INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We make Indiana a cleaner, healthier place to live.

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STATE OF INDIANA)		BEFORE THE INDIANA DEPARTMENT
)	SS:	OF ENVIRONMENTAL MANAGEMENT
COUNTY OF MARION)		

IN THE MATTER OF:)
ORDER OF THE COMMISSIONER)
PURSUANT TO 326 IAC 3-5-1(c)(2)(A))
FOR ALCOA POWER GENERATING, INC. –)
ALCOA WARRICK POWER PLANT)

NOTICE, ORDER AND VARIANCE OF THE COMMISSIONER OF THE DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

To:

This Notice, Order and Variance of the Commissioner of the Department of Environmental Management ("Order") is issued pursuant to IC 13-14-1-9, IC 13-14-2-1, IC 13-14-8-8, and IC 4-21.5 and is based on 326 IAC 3-5-1(c)(2)(A)(iii). During the commissioner's review it was determined that the Petitioner met all requirements of 326 IAC 3-5-1(c)(2)(A)(iii) according to the terms specified below:

PETITION

1. Petitioner is Alcoa Power Generating, Inc. (Petitioner) which/who owns/operates the Alcoa Warrick Power Plant (#173-00002) located at 4700 Darlington Avenue in Newburgh, Indiana 47630.

2. Pursuant to 326 IAC 3-5-1(c)(2)(A)(iii), the Petitioner is requesting approval to demonstrate compliance with applicable particulate matter (PM) limits by continuously monitoring PM emissions from three (3) boilers (Units 1-3) at the Alcoa Warrick Power Plant in lieu of the requirement to monitor opacity at 326 IAC 326 IAC 3-5-1(c)(2)(A).

3. 326 IAC 3-5-1(c)(2)(A)(iii) provides that IDEM may approve an alternative requirements when "installation of an opacity monitoring system would not provide accurate determinations of emissions as a result of interference of condensed water vapor."

4. The continuous opacity monitoring system (COMS) currently being operated on Units 1-3 will no longer be functional upon start up of the scrubbers scheduled to come online in 2008 because the COMS are located in stacks that will no longer be in use after the scrubbers are online. A COMS located at the scrubber outlet would be unreliable due to the moisture content of the emissions from the scrubber. Operating COMS in the ductwork going into the scrubber would not be representative of actual emissions since the scrubber removes particulate emissions. Therefore, the Petitioner believes that an alternative monitoring plan to monitor particulate emission using a PM continuous emissions monitoring system (CEMS) is acceptable.

FINDINGS

1. IDEM agrees that a COMS installed after the Petitioner's wet scrubber control device would not provide accurate determinations of opacity due to the interference from condensed uncombined water with a COM's light beam. IDEM also agrees that a PM CEMS installed and calibrated according to the requirements of PS-11 and any other applicable requirements is the preferred way to determine the particulate emission rate after a wet scrubber.

CONDITIONS OF APPROVAL

1. The Petitioner shall initiate start-up of the PM CEMS at such time as the scrubber commences operation for Units 1-3 at the Alcoa Warrick Power Plant.

2. The alternative monitoring plan shall consist of the following:

   A) Upon initial re-routing of the electrostatic precipitator exhaust from its existing exhaust stack(s) to its scrubber, the unit will cease to operate with an associated COMS;

   B) Upon scrubber start-up, its associated PM CEMS will also commence operation. However, results from the PM CEMS will not be available to the Petitioner for use in demonstrating compliance with the applicable particulate matter limits until it has met the requirements of PS-11, and has passed its applicable RATA test;

C) During the interim period between scrubber start-up and successful demonstration of compliance with PS-11 by the associated PM CEMS, compliance with applicable PM and opacity requirements will be assured through monitoring of particulate removal device operating parameters. The Petitioner shall monitor the ability of the electrostatic precipitator (ESP) and the scrubber to control particulate emissions in accordance with the following:

Electrostatic Precipitator

1) Conduct daily monitoring of the number of Transformer Rectifier (T-R) sets in operation.

2) Conduct daily monitoring of the primary and secondary voltages and currents of the T-R sets.

3) Whenever the percentage of T-R sets in service falls below ninety percent (90%), the Petitioner shall take reasonable response steps in accordance with Section C -- Response to Excursions or Exceedances of the Petitioner's Part 70 Permit No. T173-6630-00002. T-R set failure resulting in less than ninety percent (90%) availability is not a deviation from Permit No. T173-6630-00002 or a violation of this Order. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances of the Petitioner's Part 70 Permit No. T173-6630-00002 shall be considered a deviation from Permit No. T173-6630-00002 and this Order.

Scrubber

4) Continuously monitor and determine SO_2 emissions reduction by SO_2 CEMS.

   i) Compliance with this percent SO_2 reduction requirement will be determined on a twenty-four (24) hour daily (block) average basis.

5) Whenever the SO_2 reduction fall below ninety percent (90%), the Petitioner shall take response steps in accordance with Section C -- Response to Excursions or Exceedances of the Petitioner's Part 70 Permit No. T173-6630-00002. SO_2 reduction of less than ninety percent (90%) is not a deviation from Permit No. T173-6630-00002 or a violation of this Order. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances of the Petitioner's Part 70 Permit No. T173-6630-00002 shall be considered a deviation from Permit No. T173-6630-00002 and this Order.

6) The Petitioner shall conduct daily monitoring of the recirculation slurry flow rate.

7) Whenever the recirculation slurry flow rate falls below 250 gal./hr. or a value established during the latest stack test, the Petitioner shall take reasonable response steps in accordance with Section C -- Response to

Excursions or Exceedances of the Petitioner's Part 70 Permit No. T173-6630-00002. Failure resulting in a recirculation slurry flow rate less than 250 gal./hr is not a deviation from Permit No. T173-6630-00002 or a violation of this Order. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances of the Petitioner's Part 70 Permit No. T173-6630-00002 shall be considered a deviation from Permit No. T173-6630-00002 and this Order.

D) During the interim period between scrubber start-up and successful demonstration of compliance with PS-11 by the associated PM CEMS, PM CEMS downtime, except for calibration checks, and zero and span adjustments, shall be less than three percent (3%) of the total quarterly operating hours.

E) Upon successful demonstration of compliance with PS-11, the monitoring described by Clause C and the PM CEMS downtime provision described by Clause D will be discontinued, and thereafter, PM compliance will be demonstrated by the associated PM CEMS;

F) Upon successful completion of the certification of the PM CEMS, the Petitioner shall submit all required information to the IDEM Office of Air Quality; and

G) Installation, operation, testing, monitoring, data reporting, data substitution, and other requirements for the PM CEMS shall be determined by NSPS, 40 CFR Part 60, Subpart Db and 326 IAC 3-5 (Continuous Monitoring of Emissions).

ORDER

1. This Order grants the approval of the petition submitted by the Petitioner subject to the conditions of the approval and allows Petitioner to operate according to an alternative monitoring plan for PM CEMS for Units 1-3 at the Alcoa Warrick Power Plant in lieu of monitoring opacity with a COMS in accordance with 326 IAC 3-5-1(c)(2)(A)(iii).

2. This Order shall apply to and be binding upon the Petitioner, its successors and assigns. No change in ownership, corporate, or partnership status of the Petitioner shall in any way alter its status or responsibilities under this Order.

VARIANCE

Pursuant to 326 IAC 3-5-1(c)(2) fossil-fuel fired steam generators of greater than 100 hundred million BTU per hour heat input capacity are required to monitor for opacity, unless an alternative monitoring request has been granted by the department. The rule also states that an alternative monitoring request granted by the department shall be submitted to U.S. EPA as a state implementation plan (SIP) revision and shall not be in effect until approved as a SIP revision.

The Petitioner states that compliance with the COMS requirement while waiting for U.S. EPA SIP approval of the alternative monitoring plan would be an "undue hardship or burden" for the reasons presented below and has requested a variance from 326 IAC 3-5-1 to continuously monitor opacity for Units 1-3 at the Alcoa Warrick Power Plant per IC 13-14-8-8:

1. Cost of temporary COMS installed for each of Units 1-3 is estimated at $230,000, or $690,000 combined for all 3 units.

2. The Petitioner is scheduled to begin operation of the PM CEMS on Unit 2 by the end of March 2008. An alternative monitoring plan granted by the department would not be approved by U.S. EPA until after March 2008.

3. The COMS currently being operated on Units 1-3 will no longer be functional upon start up of the scrubbers scheduled to come online in 2008 because the COMS are located in stacks that will no longer be in use after the scrubbers are online. A COMS located at the scrubber outlet would be unreliable due to the moisture content of the emissions from the scrubber. Operating COMS in the ductwork going into the scrubber would not be representative of actual emissions since the scrubber removes particulate emissions. Opacity is a surrogate measurement for continuous compliance with the PM limits. Since PM will be measured continuously with CEMS, the monitoring of opacity should not be necessary.

4. The scrubber modification for Units 1-3 triggers the applicability of 40 CFR 60, Subpart Db (New Source Performance Standards (NSPS) for Industrial-Commercial-Institutional Steam Generating Units). The NSPS allows for sources to operate without COMS when monitoring with PM CEMS provided that the source notifies U.S. EPA 30 days prior to start-up of the PM CEMS. U.S. EPA already recognizes that continuous monitoring of PM with a CEMS is a valid alternative to continuous monitoring of opacity.

In making a decision on a variance request, and whether compliance with the rule constitutes an undue burden or hardship, IDEM considers the environmental impact of the variance request, the presence of unique circumstances that set the situation apart from the others who must comply with the rule, and the financial impact on the company.

Based on the foregoing information, IDEM finds the following:

1. IDEM is already granting approval of the alternative monitoring plan that will be in place once the boilers and scrubbers are on-line and once the PM CEMS are certified. The alternative monitoring plan will ensure that the source is monitoring for compliance with particulate matter emission limitations while U.S. EPA is approving the alternative monitoring plan into the SIP.

2. A PM CEMS installed and calibrated according to the requirements of PS-11 and any other applicable requirements is the preferred way to determine the particulate emission rate after a wet scrubber.

3. The Petitioner submitted notice to U.S. EPA for the use of a CEMS to monitor PM emissions under the NSPS at 40 CFR 60.48b(j)(1).

Based on these findings, the Office of Air Quality, IDEM, has determined that the request submitted by the Petitioner satisfies the criteria delineated in IC 13-14-8-8 for granting a variance. The issuance of this variance is subject to the conditions in the Commissioner's Order for an alternative monitoring plan for PM CEMS for Units 1-3 at the Alcoa Warrick Plant. This variance

expires one (1) year from the effective date. This is a variance from state law only and does not change federally approved SIP requirements.

EFFECTIVE DATE OF ORDER AND VARIANCE

Pursuant to IC 4-21.5-3-5, IDEM will give notice to each person whom the order is directed, affected neighbors, and in a newspaper of general circulation in the region affected by this order.

Pursuant to 40 CFR 51.104, this Order will be submitted to the U.S. Environmental Protection Agency as a revision to the Indiana state implementation plan. Upon approval by the U.S. Environmental Protection Agency, this Order will be part of the Indiana state implementation plan.

Pursuant to IC 4-21.5-3-5 and IC 13-14-8-11, this Order and Variance becomes effective fifteen (15) days after receipt of notice of the decision unless a petition for review is filed with the Indiana Office of Environmental Adjudication. If anyone wishes to challenge this decision to grant an Order and Variance, IC 4-21.5-3-7 requires that they file a petition for administrative review not later than fifteen (15) days after being served with this notice. Pursuant to IC 13-15-6-7(c) you are considered to be served with this notice when you are personally served with the notice or three (3) days after the notice is deposited in the United States mail and addressed to you, whichever occurs first. Information on petitions for review of this Order can be found at IC 4-21.5-3-7. A petition for review must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Room N-501 E, Indianapolis, Indiana 46204 within fifteen (15) days from the receipt of this notice. The petition must contain facts demonstrating you are either the applicant, the person aggrieved or adversely affected by this decision, or otherwise entitled to review by law. Pursuant to IC 4-21.5-3-5(d), the Administrative Law Judge will provide parties who request review with notice of prehearing conferences, preliminary hearings, stays or orders disposing of all proceedings.

If you have questions about this Order or Variance, please contact Susan Bem, Rules Development Section, Office of Air Quality, (317) 233-5697 or (800) 451-6027, press 0 and ask for extension 3-5697 (in Indiana) or email at sbem@idem.in.gov.

Dated at Indianapolis, Indiana, this 11TH day of FEBRUARY, 2008.

Thomas W. Easterly
Commissioner