17 | 4.967E-09          | 2.484E-08               | 2           | µg/L               | N                           | 0     | 0                  | NA                              |                                     | 0.200                  |                       |   | N   | FALSE  |                        |  |
| MW5-2  | 1/10                   | 90%                 | 0.2-0.2             | 0.201 | 0.2                      | 0.2055          | 0.21               | 0.00001   | 0.003162           | 0.01573                 | 2           | µg/L               | N                           | 0     | 0                  | NA                              |                                     | 0.200                  |                       |   | N   | FALSE  |                        |  |
| MW5-3  | 0/10                   | 100%                | 0.2-0.2             | 0.2   | 0.2                      | 0.2             |                    | 2.467E-17 | 4.967E-09          | 2.484E-08               | 2           | µg/L               | N                           | 0     | 0                  | NA                              |                                     | 0.200                  |                       |   | N   | FALSE  |                        |  |
| MW5-4  | 0/10                   | 100%                | 0.2-0.2             | 0.2   | 0.2                      | 0.2             |                    | 2.467E-17 | 4.967E-09          | 2.484E-08               | 2           | µg/L               | N                           | 0     | 0                  | NA                              |                                     | 0.200                  |                       |   | N   | FALSE  |                        |  |
| MW5-5  | 0/10                   | 100%                | 0.2-0.2             | 0.2   | 0.2                      | 0.2             |                    | 2.467E-17 | 4.967E-09          | 2.484E-08               | 2           | µg/L               | N                           | 0     | 0                  | NA                              |                                     | 0.200                  |                       |   | N   | FALSE  |                        |  |
| MW5-6  | 1/10                   | 90%                 | 0.2-0.2             | 0.206 | 0.2                      | 0.233           | 0.26               | 0.00036   | 0.01897            | 0.09211                 | 2           | µg/L               | N                           | 0     | 0                  | NA                              |                                     | 0.200                  |                       |   | N   | FALSE  |                        |  |
| MW5-7  | 0/10                   | 100%                | 0.2-0.2             | 0.2   | 0.2                      | 0.2             |                    | 2.467E-17 | 4.967E-09          | 2.484E-08               | 2           | µg/L               | N                           | 0     | 0                  | NA                              |                                     | 0.200                  |                       |   | N   | FALSE  |                        |  |
| <b>CCR Appendix-IV: Molybdenum, Total (µg/L)</b> |                        |                     |                     |       |                          |                 |                    |           |                    |                         |             |                    |                             |       |                    |                                 |                                     |                        |                       |   |     |  |                        |  |
| MW11-10  | 0/11                   | 100%                | 5-10                | 9.55  | 10                       | 10              |                    | 2.273     | 1.508              | 0.1579                  | 100         | µg/L               | N                           | 0     | 0                  | Stable                          | Non-parametric                      |                        | 10.0                  | 100.0   |     |  |                        |  |
| MW11-9   | 0/11                   | 100%                | 5-10                | 9.55  | 10                       | 10              |                    | 2.273     | 1.508              | 0.1579                  | 100         | µg/L               | N                           | 0     | 0                  | Stable                          |                                     |                        |                       |   |     |  |                        |  |
| MW5-1  | 0/11                   | 100%                | 5-10                | 9.09  | 10                       | 10              |                    | 4.091     | 2.023              | 0.2225                  | 100         | µg/L               | N                           | 0     | 0                  | NA                              |                                     | 7.727                  |                       |   | N   | FALSE  |                        |  |
| MW5-2  | 11/11                  | 0%                  | -                   | 25    | 27                       | 29              | 29                 | 18.6      | 4.313              | 0.1725                  | 100         | µg/L               | N                           | 0     | 0                  | Stable                          |                                     | 21.911                 |                       |   | N   | FALSE  |                        |  |
| MW5-3  | 2/11                   | 82%                 | 10-10               | 9.9   | 10                       | 10              | 9.8                | 0.074     | 0.272              | 0.02748                 | 100         | µg/L               | N                           | 0     | 0                  | NA                              |                                     | 9.623                  |                       |   | N   | FALSE  |                        |  |
| MW5-4  | 0/11                   | 100%                | 5-10                | 9.09  | 10                       | 10              |                    | 4.091     | 2.023              | 0.2225                  | 100         | µg/L               | N                           | 0     | 0                  | NA                              |                                     | 7.727                  |                       |   | N   | FALSE  |                        |  |
| MW5-5  | 2/11                   | 82%                 | 5-10                | 9.3   | 10                       | 10.5            | 11                 | 3.43      | 1.852              | 0.1991                  | 100         | µg/L               | N                           | 0     | 0                  | NA                              |                                     | 7.627                  |                       |   | N   | FALSE  |                        |  |
| MW5-6  | 0/11                   | 100%                | 5-10                | 9.09  | 10                       | 10              |                    | 4.091     | 2.023              | 0.2225                  | 100         | µg/L               | N                           | 0     | 0                  | NA                              |                                     | 7.273                  |                       |   | N   | FALSE  |                        |  |
| MW5-7  | 0/11                   | 100%                | 5-10                | 9.09  | 10                       | 10              |                    | 4.091     | 2.023              | 0.2225                  | 100         | µg/L               | N                           | 0     | 0                  | NA                              |                                     | 7.273                  |                       |   | N   | FALSE  |                        |  |

**TABLE 2**  
**SUMMARY OF ASSESSMENT MONITORING STATISTICAL ANALYSIS**  
**J.M. STUART STATION - POND 5**  
**AES OHIO GENERATION, LLC - MANCHESTER, OHIO**

| Location Id  | Frequency of Detection | Percent Non-Detects | Range of Non-Detect | Mean | 50th Percentile (Median) | 95th Percentile | Maximum Detect | Variance | Standard Deviation | Coefficient of Variance | CCR MCL/RSL | Report Result Unit | Compliance Samples          |                                 |                                     | Trend  | Distribution Well* | Inter-well Analysis    |                       |   | Intra-well Analysis                            |                        | SSL |
|--|------------------------|---------------------|---------------------|------|--------------------------|-----------------|----------------|----------|--------------------|-------------------------|-------------|--------------------|-----------------------------|---------------------------------|-------------------------------------|--------|--------------------|------------------------|-----------------------|---|--|------------------------|-----|
|  |                        |                     |                     |      |                          |                 |                |          |                    |                         |             |                    | Detection Exceedances (Y/N) | Number of Detection Exceedances | Number of Non-Detection Exceedances |        |                    | Lower Confidence Limit | Upper Tolerance Limit | Background Limit (Higher of MCL/RSL or Upper Tolerance Limit) | Exceedance above Background at Individual Well | Upper Prediction Limit |     |
| <b>CCR Appendix-IV: Radium-226 &amp; 228 (pCi/L)</b> |                        |                     |                     |      |                          |                 |                |          |                    |                         |             |                    |                             |                                 |                                     |        |                    |                        |                       |   |  |                        |     |
| MW11-10  | 2/11                   | 78%                 | 5-5                 | 4    | 5                        | 5               | 0.573          | 3.95     | 1.987              | 0.497                   | 5           | pCi/L              | N                           | 0                               | 0                                   | NA     | Non-parametric     |                        | 5.0                   | 5.0   |  |                        |     |
| MW11-9   | 2/11                   | 80%                 | 5-5                 | 4.13 | 5                        | 5               | 0.774          | 3.368    | 1.835              | 0.4444                  | 5           | pCi/L              | N                           | 0                               | 0                                   | NA     |                    |                        |                       |   |  |                        |     |
| MW5-1  | 9/11                   | 25%                 | 5-5                 | 1.91 | 1.087                    | 5               | 1.48           | 3.792    | 1.947              | 1.022                   | 5           | pCi/L              | N                           | 0                               | 0                                   | Stable |                    | 0.601                  |                       |   | N  | FALSE                  |     |
| MW5-2  | 11/11                  | 0%                  | -                   | 1.84 | 1.69                     | 2.5             | 2.74           | 0.1835   | 0.4283             | 0.2326                  | 5           | pCi/L              | N                           | 0                               | 0                                   | Stable |                    | 1.722                  |                       |   | N  | FALSE                  |     |
| MW5-3  | 11/11                  | 0%                  | -                   | 6.04 | 6.24                     | 7.026           | 7.13           | 0.7712   | 0.8782             | 0.1453                  | 5           | pCi/L              | Y                           | 2                               | 0                                   | Stable |                    | 5.568                  |                       |   | Y  | TRUE                   |     |
| MW5-4  | 11/11                  | 0%                  | -                   | 1.37 | 1.325                    | 2.101           | 2.3            | 0.2487   | 0.4987             | 0.3635                  | 5           | pCi/L              | N                           | 0                               | 0                                   | Stable |                    | 1.200                  |                       |   | N  | FALSE                  |     |
| MW5-5  | 11/11                  | 0%                  | -                   | 2.1  | 1.885                    | 2.851           | 2.98           | 0.3174   | 0.5634             | 0.2678                  | 5           | pCi/L              | N                           | 0                               | 0                                   | Stable |                    | 1.781                  |                       |   | N  | FALSE                  |     |
| MW5-6  | 5/11                   | 55%                 | 5-5                 | 3.04 | 5                        | 5               | 1.16           | 5.122    | 2.263              | 0.7453                  | 5           | pCi/L              | N                           | 0                               | 0                                   | Stable |                    | 1.840                  |                       |   | N  | FALSE                  |     |
| MW5-7  | 2/11                   | 90%                 | 5-5                 | 4.64 | 5                        | 5               | 1.39           | 1.303    | 1.142              | 0.2461                  | 5           | pCi/L              | N                           | 0                               | 0                                   | NA     |                    | 3.214                  |                       |   | N  | FALSE                  |     |
| <b>CCR Appendix-IV: Selenium, Total (µg/L)</b>       |                        |                     |                     |      |                          |                 |                |          |                    |                         |             |                    |                             |                                 |                                     |        |                    |                        |                       |   |  |                        |     |
| MW11-10  | 0/11                   | 100%                | 5-5                 | 5    | 5                        | 5               | 0              | 0        | 0                  | 0                       | 50          | µg/L               | N                           | 0                               | 0                                   | NA     | Non-parametric     |                        | 5.0                   | 50.0  |  |                        |     |
| MW11-9   | 0/11                   | 100%                | 5-5                 | 5    | 5                        | 5               | 0              | 0        | 0                  | 0                       | 50          | µg/L               | N                           | 0                               | 0                                   | NA     |                    |                        |                       |   |  |                        |     |
| MW5-1  | 0/10                   | 100%                | 5-5                 | 5    | 5                        | 5               | 0              | 0        | 0                  | 0                       | 50          | µg/L               | N                           | 0                               | 0                                   | NA     |                    | 5.000                  |                       |   | N  | FALSE                  |     |
| MW5-2  | 0/10                   | 100%                | 5-5                 | 5    | 5                        | 5               | 0              | 0        | 0                  | 0                       | 50          | µg/L               | N                           | 0                               | 0                                   | NA     |                    | 5.000                  |                       |   | N  | FALSE                  |     |
| MW5-3  | 0/10                   | 100%                | 5-5                 | 5    | 5                        | 5               | 0              | 0        | 0                  | 0                       | 50          | µg/L               | N                           | 0                               | 0                                   | NA     |                    | 5.000                  |                       |   | N  | FALSE                  |     |
| MW5-4  | 0/10                   | 100%                | 5-5                 | 5    | 5                        | 5               | 0              | 0        | 0                  | 0                       | 50          | µg/L               | N                           | 0                               | 0                                   | NA     |                    | 5.000                  |                       |   | N  | FALSE                  |     |
| MW5-5  | 0/10                   | 100%                | 5-5                 | 5    | 5                        | 5               | 0              | 0        | 0                  | 0                       | 50          | µg/L               | N                           | 0                               | 0                                   | NA     |                    | 5.000                  |                       |   | N  | FALSE                  |     |
| MW5-6  | 0/10                   | 100%                | 5-5                 | 5    | 5                        | 5               | 0              | 0        | 0                  | 0                       | 50          | µg/L               | N                           | 0                               | 0                                   | NA     |                    | 5.000                  |                       |   | N  | FALSE                  |     |
| MW5-7  | 0/10                   | 100%                | 5-5                 | 5    | 5                        | 5               | 0              | 0        | 0                  | 0                       | 50          | µg/L               | N                           | 0                               | 0                                   | NA     |                    | 5.000                  |                       |   | N  | FALSE                  |     |
| <b>CCR Appendix-IV: Thallium, Total (µg/L)</b>       |                        |                     |                     |      |                          |                 |                |          |                    |                         |             |                    |                             |                                 |                                     |        |                    |                        |                       |   |  |                        |     |
| MW11-10  | 0/10                   | 100%                | 1-1                 | 1    | 1                        | 1               | 0              | 0        | 0                  | 0                       | 2           | µg/L               | N                           | 0                               | 0                                   | NA     | Non-parametric     |                        | 1.0                   | 2.0   |  |                        |     |
| MW11-9   | 0/10                   | 100%                | 1-1                 | 1    | 1                        | 1               | 0              | 0        | 0                  | 0                       | 2           | µg/L               | N                           | 0                               | 0                                   | NA     |                    |                        |                       |   |  |                        |     |
| MW5-1  | 0/10                   | 100%                | 1-1                 | 1    | 1                        | 1               | 0              | 0        | 0                  | 0                       | 2           | µg/L               | N                           | 0                               | 0                                   | NA     |                    | 1.000                  |                       |   | N  | FALSE                  |     |
| MW5-2  | 0/10                   | 100%                | 1-1                 | 1    | 1                        | 1               | 0              | 0        | 0                  | 0                       | 2           | µg/L               | N                           | 0                               | 0                                   | NA     |                    | 1.000                  |                       |   | N  | FALSE                  |     |
| MW5-3  | 0/10                   | 100%                | 1-1                 | 1    | 1                        | 1               | 0              | 0        | 0                  | 0                       | 2           | µg/L               | N                           | 0                               | 0                                   | NA     |                    | 1.000                  |                       |   | N  | FALSE                  |     |
| MW5-4  | 0/10                   | 100%                | 1-1                 | 1    | 1                        | 1               | 0              | 0        | 0                  | 0                       | 2           | µg/L               | N                           | 0                               | 0                                   | NA     |                    | 1.000                  |                       |   | N  | FALSE                  |     |
| MW5-5  | 0/10                   | 100%                | 1-1                 | 1    | 1                        | 1               | 0              | 0        | 0                  | 0                       | 2           | µg/L               | N                           | 0                               | 0                                   | NA     |                    | 1.000                  |                       |   | N  | FALSE                  |     |
| MW5-6  | 0/10                   | 100%                | 1-1                 | 1    | 1                        | 1               | 0              | 0        | 0                  | 0                       | 2           | µg/L               | N                           | 0                               | 0                                   | NA     |                    | 1.000                  |                       |   | N  | FALSE                  |     |
| MW5-7  | 0/10                   | 100%                | 1-1                 | 1    | 1                        | 1               | 0              | 0        | 0                  | 0                       | 2           | µg/L               | N                           | 0                               | 0                                   | NA     |                    | 1.000                  |                       |   | N  | FALSE                  |     |