



*Mitchell E. Daniels, Jr.*  
Governor

*Thomas W. Easterly*  
Commissioner

100 North Senate Avenue  
Indianapolis, Indiana 46204  
(317) 232-8603  
(800) 451-6027  
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TO: Interested Parties / Applicant  
DATE: April 8, 2005  
RE: Lehigh Cement Company / 093-20912-00002  
FROM: Paul Dubenetzky  
Chief, Permits Branch  
Office of Air Quality

### Notice of Decision – Approval

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to 326 IAC 2, this approval was effective immediately upon submittal of the application.

If you wish to challenge this decision, IC 4-21.5-3-7 requires that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, Indianapolis, IN 46204, **within eighteen (18) calendar days from the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

- (1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
- (2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
- (3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

- (1) the name and address of the person making the request;
- (2) the interest of the person making the request;
- (3) identification of any persons represented by the person making the request;
- (4) the reasons, with particularity, for the request;
- (5) the issues, with particularity, proposed for considerations at any hearing; and
- (6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosures  
FNPER-AM.dot 1/10/05



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We make Indiana a cleaner, healthier place to live.*

*Mitchell E. Daniels, Jr.*  
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April 8, 2005

Mr. Edward Epping  
Lehigh Cement Company  
121 North First Street  
P.O. Box 97  
Mitchell, Indiana 47446

Re: First Administrative Amendment No: 093-20912-00002  
of Part 70 Permit 093-5990-00002

Dear Mr. Epping:

Lehigh Cement Company, 121 North First Street, Mitchell, Indiana 47446, applied for an application to install a second continuous opacity monitor (COM) and switch the location of the existing COM used to monitor the visible emissions from Kiln #1 and Kiln #2.

Pursuant to the provisions of 326 IAC 2-7-11, an administrative amendment is hereby approved as described in the attached Technical Support Document (TSD). Other than the changes detailed in the TSD for this approval, all other conditions of the permit shall remain unchanged and in effect. Please find enclosed a copy of the modified pages of the Part 70 Permit.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Ms. Iryn Calilung at the Indiana Department Environmental Management, Office of Air Quality, 100 North Senate Avenue, Indianapolis, Indiana 46204 or by telephone at (317) 233-5692 or toll free at 1-800-451-6027 extension 3-5692.

Sincerely,

**Original signed by Kathy Moore for**  
Paul Dubenetzky, Chief  
Permits Branch  
Office of Air Quality

Attachments - Modified Pages Part 70 Permit and TSD

cc: File - Lawrence County  
U.S. EPA, Region V  
Lawrence County Health Department  
Air Compliance Section Inspector - RCS  
Compliance Branch  
Technical Support and Modeling



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PART 70 OPERATING PERMIT

OFFICE OF AIR QUALITY

Lehigh Cement Company
121 North First Street
Mitchell, Indiana 47446

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Table with 2 columns: Permit details (Operation Permit No., Issuance Date, Expiration Date) and Issuance/Expiration dates.

First Significant Permit Modification No. 093-16851-00002, issued on July 11, 2003
Second Significant Permit Modification No.: 093-18649-00002, issued on November 5, 2004

Table with 2 columns: Administrative details (First Administrative Amendment No., Signed by, Issuance Date) and Section Affected.



## SECTION D.1 FACILITY/EMISSION UNIT OPERATION CONDITIONS

### Facility/Emissions Unit Description [326 IAC 2-7-5(15)]

- (1) One (1) kiln #1, identified as EU15, constructed in 1959 as a long dry kiln and modified to a one-stage preheater kiln in July 2003, with a heat input rate of 118 million Btu per hour, with a nominal production rate of 38 tons per hour, with PM emissions controlled by one (1) electrostatic precipitator (ESP), identified as KP1, and dioxins/furans controlled and SO<sub>2</sub> partially controlled by a Water Spray Tower, and exhausting to one (1) stack, identified as S-KP1. Kiln #1 is also permitted to use a blended fuel of coal and pressed paper making waste where the blend has a maximum of 20% pressed paper making waste by heat input.
- (2) One (1) kiln #2, identified as EU16, constructed in 1959 as a long dry kiln and modified to a one-stage preheater kiln in July 2003, with a heat input rate of 118 million Btu per hour, with a nominal production rate of 38 tons per hour, with PM emissions controlled by one (1) electrostatic precipitator (ESP), identified as KP2, and dioxins/furans controlled and SO<sub>2</sub> partially controlled by a Water Spray Tower, and exhausting to one (1) stack, identified as S-KP1. Kiln #2 is also permitted to use a blended fuel of coal and pressed paper making waste where the blend has a maximum of 20% pressed paper making waste by heat input.
- (3) One (1) kiln #3, identified as EU17, constructed in 1974 as a one-stage preheater kiln, with a heat input rate of 118 million Btu per hour, with a nominal production rate of 43 tons per hour, with PM emissions controlled by one (1) electrostatic precipitator (ESP), identified as KP3, and exhausting to one (1) stack, identified as S-KP2. Kiln #3 is also permitted to use a blended fuel of coal and pressed paper making waste where the blend has a maximum of 20% pressed paper making waste by heat input.

(The information describing the processes contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

### Emission Limitations and Standards [326 IAC 2-7-5(1)]

#### D.4.1 Prevention of Significant Deterioration (PSD) [326 IAC 2-2]

Pursuant to Significant Permit Modification 093-16851-00002 issued in 2003, in order to render the requirement of 326 IAC 2-2 (PSD) not applicable to the preheater modification, the following conditions shall apply upon startup of either preheater Kilns #1 or #2:

- (a) The Clinker production from Kiln #1 (EU15) and Kiln #2 (EU16) shall be limited to 321,875 tons each per 12 consecutive month period with compliance determined at the end of each month.
- (b) PM emissions from each Kiln #1 (EU15) and Kiln #2 (EU16) shall not exceed 0.28 lb/ton clinker.
- (c) PM<sub>10</sub> emissions from each Kiln #1 (EU15) and Kiln #2 (EU16) shall not exceed 0.59 lb/ton clinker.
- (d) NO<sub>x</sub> emissions from each Kiln #1 (EU15) and Kiln #2 (EU16) shall not exceed 11.14 lb/ton clinker.
- (e) CO emissions from each Kiln #1 (EU15) and Kiln #2 (EU16) shall not exceed 1.67 lb/ton clinker.

- (f) SO<sub>2</sub> emissions from each Kiln #1 (EU15) and Kiln #2 (EU16) shall not exceed 7.51 lb/ton clinker.
- (g) VOC emissions from each Kiln #1 (EU15) and Kiln #2 (EU16) shall not exceed 0.30 lb/ton clinker.
- (h) Lead emissions from each Kiln #1 (EU15) and Kiln #2 (EU16) shall not exceed 1.69E-03 lb/ton clinker.
- (i) Sulfuric Acid mist emissions from each Kiln #1 (EU15) and Kiln #2 (EU16) shall not exceed 3.9E-02 lb/ton clinker.
- (j) H<sub>2</sub>S emissions from each Kiln #1 (EU15) and Kiln #2 (EU16) shall not exceed 0.037 lb/ton clinker.

Therefore, the requirements of 326 IAC 2-2 (PSD) are not applicable to the preheater modification.

D.4.2 Sulfur Dioxide (SO<sub>2</sub>) [326 IAC 7-1.1-1] [326 IAC 7-2-1]

Pursuant to 326 IAC 7-1.1 (SO<sub>2</sub> Emissions Limitations) the SO<sub>2</sub> emissions from the combustion of coal in each of the kilns shall not exceed six (6.0) pounds per MMBtu heat input each. Pursuant to 326 IAC 7-2-1, compliance shall be demonstrated on a monthly average. 326 IAC 7-1.1 and 326 IAC 7-2-1 are not federally enforceable.

D.4.3 General Provisions Relating to NESHAP [326 IAC 20-1][40 CFR Part 63, Subpart A]

On and after June 14, 2002, the provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 20-1, apply to kiln #1 (EU15), kiln #2 (EU16), and kiln #3 (EU17) except when otherwise specified in 40 CFR Part 63, Subpart LLL.

D.4.4 NESHAP Emissions Limitation [40 CFR 63, Subpart LLL]

Pursuant to 40 CFR 63.1343 (Emissions Standards and Operating Limits), on and after June 14, 2002, which is the compliance date for the National Emission Standards for Hazardous Air Pollutants (NESHAP) from the Portland Cement Manufacturing Industry, kiln #1 (EU15), kiln #2 (EU16), and kiln #3 (EU17) shall be limited as follows:

- (a) Particulate matter (PM) emissions shall be limited to 0.30 pound per ton of feed (dry basis) to the kiln.
- (b) Visible emissions shall be limited to twenty percent (20%) opacity.
- (c) Dioxin/Furan emissions shall be limited to  $8.7 \times 10^{-11}$  grains per dry standard cubic foot (TEQ) corrected to seven percent oxygen; or  $1.7 \times 10^{-10}$  grains per dry standard cubic foot (TEQ) corrected to seven percent oxygen, when the average of the performance test run average temperatures at the inlet to the particulate matter control device is 400 degrees Fahrenheit or less.
- (d) The kiln shall be operated such that the three hour rolling average temperature of the gas at the inlet to the kiln's particulate matter control device does not exceed the average of the run average temperatures determined during the performance tests required in Condition D.4.7.

D.4.5 Compliance Assurance Monitoring (CAM) Plan [40 CFR 64]

IDEM has determined that a Compliance Assurance Monitoring (CAM) Plan, in accordance with

the requirements of 40 CFR 64, is required for the one-stage preheater kiln #1 (EU15), and the one-stage preheater kiln #2 (EU16). Pursuant to 40 CFR 64.2, CAM is required because the potential to emit SO<sub>2</sub> is greater than one hundred (100) tons per year before control and the source is subject to the emission limitations contained in conditions D.4.1 and D.4.2. A CAM plan was received from the source on December 19, 2002. IDEM has determined that compliance with the monitoring requirements of 40 CFR 63.8 and 40 CFR 63, Subpart LLL (National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry), satisfy the monitoring requirements of 40 CFR 64.

#### D.4.6 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

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A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for each of the kilns facilities/emissions units and the control devices KP1, KP2, and KP3. If the Operations and Maintenance Plan required by Condition D.4.12 is developed in accordance with Section B - Preventive Maintenance Plan, then once the Operations and Maintenance Plan has been developed, it shall satisfy this condition.

### Compliance Determination Requirements

#### D.4.7 NESHAP Testing Requirements [40 CFR 63, Subpart LLL]

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- (a) Within 180 days after June 14, 2002, which is the compliance date for the Portland Cement Manufacturing Industry NESHAP, the Permittee shall demonstrate initial compliance with the PM, opacity and dioxin/furan limits established in Condition D.4.4 by conducting performance tests in accordance with 40 CFR 63.1349 and Section C - Performance Testing. The tests for PM shall be repeated at least once every five 5 years and the tests for dioxin/furans shall be repeated at least once every 2.5 years from the date of this valid compliance demonstration. The Permittee is also required to repeat the performance tests for particulate matter and dioxins/furans within 90 days of initiating any significant change in the feed or fuel from that used in the previous test that may adversely affect compliance with the applicable particulate matter or dioxins/furans limits. These tests shall be conducted in accordance with Section C - Performance Testing. Pursuant to 40 CFR 63.7(e), the tests shall be conducted under representative operating conditions.
- (b) Pursuant to 40 CFR 63.1349, the Permittee is required to repeat the performance tests for particulate matter and dioxins/furans within 90 days of startup of preheater Kilns #1 and #2.

#### D.4.8 Testing requirement [326 IAC 2-1.1-11]

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To verify compliance with condition D.4.1, the Permittee shall, within 60 days after achieving maximum capacity but no later than 180 days after startup of preheater Kilns #1 and #2, perform PM, PM<sub>10</sub>, NO<sub>x</sub>, CO, SO<sub>2</sub>, VOC, Sulfuric Acid mist, H<sub>2</sub>S and Lead testing on Kiln #1 (EU15) and Kiln #2 (EU16). The PM, PM<sub>10</sub>, NO<sub>x</sub>, CO, SO<sub>2</sub>, VOC, Sulfuric Acid mist, H<sub>2</sub>S, and Lead testing for Kilns #1 and #2 shall be repeated every 2.5 years from the Permittee's initial compliance demonstration for each of these pollutants following start-up of the preheater Kilns #1 and #2.

#### D.4.9 Particulate Control

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Except as otherwise provided by statute, rule or this permit, the ESPs (KP1, KP2, and KP3) for PM control shall be in operation at all times when the associated kiln is in operation, in order to demonstrate compliance with Conditions D.4.1 and D.4.4.

D.4.10 Sulfur Dioxide Emissions from Coal Combustion and Coal Sulfur Content [326 IAC 2-7-5(A)] [326 IAC 2-7-6] [326 IAC 7-1.1] [326 IAC 7-2]

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Pursuant to 326 IAC 7-1.1-2, the Permittee shall demonstrate that the sulfur dioxide emissions from coal combustion do not exceed six (6.0) pounds per MMBtu. Pursuant to 326 IAC 7-2, compliance shall be determined utilizing the following methods:

- (a) Coal sampling and analysis shall be performed using one of the following procedures:
  - (1) Minimum Coal Sampling Requirements and Analysis Methods [326 IAC 3-7-2(b)(3)]:
    - (A) The coal sample acquisition point shall be at a location where representative samples of the total coal flow to be combusted by the facility or facilities may be obtained. A single as-bunkered or as-burned sampling station may be used to represent the coal to be combusted by multiple facilities using the same stockpile feed system;
    - (B) Coal shall be sampled at least three (3) times per day and at least one (1) time per eight (8) hour period unless no coal is bunkered during the preceding eight (8) hour period;
    - (C) Minimum sample size shall be five hundred (500) grams;
    - (D) Samples shall be composited and analyzed at the end of each calendar month;
    - (E) Preparation of the coal sample, heat content analysis, and sulfur content analysis shall be determined pursuant to 326 IAC 3-7-2(c), (d), (e);
  - (2) Sample the coal pursuant to 326 IAC 3-7-2(a). Preparation of the coal sample, heat content analysis, and sulfur content analysis shall be determined pursuant to 326 IAC 3-7-2(c), (d) and (e);
  - (3) Sample and analyze the coal pursuant to 326 IAC 3-7-3.
- (b) Compliance may be determined by conducting a stack test for sulfur dioxide emissions from the kilns in accordance with 326 IAC 3-6, utilizing the procedures in 40 CFR 60, Appendix A, Method 6, 6A, 6C, or 8. [326 IAC 7-2-1(d)]

A determination of noncompliance pursuant to either of the methods specified in (a) or (b) above shall not be refuted by evidence of compliance pursuant to the other method.

- (c) Upon written notification to IDEM by a facility owner or operator, continuous emission monitoring data collected and reported pursuant to 326 IAC 3-5-1 may be used as the means for determining compliance with the emission limitations in 326 IAC 7. Upon such notification, the other requirements of 326 IAC 7 shall not apply. [326 IAC 7-2-1(g)] 326 IAC 3-5, 326 IAC 3-6 and 326 IAC 3-7 are not federally enforceable.

**D.4.11 Continuous Emissions Monitoring [326 IAC 3-5] [326 IAC 2-7-6(1),(6)] [40 CFR 63, Subpart LLL]**

Pursuant to 326 IAC 3-5 (Continuous Monitoring of Emissions), 326 IAC 2-1.1-11 and 40 CFR Part 63, a continuous monitoring system shall be installed, calibrated, maintained, and operated for measuring the opacity from:

- (a) Kiln #1 in the Kiln #1 breeching duct leading to Stack S-KP1;
- (b) Kiln #2 in the Kiln #2 breeching duct leading to Stack S-KP1; and
- (c) Kiln #3 in the Stack S-KP2,

pursuant to 326 IAC 3-5-2 and 40 CFR 63.8(c). The continuous opacity monitors shall be installed and operational prior to conducting the performance tests required in Condition D.4.7. The continuous opacity monitors shall meet the performance specifications of 326 IAC 3-5-2 and 40 CFR 63.8(c). 326 IAC 3-5 is not federally enforceable.

**Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

**D.4.12 NESHAP Monitoring Requirements [40 CFR 63, Subpart LLL] [40 CFR 64.2]**

Pursuant to 40 CFR 63.1350 (Monitoring Requirements), on and after June 14, 2002, which is the compliance date for the National Emission Standards for Hazardous Air Pollutants (NESHAP) for the Portland Cement Manufacturing Industry, the Permittee shall perform the following monitoring requirements:

- (a) The Permittee shall have prepared a written operations and maintenance plan for kiln #1 (EU15), kiln #2 (EU16), and kiln #3 (EU17). The plan shall include the following information:
  - (1) Procedures for proper operation and maintenance of kiln #1 (EU15), kiln #2 (EU16), and kiln #3 (EU17) and associated air pollution control device(s) in order to meet the emissions limit in Condition D.4.4; and
  - (2) Procedures to be used during an inspection of the components of the combustion system of kiln #1 (EU15), kiln #2 (EU16), and kiln #3 (EU17) at least once per year.

Failure to comply with any provision of the operations and maintenance plan shall be a violation of the standard. The contents of the operations and maintenance plan are not included in this permit and may be modified by the Permittee without modification or amendment of this permit.

- (b) The Permittee shall conduct an inspection of the components of the combustion system of kiln #1 (EU15), kiln #2 (EU16), and kiln #3 (EU17) at least once per year.
- (c) The Permittee shall continuously monitor opacity of emissions at the outlet of the PM control device. The COM required by Condition D.4.11 shall be used to monitor opacity emissions in accordance with the NESHAP 40 CFR 63, Subpart LLL and shall be installed, maintained, calibrated and operated as required by 40 CFR 63, Subpart A.
- (d) The Permittee shall install, calibrate, maintain, and continuously operate a continuous monitor to record the temperature of the exhaust gases from kiln #1 (EU15), kiln #2 (EU16), and kiln #3 (EU17) at the inlet to, or upstream of the kiln's PM control device.

- (1) The recorder response range must include zero and 1.5 times either of the average temperatures established according to the requirements in 40 CFR 63.1349(b)(3)(iv).
- (2) The reference method must be a National Institute of Standards and Technology calibrated reference thermocouple-potentiometer system or alternate reference, subject to approval by the IDEM.
- (3) The three-hour rolling average temperature shall be calculated as the average of 180 successive one-minute average temperatures.
- (4) Periods of time when one-minute averages are not available shall be ignored when calculating three-hour rolling averages. When one-minute averages become available, the first one-minute average is added to the previous 179 values to calculate the three-hour rolling average.
- (5) The calibration of all thermocouples and other temperature sensors shall be verified at least once every three months.

Recording the temperature of the exhaust gases from kiln #1 (EU15) and kiln #2 (EU16) shall satisfy the requirement of the Compliance Assurance Monitoring (CAM) Plan for SO<sub>2</sub> emissions monitoring, in accordance with the requirements of 40 CFR 64.

#### D.4.13 Preventive Inspections

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In order to document compliance with the applicable PM and dioxin/furan limits specified in Condition D.4.1 and Condition D.4.4 the following inspections shall be performed for each ESP:

- (1) Electrostatic precipitator, transformer-rectifier set ("T-R set") component inspections shall be performed during each annual shutdown, but no less often than once every fourteen (14) months, and during any outage lasting more than five (5) days, unless such inspections have been performed within the last six (6) months. The inspections shall include the following:
  - (A) Internal inspections of shell for corrosion (including but not limited to doors, hatches, insulator housings, and roof area).
  - (B) Effectiveness of rapping (including but not limited to a visual check of dust buildup on discharge electrodes and plates).
  - (C) Gas distribution (including but not limited to a visual check of dust buildup on distribution plates and turning vanes).
  - (D) Dust accumulation (including but not limited to a visual check of dust buildup on shell and support members that could result in grounds or promote advanced corrosion).
  - (E) Major misalignment of plates and electrodes (including but not limited to a visual check of plate and electrode alignment).
  - (F) Rapper, electric hammer, and T-R set control cabinets (including but not limited to motors and lubrication).
  - (G) Rapper assembly (including but not limited to loose bolts, ground wires, water and air lines, and solenoids).

- (H) Electric hammer and rapper boots (including but not limited to air in-leakage, wear and deterioration).
- (I) T-R set controllers (including but not limited to voltage and current setpoints).
- (2) Air and water infiltration, once per month. This inspection may consist of audible checks around hoppers/hatches, duct expansion joints, and areas of corrosion.

#### D.4.14 Parametric Monitoring

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- (a) The ability of the ESPs to control particulate emissions shall be monitored once per day when the units are in operation, by measuring and recording and comparing the total power of the ESP to the minimum total power of thirty-five kilowatts (35 kW).
- (b) When for any reading, the total power is below the minimum total power of 35 kW, the Permittee shall take reasonable response steps in accordance with Section C – Compliance Response Plan – Preparation, Implementation, Records, and Reports. A total power reading below the minimum is not a deviation from this permit.

Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

#### D.4.15 Opacity Readings

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The ability of the ESP to control particulate emissions shall be monitored by continuously measuring and recording the opacity of emissions from each of the kiln stack exhausts (S-KP1 and S-KP2).

- (a) Appropriate response steps shall be taken in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports whenever the opacity exceeds 18 percent for three (3) consecutive six (6) minute averaging periods. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
- (b) The opacity shall be determined by the certified continuous opacity monitor required in Condition D.4.11.

### **Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

#### D.4.16 Record Keeping Requirements

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- (a) In order to document compliance with Conditions D.4.2 and D.4.10, the Permittee shall maintain records in accordance with (1) through (4) below. Records maintained for (1) through (4) shall be taken monthly and shall be complete and sufficient to establish compliance with the SO<sub>2</sub> emission limits established in D.4.2.
  - (1) Calendar dates covered in the compliance determination period;
  - (2) Actual monthly coal usage since last compliance determination period;
  - (3) Calendar month average sulfur content and heat content of coal;
  - (4) Calendar month average sulfur dioxide emission rates in pounds per million Btu of heat input.

326 IAC 7-1.1, 7-2-1, and 326 IAC 3-4, 3-5, 3-6, and 3-7 are not federally enforceable.

- (b) Pursuant to 326 IAC 3-7-5(a), the Permittee shall develop a standard operating procedure (SOP) to be followed for sampling, handling, analysis, quality control, quality assurance, and data reporting of the information collected pursuant to 326 IAC 3-7-2 through 326 IAC 3-7-4. In addition, any revision to the SOP shall be submitted to IDEM, OAQ.
- (c) To document compliance with Conditions D.4.4, D.4.7, D.4.8, D.4.11, D.4.13, D.4.14, and D.4.15, the Permittee shall maintain records in accordance with (1) through (6) below. Records shall be complete and sufficient to establish compliance with the limits established in Section C - Opacity and Conditions D.4.4, D.4.7, D.4.8, D.4.11, D.4.13, D.4.14, and D.4.15.
  - (1) Data and results from the most recent stack test.
  - (2) All continuous emissions monitoring data.
  - (3) All ESP total power readings.
  - (4) The results of all ESP inspections and the type and number of parts replaced.
  - (5) All preventive maintenance measures taken.
  - (6) All response steps taken and the outcome for each.
- (d) To document compliance with the NESHAP 40 CFR 63, Subpart LLL, the Permittee shall maintain all records required by 40 CFR 63.1355. These records include the following:
  - (1) The Permittee shall maintain files of all information (including all reports and notifications) required by 40 CFR 63.1355(a) recorded in a form suitable and readily available for inspection and review as required by 40 CFR 63.10(b)(1).
  - (2) The Permittee shall maintain records for each affected source as required by 40 CFR 63.10(b)(2) and (3) including:
    - (A) All documentation supporting initial notifications and notifications of compliance status under 40 CFR 63.9.
    - (B) All records of applicability determination, including supporting analyses.
  - (3) The Permittee shall maintain all records of continuous monitoring system data required by 40 CFR 63.10(c).
  - (4) The Permittee shall keep records of the results of the inspections of the components of the combustion systems of kilns #1, #2, and #3, required by 40 CFR 63.1350 and Condition D.4.12(b), at least once per year.
- (e) To document compliance with the CAM record keeping requirements in 40 CFR 64.9, the Permittee shall maintain the following records for Preheater Kilns #1 and #2, on site:
  - (1) Monitoring data.
  - (2) Monitor Performance Data.

- (3) Corrective Action Taken.
- (f) To document compliance with Condition D.4.1(a), the Permittee shall maintain records of the Clinker production from Kiln #1 (EU15) and Kiln #2 (EU16).
- (g) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### D.4.17 Reporting Requirements

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- (a) A quarterly summary of the information to document compliance with the SO<sub>2</sub> limit specified in Condition D.4.2 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting form located at the end of this permit, or its equivalent, within thirty (30) days after the end of the quarter being reported. This report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (b) Beginning June 14, 2002, the Permittee shall submit a continuous monitoring system (CMS) performance report with the excess opacity summaries, in accordance with 40 CFR 63, Subpart A.
- (c) Beginning June 14, 2002, the Permittee shall submit a semi-annual summary report which contains the information specified in 40 CFR 63.10(e)(3)(vi), as well as the following:
  - (1) All exceedances of maximum control device inlet gas temperature limits specified in Condition D.4.4.
  - (2) All failures to verify the calibration of the thermocouples and other temperature sensors as required under 40 CFR 63.1350(f)(6).
  - (3) The results of any combustion system component inspections conducted within the reporting period as required by Condition D.4.12(b).
  - (4) All failures to comply with any provision of the operation and maintenance plan developed in accordance with 40 CFR 63.1350(a).

If the total continuous monitoring system (CMS) downtime for any CEM or any CMS for the reporting period is ten percent or greater of the total operating time for the reporting period, the Permittee shall submit an excess emissions and CMS performance report along with the summary report.

- (d) To document compliance with the NESHAP, the Permittee shall report the information required by 40 CFR 63.1354, including, but not limited to the following:
  - (1) The plan required by Condition D.4.12 shall be submitted to IDEM, OAQ and U.S. EPA by June 14, 2002, which is the compliance date for the National Emission Standards for Hazardous Air Pollutants (NESHAP) from the Portland Cement Manufacturing Industry.
  - (2) As required by 40 CFR 63.10(d)(2), the Permittee shall report the results of performance tests as part of the notification of compliance status, required in Section C - NESHAP Notification and Reporting Requirements.

- (3) As required by 40 CFR 63.10(d)(3), the Permittee shall report the opacity results from tests required by 40 CFR 63.1349.
  - (4) As required by 40 CFR 63.10(d)(5), if actions taken by the Permittee during a startup, shutdown, or malfunction of an affected source (including actions taken to correct a malfunction) are consistent with the procedures specified in the source's startup, shutdown, and malfunction plan specified in 40 CFR 63.6(e)(3), the Permittee shall state such information in a semiannual report. Reports shall only be required if a startup, shutdown, or malfunction occurred during the reporting period. The startup, shutdown, and malfunction report may be submitted simultaneously with the excess emissions and continuous monitoring system performance reports.
  - (5) Pursuant to 40 CFR 63.10(d)(5)(ii), any time an action taken by the Permittee during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) is not consistent with the procedures in the startup, shutdown, and malfunction plan, the Permittee shall report the actions taken for that event within 2 working days after commencing actions inconsistent with the plan, by telephone call to the OAQ Compliance Section at (317) 233-5674 or facsimile (FAX) transmission at (317) 233-6865. The immediate report shall be followed by a letter within 7 working days after the end of the event, certified by the Permittee, explaining the circumstances of the event, the reasons for not following the startup, shutdown, and malfunction plan, and whether any excess emissions and/or parameter monitoring exceedances are believed to have occurred.
- (e) In addition to being submitted to the address listed in Section C - General Reporting Requirements, all reports and the operations and maintenance plan submitted pursuant to 40 CFR 63, Subpart A shall also be submitted to the U.S. EPA at the following address:
- United States Environmental Protection Agency, Region V  
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590
- Pursuant to 40 CFR 63.10(d), the reports submitted by the Permittee shall include the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (f) To document compliance with the reporting requirements in 40 CFR 64.9(a)(2), the Permittee shall report the information required by this rule, including but not limited to:
    - (1) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions and exceedances, as applicable, and the corrective actions taken.
    - (2) Summary information on the number, duration and cause including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable)
  - (g) A quarterly summary of the information to document compliance with Condition D.4.1(a) shall be submitted to the address listed in Section C - General Reporting Requirements, using the reporting forms located at the end of this permit, or the equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

**Indiana Department of Environmental Management  
Office of Air Quality**

Technical Support Document (TSD)  
Administrative Amendment to a Part 70 Operating Permit

<b>Source Background and Description</b>
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Source Name:	Lehigh Cement Company
Source Address:	121 North First Street, Mitchell, Indiana 47446
Mailing Address:	121 North First Street, P.O. Box 97, Mitchell, Indiana 47446
Phone Number:	(812) 849-2191
SIC Code:	3241
County Location:	Lawrence
Source Location Status:	Attainment or unclassified for all criteria pollutants
Source Status:	Part 70 Permit Program Major Source under PSD Rules Major Source, Section 112 of the Clean Air Act One of the 28 listed source categories
Administrative Amendment No.:	<b>093-20912-00002</b> of Part 70 Permit 093-5990-00002, issued on December 30, 2002
Permit Writer:	Iryn Calilung 317/233-5692

<b>Description of the Proposed Change</b>
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On March 10, 2005, the Office of Air Quality (OAQ) received an application from Lehigh Cement Company to install a second continuous opacity monitor (COM) and switch the location of the existing COM used to monitor visible emissions from Kiln #1 and Kiln #2.

Kiln #1 and Kiln #2 are currently permitted under Part 70 Permit 093-5990-00002, issued on December 30, 2002.

Currently Kiln #1 and Kiln #2 share a common breeching duct and stack (Stack S-KP1) after their respective induced draft fans. At this time, one (1) COM is located in the common breeching duct where the COM monitors the visible emissions from both Kiln #1 and Kiln #2.

Lehigh Cement Company is proposing the following:

- (1) Split the common duct vertically into two (2) separate breeching ducts by installing a wall in the duct.
- (2) Install an additional COM.
  - One (1) COM will monitor the visible emissions from Kiln #1 in the Kiln #1 breeching duct.
  - The other COM will monitor the visible emissions from Kiln #2 in the Kiln #2 breeching duct.

Since there are no new emission units being proposed and there is no change in the potential to emit and applicable requirements of Kiln #1 and Kiln #2, the application is processed as an administrative amendment of Part 70 Permit 093-5990-00002, issued on December 30, 2002, pursuant to 326 IAC 2-7-11.

### Part 70 Permit Changes

The following are the changes to the Part 70 Operating Permit 093-5990-00002, issued on December 30, 2002, and the permit modifications 093-16851-00002 and 093-18647-00002, due to the proposed installation of a second continuous opacity monitor (COM) system.

Any changes to Section D.4 of the Part 70 Permit are shown in **bold** or ~~strikeout~~ fonts for emphasis.

#### SECTION D.1 FACILITY/EMISSION UNIT OPERATION CONDITIONS

##### Facility/Emissions Unit Description [326 IAC 2-7-5(15)]

- (1) One (1) kiln #1, identified as EU15, constructed in 1959 as a long dry kiln and modified to a one-stage preheater kiln in July 2003, with a heat input rate of 118 million Btu per hour, with a nominal production rate of 38 tons per hour, with PM emissions controlled by one (1) electrostatic precipitator (ESP), identified as KP1, and dioxins/furans controlled and SO<sub>2</sub> partially controlled by a Water Spray Tower, and exhausting to one (1) stack, identified as S-KP1. Kiln #1 is also permitted to use a blended fuel of coal and pressed paper making waste where the blend has a maximum of 20% pressed paper making waste by heat input.
- (2) One (1) kiln #2, identified as EU16, constructed in 1959 as a long dry kiln and modified to a one-stage preheater kiln in July 2003, with a heat input rate of 118 million Btu per hour, with a nominal production rate of 38 tons per hour, with PM emissions controlled by one (1) electrostatic precipitator (ESP), identified as KP2, and dioxins/furans controlled and SO<sub>2</sub> partially controlled by a Water Spray Tower, and exhausting to one (1) stack, identified as S-KP1. Kiln #2 is also permitted to use a blended fuel of coal and pressed paper making waste where the blend has a maximum of 20% pressed paper making waste by heat input.
- (3) One (1) kiln #3, identified as EU17, constructed in 1974 as a one-stage preheater kiln, with a heat input rate of 118 million Btu per hour, with a nominal production rate of 43 tons per hour, with PM emissions controlled by one (1) electrostatic precipitator (ESP), identified as KP3, and exhausting to one (1) stack, identified as S-KP2. Kiln #3 is also permitted to use a blended fuel of coal and pressed paper making waste where the blend has a maximum of 20% pressed paper making waste by heat input.

(The information describing the processes contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

##### Emission Limitations and Standards [326 IAC 2-7-5(1)]

###### D.4.1 Prevention of Significant Deterioration (PSD) [326 IAC 2-2]

Pursuant to Significant Permit Modification 093-16851-00002 issued in 2003, in order to render the requirement of 326 IAC 2-2 (PSD) not applicable to the preheater modification, the following conditions shall apply upon startup of either preheater Kilns #1 or #2:

- (a) The Clinker production from Kiln #1 (EU15) and Kiln #2 (EU16) shall be limited to 321,875 tons each per 12 consecutive month period with compliance determined at the end of each month.
- (b) PM emissions from each Kiln #1 (EU15) and Kiln #2 (EU16) shall not exceed 0.28 lb/ton clinker.
- (c) PM<sub>10</sub> emissions from each Kiln #1 (EU15) and Kiln #2 (EU16) shall not exceed 0.59 lb/ton clinker.
- (d) NO<sub>x</sub> emissions from each Kiln #1 (EU15) and Kiln #2 (EU16) shall not exceed 11.14 lb/ton clinker.
- (e) CO emissions from each Kiln #1 (EU15) and Kiln #2 (EU16) shall not exceed 1.67 lb/ton clinker.
- (f) SO<sub>2</sub> emissions from each Kiln #1 (EU15) and Kiln #2 (EU16) shall not exceed 7.51 lb/ton clinker.
- (g) VOC emissions from each Kiln #1 (EU15) and Kiln #2 (EU16) shall not exceed 0.30 lb/ton clinker.
- (h) Lead emissions from each Kiln #1 (EU15) and Kiln #2 (EU16) shall not exceed 1.69E-03 lb/ton clinker.
- (i) Sulfuric Acid mist emissions from each Kiln #1 (EU15) and Kiln #2 (EU16) shall not exceed 3.9E-02 lb/ton clinker.
- (j) H<sub>2</sub>S emissions from each Kiln #1 (EU15) and Kiln #2 (EU16) shall not exceed 0.037 lb/ton clinker.

Therefore, the requirements of 326 IAC 2-2 (PSD) are not applicable to the preheater modification.

D.4.2 Sulfur Dioxide (SO<sub>2</sub>) [326 IAC 7-1.1-1] [326 IAC 7-2-1]

Pursuant to 326 IAC 7-1.1 (SO<sub>2</sub> Emissions Limitations) the SO<sub>2</sub> emissions from the combustion of coal in each of the kilns shall not exceed six (6.0) pounds per MMBtu heat input each. Pursuant to 326 IAC 7-2-1, compliance shall be demonstrated on a monthly average. 326 IAC 7-1.1 and 326 IAC 7-2-1 are not federally enforceable.

D.4.3 General Provisions Relating to NESHAP [326 IAC 20-1][40 CFR Part 63, Subpart A]

On and after June 14, 2002, the provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 20-1, apply to kiln #1 (EU15), kiln #2 (EU16), and kiln #3 (EU17) except when otherwise specified in 40 CFR Part 63, Subpart LLL.

D.4.4 NESHAP Emissions Limitation [40 CFR 63, Subpart LLL]

Pursuant to 40 CFR 63.1343 (Emissions Standards and Operating Limits), on and after June 14, 2002, which is the compliance date for the National Emission Standards for Hazardous Air Pollutants (NESHAP) from the Portland Cement Manufacturing Industry, kiln #1 (EU15), kiln #2 (EU16), and kiln #3 (EU17) shall be limited as follows:

- (a) Particulate matter (PM) emissions shall be limited to 0.30 pound per ton of feed (dry basis) to the kiln.
- (b) Visible emissions shall be limited to twenty percent (20%) opacity.
- (c) Dioxin/Furan emissions shall be limited to  $8.7 \times 10^{-11}$  grains per dry standard cubic foot (TEQ) corrected to seven percent oxygen; or  $1.7 \times 10^{-10}$  grains per dry standard cubic foot (TEQ) corrected to seven percent oxygen, when the average of the performance test run average temperatures at the inlet to the particulate matter control device is 400 degrees Fahrenheit or less.
- (d) The kiln shall be operated such that the three hour rolling average temperature of the gas at the inlet to the kiln's particulate matter control device does not exceed the average of the run average temperatures determined during the performance tests required in Condition D.4.7.

#### D.4.5 Compliance Assurance Monitoring (CAM) Plan [40 CFR 64]

IDEM has determined that a Compliance Assurance Monitoring (CAM) Plan, in accordance with the requirements of 40 CFR 64, is required for the one-stage preheater kiln #1 (EU15), and the one-stage preheater kiln #2 (EU16). Pursuant to 40 CFR 64.2, CAM is required because the potential to emit SO<sub>2</sub> is greater than one hundred (100) tons per year before control and the source is subject to the emission limitations contained in conditions D.4.1 and D.4.2. A CAM plan was received from the source on December 19, 2002. IDEM has determined that compliance with the monitoring requirements of 40 CFR 63.8 and 40 CFR 63, Subpart LLL (National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry), satisfy the monitoring requirements of 40 CFR 64.

#### D.4.6 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for each of the kilns facilities/emissions units and the control devices KP1, KP2, and KP3. If the Operations and Maintenance Plan required by Condition D.4.12 is developed in accordance with Section B - Preventive Maintenance Plan, then once the Operations and Maintenance Plan has been developed, it shall satisfy this condition.

### **Compliance Determination Requirements**

#### D.4.7 NESHAP Testing Requirements [40 CFR 63, Subpart LLL]

- (a) Within 180 days after June 14, 2002, which is the compliance date for the Portland Cement Manufacturing Industry NESHAP, the Permittee shall demonstrate initial compliance with the PM, opacity and dioxin/furan limits established in Condition D.4.4 by conducting performance tests in accordance with 40 CFR 63.1349 and Section C - Performance Testing. The tests for PM shall be repeated at least once every five 5 years and the tests for dioxin/furans shall be repeated at least once every 2.5 years from the date of this valid compliance demonstration. The Permittee is also required to repeat the performance tests for particulate matter and dioxins/furans within 90 days of initiating any significant change in the feed or fuel from that used in the previous test that may adversely affect compliance with the applicable particulate matter or dioxins/furans limits. These tests shall be conducted in accordance with Section C - Performance Testing. Pursuant to 40 CFR 63.7(e), the tests shall be conducted under representative operating conditions.
- (b) Pursuant to 40 CFR 63.1349, the Permittee is required to repeat the performance tests

for particulate matter and dioxins/furans within 90 days of startup of preheater Kilns #1 and #2.

**D.4.8 Testing requirement [326 IAC 2-1.1-11]**

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To verify compliance with condition D.4.1, the Permittee shall, within 60 days after achieving maximum capacity but no later than 180 days after startup of preheater Kilns #1 and #2, perform PM, PM<sub>10</sub>, NO<sub>x</sub>, CO, SO<sub>2</sub>, VOC, Sulfuric Acid mist, H<sub>2</sub>S and Lead testing on Kiln #1 (EU15) and Kiln #2 (EU16). The PM, PM<sub>10</sub>, NO<sub>x</sub>, CO, SO<sub>2</sub>, VOC, Sulfuric Acid mist, H<sub>2</sub>S, and Lead testing for Kilns #1 and #2 shall be repeated every 2.5 years from the Permittee's initial compliance demonstration for each of these pollutants following start-up of the preheater Kilns #1 and #2.

**D.4.9 Particulate Control**

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Except as otherwise provided by statute, rule or this permit, the ESPs (KP1, KP2, and KP3) for PM control shall be in operation at all times when the associated kiln is in operation, in order to demonstrate compliance with Conditions D.4.1 and D.4.4.

**D.4.10 Sulfur Dioxide Emissions from Coal Combustion and Coal Sulfur Content [326 IAC 2-7-5(A)] [326 IAC 2-7-6] [326 IAC 7-1.1] [326 IAC 7-2]**

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Pursuant to 326 IAC 7-1.1-2, the Permittee shall demonstrate that the sulfur dioxide emissions from coal combustion do not exceed six (6.0) pounds per MMBtu. Pursuant to 326 IAC 7-2, compliance shall be determined utilizing the following methods:

- (a) Coal sampling and analysis shall be performed using one of the following procedures:
  - (1) Minimum Coal Sampling Requirements and Analysis Methods [326 IAC 3-7-2(b)(3)]:
    - (A) The coal sample acquisition point shall be at a location where representative samples of the total coal flow to be combusted by the facility or facilities may be obtained. A single as-bunkered or as-burned sampling station may be used to represent the coal to be combusted by multiple facilities using the same stockpile feed system;
    - (B) Coal shall be sampled at least three (3) times per day and at least one (1) time per eight (8) hour period unless no coal is bunkered during the preceding eight (8) hour period;
    - (C) Minimum sample size shall be five hundred (500) grams;
    - (D) Samples shall be composited and analyzed at the end of each calendar month;
    - (E) Preparation of the coal sample, heat content analysis, and sulfur content analysis shall be determined pursuant to 326 IAC 3-7-2(c), (d), (e);
  - (2) Sample the coal pursuant to 326 IAC 3-7-2(a). Preparation of the coal sample, heat content analysis, and sulfur content analysis shall be determined pursuant to 326 IAC 3-7-2(c), (d) and (e);
  - (3) Sample and analyze the coal pursuant to 326 IAC 3-7-3.

- (b) Compliance may be determined by conducting a stack test for sulfur dioxide emissions from the kilns in accordance with 326 IAC 3-6, utilizing the procedures in 40 CFR 60, Appendix A, Method 6, 6A, 6C, or 8. [326 IAC 7-2-1(d)]

A determination of noncompliance pursuant to either of the methods specified in (a) or (b) above shall not be refuted by evidence of compliance pursuant to the other method.

- (c) Upon written notification to IDEM by a facility owner or operator, continuous emission monitoring data collected and reported pursuant to 326 IAC 3-5-1 may be used as the means for determining compliance with the emission limitations in 326 IAC 7. Upon such notification, the other requirements of 326 IAC 7 shall not apply. [326 IAC 7-2-1(g)]

326 IAC 3-5, 326 IAC 3-6 and 326 IAC 3-7 are not federally enforceable.

**D.4.11 Continuous Emissions Monitoring [326 IAC 3-5] [326 IAC 2-7-6(1),(6)] [40 CFR 63, Subpart LLL]**

Pursuant to 326 IAC 3-5 (Continuous Monitoring of Emissions), 326 IAC 2-1.1-11 and 40 CFR Part 63, a continuous monitoring system shall be installed, calibrated, maintained, and operated for measuring the opacity from:

- (a) Kiln #1 in the Kiln #1 breeching duct leading to Stack S-KP1;**
- (b) Kiln #2 in the Kiln #2 breeching duct leading to Stack S-KP1; and**
- (c) Kiln #3 in the Stack S-KP2**

~~the stacks associated with each of the kilns (S-KP1 and S-KP2),~~ pursuant to 326 IAC 3-5-2 and 40 CFR 63.8(c). The continuous opacity monitors shall be installed and operational prior to conducting the performance tests required in Condition D.4.7. The continuous opacity monitors shall meet the performance specifications of 326 IAC 3-5-2 and 40 CFR 63.8(c). 326 IAC 3-5 is not federally enforceable.

**Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

**D.4.12 NESHAP Monitoring Requirements [40 CFR 63, Subpart LLL] [40 CFR 64.2]**

Pursuant to 40 CFR 63.1350 (Monitoring Requirements), on and after June 14, 2002, which is the compliance date for the National Emission Standards for Hazardous Air Pollutants (NESHAP) for the Portland Cement Manufacturing Industry, the Permittee shall perform the following monitoring requirements:

- (a) The Permittee shall have prepared a written operations and maintenance plan for kiln #1 (EU15), kiln #2 (EU16), and kiln #3 (EU17). The plan shall include the following information:
  - (1) Procedures for proper operation and maintenance of kiln #1 (EU15), kiln #2 (EU16), and kiln #3 (EU17) and associated air pollution control device(s) in order to meet the emissions limit in Condition D.4.4; and
  - (2) Procedures to be used during an inspection of the components of the combustion system of kiln #1 (EU15), kiln #2 (EU16), and kiln #3 (EU17) at least once per year.

Failure to comply with any provision of the operations and maintenance plan shall be a violation of the standard. The contents of the operations and maintenance plan are not included in this permit and may be modified by the Permittee without modification or amendment of this permit.

- (b) The Permittee shall conduct an inspection of the components of the combustion system of kiln #1 (EU15), kiln #2 (EU16), and kiln #3 (EU17) at least once per year.
- (c) The Permittee shall continuously monitor opacity of emissions at the outlet of the PM control device. The COM required by Condition D.4.11 shall be used to monitor opacity emissions in accordance with the NESHAP 40 CFR 63, Subpart LLL and shall be installed, maintained, calibrated and operated as required by 40 CFR 63, Subpart A.
- (d) The Permittee shall install, calibrate, maintain, and continuously operate a continuous monitor to record the temperature of the exhaust gases from kiln #1 (EU15), kiln #2 (EU16), and kiln #3 (EU17) at the inlet to, or upstream of the kiln's PM control device.
  - (1) The recorder response range must include zero and 1.5 times either of the average temperatures established according to the requirements in 40 CFR 63.1349(b)(3)(iv).
  - (2) The reference method must be a National Institute of Standards and Technology calibrated reference thermocouple-potentiometer system or alternate reference, subject to approval by the IDEM.
  - (3) The three-hour rolling average temperature shall be calculated as the average of 180 successive one-minute average temperatures.
  - (4) Periods of time when one-minute averages are not available shall be ignored when calculating three-hour rolling averages. When one-minute averages become available, the first one-minute average is added to the previous 179 values to calculate the three-hour rolling average.
  - (5) The calibration of all thermocouples and other temperature sensors shall be verified at least once every three months.

Recording the temperature of the exhaust gases from kiln #1 (EU15) and kiln #2 (EU16) shall satisfy the requirement of the Compliance Assurance Monitoring (CAM) Plan for SO<sub>2</sub> emissions monitoring, in accordance with the requirements of 40 CFR 64.

#### D.4.13 Preventive Inspections

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In order to document compliance with the applicable PM and dioxin/furan limits specified in Condition D.4.1 and Condition D.4.4 the following inspections shall be performed for each ESP:

- (1) Electrostatic precipitator, transformer-rectifier set ("T-R set") component inspections shall be performed during each annual shutdown, but no less often than once every fourteen (14) months, and during any outage lasting more than five (5) days, unless such inspections have been performed within the last six (6) months. The inspections shall include the following:
  - (A) Internal inspections of shell for corrosion (including but not limited to doors, hatches, insulator housings, and roof area).

- (B) Effectiveness of rapping (including but not limited to a visual check of dust buildup on discharge electrodes and plates).
  - (C) Gas distribution (including but not limited to a visual check of dust buildup on distribution plates and turning vanes).
  - (D) Dust accumulation (including but not limited to a visual check of dust buildup on shell and support members that could result in grounds or promote advanced corrosion).
  - (E) Major misalignment of plates and electrodes (including but not limited to a visual check of plate and electrode alignment).
  - (F) Rapper, electric hammer, and T-R set control cabinets (including but not limited to motors and lubrication).
  - (G) Rapper assembly (including but not limited to loose bolts, ground wires, water and air lines, and solenoids).
  - (H) Electric hammer and rapper boots (including but not limited to air in-leakage, wear and deterioration).
  - (I) T-R set controllers (including but not limited to voltage and current setpoints).
- (2) Air and water infiltration, once per month. This inspection may consist of audible checks around hoppers/hatches, duct expansion joints, and areas of corrosion.

#### D.4.14 Parametric Monitoring

- (a) The ability of the ESPs to control particulate emissions shall be monitored once per day when the units are in operation, by measuring and recording and comparing the total power of the ESP to the minimum total power of thirty-five kilowatts (35 kW).
- (b) When for any reading, the total power is below the minimum total power of 35 kW, the Permittee shall take reasonable response steps in accordance with Section C – Compliance Response Plan – Preparation, Implementation, Records, and Reports. A total power reading below the minimum is not a deviation from this permit.

Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

#### D.4.15 Opacity Readings

The ability of the ESP to control particulate emissions shall be monitored by continuously measuring and recording the opacity of emissions from each of the kiln stack exhausts (S-KP1 and S-KP2).

- (a) Appropriate response steps shall be taken in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports whenever the opacity exceeds 18 percent for three (3) consecutive six (6) minute averaging periods. Failure to take response steps in accordance with Section C - Compliance Response

Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

- (b) The opacity shall be determined by the certified continuous opacity monitor required in Condition D.4.11.

### **Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

#### **D.4.16 Record Keeping Requirements**

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- (a) In order to document compliance with Conditions D.4.2 and D.4.10, the Permittee shall maintain records in accordance with (1) through (4) below. Records maintained for (1) through (4) shall be taken monthly and shall be complete and sufficient to establish compliance with the SO<sub>2</sub> emission limits established in D.4.2.

- (1) Calendar dates covered in the compliance determination period;
- (2) Actual monthly coal usage since last compliance determination period;
- (3) Calendar month average sulfur content and heat content of coal;
- (4) Calendar month average sulfur dioxide emission rates in pounds per million Btu of heat input.

326 IAC 7-1.1, 7-2-1, and 326 IAC 3-4, 3-5, 3-6, and 3-7 are not federally enforceable.

- (b) Pursuant to 326 IAC 3-7-5(a), the Permittee shall develop a standard operating procedure (SOP) to be followed for sampling, handling, analysis, quality control, quality assurance, and data reporting of the information collected pursuant to 326 IAC 3-7-2 through 326 IAC 3-7-4. In addition, any revision to the SOP shall be submitted to IDEM, OAQ.

- (c) To document compliance with Conditions D.4.4, D.4.7, D.4.8, D.4.11, D.4.13, D.4.14, and D.4.15, the Permittee shall maintain records in accordance with (1) through (6) below. Records shall be complete and sufficient to establish compliance with the limits established in Section C - Opacity and Conditions D.4.4, D.4.7, D.4.8, D.4.11, D.4.13, D.4.14, and D.4.15.

- (1) Data and results from the most recent stack test.
- (2) All continuous emissions monitoring data.
- (3) All ESP total power readings.
- (4) The results of all ESP inspections and the type and number of parts replaced.
- (5) All preventive maintenance measures taken.
- (6) All response steps taken and the outcome for each.

- (d) To document compliance with the NESHAP 40 CFR 63, Subpart LLL, the Permittee shall maintain all records required by 40 CFR 63.1355. These records include the following:

- (1) The Permittee shall maintain files of all information (including all reports and notifications) required by 40 CFR 63.1355(a) recorded in a form suitable and readily available for inspection and review as required by 40 CFR 63.10(b)(1).
  - (2) The Permittee shall maintain records for each affected source as required by 40 CFR 63.10(b)(2) and (3) including:
    - (A) All documentation supporting initial notifications and notifications of compliance status under 40 CFR 63.9.
    - (B) All records of applicability determination, including supporting analyses.
  - (3) The Permittee shall maintain all records of continuous monitoring system data required by 40 CFR 63.10(c).
  - (4) The Permittee shall keep records of the results of the inspections of the components of the combustion systems of kilns #1, #2, and #3, required by 40 CFR 63.1350 and Condition D.4.12(b), at least once per year.
- (e) To document compliance with the CAM record keeping requirements in 40 CFR 64.9, the Permittee shall maintain the following records for Preheater Kilns #1 and #2, on site:
- (1) Monitoring data.
  - (2) Monitor Performance Data.
  - (3) Corrective Action Taken.
- (f) To document compliance with Condition D.4.1(a), the Permittee shall maintain records of the Clinker production from Kiln #1 (EU15) and Kiln #2 (EU16).
- (g) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### D.4.17 Reporting Requirements

- (a) A quarterly summary of the information to document compliance with the SO<sub>2</sub> limit specified in Condition D.4.2 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting form located at the end of this permit, or its equivalent, within thirty (30) days after the end of the quarter being reported. This report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (b) Beginning June 14, 2002, the Permittee shall submit a continuous monitoring system (CMS) performance report with the excess opacity summaries, in accordance with 40 CFR 63, Subpart A.
- (c) Beginning June 14, 2002, the Permittee shall submit a semi-annual summary report which contains the information specified in 40 CFR 63.10(e)(3)(vi), as well as the following:
  - (1) All exceedances of maximum control device inlet gas temperature limits specified in Condition D.4.4.

- (2) All failures to verify the calibration of the thermocouples and other temperature sensors as required under 40 CFR 63.1350(f)(6).
- (3) The results of any combustion system component inspections conducted within the reporting period as required by Condition D.4.12(b).
- (4) All failures to comply with any provision of the operation and maintenance plan developed in accordance with 40 CFR 63.1350(a).

If the total continuous monitoring system (CMS) downtime for any CEM or any CMS for the reporting period is ten percent or greater of the total operating time for the reporting period, the Permittee shall submit an excess emissions and CMS performance report along with the summary report.

- (d) To document compliance with the NESHAP, the Permittee shall report the information required by 40 CFR 63.1354, including, but not limited to the following:
  - (1) The plan required by Condition D.4.12 shall be submitted to IDEM, OAQ and U.S. EPA by June 14, 2002, which is the compliance date for the National Emission Standards for Hazardous Air Pollutants (NESHAP) from the Portland Cement Manufacturing Industry.
  - (2) As required by 40 CFR 63.10(d)(2), the Permittee shall report the results of performance tests as part of the notification of compliance status, required in Section C - NESHAP Notification and Reporting Requirements.
  - (3) As required by 40 CFR 63.10(d)(3), the Permittee shall report the opacity results from tests required by 40 CFR 63.1349.
  - (4) As required by 40 CFR 63.10(d)(5), if actions taken by the Permittee during a startup, shutdown, or malfunction of an affected source (including actions taken to correct a malfunction) are consistent with the procedures specified in the source's startup, shutdown, and malfunction plan specified in 40 CFR 63.6(e)(3), the Permittee shall state such information in a semiannual report. Reports shall only be required if a startup, shutdown, or malfunction occurred during the reporting period. The startup, shutdown, and malfunction report may be submitted simultaneously with the excess emissions and continuous monitoring system performance reports.
  - (5) Pursuant to 40 CFR 63.10(d)(5)(ii), any time an action taken by the Permittee during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) is not consistent with the procedures in the startup, shutdown, and malfunction plan, the Permittee shall report the actions taken for that event within 2 working days after commencing actions inconsistent with the plan, by telephone call to the OAQ Compliance Section at (317) 233-5674 or facsimile (FAX) transmission at (317) 233-6865. The immediate report shall be followed by a letter within 7 working days after the end of the event, certified by the Permittee, explaining the circumstances of the event, the reasons for not following the startup, shutdown, and malfunction plan, and whether any excess emissions and/or parameter monitoring exceedances are believed to have occurred.

- (e) In addition to being submitted to the address listed in Section C - General Reporting Requirements, all reports and the operations and maintenance plan submitted pursuant to 40 CFR 63, Subpart A shall also be submitted to the U.S. EPA at the following address:
- United States Environmental Protection Agency, Region V  
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590
- Pursuant to 40 CFR 63.10(d), the reports submitted by the Permittee shall include the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (f) To document compliance with the reporting requirements in 40 CFR 64.9(a)(2), the Permittee shall report the information required by this rule, including but not limited to:
- (1) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions and exceedances, as applicable, and the corrective actions taken.
  - (2) Summary information on the number, duration and cause including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable)
- (g) A quarterly summary of the information to document compliance with Condition D.4.1(a) shall be submitted to the address listed in Section C - General Reporting Requirements, using the reporting forms located at the end of this permit, or the equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

#### Recommendation and Conclusion

- (a) Unless otherwise stated, information used in this review was derived from the application and additional information received by the Office of Air Quality (OAQ) on March 10, 2005.
- (b) Based on the facts, conditions and evaluations made, the OAQ staff recommends to the IDEM's Commissioner that the preliminary findings for the [Administrative Amendment 093-20912-00002](#) be approved.

#### IDEM Contact

Questions regarding this minor permit modification can be directed to Ms. Iryn Calilung at the Indiana Department Environmental Management, Office of Air Quality, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana 46206-6015 or by telephone at (317) 233-5692 or toll free at 1-800-451-6027 extension 3-5692.

For additional information about air permits and how the public can participate, see IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: [www.IN.gov/idem/guides](http://www.IN.gov/idem/guides).