

L-07-110
August 8, 2007

Ms. Kareen Milcic
Permits Chief
Water Management Program
Southwest Region
Pennsylvania Department of Environmental Protection
400 Waterfront Drive
Pittsburgh, PA 15222-4745

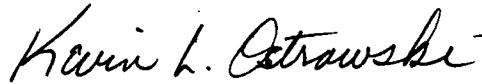
**Renewal Application for Beaver Valley Power Station
NPDES Outfall 012
NPDES Permit No. PA0025615**

Dear Ms. Milcic:

Enclosed please find three copies of the Pennsylvania Department of Environmental Protection (DEP) NPDES Permit renewal application for First Energy Nuclear Operating Company (FENOC) Beaver Valley Power Station NPDES Outfall 012. The evaporative coolers serving the HVAC unit for the Emergency Response Facility were replaced in December of 2006. Sampling was completed in January of 2007. This should complete our application package.

Should you have any questions regarding the attached documents, please direct them to Mr. Michael Banko, at 724-682-4117.

Sincerely,



Kevin L. Ostrowski
Director, Site Operations

Enclosures

cc: US Nuclear Regulatory Commission (*Note: No new NRC commitments are contained in this submittal.*)

C001

NRR



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER STANDARDS AND FACILITY REGULATION

Applicant Name: FirstEnergy Nuclear Operating Company (FENOC)
Beaver Valley Power Station

ANALYSIS RESULTS TABLE POLLUTANT GROUP 2 MODULE 5

Before completing this form, read the step-by-step instructions provided in Appendix 1.

APPLICANT NAME FirstEnergy Nuclear Operating Company - Beaver Valley Power Station

- ☒ **Outfall Number** Outfall 012 (Show location of sampling point on Line Drawing)
- ☐ Intake Sampling Results - Optional (Specify Source: _____)
- ☐ Background Sampling Results - Optional (Specify Location: _____)
- ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing)
- ☐ New Discharge (Basis for Information: _____)
- ☐ Bypass or Sewer System Overflow (Describe: _____)

| POLLUTANT GROUP 2 Metals | | 1. MDL Used* (µg/L) | 2. EPA Method Number Used | 3. Level Present | | | | | 4. Units | | 5. Coefficient of Effluent Variability (CV) |
|---------------------------------|------------------|---------------------------|------------------------------------|--------------------|---------|------------------------|--------|-----------------------------|----------|--------|--|
| | | | | a. Max Daily Value | | b. Average of Analysis | | c. Number of Analysis | | | |
| | | | | Concentration | Mass | Concentration | Mass | | | | |
| 1M | Antimony, Total | 2 | 200.7 | 15 | 0.0001 | | | 1 | ug/l | lb/day | |
| 2M | Arsenic, Total | 10 | 200.7 | 14 | 0.0001 | | | 1 | ug/l | lb/day | |
| 3M | Beryllium, Total | 2 | 200.7 | 2 | 0.00002 | | | 1 | ug/l | lb/day | |
| 4M | Cadmium, Total | 2 | 200.7 | ND | -- | | | 1 | ug/l | lb/day | |
| 5M | Chromium III | 2 | 200.7 | 30 | 0.0003 | 6 | 0.0001 | 6 | ug/l | lb/day | |
| 5M | Chromium VI | 10 | 218.4 | ND | -- | | | 1 | ug/l | lb/day | |
| 6M | Copper, Total | 2 | 200.7 | 135 | 0.0011 | 57 | 0.0005 | 7 | ug/l | lb/day | |
| 7M | Lead, Total | 2 | 200.7 | ND | -- | | | 1 | ug/l | lb/day | |
| 8M | Mercury, Total | 0.2 | 245.2 | ND | -- | | | 1 | ug/l | lb/day | |
| 9M | Nickel, Total | 5 | 200.7 | ND | -- | | | 1 | ug/l | lb/day | |
| 10M | Selenium, Total | 8 | 200.7 | ND | -- | | | 1 | ug/l | lb/day | |
| 11M | Silver, Total | 1 | 200.7 | 8 | 0.0001 | | | 1 | ug/l | lb/day | |

3. If other data is available (i.e., DMR data, etc.), the past year of data may be used to determine 3a, 3b, 3c, and 5.

3.a. Maximum Daily Value – Report the highest daily value or daily average value from the last year of data. Report both mass and concentration.

3.b. Average of Analysis – Determine the average of all samples taken within the past year. Report both mass and concentration.

3.c. A minimum of 3 Sampling Events required for process wastewater discharges, and a minimum of 1 Sampling Event for all other discharges, treatment facility influent, intake water and background.

It is in the applicant's interest to achieve the lowest level of detection possible. This will minimize uncertainty and therefore the need for additional analysis or potential for establishing a large number of effluent limits and/or monitoring requirements in the final NPDES permit.

| POLLUTANT GROUP 2 Metals | | 1. MDL Used* (µg/L) | 2. EPA Method Number Used | 3. Level Present | | | | | 4. Units | | 5. Coefficient of Effluent Variability (CV) |
|---------------------------------|-----------------|---------------------------|---------------------------------|--------------------|--------|------------------------|--------|-----------------------------|---------------|--------|--|
| | | | | a. Max Daily Value | | b. Average of Analysis | | c. Number of Analysis | | | |
| | | | | Concentration | Mass | Concentration | Mass | | Concentration | Mass | |
| 12M | Thallium, Total | 10 | 200.7 | ND | -- | | | 1 | ug/l | lb/day | |
| 13M | Zinc, Total | 8 | 200.7 | 408 | 0.0034 | 148 | 0.0012 | 7 | ug/l | lb/day | |
| 14M | Cyanide, Total | | | | | | | | | | |
| 14M | Cyanide, Free | | | | | | | | | | |
| 15M | Phenols, Total | | | | | | | | | | |

3. If other data is available (i.e., DMR data, etc.), the past year of data may be used to determine 3a, 3b, 3c, and 5.
- 3.a. Maximum Daily Value – Report the highest daily value or daily average value from the last year of data. Report both mass and concentration.
- 3.b. Average of Analysis – Determine the average of all samples taken within the past year. Report both mass and concentration.
- 3.c. A minimum of 3 Sampling Events required for process wastewater discharges, and a minimum of 1 Sampling Event for all other discharges, treatment facility influent, intake water and background.
- * It is in the applicant's interest to achieve the lowest level of detection possible. This will minimize uncertainty and therefore the need for additional analysis or potential for establishing a large number of effluent limits and/or monitoring requirements in the final NPDES permit.



COMMONWEALTH OF PENNSYLVANIA
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BUREAU OF WATER STANDARDS AND FACILITY REGULATION

ANALYSIS RESULTS TABLE POLLUTANT GROUP 1 MODULE 4

Before completing this form, read the step-by-step instructions provided in Appendix 1.

APPLICANT NAME FirstEnergy Nuclear Operating Company (FENOC) - Beaver Valley Power Station

- ☒ **Outfall Number 012** (Show location of sampling point on Line Drawing)
- ☐ Intake Sampling Results - Optional (Specify Source: _____)
- ☐ Background Sampling Results - Optional (Specify Location of Sample: _____)
- ☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Line Drawing)
- ☐ New Discharge (Basis for Information: _____)
- ☐ Bypass or Sewer System Overflow (Describe: _____)

| POLLUTANT GROUP 1 | 1. LEVEL PRESENT | | | | 2. UNITS | | 3. Coefficient of Effluent Variability (CV) |
|--------------------------------|------------------------|-----------|------------------------|----------|--------------------|-------------------|---|
| | a. Maximum Daily Value | | b. Average of Analysis | | c. No. of Analysis | a. | |
| | (1) Concentration | (2) Mass | (1) Concentration | (2) Mass | | Concentration | b. Mass |
| Biochemical Oxygen Demand, BOD | 14 | 0.117 | | | 1 | mg/l | lb/day |
| Chemical Oxygen Demand, COD | <20 | -- | | | 1 | mg/l | lb/day |
| Hardness (CaCO ₃) | 240 | 2.00 | | | 1 | CaCO ₃ | lb/day |
| Total Suspended Solids, TSS | <4 | -- | | | 1 | mg/l | lb/day |
| Total Dissolved Solids, TDS | 512 | 4.27 | 461 | 3.84 | 6 | mg/l | lb/day |
| Ammonia as N | <0.1 | -- | | | 1 | mg/l | lb/day |
| Nitrate-Nitrite (as N) | 3.00 | 0.025 | | | 1 | mg/l | lb/day |
| Total Kjeldahl Nitrogen (TKN) | 0.416 | 0.003 | | | 1 | mg/l | lb/day |
| Phosphorus (as P), Total | <0.05 | -- | | | 1 | mg/l | lb/day |
| Temperature winter | 17.9 Value | | Value | | 1 | C | |
| Temperature summer | Value | | Value | | 1 | C | |
| pH | Min. 7.75 | Max. 8.58 | | | 7 | Standard units | Standard units |

1.a. Maximum Daily Value - Report the **highest** daily value or daily average value from the last year of data. Report both mass and concentration.

1.b. Average of Analysis - The average of all values within the last year and report both the mass and concentration.

1.c. A minimum of 3 Sampling Events required for process wastewater discharges, and a minimum of 1 Sampling Event for all other discharges, treatment facility influent, intake water and background.

| POLLUTANT GROUP 1 | Believed Absent | 1. MDL Used* (µg/L) | 2. EPA Method Number Used | 3. Level Present | | | | | 4. Units | | 5. Coefficient of Effluent Variability (CV) |
|--------------------------------------|-------------------------------------|---------------------|---------------------------|--------------------|---------|------------------------|------|-----------------------|---------------|--------|---|
| | | | | a. Max Daily Value | | b. Average of Analysis | | c. Number of Analysis | | | |
| | | | | Concentration | Mass | Concentration | Mass | | Concentration | Mass | |
| Color | <input checked="" type="checkbox"/> | 25 | 110.2 | ND | -- | | | 1 | Units | | |
| Fecal Coliform | <input checked="" type="checkbox"/> | 2 | SM9222 D | ND | -- | | | 1 | counts/100ml | | |
| Fluoride | <input type="checkbox"/> | 40 | 340.2 | 0.3 | 0.003 | | | 1 | mg/l | lb/day | |
| Oil and Grease | <input checked="" type="checkbox"/> | 5000 | 1664A | ND | -- | | | 1 | mg/l | lb/day | |
| Bromide | <input checked="" type="checkbox"/> | 50 | 300 | ND | -- | | | 1 | mg/L | lb/day | |
| Chlorine, Total Residual | <input checked="" type="checkbox"/> | 0.05 | 330.5 | ND | -- | | | 1 | mg/L | lb/day | |
| Sulfate | <input type="checkbox"/> | 100 | 300 | 109 | 0.909 | | | 1 | mg/l | lb/day | |
| Sulfide | <input checked="" type="checkbox"/> | 2000 | 9030A | ND | -- | | | 1 | mg/l | lb/day | |
| Sulfite | <input checked="" type="checkbox"/> | 2000 | 377.1 | ND | -- | | | 1 | mg/l | lb/day | |
| Surfactants | <input checked="" type="checkbox"/> | 0.1 | 5540C | ND | -- | | | 1 | mg/l | lb/day | |
| Aluminum, Total | <input type="checkbox"/> | 4 | 200.7 | 36 | 0.0003 | | | 1 | ug/l | lb/day | |
| Barium, Total | <input type="checkbox"/> | 15 | 200.7 | 63 | 0.0005 | | | 1 | ug/l | lb/day | |
| Boron, Total | <input type="checkbox"/> | 50 | 212.3 | 73 | 0.0006 | | | 1 | ug/l | lb/day | |
| Cobalt, Total | <input type="checkbox"/> | 2 | 200.7 | 13 | 0.0001 | | | 1 | ug/l | lb/day | |
| Iron, Total | <input type="checkbox"/> | 2 | 200.7 | 50 | 0.0004 | | | 1 | ug/l | lb/day | |
| Iron, Dissolved | <input type="checkbox"/> | 2 | 200.7 | 16 | 0.0001 | | | 1 | ug/l | lb/day | |
| Manganese, Total | <input type="checkbox"/> | 4 | 200.7 | 14 | 0.0001 | | | 1 | ug/l | lb/day | |
| Radioactivity (Total Alpha and Beta) | <input type="checkbox"/> | 1.0 | 900.0 | 2.9 | -- | | | 1 | pCi/L | | |
| Total Organic Carbon, TOC | <input type="checkbox"/> | 1000 | 9060 | <1 | -- | | | 1 | mg/l | lb/day | |
| Radium, Total | <input type="checkbox"/> | 1.8 | 903.1 & Ra-05 | ND | -- | | | 1 | pCi/L | | |
| Magnesium | <input type="checkbox"/> | 30 | 200.7 | 17100 | 0.143 | | | 1 | ug/l | lb/day | |
| Molybdenum | <input type="checkbox"/> | 10 | 200.7 | 16 | 0.0001 | | | 1 | ug/l | lb/day | |
| Tin, Total | <input checked="" type="checkbox"/> | 80 | 200.7 | ND | -- | | | 1 | ug/l | lb/day | |
| Titanium, Total | <input type="checkbox"/> | 2 | 200.7 | 3 | 0.00003 | | | 1 | ug/l | lb/day | |

3. If other data is available (i.e., DMR data, etc.), the past year of data may be used to determine 3a, 3b, 3c, and 5.

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