

**Environmental
Protection Agency**

John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

April 27, 2011

RE: CUYAHOGA COUNTY
CITY OF CLEVELAND
FIRSTENERGY LAKE SHORE PLANT
NPDES PERMIT NO. OH0001147
OHIO EPA PERMIT NO. 3IB00004

Mr. Scott Brown, Environmental Engineer
FirstEnergy Generation Corp.
76 South Main Street
Akron, OH 44308

Dear Mr. Brown:

This letter is a follow-up to the inspection of the above referenced facility on March 23, 2011. The purpose of the inspection was to obtain and review information in anticipation of renewal of the National Pollutant Discharge Elimination System (NPDES) discharge permit. At the time of the inspection, the Lake Shore Plant was idled. Based on these circumstances, the inspection was limited to a review of the effluent discharge quality at the respective outfalls.

NPDES Permit Status

The permit for this facility will expire on June 30, 2011. Receipt of a timely renewal application on December 22, 2010 authorizes the permittee to discharge beyond the expiration date.

Facility Description

When operational, the coal-fired facility can generate 245 megawatts of electricity. For this facility, Lake Erie is utilized as the source of water for process operations. The NPDES permit requires monitoring of the intake cooling water at Station 800 and regulates the discharge of pollutants to Lake Erie through three final outfalls (001, 002 and 003) and two internal stations (601 and 607).

Outfall 001: This outfall is the continuous discharge of condenser cooling water from Turbine 18 combined with some boiler blowdown associated with Station 601.

Outfall 002: This outfall is the discharge of the wastewater from the combined treatment basin (includes Internal Outfall 607) after treatment through the high rate anthracite filters.

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Outfall 003: Low volume wastes are collected in a basin and treated through the high rate anthracite filters before discharging at this outfall.

Internal Station 601: This outfall is an intermittent discharge of boiler blowdown to the intake water forebay. The blowdown mixes with intake water from Lake Erie that is used as condenser cooling water for Turbine 18.

Internal Station 607: Although not in use, metal cleaning wastes, air heater wash water, and chemical cleaning wastes can be diverted to the metals cleaning waste system. Clarified water is discharged to Lake Erie through Outfall 002.

Inspection Findings/Compliance Status

At the time of the inspection the following items were noted:

1. The inspection found what appears to be an overflow pipe from the combined treatment basin to Lake Erie. The existence of such a structure is unauthorized and must be immediately eliminated.
2. All samples required by the NPDES permit are collected by Lake Shore Plant personnel and sent off site to FirstEnergy's Beta Laboratory, a facility. This laboratory performs all analyses required by the NPDES permit except for pH which is performed onsite at the time of sample collection.
3. You indicated that FirstEnergy wants the flexibility to "interconnect" the ash pond and low-volume waste basin. This flexibility would allow for the use of either pond system for treatment during high flow events or maintenance of the filter systems.
4. FirstEnergy has requested the reauthorization of the general mercury variance. The requested variance is to be applied to Outfalls 002 and 003.

Discharge Monitoring Reports (DMR)

Discharge monitoring reports (DMR) received by Ohio EPA for the period, January 2009 through March 2011, were reviewed. A summary of the discharge data is listed in Attachment A. Additionally, the effluent data was reviewed for compliance with the final effluent limitations and monitoring requirements of the NPDES permit. A summary of the specific violations are cited in Attachment B.

Please be advised that any violations referenced herein are subject to appropriate enforcement actions pursuant to Chapter 6111 of the Ohio Revised Code. Such actions

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can result in the imposition of fines of up to \$10,000 per day of violation. Submittal of a written response to this office addressing the above deficiencies is requested within fifteen days of the date of this letter. Please be advised failure to comply with terms and conditions on the NPDES permit are subject to appropriate enforcement action pursuant to Chapter 6111 of the Ohio Revised code.

A draft copy of the renewal permit will be sent under separate cover. Any comments regarding the draft permit must be submitted in writing during the public notice period.

Should you have any questions or comments regarding this letter, please contact this office.

Respectfully,



Ermelindo Gomes
Environmental Engineer
Division of Surface Water

EG/mt

File: Industrial/FirstEnergy Lake Shore /Permit-Compliance

ATTACHMENT A: FIRSTENERGY LAKE SHORE NPDES DATA SUMMARY (1/2009 – 3/2011)						
Parameter	Season	Units	# Obs.	50 th	95 th	Data Range
Outfall 001						
Water Temperature	Annual	F	697	59	105	32-110
pH	Annual	S.U.	77	8	8.23	7.68-8.5
Copper, Total Recoverable	Annual	ug/l	21	0	43.9	0-97.6
Flow Rate	Summer	MGD	179	212	212	0.0294-212
Flow Rate	Winter	MGD	368	212	212	0-212
Flow Rate	Annual	MGD	547	212	212	0-212
Outfall 002						
pH	Annual	S.U.	625	7.96	8.4	7.11-8.81
Total Suspended Solids	Annual	mg/l	108	0	18.7	0-28
Oil and Grease, Hexane Extr Method	Annual	mg/l	55	0	0	0-0
Copper, Total Recoverable	Annual	ug/l	108	0	16.7	0-37.9
Flow Rate	Summer	MGD	368	2.12	4.15	0.603-5.19
Flow Rate	Winter	MGD	450	2.65	4.24	0.37-6.01
Flow Rate	Annual	MGD	818	2.28	4.22	0.37-6.01
Mercury, Total (Low Level)	Annual	ng/l	32	1.34	4.64	0-9.56
Outfall 003						
pH	Annual	S.U.	620	7.61	8.11	6.82-8.56
Total Suspended Solids	Annual	mg/l	107	0	13.7	0-34
Oil and Grease, Hexane Extr Method	Annual	mg/l	109	0	0	0-0
Copper, Total Recoverable	Annual	ug/l	27	0	23.8	0-135
Flow Rate	Summer	MGD	356	2.05	9.29	0.62-9.72
Flow Rate	Winter	MGD	452	1.78	3.79	0.829-8.71
Flow Rate	Annual	MGD	808	1.92	8.94	0.62-9.72
Mercury, Total (Low Level)	Annual	ng/l	9	1.35	4.11	0.635-4.6
Outfall 601						
pH	Annual	S.U.	22	9.36	9.65	9.21-9.85
Total Suspended Solids	Annual	mg/l	22	0	5	0-7
Oil and Grease, Hexane Extr Method	Annual	mg/l	22	0	0	0-0
Flow Rate	Summer	MGD	12	0.0182	0.0866	0.004-0.14
Flow Rate	Winter	MGD	104	0.022	0.072	0-0.22

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ATTACHMENT A: FIRSTENERGY LAKE SHORE NPDES DATA SUMMARY (1/2009 – 3/2011)						
Parameter	Season	Units	# Obs.	50 th	95 th	Data Range
Flow Rate	Annual	MGD	116	0.022	0.072	0-0.22
Outfall 800						
Water Temperature	Annual	F	820	57	75	33-94
Total Suspended Solids	Annual	mg/l	324	0	22	0-117
Copper, Total Recoverable	Annual	ug/l	99	0	25.3	0-45.6

ATTACHMENT B: FIRSTENERGY LAKE SHORE VIOLATION SUMMARY (1/2009 – 3/2011)						
Reporting Period	Station	Parameter	Limit Type	Limit	Reported Value	Violation Date
December 2010	002	Mercury, Total (Low Le	30D Conc	7.1	9.56	12/1/2010
December 2010	002	Mercury, Total (Low Le	30D Qty	0.0000	.00012	12/1/2010