

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

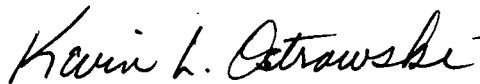
**Renewal Application for Beaver Valley Power Station  
NPDES Outfall 012  
NPDES Permit No. PA0025615**

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.*)

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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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## 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.	b.	
	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass		Concentration	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 <sub>3</sub> )	240	2.00			1	CaCO <sub>3</sub>	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	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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