



State of Ohio Environmental Protection Agency

Southwest District Office

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Ted Strickland, Governor
Lee Fisher, Lieutenant Governor
Chris Korleski, Director

May 2, 2008

Mr. Jim Stieritz
Duke Energy Corporation
P.O. Box 960
Cincinnati, Ohio 45201

**Re: Duke Energy, Miami Fort Station
NPDES Permit No. 11B00001*HD; OH0009873
NPDES Compliance Inspection**

Dear Mr. Yeager:

On April 10, 2008, I conducted a National Pollutant Discharge Elimination System (NPDES) permit compliance inspection at the above referenced facility. Jim Stieritz, Principal Environmental Scientist, J. R. Wood, Environmental Coordinator, and Tim Thiemann, General Manager, represented the company during the inspection. Joe Potts, Project Engineer, provided operational information during the inspection of the new FGD wastewater treatment system. The purpose of the inspection was to evaluate the operation and performance of the facility's wastewater treatment systems and to determine compliance with the NPDES permit.

All aspects of plant operation and permit compliance evaluated during the inspection received satisfactory ratings. A few NPDES permit final effluent limitation violations were identified from reviewing the Discharge Monitoring Reports from January, 2005, to the present. These are detailed in the attached report. Duke Energy had previously reported these violations; no further explanation is needed. An item briefly discussed during the inspection was the need for better management of the coal barge unloading area to minimize coal spillage. I would like to discuss this issue further, with the possibility of adding a condition in the NPDES permit. Ohio EPA is in the process of drafting the renewal of the permit (which expires on June 30, 2008).

A copy of the inspection report is attached. If you have any questions, don't hesitate to contact me at (937) 285-6102.

Sincerely,

Michael W. Zimmerman
Permits Group
Division of Surface Water

copy: Tim Thiemann, Duke Energy
J. R. Wood, Duke Energy





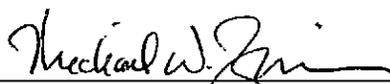
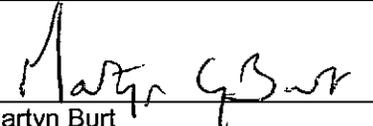
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NPDES Compliance Inspection Report

Section A: National Data System Coding					
Permit #	NPDES#	Month/Day/Year	Inspection Type	Inspector	Facility Type
11B00001*HD	OH0009873	4/10/2008	C	S	1

Section B: Facility Data		
Name and Location of Facility Inspected	Entry Time	Permit Effective Date
Duke Energy Corp., Miami Fort Station 11021 Brower Road North Bend, Ohio 45052	10:20 am	8/1/2004
	Exit Time	Permit Expiration Date
	2:00 pm	6/30/2008
Name(s) and Title(s) of On-Site Representatives	Phone Number(s)	
James J. Stieritz, Principal Environmental Scientist J.R. Wood, Environmental Coordinator Joe Potts, Project Engineer	(513) 287-2269 (513) 467-4886 (513) 467-4936	
Name, Address and Title of Responsible Official	Phone Number	
Tim Thiemann, General Manager Duke Energy Corp., Miami Fort Station (same address)	(513) 467-4936	

Section C: Areas Evaluated During Inspection					
(S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated)					
S	Permit	S	Flow Measurement	N	Pretreatment
S	Records/Reports	N	Laboratory	S	Compliance Schedule
S	Operations & Maintenance	S	Effluent/Receiving Waters	S	Self-Monitoring Program
S	Facility Site Review	S	Sludge Storage/Disposal	N	Other
N	Collection System				

Section D: Summary of Findings (Attach additional sheets if necessary)	
<p>Inspection findings indicate the Duke Energy, Miami Fort Station is generally in compliance with the terms and conditions of its NPDES permit. All wastewater treatment systems, including the new flue gas desulfurization WWTP, sanitary WWTP, and ash pond settling basin are being properly operated and maintained. Review of discharge monitoring reports from January, 2005 to the present revealed four effluent limitation violations, three fecal coliform violations at the sanitary WWTP (outfall 006) and one total residual chlorine violation at the condenser cooling water discharge (outfall 001). ***Refer to attached sheets for additional findings and information.</p>	
Inspector	Reviewer
 Michael W. Zimmermah Division of Surface Water Southwest District Office	 Martyn G. Burt Compliance & Enforcement Supervisor Division of Surface Water Southwest District Office
5-2-08 Date	5/2/08 Date



Sections E thru K: Complete on all inspections as appropriate
Y – Yes, N – No, N/A – Not Applicable, N/E – Not Evaluated

Section E: Permit Verification

Inspection observations verify the permit

- (a) Correct name and mailing address of permittee Y
- (b) Correct name and location of receiving waters..... Y
- (c) Product(s) and production rates conform with permit application (Industries)..... Y
- (d) Flows and loadings conform with NPDES permit..... Y
- (e) Treatment processes are as described in permit application... Y
- (f) New treatment process(es) added since last inspection..... Y
- (g) Notification given to State of new, different or increased discharges..... Y
- (h) All discharges are permitted..... Y
- (i) Number and location of discharge points are as described in permit..... Y

Comments/Status:

(f) 1) new flue gas desulfurization wastewater treatment with discharge to ash pond sedimentation basin, and 2) modification to the sanitary wastewater treatment and disinfection system with installation of slow sand filters and ultraviolet disinfection

Section F: Permit Compliance

- (a) Any significant violations since the last inspection..... Y
- (b) Permittee is taking actions to resolve violations..... Y
- (c) Permittee has a compliance schedule..... N
- (d) Compliance schedule contained in
- (e) Permittee is meeting compliance schedule..... N/A

Comments/Status:

Final effluent violations:
Outfall 001: TRC – 11/6/2007 – 2.34 mg/l (limit is 0.2 mg/l daily max.)
Outfall 006: Fecal coliform – 5/3/2006 – 6000 (limit is 400 #/100 ml)
10/4/2006 – 7000 (limit is 400 #/100 ml)
10/18/2006 – 3100 (limit is 400 #/100 ml)



Section G: Operation & Maintenance

Treatment Works:

Treatment facility properly operated and maintained

- (a) Standby power available.....generator or dual feed Y
- (b) Adequate alarm system available for power or equipment failures.. Y
- (c) All treatment units in service other than backup units..... Y
- (d) Wastewater Treatment Works classification (OAC 3745-7)..... I
- (e) Operator of Record holds unexpired license of class required by permit..... Y
 Class: I
- (f) Copy of certificate of Operator of Record displayed on-site..... N
- (g) Minimum operator staffing requirements fulfilled (OAC 3745-7)... Y
- (h) Routine and preventative maintenance scheduled/performed... Y
- (i) Any major equipment breakdown since last inspection..... N
- (j) Operation and maintenance manual provided and maintained.... Y
- (k) Any plant bypasses since last inspection..... N
- (l) Regulatory agency notified of bypasses..... N/A
 On MORs and/or Spill Hotline (1-800-282-9378)
- (m) Any hydraulic and/or organic overloads since last inspection..... N

Record Keeping:

- (a) Log book provided..... Y
- (b) Format of log book (i.e. computer log, hard bound book)

Daily bench sheets and computer logs.
- (c) Log book(s) kept onsite (in an area protected from weather)..... Y
- (d) Log book contains the following:
 - I. Identification of treatment works..... Y
 - II. Date/times of arrival/departure for Operator of Record and any other operator required by OAC 3745-7..... Y
 - III. Daily record of operation and maintenance activities (including preventative maintenance, repairs and request for repairs)..... Y
 - IV. Laboratory results (unless documented on bench sheets)... Y
 - V. Identification of person making log entries..... Y
- (d) Has the operator of record submitted written notification to the permittee, Ohio EPA and (if applicable) any local environmental agencies when a collection system overflow, treatment plant bypass or effluent limit violation has occurred..... Y



Section G: Operation & Maintenance (con't)

Collection System:

- (a) Percent combined system: 0%
- (b) Any collection system overflows since last inspection..... N
(CSO and/or SSO)
- (c) Regulatory agency notified of overflows (SSOs)..... N/A
- (d) CSO O&M plan provided and implemented..... N/A
- (e) CSOs monitored and reported in accordance with permit..... N/A
- (f) Portable pumps used to relieve system..... N/A
- (g) Lift station alarms provided and maintained..... N/A
- (h) Are lift stations equipped with permanent standby power
or equivalent..... N/A
- (i) Is there an inflow/infiltration problem (separate sewer system),
or were there any major repairs to collection system since
last inspection..... N
- (j) Any complaints received since last inspection of basement flooding N
- (k) Are any portions of the sewer system at or near capacity..... N

Comments/Status:





Section I: Self-Monitoring Program (con't)

Sampling:

- (a) Sampling location(s) are as specified by permit..... Y
- (b) Parameters and sampling frequency agree with permit..... Y
- (c) Permittee uses required sampling method..... Y
- (d) Sample collection procedures are adequate..... Y
 - (i) Samples refrigerated during compositing..... Y
 - (ii) Proper preservation techniques used..... Y
 - (iii) Containers and sample holding times prior to analysis conform with 40 CFR 136.3..... Y
- (e) Monitoring records (i.e., flow, pH, DO) maintained for a minimum of three years including all original strip chart recordings (i.e, continuous monitoring instrumentation, calibration and maintenance records)..... Y
- (f) Adequate records maintained of sampling date, time, location, etc.. Y

Laboratory:

General:

- (a) EPA approved analytical testing procedures used (40 CFR 136.3).. Y
- (b) If alternate analytical procedures are used, proper approval has been obtained..... N/A
- (c) Analyses being performed more frequently than required by permit. N
- (d) If (c) is yes, are results in permittee's self-monitoring report..... N/A
- (e) Commercial laboratory used..... Y
Parameters analyzed by commercial lab: *oil & grease, NO₃ + NO₂*

Lab name: *Test America*

Quality Control/Quality Assurance:

- (f) Quality assurance manual provided and maintained..... Y
- (g) Satisfactory calibration and maintenance of instruments/equipment. Y
- (h) Adequate records maintained..... Y
- (i) Results of latest USEPA quality assurance performance sampling program: Satisfactory Marginal Unsatisfactory

Date: *not evaluated*

Comments/Status:

Plant lab personnel perform daily inspections at the wastewater treatment systems. At outfall 006, daily observations for color, odor, and turbidity are recorded. Temperature, pH, TSS, TRC, TRO, CBOD₅, and metals are measured on site by plant staff.



Section J: Effluent/Receiving Water Observations

Outfall Number	Oil sheen	Grease	Turbidity	Visible Foam	Visible Floating Solids	Color	Other
001	<i>submerged</i>						
002	<i>none</i>	<i>none</i>	<i>moderate</i>	<i>none</i>	<i>none</i>	<i>grayish brown</i>	
004	<i>submerged</i>						
006	<i>none</i>	<i>none</i>	<i>none</i>	<i>none</i>	<i>none</i>	<i>clear</i>	

Comments/Status:

Refer to attached sheet.

Section K: Multimedia Observations

- (a) Are there indications of sloppy housekeeping or poor maintenance in work and storage areas or laboratories..... N
- (b) Do you notice staining or discoloration of soils, pavement or floors.. N
- (c) Do you notice distressed (unhealthy, discolored, dead) vegetation.. N
- (d) Do you see unidentified dark smoke or dust clouds coming from sources other than smokestacks..... N
- (e) Do you notice any unusual odors or strong chemical smells..... N
- (f) Do you see any open or unmarked drums, unsecured liquids, or damaged containment facilities..... N

If any of the above are observed, ask the following questions:

- (1) What is the cause of the condition?
- (2) Is the observed condition or source a waste product?
- (3) Where is the suspected contaminant normally disposed?
- (4) Is this disposal permitted?
- (5) How long has the condition existed and when did it begin?

Comments/Status:



Section D: Summary of Findings (con't.):

Duke Energy Miami Fort Station currently has three coal-fired electric generating units (Units # 6, 7, & 8). A fourth unit (# 5) was shutdown on December 31, 2007. The Station has a total generating capacity of approximately 1300 megawatts. Two new wet scrubber flue gas desulfurization (FGD) systems were installed on Units 7 and 8 in 2007. A new FGD wastewater treatment system was installed and began operating in December, 2007.

The station has five wastewater outfalls (001, 002, 004, 006, & 009), three stormwater outfalls (020, 021, & 022), two internal monitoring stations (611 & 612), a river intake monitoring station 801, and a sludge monitoring station 588 currently covered by the NPDES permit.

Notes regarding specific treatment systems and outfalls:

Outfall 001:

- condenser and heat exchanger cooling water as well as boiler blowdown water
- flows through a pipe tunnel under the plant and discharges approximately 75 feet out in the Ohio River (submerged)

Outfall 002:

- final outfall from Ash Basins A & B
- wastewater inputs include coal pile runoff, ash conveyance wastewater, FGD wastewater treatment system discharge, boiler tube cleaning wastewater, and storm water
- FGD WWTP fully on-line, treating wastewater from both Units #7 and 8, beginning in December, 2007 (approx. 200 gpm); treatment system operated by contractor Synthetic Materials (SynMat)
- a surface film consisting of air-entrained ash fines was observed around the edges of the pond
- results from two 48-hour screening bioassays conducted by Ohio EPA in October, 2005 and June, 2006 indicated no acute toxicity

Outfall 004:

- transformer cooling water
- only one transformer in service resulting in significant reduction in flow; will eventually be shut down completely
- flow enters Outfall 001 pipe before discharging to the river

Outfall 006:

- sanitary WWTP discharge, approx. 50 gpm max
- new slow sand filters and UV disinfection system in operation
- contract operator is Winelco Inc. (Bob Reckers); scheduled twice per month visits, additional visits as needed; Duke Energy lab personnel inspect plant daily
- final effluent was clear with no solids, foam, etc.
- Hamilton County General Health District inspected WWTP in July, 2007



Permit # : 11B00001*HD
NPDES #: OH0009873

Outfall 009:

-coal pile runoff emergency overflow to river
-not discharging during inspection

Outfalls 020, 021, 022:

-not inspected

Review of the Discharge Monitoring Records for outfalls 001, 002, 004, and 006 for the period of January, 2005 through March, 2008 revealed the following final effluent limitation violations:

Reporting Period	Station	Parameter	Limit Type	Limit	Reported Value	Violation Date
October 2005	006	Fecal Coliform	30D Conc	200	200.	10/1/2005
May 2006	006	Fecal Coliform	1D Conc	400	6000.	5/3/2006
October 2006	006	Fecal Coliform	1D Conc	400	7000.	10/4/2006
October 2006	006	Fecal Coliform	1D Conc	400	3100.	10/18/2006
November 2007	001	Chlorine, Total Residual	1D Conc	0.2	2.34	11/6/2007

