

April 9, 2002

Mr. Dave Puzan
Lone Star Industries, Inc.
P.O Box 482
Greencastle, Indiana 46135

Re: Minor Source Modification No.
133-15262-00002

Dear Mr. Puzan:

Lone Star Industries, Inc., applied for a Part 70 operating permit on October 15, 1996 for a Portland cement manufacturing process. An application to modify the source was received on January 25, 2002. Pursuant to 326 IAC 2-7-10.5 the following emission units are approved for construction at the source:

One (1) gypsum material handling process with a maximum production of 150 tons per hour of the blended synthetic gypsum material, comprised of the following units:

- (a) One (1) synthetic gypsum transporting system, identified as Unit #1 (F1-20), with fugitive emissions;
- (b) One (1) granulated slag/rock transporting system, identified as Unit #4 (F1-31), with fugitive emissions;
- (c) One (1) outdoor gypsum storage pile, identified as Unit #2 (F1-27), with a maximum storage capacity of 10,000 tons and a maximum throughput of 67,000 tons per year, using water suppression to control particulate emissions;
- (d) One (1) outdoor granulated slag/rock storage pile, identified as Unit #5 (F1-32), with a maximum storage capacity of 5,000 tons and a maximum throughput of 22,400 tons per year, using water suppression to control particulate emissions;
- (e) One (1) synthetic gypsum hopper, identified as Unit #3 (F1-34), with a maximum throughput of 90 tons per hour;
- (f) One (1) granulated slag/rock hopper, identified as Unit #6 (F1-35), with a maximum throughput of 30 tons per hour;
- (g) One (1) synthetic gypsum weigh belt, with a maximum throughput of 90 tons per hour;
- (h) One (1) granulated slag/rock weigh belt, with a maximum throughput of 30 tons per hour;
- (i) One (1) belt #1 for synthetic gypsum and granulated slag/rock, with a maximum throughput of 120 tons per hour;

- (j) One (1) enclosed pug mill, identified as Unit #8 (S1-36), with a maximum throughput of 150 tons per hour, with particulate emissions controlled by Dust Collector #1, and exhausting through stack S1-36;
- (k) One (1) CKD bin, identified as Unit #7 (S1-36), with a maximum throughput of 30 tons per hour, with particulate emissions controlled by Dust Collector #1, and exhausting through stack S1-36;
- (l) One (1) belt #2 for finished gypsum material, with a maximum throughput of 150 tons per hour;
- (m) One (1) covered storage pile for finished gypsum material, identified as Unit #9 (F1-37), with a maximum storage capacity of 5,000 tons and a maximum throughput of 112,000 tons per year; and
- (n) One (1) finished gypsum material hopper, identified as Unit #10 (F1-38), with a maximum throughput of 150 tons per hour.

The proposed Minor Source Modification approval will be incorporated into the pending Part 70 permit application pursuant to 326 IAC 2-7-10.5(l)(3). The source may begin operation upon issuance of the source modification approval.

Pursuant to Contract No. A305-0-00-36, IDEM, OAQ has assigned the processing of this application to Eastern Research Group, Inc., (ERG). Therefore, questions should be directed to Kristin Clapp, ERG, 1600 Perimeter Park Drive, Morrisville, North Carolina 27560, or call (703) 633-1694 to speak directly to Ms. Clapp. Questions may also be directed to Duane Van Laningham at IDEM, OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or call (800) 451-6027, press 0 and ask for Duane Van Laningham, or extension 3-6878, or dial (317) 233-6878.

Sincerely,

Original Signed by Paul Dubenetzky
Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

Attachments
ERG/KC

cc: File - Putnam County
Putnam County Health Department
Air Compliance Section Inspector - Jim Thorpe
Compliance Data Section - Karen Nowak
Administrative and Development - Sara Cloe
Technical Support and Modeling - Michele Boner

PART 70 MINOR SOURCE MODIFICATION OFFICE OF AIR QUALITY

**Lone Star Industries, Inc.
3301 South County Rd. 150 W
Greencastle, Indiana 46135**

(herein known as the Permittee) is hereby authorized to construct and operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this approval.

This approval 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.

Source Modification No.: 133-15262-00002	
Issued by: Original Signed by Paul Dubenetzky Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: April 9, 2002

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SECTION A

SOURCE SUMMARY

This approval is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the emission units contained in conditions A.1 through A.2 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this approval pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

The Permittee owns and operates a stationary Portland cement manufacturing plant.

Responsible Official:	John Kass
Source Address:	3301 South County Rd. 150 W, Greencastle, IN 46135
Mailing Address:	P.O. Box 482, Greencastle, IN 46135
General Source Phone Number:	(765)653-8816
SIC Code:	3241
County Location:	Putnam
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Permit Program Major source under PSD Rules; 1 of 28 Source Categories

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source is approved to construct and operate the following emission units and pollution control devices:

One (1) gypsum material handling process, with a maximum production of 150 tons per hour of the blended synthetic gypsum material, comprised of the following units:

- (a) One (1) synthetic gypsum transporting system, identified as Unit #1 (F1-20), with fugitive emissions;
- (b) One (1) granulated slag/rock transporting system, identified as Unit #4 (F1-31), with fugitive emissions;
- (c) One (1) outdoor gypsum storage pile, identified as Unit #2 (F1-27), with a maximum storage capacity of 10,000 tons and a maximum throughput of 67,000 tons per year, using water suppression to control particulate emissions;
- (d) One (1) outdoor granulated slag/rock storage pile, identified as Unit #5 (F1-32), with a maximum storage capacity of 5,000 tons and a maximum throughput of 22,400 tons per year, using water suppression to control particulate emissions;
- (e) One (1) synthetic gypsum hopper, identified as Unit #3 (F1-34), with a maximum throughput of 90 tons per hour;
- (f) One (1) granulated slag/rock hopper, identified as Unit #6 (F1-35), with a maximum throughput of 30 tons per hour;
- (g) One (1) synthetic gypsum weigh belt, with a maximum throughput of 90 tons per hour;
- (h) One (1) granulated slag/rock weigh belt, with a maximum throughput of 30 tons per hour;

- (i) One (1) belt #1 for synthetic gypsum and granulated slag/rock, with a maximum throughput of 120 tons per hour;
- (j) One (1) enclosed pug mill, identified as Unit #8 (S1-36), with a maximum throughput of 150 tons per hour, with particulate emissions controlled by Dust Collector #1, and exhausting through stack S1-36;
- (k) One (1) CKD bin, identified as Unit #7 (S1-36), with a maximum throughput of 30 tons per hour, with particulate emissions controlled by Dust Collector #1, and exhausting through stack S1-36;
- (l) One (1) belt #2 for finished gypsum material, with a maximum throughput of 150 tons per hour;
- (m) One (1) covered storage pile for finished gypsum material, identified as Unit #9 (F1-37), with a maximum storage capacity of 5,000 tons and a maximum throughput of 112,000 tons per year; and
- (n) One (1) finished gypsum material hopper, identified as Unit #10 (F1-38), with a maximum throughput of 150 tons per hour.

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)]
[326 IAC 2-7-5(15)]

This stationary source does not currently have any insignificant activities, as defined in 326 IAC 2-7-1 (21) that have applicable requirements.

A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

- (a) It is a major source, as defined in 326 IAC 2-7-1(22);
- (b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

SECTION B GENERAL CONSTRUCTION CONDITIONS

B.1 Definitions [326 IAC 2-7-1]

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-7) shall prevail.

B.2 Effective Date of the Permit [IC13-15-5-3]

Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

B.3 Revocation of Permits [326 IAC 2-1.1-9(5)][326 IAC 2-7-10.5(i)]

Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

B.4 NSPS Reporting Requirement Parts 60.60 through 60.66

Pursuant to the New Source Performance Standards (NSPS), Part 60.60 through 60.66, Subpart F, the source owner/operator is hereby advised of the requirement to report the following at the appropriate times:

- (a) Commencement of construction date (no later than 30 days after such date);
- (b) Anticipated start-up date (not more than 60 days or less than 30 days prior to such date);
- (c) Actual start-up date (within 15 days after such date); and
- (d) Date of performance testing (at least 30 days prior to such date), when required by a condition elsewhere in this permit.

Reports are to be sent to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, IN 46206-6015

The application and enforcement of these standards have been delegated to the IDEM, OAQ. The requirements of 40 CFR Part 60 are also federally enforceable.

B.5 NESHAP Reporting Requirement Part 63.1354

Pursuant to the National Emission Standards for Hazardous Air Pollutants (NESHAP), Part 63.1354, Subpart LLL, the source owner/operator is hereby advised of the requirement to report the following at the appropriate times:

- (a) Initial Notification per 40 CFR 63.9(b) through (d);
- (b) Notification of opacity and visible emissions observations required by Section 63.1349 in accordance with Sections 63.6(h)(5) and 63.9(f); and
- (c) Notification of compliance status as required by Section 63.9(h).

Reports are to be sent to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, IN 46206-6015

The application and enforcement of these standards have been delegated to the IDEM, OAQ.
The requirements of 40 CFR Part 60 are also federally enforceable.

SECTION C GENERAL OPERATION CONDITIONS

C.1 Certification ~~[326 IAC 2-7-4(f)][326 IAC 2-7-6(1)][326 IAC 2-7-5(3)(C)]~~

- (a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by a responsible official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification.
- (c) A responsible official is defined at 326 IAC 2-7-1(34).

C.2 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)] ~~[326 IAC 1-6-3]~~

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) when operation begins, including the following information on each facility:
 - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If, due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

The PMP and the PMP extension notification do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) The Permittee shall implement the PMPs as necessary to ensure that failure to implement a PMP does not cause or contribute to a violation of any limitation on emissions or potential to emit.
- (c) A copy of the PMPs shall be submitted to IDEM, OAQ, upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or contributes to any violation. The PMP does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (d) Records of preventive maintenance shall be retained for a period of at least five (5) years. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to

the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

C.3 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]

(a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.

(b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

Any such application shall be certified by the "responsible official" as defined by 326 IAC 2-7-1(34).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

C.4 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.5 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

C.6 Operation of Equipment [326 IAC 2-7-6(6)]

Except as otherwise provided by statute or rule, or in this permit, all air pollution control equipment listed in this permit and used to comply with an applicable requirement shall be operated at all times that the emission units vented to the control equipment are in operation.

Testing Requirements [326 IAC 2-7-6(1)]

C.7 Performance Testing [326 IAC 3-6][326 IAC 2-1.1-11]

(a) Compliance testing on new emission units shall be conducted within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up, if specified in Section D of this approval. All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this approval, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this approval, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, within forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ, if the source submits to IDEM, OAQ, a reasonable written explanation within five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

C.8 Compliance Requirements [326 IAC 2-1.1-11]

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

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

C.9 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

If required by Section D, all monitoring and record keeping requirements shall be implemented when operation begins. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment.

C.10 Pressure Gauge and Other Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

- (a) Whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device, the gauge employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent ($\pm 2\%$) of full scale reading.
- (b) The Permittee may request the IDEM, OAQ approve the use of a pressure gauge or other instrument that does not meet the above specifications provided the Permittee can demonstrate an alternative pressure gauge or other instrument specification will adequately ensure compliance with permit conditions requiring the measurement of pressure drop or other parameters.

Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]

C.11 Compliance Response Plan - Preparation, Implementation, Records, and Reports [326 IAC 2-7-5] [326 IAC 2-7-6]

- (a) The Permittee is required to prepare a Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. A CRP shall be submitted to IDEM, OAQ upon request. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee, supplemented from time to time by the Permittee, maintained on site, and comprised of:

- (1) Reasonable response steps that may be implemented in the event that a response step is needed pursuant to the requirements of Section D of this permit; and an expected timeframe for taking reasonable response steps.
 - (2) If, at any time, the Permittee takes reasonable response steps that are not set forth in the Permittee's current Compliance Response Plan and the Permittee documents such response in accordance with subsection (e) below, the Permittee shall amend its Compliance Response Plan to include such response steps taken.
- (b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition as follows:
- (1) Reasonable response steps shall be taken as set forth in the Permittee's current Compliance Response Plan; or
 - (2) If none of the reasonable response steps listed in the Compliance Response Plan is applicable or responsive to the excursion, the Permittee shall devise and implement additional response steps as expeditiously as practical. Taking such additional response steps shall not be considered a deviation from this permit so long as the Permittee documents such response steps in accordance with this condition.
 - (3) If the Permittee determines that additional response steps would necessitate that the emissions unit or control device be shut down, the IDEM, OAQ shall be promptly notified of the expected date of the shut down, the status of the applicable compliance monitoring parameter with respect to normal, and the results of the actions taken up to the time of notification.
 - (4) Failure to take reasonable response steps shall constitute a violation of the permit.
- (c) The Permittee is not required to take any further response steps for any of the following reasons:
- (1) A false reading occurs due to the malfunction of the monitoring equipment and prompt action was taken to correct the monitoring equipment.
 - (2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for a minor permit modification to the permit, and such request has not been denied.
 - (3) An automatic measurement was taken when the process was not operating.
 - (4) The process has already returned or is returning to operating within "normal" parameters and no response steps are required.
- (d) When implementing reasonable steps in response to a compliance monitoring condition, if the Permittee determines that an exceedance of an emission limitation has occurred, the Permittee shall report such deviations pursuant to Section B-Deviations from Permit Requirements and Conditions.
- (e) The Permittee shall record all instances when response steps are taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.

- (f) Except as otherwise provided by a rule or provided specifically in Section D, all monitoring as required in Section D shall be performed when the emission unit is operating, except for time necessary to perform quality assurance and maintenance activities.

C.12 Emergency Provisions [326 IAC 2-7-16]

- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:
- (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
 - (2) The permitted facility was at the time being properly operated;
 - (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
 - (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section), or
Telephone Number: 317-233-5674 (ask for Compliance Section)
Facsimile Number: 317-233-5967

- (5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-7-5(3)(C)(ii) and must contain the following:

- (A) A description of the emergency;
- (B) Any steps taken to mitigate the emissions; and
- (C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
- (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
- (e) IDEM, OAQ, may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4-(c)(10) be revised in response to an emergency.
- (f) Failure to notify IDEM, OAQ, by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.
- (g) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.

**C.13 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5]
[326 IAC 2-7-6]**

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The documents submitted pursuant to this condition do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

C.14 General Record Keeping Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-6]

- (a) Records of all required data, reports and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

C.15 General Reporting Requirements [326 IAC 2-7-5(3)(C)]

- (a) The reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

- (b) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (c) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (d) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years.

SECTION D.1

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

One (1) gypsum material handling process, with a maximum production of 150 tons per hour of the blended synthetic gypsum material, comprised of the following units:

- (a) One (1) synthetic gypsum transporting system, identified as Unit #1 (F1-20), with fugitive emissions;
- (b) One (1) granulated slag/rock transporting system, identified as Unit #4 (F1-31), with fugitive emissions;
- (c) One (1) outdoor gypsum storage pile, identified as Unit #2 (F1-27), with a maximum storage capacity of 10,000 tons and a maximum throughput of 67,000 tons per year, using water suppression to control particulate emissions;
- (d) One (1) outdoor granulated slag/rock storage pile, identified as Unit #5 (F1-32), with a maximum storage capacity of 5,000 tons and a maximum throughput of 22,400 tons per year, using water suppression to control particulate emissions;
- (e) One (1) synthetic gypsum hopper, identified as Unit #3 (F1-34), with a maximum throughput of 90 tons per hour;
- (f) One (1) granulated slag/rock hopper, identified as Unit #6 (F1-35), with a maximum throughput of 30 tons per hour;
- (g) One (1) synthetic gypsum weigh belt, with a maximum throughput of 90 tons per hour;
- (h) One (1) granulated slag/rock weigh belt, with a maximum throughput of 30 tons per hour;
- (i) One (1) belt #1 for synthetic gypsum and granulated slag/rock, with a maximum throughput of 120 tons per hour;
- (j) One (1) enclosed pug mill, identified as Unit #8 (S1-36), with a maximum throughput of 150 tons per hour, with particulate emissions controlled by Dust Collector #1, and exhausting through stack S1-36;
- (k) One (1) CKD bin, identified as Unit #7 (S1-36), with a maximum throughput of 30 tons per hour, with particulate emissions controlled by Dust Collector #1, and exhausting through stack S1-36;
- (l) One (1) belt #2 for finished gypsum material, with a maximum throughput of 150 tons per hour;
- (m) One (1) covered storage pile for finished gypsum material, identified as Unit #9 (F1-37), with a maximum storage capacity of 5,000 tons and a maximum throughput of 112,000 tons per year; and
- (n) One (1) finished gypsum material hopper, identified as Unit #10 (F1-38), with a maximum throughput of 150 tons per hour.

(The information describing the process 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.1.1 PM and PM10 Emissions [326 IAC 2-2][40 CFR 52.21]

The PM potential to emit from this gypsum material handling shall be less than twenty-five (25) tons per year and the PM10 potential to emit shall be less than fifteen (15) tons per year, based on the maximum capacity of 150 tons per year and standard emission factors from AP-42. Therefore the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) are not applicable because the increase in potential emissions from this modification is not over the significant PSD thresholds for any pollutants.

D.1.2 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Process Operations), the particulate matter (PM) from the gypsum material handling operation shall be limited to less than 55.4 pounds per hour when operating at a process weight rates of 150 tons per hour. This limit was calculated as follows:

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

D.1.3 General Provisions Relating to NSPS [326 IAC 12-1][40 CFR 60, Subpart A]

The provisions of 40 CFR 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1, apply to the gypsum material handling process except when otherwise specified in 40 CFR 60, Subpart F.

D.1.4 Opacity Limitation [326 IAC 12-1][40 CFR 60, Subpart F]

The gypsum material handling process is subject to 40 CFR 60, Subpart F (Standards of Performance for Portland Cement Plants). Pursuant to this rule, the gypsum hopper (F1-34), granulated slag/rock hopper (F1-35), CKD bin/pugmill (S1-36), and finished gypsum material hopper (F1-38) shall be limited to ten percent (10%) opacity or less.

D.1.5 General Provisions Relating to NESHAP [326 IAC 20-1][40 CFR 63, Subpart A]

The provisions of 40 CFR 63, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 20-1, apply to the gypsum material handling process except when otherwise specified in 40 CFR 63, Subpart LLL.

D.1.6 Opacity Limitation [326 IAC 20-1][40 CFR 63, Subpart LLL]

Pursuant to 40 CFR 63.1348 (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, or upon startup, whichever is later, the visible emissions from the gypsum hopper (F1-34), granulated slag/rock hopper (F1-35), CKD bin/pugmill (S1-36), and finished gypsum material hopper (F1-38) shall be limited to ten percent (10%) opacity or less.

D.1.7 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

- (a) A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and their control devices.
- (b) If the Operations and Maintenance Plan required by Condition D.1.10 is developed in accordance with Section B - Preventive Maintenance Plan, then after June 14, 2002, or upon startup, whichever is later, the Operations and Maintenance Plan shall satisfy the PMP.

Compliance Determination Requirements

D.1.8 Particulate Matter (PM)

In order to comply with Conditions D.1.1 and D.1.2, the baghouse for PM control shall be in operation and control emissions from the CKD bin/pugmill at all times that the CKD bin/pugmill is in operation.

D.1.9 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1-4(f)]

- (a) Pursuant to 40 CFR 60.11, opacity tests to determine compliance with the operation Condition D.1.4 shall be conducted within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up. These tests shall be performed according to 326 IAC 3-6 (Source Sampling Procedures) utilizing U.S. EPA Method 9 (40 CFR Part 60, Appendix A) or other methods as approved by the Commissioner.
- (b) No later than 180 days after June 14, 2002, which is the compliance date for the Portland Cement Manufacturing Industry NESHAP, or upon startup, whichever is later, the Permittee shall demonstrate initial compliance with the limits established in Condition D.1.6 by conducting a test in accordance with 40 CFR 63.1349, Method 9 of 40 CFR Part 60, Appendix A, and Section C - Performance Testing.

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

D.1.10 NESHAP Monitoring Requirements [326 IAC 20-1][40 CFR 63, Subpart LLL]

Pursuant to 40 CFR 63.1350 (Monitoring Requirements), the Permittee shall prepare a written operations and maintenance plan for the gypsum material handling process by June 14, 2002, which is the compliance date for the National Emissions Standards for Hazardous Air Pollutants (NESHAP) for the Portland Cement Manufacturing Industry or upon startup, whichever is later. The plan shall include the following information:

- (a) Procedures for proper operation and maintenance of the affected sources and associated air pollution control device(s) in order to meet the emissions limit in Condition D.1.5; and
- (b) Procedures to be used to periodically monitor the facilities listed in this section, which are subject to opacity standards under 40 CFR 63.1348. Such procedures must include the following provisions:
 - (1) The Permittee shall conduct a monthly 1-minute visible emissions test of each affected source except for the finish mills or raw mills, in accordance with 40 CFR 60, Appendix A, Method 22. The test must be conducted while the affected source is in operation.
 - (2) If no visible emissions are observed in six consecutive monthly test for any affected source, the Permittee may decrease the frequency of testing from monthly to semi-annually for that affected source. If visible emissions are observed during any semi-annual test, the Permittee shall resume testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.
 - (3) If no visible emissions are observed during the semi-annual test for any affected source, the Permittee may decrease the frequency of testing from semi-annually to annually for that affected source. If visible emissions are observed during any annual test, the Permittee shall resume testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.

- (4) If visible emissions are observed during any Method 22 test, the Permittee must conduct a 6-minute test of opacity in accordance with 40 CFR 60, Subpart A, Method 9. The Method 9 test must begin within one hour of any observation of visible emissions.

Failure to comply with any provision of the operations and maintenance plan shall be a violation of the standard.

D.1.11 Visible Emissions Notations

- (a) Once per shift visible emission notations of the CKD bin/pugmill stack exhaust shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. 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.1.12 Parametric Monitoring

The Permittee shall record the total static pressure drop across the baghouse used in conjunction with the CKD bin/pugmill, at least once per shift when the CKD bin/pugmill is in operation when venting to the atmosphere. When for any one reading, the pressure drop across the baghouse is outside the normal range of 2.0 and 10.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range 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.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.1.13 Baghouse Inspections

An inspection shall be performed each calendar quarter of all bags controlling the CKD bin/pugmill when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

D.1.14 Broken or Failed Bag Detection

In the event that bag failure has been observed:

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if

there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. 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) For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

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

D.1.15 Record Keeping Requirements

- (a) To document compliance with Condition D.1.11, the Permittee shall maintain records of daily visible emission notations of the CKD bin/pugmill stack exhaust.
- (b) To document compliance with Condition D.1.12, the Permittee shall maintain records of the total pressure drop across the baghouse associated with the CKD bin/pugmill.
- (c) To document compliance with Condition D.1.13, the Permittee shall maintain records of the results of the inspections required under Condition D.1.13 and the dates the vents are redirected.
- (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 60.1355(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 notification of compliance status under 40 CFR 63.9.
 - (B) All records of applicability determination, including supporting analyses.
- (e) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.16 Reporting Requirements

- (a) To document compliance with 40 CFR 63, Subpart LLL, 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.1.10 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) for the Portland Cement Manufacturing Industry, or upon startup, whichever is later.

- (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 B - NESHAP 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 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)232-8440 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.
- (b) In addition to being submitted to the address listed in Section C - General Reporting Requirements, all reports and the operation 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)(5)(i) and (ii), the reports submitted by the Permittee shall include the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY

PART 70 SOURCE MODIFICATION CERTIFICATION

Source Name: Lone Star Industries, Inc.
Source Address: 3301 South County Rd 150 West, Greencastle, Indiana 46135
Mailing Address: P.O. Box 482, Greencastle, IN 46135
Source Modification No.: 133-15262-00002

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this approval.

Please check what document is being certified:

- 9 Test Result (specify) _____
- 9 Report (specify) _____
- 9 Notification (specify) _____
- 9 Affidavit (specify) _____
- 9 Other (specify) _____

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

Indiana Department of Environmental Management Office of Air Quality

Technical Support Document (TSD) for a Part 70 Minor Source Modification

Source Background and Description

Source Name:	Lone Star Industries, Inc.
Source Location:	3301 South County Rd. 150 West, Greencastle, Indiana 46135
County:	Putnam
SIC Code:	3241
Operation Permit No.:	T 133-6927-00002
Operation Permit Issuance Date:	Pending
Minor Source Modification No.:	133-15262-00002
Permit Reviewer:	ERG/KC

The Office of Air Quality (OAQ) has reviewed a modification application from Lone Star Industries, Inc. relating to the construction of the following emission units and pollution control devices:

One (1) gypsum material handling process, with a maximum production of 150 tons per hour of the blended synthetic gypsum material, comprised of the following units:

- (a) One (1) synthetic gypsum transporting system, identified as Unit #1 (F1-20), with fugitive emissions;
- (b) One (1) granulated slag/rock transporting system, identified as Unit #4 (F1-31), with fugitive emissions;
- (c) One (1) outdoor gypsum storage pile, identified as Unit #2 (F1-27), with a maximum storage capacity of 10,000 tons and a maximum throughput of 67,000 tons per year, using water suppression to control particulate emissions;
- (d) One (1) outdoor granulated slag/rock storage pile, identified as Unit #5 (F1-32), with a maximum storage capacity of 5,000 tons and a maximum throughput of 22,400 tons per year, using water suppression to control particulate emissions;
- (e) One (1) synthetic gypsum hopper, identified as Unit #3 (F1-34), with a maximum throughput of 90 tons per hour;
- (f) One (1) granulated slag/rock hopper, identified as Unit #6 (F1-35), with a maximum throughput of 30 tons per hour;
- (g) One (1) synthetic gypsum weigh belt, with a maximum throughput of 90 tons per hour;

- (h) One (1) granulated slag/rock weigh belt, with a maximum throughput of 30 tons per hour;
- (i) One (1) belt #1 for synthetic gypsum and granulated slag/rock, with a maximum throughput of 120 tons per hour;
- (j) One (1) enclosed pug mill, identified as Unit #8 (S1-36), with a maximum throughput of 150 tons per hour, with particulate emissions controlled by Dust Collector #1, and exhausting through stack S1-36;
- (k) One (1) CKD bin, identified as Unit #7 (S1-36), with a maximum throughput of 30 tons per hour, with particulate emissions controlled by Dust Collector #1, and exhausting through stack S1-36;
- (l) One (1) belt #2 for finished gypsum material, with a maximum throughput of 150 tons per hour;
- (m) One (1) covered storage pile for finished gypsum material, identified as Unit #9 (F1-37), with a maximum storage capacity of 5,000 tons and a maximum throughput of 112,000 tons per year; and
- (n) One (1) finished gypsum material hopper, identified as Unit #10 (F1-38), with a maximum throughput of 150 tons per hour.

History

On January 25, 2002, Lone Star Industries, Inc. submitted an application to the OAQ requesting to add a gypsum material handling operation to their existing plant. The source already has gypsum handling. The modification is for synthetic gypsum. This one is being constructed to use the CKD that is currently placed in an onsite landfill. This process will minimize the quantity of CKD going to the landfill. This process will use the same belts to fill gypsum as the current gypsum handling process. Therefore, only one system can operate at a time. There will be no debottleneck as a result of this modification. Lone Star Industries, Inc. submitted an application for a Part 70 permit on October 15, 1996. This source has previously been issued the following permits: SSM133-14452-00002, issued February 26, 2002; I133-14452I-00002, issued June 25, 2001; AA133-12826-00002, issued January 8, 2001; E133-10690-0002, issued on April 28, 1999; and CP133-10159-00002, issued April 16, 1999 (This permit supercedes all permits issued prior to it).

Enforcement Issue

IDEM is aware of continuous monitoring exceedances at Lone Star Industries, Inc.'s Greencastle plant. IDEM is reviewing this matter and will take appropriate action.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
S1-36	Enclosed pug mill and CKD bin	40	TBD	1200	ambient

Recommendation

The staff recommends to the Commissioner that the Part 70 Minor Source Modification be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on January 25, 2002.

Emission Calculations

The calculations submitted by the applicant have been verified and found to be accurate and correct. These calculations are provided in Appendix A of this document (pages 1 through 4).

Potential To Emit of Modification

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA.”

This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	19.24
PM-10	10.84
SO ₂	0
VOC	0
CO	0
NO _x	0

HAP's	Potential To Emit (tons/year)
TOTAL	0

- (a) Fugitive Emissions
 Since this type of operation is one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive emissions are counted towards determination of PSD and Emission Offset applicability.

Justification for Modification

The Part 70 Operating permit is being modified through a Part 70 Minor Source Modification. This modification is being performed pursuant to 326 IAC 2-7-10.5(d)(4)(A) as the potential to emit of PM and PM-10 is less than twenty-five (25) tons per year and greater than five (5) tons per year.

County Attainment Status

The source is located in Putnam County.

Pollutant	Status
PM-10	Attainment
SO ₂	Attainment
NO ₂	Attainment
Ozone	Attainment
CO	Attainment
Lead	Attainment

- (a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Putnam County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) Putnam County has been classified as attainment or unclassifiable for all criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (c) Fugitive Emissions
Since this type of operation is one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive emissions are counted towards determination of PSD and Emission Offset applicability.

Source Status

Existing Source PSD or Emission Offset Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/year)
PM	402
PM-10	177
SO ₂	3,278
VOC	24.4
CO	2,831
NO _x	4,389

- (a) This existing source is a major stationary source because an attainment regulated pollutant is emitted at a rate of 100 tons per year or more and it is one of the 28 listed source categories.
- (b) These emissions are based upon the TSD for CP133-10159-00002, issued on April 16, 1999.

Potential to Emit of Modification After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Part 70 source modification.

Process/facility	Potential to Emit (tons/year)						
	PM	PM-10	SO ₂	VOC	CO	NO _x	HAPs
Storage Piles (F1-27, F1-32, F1-37)	0.39	0.39	0	0	0	0	0
Unpaved Roads (F1-20, F1-31)	0.14	0.14	0	0	0	0	0
Gypsum Hopper (F1-35)	0.05	0.05	0	0	0	0	0

Process/facility	Potential to Emit (tons/year)						
	PM	PM-10	SO ₂	VOC	CO	NO _x	HAPs
Granulated Slag/Rock Hopper (F1-34)	0.02	0.02	0	0	0	0	0
Finished Gypsum Hopper (F1-38)	0.09	0.09	0	0	0	0	0
Misc. Conveying	0.11	0.11	0	0	0	0	0
CKD/Pugmill (S1-36)	0.17	0.08	0	0	0	0	0
Total	0.97	0.88	0	0	0	0	0
PSD or Offset Threshold	25	15	40	40	100	40	–

Note: Emissions shown are controlled emissions after the baghouse and water mist suppression as these control devices are federally enforceable after the issuance of this permit.

Even without control, the potential to emit of PM and PM10 from this modification is less than 25 and 15 tons per year, respectively. This modification to an existing major stationary source is not major because the emission increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

Federal Rule Applicability

- (a) The gypsum material handling process is subject to 40 CFR 60, Subpart F (Standards of Performance for Portland Cement Plants). Pursuant to this rule, the gypsum hopper (F1-34), granulated slag/rock hopper (F1-35), CKD bin/pugmill (S1-36), and finished gypsum material hopper (F1-38) shall be limited to ten percent (10%) opacity or less.
- (b) The gypsum material handling process is subject to 40 CFR 63, Subpart LLL (National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry). Pursuant to this rule, the gypsum hopper (F1-34), granulated slag/rock hopper (F1-35), CKD bin/pugmill (S1-36), and finished gypsum material hopper (F1-38) shall be limited to ten percent (10%) opacity or less.

State Rule Applicability - Individual Facilities

326 IAC 2-2 (Prevention of Significant Deterioration)

Emissions of PM from this modification shall be less than twenty-five (25) tons per year and emissions of PM10 from this modification shall be less than fifteen (15) tons per year. Using standard emission factors from AP-42, the source is in compliance with these limits at maximum capacity. Therefore this source is not subject to 326 IAC 2-2 (Prevention of Significant Deterioration) because the increase in potential emissions from this modification is not over the significant PSD thresholds for any pollutants.

326 IAC 2-4.1-1 (New Source Toxics Control)

This modification is not subject to 326 IAC 2-4.1-1 because no units emit hazardous air pollutants.

326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

326 IAC 6-3-2 (Process Operations)

Pursuant to 326 IAC 6-3-2 (Process Operations), the particulate matter (PM) from the gypsum material handling operation shall be limited to less than 55.4 pounds per hour when operating at a process weight rates of 150 tons per hour. This limit was calculated as follows:

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

At maximum capacity, the gypsum material handling operation is in compliance with this limit.

Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this modification are as follows:

1. The gypsum material handling operation has applicable compliance monitoring conditions as specified below:
 - (a) Pursuant to 40 CFR 63.1350 (Monitoring Requirements), the Permittee shall prepare a written operations and maintenance plan for the gypsum material handling process by June 14, 2002, which is the compliance date for the National Emissions Standards for Hazardous Air Pollutants (NESHAP) for the Portland Cement Manufacturing Industry, or upon startup, whichever is later. The plan shall include the following information:
 - (i) Procedures for proper operation and maintenance of the affected sources and associated air pollution control device(s) in order to meet the emissions limit in the permit; and

- (ii) Procedures to be used to periodically monitor the facilities listed in this section, which are subject to opacity standards under 40 CFR 63.1348. Such procedures must include the following provisions:
 - (A) The Permittee shall conduct a monthly 1-minute visible emissions test of each affected source except for the finish mills or raw mills, in accordance with 40 CFR 60, Appendix A, Method 22. The test must be conducted while the affected source is in operation.
 - (B) If no visible emissions are observed in six consecutive monthly test for any affected source, the Permittee may decrease the frequency of testing from monthly to semi-annually for that affected source. If visible emissions are observed during any semi-annual test, the Permittee shall resume testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.
 - (C) If no visible emissions are observed during the semi-annual test for any affected source, the Permittee may decrease the frequency of testing from semi-annually to annually for that affected source. If visible emissions are observed during any annual test, the Permittee shall resume testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.
 - (D) If visible emissions are observed during any Method 22 test, the Permittee must conduct a 6-minute test of opacity in accordance with 40 CFR 60, Subpart A, Method 9. The Method 9 test must begin within one hour of any observation of visible emissions.

Failure to comply with any provision of the operations and maintenance plan shall be a violation of the standard.

- (b) Once per shift visible emissions notations of the CKD bin/pugmill stack exhaust shall be performed during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. 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.
- (c) The Permittee shall record the total static pressure drop across the baghouse controlling the CKD bin/pugmill, at least once per shift when the CKD bin/pugmill is in operation. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 2.0 to 10.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this

unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading. 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.

These monitoring conditions are necessary because the baghouse for the CKD bin/pugmill must operate properly to ensure compliance with 326 IAC 6-3 (Process Operations), 40 CFR 60, Subpart F (Standards of Performance for Portland Cement Plants), 40 CFR 63, Subpart LLL (National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry), and 326 IAC 2-7 (Part 70).

Conclusion

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Minor Source Modification No. 133-15262-00002.

Appendix A: Emission Calculations
Gypsum Material Processing
Company Name: Lone Star Industries, Inc.
Address City IN Zip: 3301 South County Rd 150 West, Greencastle, IN 46135
CP: MSM 133-15262-00002
Plt ID: 133-00002
Reviewer: ERG/KC
Date: #####

Particulate Emissions Before Controls

Unit	Description				
F1-27, F1-32 - Storage Piles	Storage		** see page 2 **	0.78 tons/yr	AP-42 Ch.11.2.3 (Fourth edition, no update)
F1-20, F1-31 - Unpaved Roads	Transporting		** see page 3 **	0.29 tons/yr	AP-42 Ch.13.2.2 (Supplement E, 9/98)
F1-35 - Gypsum Hopper	Loading & Unloading	67,200 ton/yr x	0.0016 lb/ton / 2000 lb/ton =	0.05 tons/yr	AP-42 Ch.13.2.4 (Fifth edition, 1/95) calculated
F1-34 - Granulated Slag/Rock Hopper	Loading & Unloading	22,400 ton/yr x	0.0016 lb/ton / 2000 lb/ton =	0.02 tons/yr	AP-42 Ch.13.2.4 (Fifth edition, 1/95) calculated
F1-38 - Finished Gypsum Hopper	Loading & Unloading	112,000 ton/yr x	0.0016 lb/ton / 2000 lb/ton =	0.09 tons/yr	AP-42 Ch.13.2.4 (Fifth edition, 1/95) calculated
Misc. Conveying	Conveyor Transfer (10 pts)	716,800 ton/yr x	0.00294 lb/ton / 2000 lb/ton =	1.05 tons/yr	AP-42 Ch.11.19.2 (Fifth edition, 1/95)
S1-36 - CKD/Pugmill - PM	Raw Material Handling	112,000 ton/yr x	0.3 lb/ton / 2000 lb/ton =	16.80 tons/yr	AP-42 Ch.11.6 (Fourth edition) SCC 3-05-007-19
S1-36 - CKD/Pugmill - PM10	Raw Material Handling	112,000 ton/yr x	0.15 lb/ton / 2000 lb/ton =	8.40 tons/yr	
Total emissions before controls:				PM	19.08 tons/yr
				PM10	10.68 tons/yr

Particulate Emissions After Controls

Unit	Description				
F1-27, F1-32, F1-37 - Storage Piles	Storage	0.78 tons/yr x	50% emitted after controls =	0.39 tons/yr	
F1-20, F1-31 - Unpaved Roads	Transporting	0.29 tons/yr x	50% emitted after controls =	0.14 tons/yr	
F1-35 - Gypsum Hopper	Loading & Unloading	0.05 tons/yr x	100% emitted after controls =	0.05 tons/yr	
F1-34 - Granulated Slag/Rock Hopper	Loading & Unloading	0.02 tons/yr x	100% emitted after controls =	0.02 tons/yr	
F1-38 - Finished Gypsum Hopper	Loading & Unloading	0.09 tons/yr x	100% emitted after controls =	0.09 tons/yr	
Misc. Conveying	Conveyor Transfer (10 pts)	1.05 tons/yr x	10% emitted after controls =	0.11 tons/yr	
S1-36 - CKD/Pugmill - PM	Raw Material Handling	16.80 tons/yr x	1% emitted after controls =	0.17 tons/yr	
S1-36 - CKD/Pugmill - PM10	Raw Material Handling	8.40 tons/yr x	1% emitted after controls =	0.08 tons/yr	
Total emissions after controls:				PM	0.97 tons/yr
				PM10	0.88 tons/yr

Conveyor Points

3 @ Raw Gypsum	67,200 yr x 3 =	201600
3 @ Slag/Rock	22,400 yr x 3 =	67200
1 into Pugmill	112,000 yr x 1 =	112000
1 out of Pugmill	112,000 yr x 1 =	112000
2 to Existing gypsum belts	112,000 x 2 =	224000
Total		716800 yr

Particulate Emissions from Storage

Storage emissions, which result from wind erosion, are determined by the following calculations:

F1-27 - Slag/Rock Pile

$E_f = 1.7 \cdot (s/1.5) \cdot (365-p)/235 \cdot (f/15)$	
=	4.63 lb/acre/day
where s =	4 % silt content of material
p =	125 days of rain greater than or equal to 0.01 inches
f =	15 % of wind greater than or equal to 12 mph
$E_p(\text{storage}) = E_f \cdot sc \cdot (40 \text{ cuft/ton}) / (2000 \text{ lb/ton}) / (43560 \text{ sqft/acre}) / (25 \text{ ft}) \cdot (365 \text{ day/yr})$	
=	0.16 tons/yr
where sc =	5 ,000 tons storage capacity

F1-32 - Gypsum Pile

$E_f = 1.7 \cdot (s/1.5) \cdot (365-p)/235 \cdot (f/15)$	
=	9.26 lb/acre/day
where s =	8 % silt content of material
p =	125 days of rain greater than or equal to 0.01 inches
f =	15 % of wind greater than or equal to 12 mph
$E_p(\text{storage}) = E_f \cdot sc \cdot (40 \text{ cuft/ton}) / (2000 \text{ lb/ton}) / (43560 \text{ sqft/acre}) / (25 \text{ ft}) \cdot (365 \text{ day/yr})$	
=	0.62 tons/yr
where sc =	10 ,000 tons storage capacity

Total Storage Particulate Emissions

$0.16 + 0.62 =$	0.78
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Particulate Emissions from Unpaved Roads

The following calculations determine the amount of emissions created by unpaved roads, based on 8760 hours of use and AP-42, Ch 13.2.2 (Supplement E, 9/98).

Two methods are provided for calculating emissions. The first does not consider natural mitigation due to precipitation.

Gypsum

3 trip/hr x		15 mph/60 min = 0.25 mi/min (1 min per load)
0.125 mile/trip x		23 ton per load, maximum 67,200 ton/yr = 2922 loads per year
2 (round trip) x		2922 loads x 1 load/min = 2922 min/60 min = 48.7
48.7 hr/yr =	36.525 miles per year	
Ef = k*[(s/12)^0.8]*[(W/3)^b]/[(M/0.2)^c]		
=	5.70 lb/mile	
where k =	2.6 (particle size multiplier for PM-10)	(k=10 for PM-30 or TSP)
s =	9 mean % silt content of unpaved roads	
b =	0.4 Constant for PM-10 (b = 0.5 for PM-30 or TSP)	
c =	0.3 Constant for PM-10 (c = 0.4 for PM-30 or TSP)	
W =	38 tons average vehicle weight	
M =	0.2 surface material moisture content, % (default is 0.2 for dry conditions)	
	<u>5.70 lb/mi x 36.525 mi/yr =</u>	0.104 tons/yr
	2000 lb/ton	

Slag/Rock

1 trip/hr x		15 mph/60 min = 0.25 mi/min (1 mile round trip/0.25 mi/min = 4 min/load)
0.5 mile/trip x		23 ton per load, maximum 22,400 ton/yr = 974 loads per year
2 (round trip) x		974 loads x 4 load/min = 3896 min/60 min = 64.9
64.9 hr/yr =	64.9 miles per year	
Ef = k*[(s/12)^0.8]*[(W/3)^b]/[(M/0.2)^c]		
=	5.70 lb/mile	
where k =	2.6 (particle size multiplier for PM-10)	(k=10 for PM-30 or TSP)
s =	9 mean % silt content of unpaved roads	
b =	0.4 Constant for PM-10 (b = 0.5 for PM-30 or TSP)	
c =	0.3 Constant for PM-10 (c = 0.4 for PM-30 or TSP)	
W =	38 tons average vehicle weight	
M =	0.2 surface material moisture content, % (default is 0.2 for dry conditions)	
	<u>5.70 lb/mi x 64.9 mi/yr =</u>	0.185 tons/yr
	2000 lb/ton	

Total Unpaved Roads Particulate Emissions

0.104 + 0.185 =	0.29
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Particulate Emissions from Storage

Storage emissions, which result from wind erosion, are determined by the following calculations:

F1-37 - Gypsum Pile

$E_f = 1.7 \cdot (s/1.5) \cdot (365-p)/235 \cdot (f/15)$	
=	4.63 lb/acre/day
where s =	4 % silt content of material
p =	125 days of rain greater than or equal to 0.01 inches
f =	15 % of wind greater than or equal to 12 mph
$E_p(\text{storage}) = E_f \cdot sc \cdot (40 \text{ cuft/ton}) / (2000 \text{ lb/ton}) / (43560 \text{ sqft/acre}) / (25 \text{ ft}) \cdot (365 \text{ day/yr})$	
=	0.16 tons/yr
where sc =	5 ,000 tons storage capacity

Emission Factor Calculation for Aggregate Handling

The following calculations determine the amount of emissions created by truck loading and unloading of aggregate, based on 8760 hours of use and AP-42, Ch 13.2.4 (Fifth edition, 1/95).

$E_f = k \cdot (0.0032) \cdot (U/5)^{1.3} / (M/2)^{1.4}$	
=	0.0016 lb/ton
where k =	0.74 (particle size multiplier)
U =	10 mile/hr mean wind speed
M =	5 % material moisture content

TABLE 3 TO SUBPART EC—OPERATING PARAMETERS TO BE MONITORED AND MINIMUM MEASUREMENT AND RECORDING FREQUENCIES—Continued

Operating parameters to be monitored	Minimum frequency		Control system		
	Data measurement	Data recording	Dry scrubber followed by fabric filter	Wet scrubber	Dry scrubber followed by fabric filter and wet scrubber
Minimum operating parameters:					
Minimum secondary chamber temperature.	Continuous	1xminute	✓	✓	✓
Minimum dioxin/furan sorbent flow rate.	Hourly	1xhour	✓	✓
Minimum HCl sorbent flow rate.	Hourly	1xhour	✓	✓
Minimum mercury (Hg) sorbent flow rate.	Hourly	1xhour	✓	✓
Minimum pressure drop across the wet scrubber or minimum horsepower or amperage to wet scrubber.	Continuous	1xminute	✓	✓
Minimum scrubber liquor flow rate.	Continuous	1xminute	✓	✓
Minimum scrubber liquor pH ..	Continuous	1xminute	✓	✓

Subpart F—Standards of Performance for Portland Cement Plants

§ 60.60 Applicability and designation of affected facility.

(a) The provisions of this subpart are applicable to the following affected facilities in portland cement plants: Kiln, clinker cooler, raw mill system, finish mill system, raw mill dryer, raw material storage, clinker storage, finished product storage, conveyor transfer points, bagging and bulk loading and unloading systems.

(b) Any facility under paragraph (a) of this section that commences construction or modification after August 17, 1971, is subject to the requirements of this subpart.

[42 FR 37936, July 25, 1977]

§ 60.61 Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act and in subpart A of this part.

(a) *Portland cement plant* means any facility manufacturing portland cement by either the wet or dry process.

(b) *Bypass* means any system that prevents all or a portion of the kiln or clinker cooler exhaust gases from entering the main control device and ducts the gases through a separate con-

trol device. This does not include emergency systems designed to duct exhaust gases directly to the atmosphere in the event of a malfunction of any control device controlling kiln or clinker cooler emissions.

(c) *Bypass stack* means the stack that vents exhaust gases to the atmosphere from the bypass control device.

(d) *Monovent* means an exhaust configuration of a building or emission control device (e.g., positive-pressure fabric filter) that extends the length of the structure and has a width very small in relation to its length (i.e., length to width ratio is typically greater than 5:1). The exhaust may be an open vent with or without a roof, louvered vents, or a combination of such features.

[36 FR 24877, Dec. 23, 1971, as amended at 39 FR 20793, June 13, 1974; 53 FR 50363, Dec. 14, 1988]

§ 60.62 Standard for particulate matter.

(a) On and after the date on which the performance test required to be conducted by § 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any kiln any gases which:

(1) Contain particulate matter in excess of 0.15 kg per metric ton of feed (dry basis) to the kiln (0.30 lb per ton).

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(2) Exhibit greater than 20 percent opacity.

(b) On and after the date on which the performance test required to be conducted by § 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any clinker cooler any gases which:

(1) Contain particulate matter in excess of 0.050 kg per metric ton of feed (dry basis) to the kiln (0.10 lb per ton).

(2) Exhibit 10 percent opacity, or greater.

(c) On and after the date on which the performance test required to be conducted by § 60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility other than the kiln and clinker cooler any gases which exhibit 10 percent opacity, or greater.

[39 FR 20793, June 14, 1974, as amended at 39 FR 39874, Nov. 12, 1974; 40 FR 46258, Oct. 6, 1975]

§ 60.63 Monitoring of operations.

(a) The owner or operator of any portland cement plant subject to the provisions of this part shall record the daily production rates and kiln feed rates.

(b) Except as provided in paragraph (c) of this section, each owner or operator of a kiln or clinker cooler that is subject to the provisions of this subpart shall install, calibrate, maintain, and operate in accordance with § 60.13 a continuous opacity monitoring system to measure the opacity of emissions discharged into the atmosphere from any kiln or clinker cooler. Except as provided in paragraph (c) of this section, a continuous opacity monitoring system shall be installed on each stack of any multiple stack device controlling emissions from any kiln or clinker cooler. If there is a separate bypass installed, each owner or operator of a kiln or clinker cooler shall also install, calibrate, maintain, and operate a continuous opacity monitoring system on each bypass stack in addition to the main control device stack. Each owner or operator of an affected kiln or clinker cooler for which the performance test required under § 60.8 has been completed on or prior to December 14, 1988,

shall install the continuous opacity monitoring system within 180 days after December 14, 1988.

(c) Each owner or operator of a kiln or clinker cooler subject to the provisions of this subpart using a positive-pressure fabric filter with multiple stacks, or a negative-pressure fabric filter with multiple stacks, or an electrostatic precipitator with multiple stacks may, in lieu of installing the continuous opacity monitoring system required by § 60.63(b), monitor visible emissions at least once per day by using a certified visible emissions observer. If the control device exhausts gases through a monovent, visible emission observations in lieu of a continuous opacity monitoring system are required. These observations shall be taken in accordance with EPA Method 9. Visible emissions shall be observed during conditions representative of normal operation. Observations shall be recorded for at least three 6-minute periods each day. In the event that visible emissions are observed for a number of emission sites from the control device with multiple stacks, Method 9 observations shall be recorded for the emission site with the highest opacity. All records of visible emissions shall be maintained for a period of 2 years.

(d) For the purpose of reports under § 60.65, periods of excess emissions that shall be reported are defined as all 6-minute periods during which the average opacity exceeds that allowed by § 60.62(a)(2) or § 60.62(b)(2).

(e) The provisions of paragraphs (a), (b), and (c) of this section apply to kilns and clinker coolers for which construction, modification, or reconstruction commenced after August 17, 1971.

[36 FR 24877, Dec. 23, 1971, as amended at 53 FR 50363, Dec. 14, 1988]

§ 60.64 Test methods and procedures.

(a) In conducting the performance tests required in § 60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in § 60.8(b).

(b) The owner or operator shall determine compliance with the particulate matter standard in § 60.62 as follows:

§ 60.65

(1) The emission rate (E) of particulate matter shall be computed for each run using the following equation:

$$E = (c_s Q_{sd}) / (P K)$$

where:

E=emission rate of particulate matter, kg/metric ton (lb/ton) of kiln feed.

c_s =concentration of particulate matter, g/dscm (gr/dscf).

Q_{sd} =volumetric flow rate of effluent gas, dscm/hr (dscf/hr).

P=total kiln feed (dry basis) rate, metric ton/hr (ton/hr).

K=conversion factor, 1000 g/kg (7000 gr/lb).

(2) Method 5 shall be used to determine the particulate matter concentration (c_s) and the volumetric flow rate (Q_{sd}) of the effluent gas.

The sampling time and sample volume for each run shall be at least 60 minutes and 0.85 dscm (30.0 dscf) for the kiln and at least 60 minutes and 1.15 dscm (40.6 dscf) for the clinker cooler.

(3) Suitable methods shall be used to determine the kiln feed rate (P), except fuels, for each run. Material balance over the production system shall be used to confirm the feed rate.

(4) Method 9 and the procedures in § 60.11 shall be used to determine opacity.

[54 FR 6666, Feb. 14, 1989, as amended at 65 FR 61753, Oct. 17, 2000]

§ 60.65 Recordkeeping and reporting requirements.

(a) Each owner or operator required to install a continuous opacity monitoring system under § 60.63(b) shall submit reports of excess emissions as defined in § 60.63(d). The content of these reports must comply with the requirements in § 60.7(c). Notwithstanding the provisions of § 60.7(c), such reports shall be submitted semiannually.

(b) Each owner or operator monitoring visible emissions under § 60.63(c) shall submit semiannual reports of observed excess emissions as defined in § 60.63(d).

(c) Each owner or operator of facilities subject to the provisions of § 60.63(c) shall submit semiannual reports of the malfunction information required to be recorded by § 60.7(b). These reports shall include the frequency, duration, and cause of any incident resulting in deenergization of any device controlling kiln emissions

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or in the venting of emissions directly to the atmosphere.

(d) The requirements of this section remain in force until and unless the Agency, in delegating enforcement authority to a State under section 111(c) of the Clean Air Act, 42 U.S.C. 7411, approves reporting requirements or an alternative means of compliance surveillance adopted by such States. In that event, affected sources within the State will be relieved of the obligation to comply with this section, provided that they comply with the requirements established by the State.

[53 FR 50364, Dec. 14, 1988]

§ 60.66 Delegation of authority.

(a) In delegating implementation and enforcement authority to a State under section 111(c) of the Act, the authorities contained in paragraph (b) of this section shall be retained by the Administrator and not transferred to a State.

(b) Authorities which will not be delegated to States: No restrictions.

[53 FR 50364, Dec. 14, 1988]

Subpart G—Standards of Performance for Nitric Acid Plants

§ 60.70 Applicability and designation of affected facility.

(a) The provisions of this subpart are applicable to each nitric acid production unit, which is the affected facility.

(b) Any facility under paragraph (a) of this section that commences construction or modification after August 17, 1971, is subject to the requirements of this subpart.

[42 FR 37936, July 25, 1977]

§ 60.71 Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act and in subpart A of this part.

(a) *Nitric acid production unit* means any facility producing weak nitric acid by either the pressure or atmospheric pressure process.

(b) *Weak nitric acid* means acid which is 30 to 70 percent in strength.

Subpart KKK [Reserved]**Subpart LLL—National Emission Standards for Hazardous Air Pollutants From the Portland Cement Manufacturing Industry**

SOURCE: 64 FR 31925, June 14, 1999, unless otherwise noted.

GENERAL

§ 63.1340 Applicability and designation of affected sources.

(a) Except as specified in paragraphs (b) and (c) of this section, the provisions of this subpart apply to each new and existing portland cement plant which is a major source or an area source as defined in § 63.2.

(b) The affected sources subject to this subpart are:

(1) Each kiln and each in-line kiln/raw mill at any major or area source, including alkali bypasses, except for kilns and in-line kiln/raw mills that burn hazardous waste and are subject to and regulated under subpart EEE of this part;

(2) Each clinker cooler at any portland cement plant which is a major source;

(3) Each raw mill at any portland cement plant which is a major source;

(4) Each finish mill at any portland cement plant which is a major source;

(5) Each raw material dryer at any portland cement plant which is a major source and each greenfield raw material dryer at any portland cement plant which is a major or area source;

(6) Each raw material, clinker, or finished product storage bin at any portland cement plant which is a major source;

(7) Each conveying system transfer point at any portland cement plant which is a major source;

(8) Each bagging system at any portland cement plant which is a major source; and

(9) Each bulk loading or unloading system at any portland cement plant which is a major source.

(c) For portland cement plants with on-site nonmetallic mineral processing facilities, the first affected source in the sequence of materials handling op-

erations subject to this subpart is the raw material storage, which is just prior to the raw mill. The primary and secondary crushers and any other equipment of the on-site nonmetallic mineral processing plant which precedes the raw material storage are not subject to this subpart. Furthermore, the first conveyor transfer point subject to this subpart is the transfer point associated with the conveyor transferring material from the raw material storage to the raw mill.

(d) The owner or operator of any affected source subject to the provisions of this subpart is subject to title V permitting requirements.

§ 63.1341 Definitions.

All terms used in this subpart that are not defined in this section have the meaning given to them in the CAA and in subpart A of this part.

Alkali bypass means a duct between the feed end of the kiln and the preheater tower through which a portion of the kiln exit gas stream is withdrawn and quickly cooled by air or water to avoid excessive buildup of alkali, chloride and/or sulfur on the raw feed. This may also be referred to as the "kiln exhaust gas bypass".

Bagging system means the equipment which fills bags with portland cement.

Clinker cooler means equipment into which clinker product leaving the kiln is placed to be cooled by air supplied by a forced draft or natural draft supply system.

Continuous monitor means a device which continuously samples the regulated parameter specified in § 63.1350 of this subpart without interruption, evaluates the detector response at least once every 15 seconds, and computes and records the average value at least every 60 seconds, except during allowable periods of calibration and except as defined otherwise by the continuous emission monitoring system performance specifications in appendix B to part 60 of this chapter.

Conveying system means a device for transporting materials from one piece of equipment or location to another location within a facility. Conveying systems include but are not limited to the following: feeders, belt conveyors,

bucket elevators and pneumatic systems.

Conveying system transfer point means a point where any material including but not limited to feed material, fuel, clinker or product, is transferred to or from a conveying system, or between separate parts of a conveying system.

Dioxins and furans (D/F) means tetra-, penta-, hexa-, hepta-, and octachlorinated dibenzo dioxins and furans.

Facility means all contiguous or adjoining property that is under common ownership or control, including properties that are separated only by a road or other public right-of-way.

Feed means the prepared and mixed materials, which include but are not limited to materials such as limestone, clay, shale, sand, iron ore, mill scale, cement kiln dust and flyash, that are fed to the kiln. Feed does not include the fuels used in the kiln to produce heat to form the clinker product.

Finish mill means a roll crusher, ball and tube mill or other size reduction equipment used to grind clinker to a fine powder. Gypsum and other materials may be added to and blended with clinker in a finish mill. The finish mill also includes the air separator associated with the finish mill.

Greenfield kiln, in-line kiln/raw mill, or raw material dryer means a kiln, in-line kiln/raw mill, or raw material dryer for which construction is commenced at a plant site (where no kilns and no in-line kiln/raw mills were in operation at any time prior to March 24, 1998) after March 24, 1998.

Hazardous waste is defined in § 261.3 of this chapter.

In-line kiln/raw mill means a system in a portland cement production process where a dry kiln system is integrated with the raw mill so that all or a portion of the kiln exhaust gases are used to perform the drying operation of the raw mill, with no auxiliary heat source used. In this system the kiln is capable of operating without the raw mill operating, but the raw mill cannot operate without the kiln gases, and consequently, the raw mill does not generate a separate exhaust gas stream.

Kiln means a device, including any associated preheater or precalciner devices, that produces clinker by heating

limestone and other materials for subsequent production of portland cement.

Kiln exhaust gas bypass means alkali bypass.

Monovent means an exhaust configuration of a building or emission control device (e. g. positive pressure fabric filter) that extends the length of the structure and has a width very small in relation to its length (i. e., length to width ratio is typically greater than 5:1). The exhaust may be an open vent with or without a roof, louvered vents, or a combination of such features.

New brownfield kiln, in-line kiln raw mill, or raw material dryer means a kiln, in-line kiln/raw mill or raw material dryer for which construction is commenced at a plant site (where kilns and/or in-line kiln/raw mills were in operation prior to March 24, 1998) after March 24, 1998.

One-minute average means the average of thermocouple or other sensor responses calculated at least every 60 seconds from responses obtained at least once during each consecutive 15 second period.

Portland cement plant means any facility manufacturing portland cement.

Raw material dryer means an impact dryer, drum dryer, paddle-equipped rapid dryer, air separator, or other equipment used to reduce the moisture content of feed materials.

Raw mill means a ball and tube mill, vertical roller mill or other size reduction equipment, that is not part of an in-line kiln/raw mill, used to grind feed to the appropriate size. Moisture may be added or removed from the feed during the grinding operation. If the raw mill is used to remove moisture from feed materials, it is also, by definition, a raw material dryer. The raw mill also includes the air separator associated with the raw mill.

Rolling average means the average of all one-minute averages over the averaging period.

Run average means the average of the one-minute parameter values for a run.

TEQ means the international method of expressing toxicity equivalents for dioxins and furans as defined in U.S. EPA, Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-dioxins and -dibenzofurans

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(CDDs and CDFs) and 1989 Update, March 1989.

EMISSION STANDARDS AND OPERATING LIMITS

§ 63.1342 Standards: General.

(a) Table 1 to this subpart provides cross references to the 40 CFR part 63,

subpart A, general provisions, indicating the applicability of the general provisions requirements to subpart LLL.

(b) Table 1 of this section provides a summary of emission limits and operating limits of this subpart.

TABLE 1 TO § 63.1342.—EMISSION LIMITS AND OPERATING LIMITS

Affected source	Pollutant or opacity	Emission and operating limit
All kilns and in-line kiln/raw mills at major sources (including alkali bypass). All kilns and in-line kiln/raw mills at major and area sources (including alkali bypass).	PM	0.15 kg/Mg of feed (dry basis).
	Opacity	20 percent.
	D/F	0.20 ng TEQ/dscm or 0.40 ng TEQ/dscm when the average of the performance test run average particulate matter control device (PMCD) inlet temperatures is 204 °C or less. [Corrected to 7 percent oxygen] Operate such that the three-hour rolling average PMCD inlet temperature is no greater than the temperature established at performance test. If activated carbon injection is used: Operate such that the three-hour rolling average activated carbon injection rate is no less than rate established at performance test. Operate such that either the carrier gas flow rate or carrier gas pressure drop exceeds the value established at performance test. Inject carbon of equivalent specifications to that used at performance test.
New greenfield kilns and in-line kiln/raw mills at major and area sources.	THC	50 ppmvd, as propane, corrected to 7 percent oxygen.
All clinker coolers at major sources	PM	0.050 kg/Mg of feed (dry basis)
All raw mills and finish mills at major sources New greenfield raw material dryers at major and area sources.	Opacity	10 percent.
	THC	50 ppmvd, as propane, corrected to 7 percent oxygen.
All raw material dryers and material handling points at major sources.	Opacity	10 percent.

§ 63.1343 Standards for kilns and in-line kiln/raw mills.

(a) *General.* The provisions in this section apply to each kiln, each in-line kiln/raw mill, and any alkali bypass associated with that kiln or in-line kiln/raw mill.

(b) *Existing, reconstructed, or new brownfield/major sources.* No owner or operator of an existing, reconstructed or new brownfield kiln or an existing, reconstructed or new brownfield in-line kiln/raw mill at a facility that is a major source subject to the provisions of this subpart shall cause to be discharged into the atmosphere from these affected sources, any gases which:

(1) Contain particulate matter (PM) in excess of 0.15 kg per Mg (0.30 lb per ton) of feed (dry basis) to the kiln. When there is an alkali bypass associated with a kiln or in-line kiln/raw mill, the combined particulate matter emissions from the kiln or in-line kiln/raw mill and the alkali bypass are subject to this emission limit.

(2) Exhibit opacity greater than 20 percent.

(3) Contain D/F in excess of:

(i) 0.20 ng per dscm (8.7×10^{-11} gr per dscf) (TEQ) corrected to seven percent oxygen; or

(ii) 0.40 ng per dscm (1.7×10^{-10} gr per dscf) (TEQ) corrected to seven percent oxygen, when the average of the performance test run average temperatures at the inlet to the particulate

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matter control device is 204 °C (400 °F) or less.

(c) *Greenfield/major sources.* No owner or operator that commences construction of a greenfield kiln or greenfield inline kiln/raw mill at a facility which is a major source subject to the provisions of this subpart shall cause to be discharged into the atmosphere from these affected sources any gases which:

(1) Contain particulate matter in excess of 0.15 kg per Mg (0.30 lb per ton) of feed (dry basis) to the kiln. When there is an alkali bypass associated with a kiln or in-line kiln/raw mill, the combined particulate matter emissions from the kiln or in-line kiln/raw mill and the bypass stack are subject to this emission limit.

(2) Exhibit opacity greater than 20 percent.

(3) Contain D/F in excess of:

(i) 0.20 ng per dscm (8.7×10^{-11} gr per dscf) (TEQ) corrected to seven percent oxygen; or

(ii) 0.40 ng per dscm (1.7×10^{-10} gr per dscf) (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 204 °C (400 °F) or less.

(4) Contain total hydrocarbon (THC), from the main exhaust of the kiln or in-line kiln/raw mill, in excess of 50 ppmvd as propane, corrected to seven percent oxygen.

(d) *Existing, reconstructed, or new brownfield/area sources.* No owner or operator of an existing, reconstructed, or new brownfield kiln or an existing, reconstructed or new brownfield in-line kiln/raw mill at a facility that is an area source subject to the provisions of this subpart shall cause to be discharged into the atmosphere from these affected sources any gases which contain D/F in excess of:

(1) 0.20 ng per dscm (8.7×10^{-11} gr per dscf) (TEQ) corrected to seven percent oxygen; or

(2) 0.40 ng per dscm (1.7×10^{-10} gr per dscf) (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 204 °C (400 °F) or less.

(e) *Greenfield/area sources.* No owner or operator of a greenfield kiln or a greenfield in-line kiln/raw mill at a facility that is an area source subject to the provisions of this subpart shall cause to be discharged into the atmosphere from these affected sources any gases which:

(1) Contain D/F in excess of:

(i) 0.20 ng per dscm (8.7×10^{-11} gr per dscf) (TEQ) corrected to seven percent oxygen; or

(ii) 0.40 ng per dscm (1.7×10^{-11} gr per dscf) (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 204 °C (400 °F) or less.

(2) Contain THC, from the main exhaust of the kiln or in-line kiln/raw mill, in excess of 50 ppmvd as propane, corrected to seven percent oxygen.

§ 63.1344 Operating limits for kilns and in-line kiln/raw mills.

(a) The owner or operator of a kiln subject to a D/F emission limitation under § 63.1343 must operate the kiln such that the temperature of the gas at the inlet to the kiln particulate matter control device (PMCD) and alkali bypass PMCD, if applicable, does not exceed the applicable temperature limit specified in paragraph (b) of this section. The owner or operator of an in-line kiln/raw mill subject to a D/F emission limitation under § 63.1343 must operate the in-line kiln/raw mill, such that:

(1) When the raw mill of the in-line kiln/raw mill is operating, the applicable temperature limit for the main in-line kiln/raw mill exhaust, specified in paragraph (b) of this section and established during the performance test when the raw mill was operating is not exceeded.

(2) When the raw mill of the in-line kiln/raw mill is not operating, the applicable temperature limit for the main in-line kiln/raw mill exhaust, specified in paragraph (b) of this section and established during the performance test when the raw mill was not operating, is not exceeded.

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(3) If the in-line kiln/raw mill is equipped with an alkali bypass, the applicable temperature limit for the alkali bypass, specified in paragraph (b) of this section and established during the performance test when the raw mill was operating, is not exceeded.

(b) The temperature limit for affected sources meeting the limits of paragraph (a) of this section or paragraphs (a)(1) through (a)(3) of this section is determined in accordance with § 63.1349(b)(3)(iv).

(c) The owner or operator of an affected source subject to a D/F emission limitation under § 63.1343 that employs carbon injection as an emission control technique must operate the carbon injection system in accordance with paragraphs (c)(1) and (c)(2) of this section.

(1) The three-hour rolling average activated carbon injection rate shall be equal to or greater than the activated carbon injection rate determined in accordance with § 63.1349(b)(3)(vi).

(2) The owner or operator shall either:

(i) Maintain the minimum activated carbon injection carrier gas flow rate, as a three-hour rolling average, based on the manufacturer's specifications. These specifications must be documented in the test plan developed in accordance with § 63.7(c), or

(ii) Maintain the minimum activated carbon injection carrier gas pressure drop, as a three-hour rolling average, based on the manufacturer's specifications. These specifications must be documented in the test plan developed in accordance with § 63.7(c).

(d) Except as provided in paragraph (e) of this section, the owner or operator of an affected source subject to a D/F emission limitation under § 63.1343 that employs carbon injection as an emission control technique must specify and use the brand and type of activated carbon used during the performance test until a subsequent performance test is conducted, unless the site-specific performance test plan contains documentation of key parameters that affect adsorption and the owner or operator establishes limits based on those parameters, and the limits on these parameters are maintained.

(e) The owner or operator of an affected source subject to a D/F emission limitation under § 63.1343 that employs carbon injection as an emission control technique may substitute, at any time, a different brand or type of activated carbon provided that the replacement has equivalent or improved properties compared to the activated carbon specified in the site-specific performance test plan and used in the performance test. The owner or operator must maintain documentation that the substitute activated carbon will provide the same or better level of control as the original activated carbon.

§ 63.1345 Standards for clinker coolers.

(a) No owner or operator of a new or existing clinker cooler at a facility which is a major source subject to the provisions of this subpart shall cause to be discharged into the atmosphere from the clinker cooler any gases which:

(1) Contain particulate matter in excess of 0.050 kg per Mg (0.10 lb per ton) of feed (dry basis) to the kiln.

(2) Exhibit opacity greater than ten percent.

(b) [Reserved]

§ 63.1346 Standards for new and reconstructed raw material dryers.

(a) *Brownfield/major sources.* No owner or operator of a new or reconstructed brownfield raw material dryer at a facility which is a major source subject to this subpart shall cause to be discharged into the atmosphere from the new or reconstructed raw material dryer any gases which exhibit opacity greater than ten percent.

(b) *Greenfield/area sources.* No owner or operator of a greenfield raw material dryer at a facility which is an area source subject to this subpart shall cause to be discharged into the atmosphere from the greenfield raw material dryer any gases which contain THC in excess of 50 ppmvd, reported as propane, corrected to seven percent oxygen.

(c) *Greenfield/major sources.* No owner or operator of a greenfield raw material dryer at a facility which is a major source subject to this subpart shall

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cause to be discharged into the atmosphere from the greenfield raw material dryer any gases which:

- (1) Contain THC in excess of 50 ppmvd, reported as propane, corrected to seven percent oxygen.
- (2) Exhibit opacity greater than ten percent.

§ 63.1347 Standards for raw and finish mills.

The owner or operator of each new or existing raw mill or finish mill at a facility which is a major source subject to the provisions of this subpart shall not cause to be discharged from the mill sweep or air separator air pollution control devices of these affected sources any gases which exhibit opacity in excess of ten percent.

§ 63.1348 Standards for affected sources other than kilns; in-line kiln/raw mills; clinker coolers; new and reconstructed raw material dryers; and raw and finish mills.

The owner or operator of each new or existing raw material, clinker, or finished product storage bin; conveying system transfer point; bagging system; and bulk loading or unloading system; and each existing raw material dryer, at a facility which is a major source subject to the provisions of this subpart shall not cause to be discharged any gases from these affected sources which exhibit opacity in excess of ten percent.

MONITORING AND COMPLIANCE PROVISIONS

§ 63.1349 Performance testing requirements.

(a) The owner or operator of an affected source subject to this subpart shall demonstrate initial compliance with the emission limits of § 63.1343 and §§ 63.1345 through 63.1348 using the test methods and procedures in paragraph (b) of this section and § 63.7. Performance test results shall be documented in complete test reports that contain the information required by paragraphs (a)(1) through (a)(10) of this section, as well as all other relevant information. The plan to be followed during testing shall be made available to the Administrator prior to testing, if requested.

- (1) A brief description of the process and the air pollution control system;
- (2) Sampling location description(s);
- (3) A description of sampling and analytical procedures and any modifications to standard procedures;
- (4) Test results;
- (5) Quality assurance procedures and results;
- (6) Records of operating conditions during the test, preparation of standards, and calibration procedures;
- (7) Raw data sheets for field sampling and field and laboratory analyses;
- (8) Documentation of calculations;
- (9) All data recorded and used to establish parameters for compliance monitoring; and
- (10) Any other information required by the test method.

(b) Performance tests to demonstrate initial compliance with this subpart shall be conducted as specified in paragraphs (b)(1) through (b)(4) of this section.

(1) The owner or operator of a kiln subject to limitations on particulate matter emissions shall demonstrate initial compliance by conducting a performance test as specified in paragraphs (b)(1)(i) through (b)(1)(iv) of this section. The owner or operator of an in-line kiln/raw mill subject to limitations on particulate matter emissions shall demonstrate initial compliance by conducting separate performance tests as specified in paragraphs (b)(1)(i) through (b)(1)(iv) of this section while the raw mill of the in-line kiln/raw mill is under normal operating conditions and while the raw mill of the in-line kiln/raw mill is not operating. The owner or operator of a clinker cooler subject to limitations on particulate matter emissions shall demonstrate initial compliance by conducting a performance test as specified in paragraphs (b)(1)(i) through (b)(1)(iii) of this section. The opacity exhibited during the period of the Method 5 of Appendix A to part 60 of this chapter performance tests required by paragraph (b)(1)(i) of this section shall be determined as required in paragraphs (b)(1)(v) through (vi) of this section.

(i) EPA Method 5 of appendix A to part 60 of this chapter shall be used to determine PM emissions. Each performance test shall consist of three

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separate runs under the conditions that exist when the affected source is operating at the highest load or capacity level reasonably expected to occur. Each run shall be conducted for at least one hour, and the minimum sample volume shall be 0.85 dscm (30 dscf). The average of the three runs shall be used to determine compliance. A determination of the particulate matter collected in the impingers ("back half") of the Method 5 particulate sampling train is not required to demonstrate initial compliance with the PM standards of this subpart. However this shall not preclude the permitting authority from requiring a determination of the "back half" for other purposes.

(ii) Suitable methods shall be used to determine the kiln or inline kiln/raw mill feed rate, except for fuels, for each run.

(iii) The emission rate, E, of PM shall be computed for each run using equation 1:

$$E = (C_s Q_{sd})/P \quad (\text{Eq. 1})$$

Where:

E = emission rate of particulate matter, kg/Mg of kiln feed.

C_s = concentration of PM, kg/dscm.

Q_{sd} = volumetric flow rate of effluent gas, dscm/hr.

P = total kiln feed (dry basis), Mg/hr.

(iv) When there is an alkali bypass associated with a kiln or in-line kiln/raw mill, the main exhaust and alkali bypass of the kiln or in-line kiln/raw mill shall be tested simultaneously and the combined emission rate of particulate matter from the kiln or in-line kiln/raw mill and alkali bypass shall be computed for each run using equation 2.

$$E_c = (C_{sk} Q_{sdk} + C_{sb} Q_{sdb})/P \quad (\text{Eq. 2})$$

Where:

E_c = the combined emission rate of particulate matter from the kiln or in-line kiln/raw mill and bypass stack, kg/Mg of kiln feed.

C_{sk} = concentration of particulate matter in the kiln or in-line kiln/raw mill effluent, kg/dscm.

Q_{sdk} = volumetric flow rate of kiln or in-line kiln/raw mill effluent, dscm/hr.

C_{sb} = concentration of particulate matter in the alkali bypass gas, kg/dscm.

Q_{sdb} = volumetric flow rate of alkali bypass gas, dscm/hr.

P = total kiln feed (dry basis), Mg/hr.

(v) Except as provided in paragraph (b)(1)(vi) of this section the opacity exhibited during the period of the Method 5 performance tests required by paragraph (b)(1)(i) of this section shall be determined through the use of a continuous opacity monitor (COM). The maximum six-minute average opacity during the three Method 5 test runs shall be determined during each Method 5 test run, and used to demonstrate initial compliance with the applicable opacity limits of § 63.1343(b)(2), § 63.1343(c)(2), or § 63.1345(a)(2).

(vi) Each owner or operator of a kiln, in-line kiln/raw mill, or clinker cooler subject to the provisions of this subpart using a fabric filter with multiple stacks or an electrostatic precipitator with multiple stacks may, in lieu of installing the continuous opacity monitoring system required by paragraph (b)(1)(v) of this section, conduct an opacity test in accordance with Method 9 of appendix A to part 60 of this chapter during each Method 5 performance test required by paragraph (b)(1)(i) of this section. If the control device exhausts through a monovent, or if the use of a COM in accordance with the installation specifications of Performance Specification 1 (PS-1) of appendix B to part 60 of this chapter is not feasible, a test shall be conducted in accordance with Method 9 of appendix A to part 60 of this chapter during each Method 5 performance test required by paragraph (b)(1)(i) of this section. The maximum six-minute average opacity shall be determined during the three Method 5 test runs, and used to demonstrate initial compliance with the applicable opacity limits of § 63.1343(b)(2), § 63.1343(c)(2), or § 63.1345(a)(2).

(2) The owner or operator of any affected source subject to limitations on opacity under this subpart that is not subject to paragraph (b)(1) of this section shall demonstrate initial compliance with the affected source opacity limit by conducting a test in accordance with Method 9 of appendix A to part 60 of this chapter. The performance test shall be conducted under the conditions that exist when the affected

source is operating at the highest load or capacity level reasonably expected to occur. The maximum six-minute average opacity exhibited during the test period shall be used to determine whether the affected source is in initial compliance with the standard. The duration of the Method 9 performance test shall be 3-hours (30 6-minute averages), except that the duration of the Method 9 performance test may be reduced to 1-hour if the conditions of paragraphs (b)(2)(i) through (ii) of the section apply:

(i) There are no individual readings greater than 10 percent opacity;

(ii) There are no more than three readings of 10 percent for the first 1-hour period.

(3) The owner or operator of an affected source subject to limitations on D/F emissions shall demonstrate initial compliance with the D/F emission limit by conducting a performance test using Method 23 of appendix A to part 60 of this chapter. The owner or operator of an in-line kiln/raw mill shall demonstrate initial compliance by conducting separate performance tests while the raw mill of the in-line kiln/raw mill is under normal operating conditions and while the raw mill of the in-line kiln/raw mill is not operating. The owner or operator of a kiln or in-line kiln/raw mill equipped with an alkali bypass shall conduct simultaneous performance tests of the kiln or in-line kiln/raw mill exhaust and the alkali bypass, however the owner or operator of an in-line kiln/raw mill is not required to conduct a performance test of the alkali bypass exhaust when the raw mill of the in-line kiln/raw mill is not operating.

(i) Each performance test shall consist of three separate runs; each run shall be conducted under the conditions that exist when the affected source is operating at the highest load or capacity level reasonably expected to occur. The duration of each run shall be at least three hours and the sample volume for each run shall be at least 2.5 dscm (90 dscf). The concentration shall be determined for each run and the arithmetic average of the concentrations measured for the three runs shall be calculated and used to determine compliance.

(ii) The temperature at the inlet to the kiln or in-line kiln/raw mill PMCD, and where applicable, the temperature at the inlet to the alkali bypass PMCD, must be continuously recorded during the period of the Method 23 test, and the continuous temperature record(s) must be included in the performance test report.

(iii) One-minute average temperatures must be calculated for each minute of each run of the test.

(iv) The run average temperature must be calculated for each run, and the average of the run average temperatures must be determined and included in the performance test report and will determine the applicable temperature limit in accordance with § 63.1344(b).

(v) If activated carbon injection is used for D/F control, the rate of activated carbon injection to the kiln or in-line kiln/raw mill exhaust, and where applicable, the rate of activated carbon injection to the alkali bypass exhaust, must be continuously recorded during the period of the Method 23 test, and the continuous injection rate record(s) must be included in the performance test report. In addition, the performance test report must include the brand and type of activated carbon used during the performance test and a continuous record of either the carrier gas flow rate or the carrier gas pressure drop for the duration of the test. Activated carbon injection rate parameters must be determined in accordance with paragraphs (b)(3)(vi) of this section.

(vi) The run average injection rate must be calculated for each run, and the average of the run average injection rates must be determined and included in the performance test report and will determine the applicable injection rate limit in accordance with § 63.1344(c)(1).

(4) The owner or operator of an affected source subject to limitations on emissions of THC shall demonstrate initial compliance with the THC limit by operating a continuous emission monitor in accordance with Performance Specification 8A of appendix B to part 60 of this chapter. The duration of the performance test shall be three

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hours, and the average THC concentration (as calculated from the one-minute averages) during the three hour performance test shall be calculated. The owner or operator of an in-line kiln/raw mill shall demonstrate initial compliance by conducting separate performance tests while the raw mill of the in-line kiln/raw mill is under normal operating conditions and while the raw mill of the in-line kiln/raw mill is not operating.

(c) Except as provided in paragraph (e) of this section, performance tests required under paragraphs (b)(1) and (b)(2) of this section shall be repeated every five years, except that the owner or operator of a kiln, in-line kiln/raw

mill or clinker cooler is not required to repeat the initial performance test of opacity for the kiln, in-line kiln/raw mill or clinker cooler.

(d) Performance tests required under paragraph (b)(3) of this section shall be repeated every 30 months.

(e) The owner or operator is required to repeat the performance tests for kilns or in-line kiln/raw mills as specified in paragraphs (b)(1) and (b)(3) of this section within 90 days of initiating any significant change in the feed or fuel from that used in the previous performance test.

(f) Table 1 of this section provides a summary of the performance test requirements of this subpart.

TABLE 1 TO § 63.1349.—SUMMARY OF PERFORMANCE TEST REQUIREMENTS

Affected source and pollutant	Performance test
New and existing kiln and in-line kiln/raw mill ^{b,c} PM	EPA Method 5. ^a
New and existing kiln and in-line kiln/raw mill ^{b,c} Opacity	COM if feasible ^{d,e} or EPA Method 9 visual opacity readings.
New and existing kiln and in-line kiln/raw mill ^{b,c,f,g} D/F	EPA Method 23 ^h .
New greenfield kiln and in-line kiln/raw mill ^c THC	THC CEM (EPA PS–8A). ⁱ
New and existing clinker cooler PM	EPA Method 5. ^a
New and existing clinker cooler opacity	COM ^{d,j} or EPA Method 9 visual opacity readings.
New and existing raw and finish mill opacity	EPA Method 9. ^{a,j}
New and existing raw material dryer and materials handling processes (raw material storage, clinker storage, finished product storage, conveyor transfer points, bagging, and bulk loading and unloading systems) opacity.	EPA Method 9. ^{a,j}
New greenfield raw material dryer THC	THC CEM (EPA PS–8A). ⁱ

^a Required initially and every 5 years thereafter.
^b Includes main exhaust and alkali bypass.
^c In-line kiln/raw mill to be tested with and without raw mill in operation.
^d Must meet COM performance specification criteria. If the fabric filter or electrostatic precipitator has multiple stacks, daily EPA Method 9 visual opacity readings may be taken instead of using a COM.
^e Opacity limit is 20 percent.
^f Alkali bypass is tested with the raw mill on.
^g Temperature and (if applicable) activated carbon injection parameters determined separately with and without the raw mill operating.
^h Required initially and every 30 months thereafter.
ⁱ EPA Performance Specification (PS)–8A of appendix B to 40 CFR part 60.
^j Opacity limit is 10 percent.

§ 63.1350 Monitoring requirements.

(a) The owner or operator of each portland cement plant shall prepare for each affected source subject to the provisions of this subpart, a written operations and maintenance plan. The plan shall be submitted to the Administrator for review and approval as part of the application for a part 70 permit and shall include the following information:

(1) Procedures for proper operation and maintenance of the affected source and air pollution control devices in order to meet the emission limits and

operating limits of §§63.1343 through 63.1348;

(2) Corrective actions to be taken when required by paragraph (e) of this section;

(3) Procedures to be used during an inspection of the components of the combustion system of each kiln and each in-line kiln raw mill located at the facility at least once per year; and

(4) Procedures to be used to periodically monitor affected sources subject to opacity standards under §§63.1346 and 63.1348. Such procedures must include the provisions of paragraphs

(a)(4)(i) through (a)(4)(iv) of this section.

(i) The owner or operator must conduct a monthly 1-minute visible emissions test of each affected source in accordance with Method 22 of Appendix A to part 60 of this chapter. The test must be conducted while the affected source is in operation.

(ii) If no visible emissions are observed in six consecutive monthly tests for any affected source, the owner or operator may decrease the frequency of testing from monthly to semi-annually for that affected source. If visible emissions are observed during any semi-annual test, the owner or operator must resume testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.

(iii) If no visible emissions are observed during the semi-annual test for any affected source, the owner or operator may decrease the frequency of testing from semi-annually to annually for that affected source. If visible emissions are observed during any annual test, the owner or operator must resume testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.

(iv) If visible emissions are observed during any Method 22 test, the owner or operator must conduct a 6-minute test of opacity in accordance with Method 9 of appendix A to part 60 of this chapter. The Method 9 test must begin within one hour of any observation of visible emissions.

(b) Failure to comply with any provision of the operations and maintenance plan developed in accordance with paragraph (a) of this section shall be a violation of the standard.

(c) The owner or operator of a kiln or in-line kiln/raw mill shall monitor opacity at each point where emissions are vented from these affected sources including alkali bypasses in accordance with paragraphs (c)(1) through (c)(3) of this section.

(1) Except as provided in paragraph (c)(2) of this section, the owner or operator shall install, calibrate, maintain, and continuously operate a continuous

opacity monitor (COM) located at the outlet of the PM control device to continuously monitor the opacity. The COM shall be installed, maintained, calibrated, and operated as required by subpart A, general provisions of this part, and according to PS-1 of appendix B to part 60 of this chapter.

(2) The owner or operator of a kiln or in-line kiln/raw mill subject to the provisions of this subpart using a fabric filter with multiple stacks or an electrostatic precipitator with multiple stacks may, in lieu of installing the continuous opacity monitoring system required by paragraph (c)(1) of this section, monitor opacity in accordance with paragraphs (c)(2)(i) through (ii) of this section. If the control device exhausts through a monovent, or if the use of a COM in accordance with the installation specifications of PS-1 of appendix B to part 60 of this chapter is not feasible, the owner or operator must monitor opacity in accordance with paragraphs (c)(2)(i) through (ii) of this section.

(i) Perform daily visual opacity observations of each stack in accordance with the procedures of Method 9 of appendix A of part 60 of this chapter. The Method 9 test shall be conducted while the affected source is operating at the highest load or capacity level reasonably expected to occur within the day. The duration of the Method 9 test shall be at least 30 minutes each day.

(ii) Use the Method 9 procedures to monitor and record the average opacity for each six-minute period during the test.

(3) To remain in compliance, the opacity must be maintained such that the 6-minute average opacity for any 6-minute block period does not exceed 20 percent. If the average opacity for any 6-minute block period exceeds 20 percent, this shall constitute a violation of the standard.

(d) The owner or operator of a clinker cooler shall monitor opacity at each point where emissions are vented from the clinker cooler in accordance with paragraphs (d)(1) through (d)(3) of this section.

(1) Except as provided in paragraph (d)(2) of this section, the owner or operator shall install, calibrate, maintain,

and continuously operate a COM located at the outlet of the clinker cooler PM control device to continuously monitor the opacity. The COM shall be installed, maintained, calibrated, and operated as required by subpart A, general provisions of this part, and according to PS-1 of appendix B to part 60 of this chapter.

(2) The owner or operator of a clinker cooler subject to the provisions of this subpart using a fabric filter with multiple stacks or an electrostatic precipitator with multiple stacks may, in lieu of installing the continuous opacity monitoring system required by paragraph (d)(1) of this section, monitor opacity in accordance with paragraphs (d)(2)(i) through (ii) of this section. If the control device exhausts through a monovent, or if the use of a COM in accordance with the installation specifications of PS-1 of appendix B to part 60 of this chapter is not feasible, the owner or operator must monitor opacity in accordance with paragraphs (d)(2)(i) through (ii) of this section.

(i) Perform daily visual opacity observations of each stack in accordance with the procedures of Method 9 of appendix A of part 60 of this chapter. The Method 9 test shall be conducted while the affected source is operating at the highest load or capacity level reasonably expected to occur within the day. The duration of the Method 9 test shall be at least 30 minutes each day.

(ii) Use the Method 9 procedures to monitor and record the average opacity for each six-minute period during the test.

(3) To remain in compliance, the opacity must be maintained such that the 6-minute average opacity for any 6-minute block period does not exceed 10 percent. If the average opacity for any 6-minute block period exceeds 10 percent, this shall constitute a violation of the standard.

(e) The owner or operator of a raw mill or finish mill shall monitor opacity by conducting daily visual emissions observations of the mill sweep and air separator PMCDs of these affected sources, in accordance with the procedures of Method 22 of appendix A of part 60 of this chapter. The Method 22 test shall be conducted while the affected source is operating at the high-

est load or capacity level reasonably expected to occur within the day. The duration of the Method 22 test shall be six minutes. If visible emissions are observed during any Method 22 visible emissions test, the owner or operator must:

(1) Initiate, within one-hour, the corrective actions specified in the site specific operating and maintenance plan developed in accordance with paragraphs (a)(1) and (a)(2) of this section; and

(2) Within 24 hours of the end of the Method 22 test in which visible emissions were observed, conduct a visual opacity test of each stack from which visible emissions were observed in accordance with Method 9 of appendix A of part 60 of this chapter. The duration of the Method 9 test shall be thirty minutes.

(f) The owner or operator of an affected source subject to a limitation on D/F emissions shall monitor D/F emissions in accordance with paragraphs (f)(1) through (f)(6) of this section.

(1) The owner or operator shall install, calibrate, maintain, and continuously operate a continuous monitor to record the temperature of the exhaust gases from the kiln, in-line kiln/raw mill and alkali bypass, if applicable, at the inlet to, or upstream of, the kiln, in-line kiln/raw mill and/or alkali bypass PM control devices.

(i) The recorder response range must include zero and 1.5 times either of the average temperatures established according to the requirements in § 63.1349(b)(3)(iv).

(ii) 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 Administrator.

(2) The owner or operator shall monitor and continuously record the temperature of the exhaust gases from the kiln, in-line kiln/raw mill and alkali bypass, if applicable, at the inlet to the kiln, in-line kiln/raw mill and/or alkali bypass PMCD.

(3) The three-hour rolling average temperature shall be calculated as the average of 180 successive one-minute average temperatures.

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(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) When the operating status of the raw mill of the in-line kiln/raw mill is changed from off to on, or from on to off the calculation of the three-hour rolling average temperature must begin anew, without considering previous recordings.

(6) The calibration of all thermocouples and other temperature sensors shall be verified at least once every three months.

(g) The owner or operator of an affected source subject to a limitation on D/F emissions that employs carbon injection as an emission control technique shall comply with the monitoring requirements of paragraphs (f)(1) through (f)(6) and (g)(1) through (g)(6) of this section to demonstrate continuous compliance with the D/F emission standard.

(1) Install, operate, calibrate and maintain a continuous monitor to record the rate of activated carbon injection. The accuracy of the rate measurement device must be ± 1 percent of the rate being measured.

(2) Verify the calibration of the device at least once every three months.

(3) The three-hour rolling average activated carbon injection rate shall be calculated as the average of 180 successive one-minute average activated carbon injection rates.

(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) When the operating status of the raw mill of the in-line kiln/raw mill is changed from off to on, or from on to off the calculation of the three-hour rolling average activated carbon injection rate must begin anew, without considering previous recordings.

(6) The owner or operator must install, operate, calibrate and maintain a

continuous monitor to record the activated carbon injection system carrier gas parameter (either the carrier gas flow rate or the carrier gas pressure drop) established during the D/F performance test in accordance with paragraphs (g)(6)(i) through (g)(6)(iii) of this section.

(i) The owner or operator shall install, calibrate, operate and maintain a device to continuously monitor and record the parameter value.

(ii) The owner or operator must calculate and record three-hour rolling averages of the parameter value.

(iii) 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 shall be added to the previous 179 values to calculate the three-hour rolling average.

(h) The owner or operator of an affected source subject to a limitation on THC emissions under this subpart shall comply with the monitoring requirements of paragraphs (h)(1) through (h)(3) of this section to demonstrate continuous compliance with the THC emission standard:

(1) The owner or operator shall install, operate and maintain a THC continuous emission monitoring system in accordance with Performance Specification 8A, of appendix B to part 60 of this chapter and comply with all of the requirements for continuous monitoring systems found in the general provisions, subpart A of this part.

(2) The owner or operator is not required to calculate hourly rolling averages in accordance with section 4.9 of Performance Specification 8A.

(3) Any thirty-day block average THC concentration in any gas discharged from a greenfield raw material dryer, the main exhaust of a greenfield kiln, or the main exhaust of a greenfield in-line kiln/raw mill, exceeding 50 ppmvd, reported as propane, corrected to seven percent oxygen, is a violation of the standard.

(i) The owner or operator of any kiln or in-line kiln/raw mill subject to a D/F emission limit under this subpart shall conduct an inspection of the components of the combustion system of

each kiln or in-line kiln raw mill at least once per year.

(j) The owner or operator of an affected source subject to a limitation on opacity under § 63.1346 or § 63.1348 shall monitor opacity in accordance with the operation and maintenance plan developed in accordance with paragraph (a) of this section.

(k) The owner or operator of an affected source subject to a particulate matter standard under § 63.1343 shall install, calibrate, maintain, and operate a particulate matter continuous emission monitoring system (PM CEMS) to measure the particulate matter discharged to the atmosphere. All requirements relating to installation, calibration, maintenance, operation or performance of the PM CEMS and implementation of the PM CEMS requirement are deferred pending further rule-making.

(l) An owner or operator may submit an application to the Administrator for approval of alternate monitoring requirements to demonstrate compliance with the emission standards of this subpart, except for emission standards for THC, subject to the provisions of paragraphs (1)(1) through (1)(6) of this section.

(1) The Administrator will not approve averaging periods other than those specified in this section, unless the owner or operator documents, using data or information, that the longer averaging period will ensure that emissions do not exceed levels achieved during the performance test over any increment of time equivalent to the time required to conduct three runs of the performance test.

(2) If the application to use an alternate monitoring requirement is approved, the owner or operator must continue to use the original monitoring requirement until approval is received to use another monitoring requirement.

(3) The owner or operator shall submit the application for approval of alternate monitoring requirements no later than the notification of performance test. The application must contain the information specified in paragraphs (1)(3)(i) through (1)(3)(iii) of this section:

(i) Data or information justifying the request, such as the technical or economic infeasibility, or the impracticality of using the required approach;

(ii) A description of the proposed alternative monitoring requirement, including the operating parameter to be monitored, the monitoring approach and technique, the averaging period for the limit, and how the limit is to be calculated; and

(iii) Data or information documenting that the alternative monitoring requirement would provide equivalent or better assurance of compliance with the relevant emission standard.

(4) The Administrator will notify the owner or operator of the approval or denial of the application within 90 calendar days after receipt of the original request, or within 60 calendar days of the receipt of any supplementary information, whichever is later. The Administrator will not approve an alternate monitoring application unless it would provide equivalent or better assurance of compliance with the relevant emission standard. Before disapproving any alternate monitoring application, the Administrator will provide:

(i) Notice of the information and findings upon which the intended disapproval is based; and

(ii) Notice of opportunity for the owner or operator to present additional supporting information before final action is taken on the application. This notice will specify how much additional time is allowed for the owner or operator to provide additional supporting information.

(5) The owner or operator is responsible for submitting any supporting information in a timely manner to enable the Administrator to consider the application prior to the performance test. Neither submittal of an application, nor the Administrator's failure to approve or disapprove the application relieves the owner or operator of the responsibility to comply with any provision of this subpart.

(6) The Administrator may decide at any time, on a case-by-case basis that additional or alternative operating

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limits, or alternative approaches to establishing operating limits, are necessary to demonstrate compliance with the emission standards of this subpart.

(m) A summary of the monitoring requirements of this subpart is given in Table 1 to this section.

TABLE 1 TO § 63.1350.—MONITORING REQUIREMENTS

Affected source/pollutant or opacity	Monitor type/operation/process	Monitoring requirements
All affected sources	Operations and maintenance plan	Prepare written plan for all affected sources and control devices.
All kilns and in-line kiln raw mills at major sources (including alkali bypass)/opacity.	Continuous opacity monitor, if applicable	Install, calibrate, maintain and operate in accordance with general provisions and with PS-1.
	Method 9 opacity test, if applicable	Daily test of at least 30-minutes, while kiln is at highest load or capacity level. Deferred.
Kilns and in-line kiln raw mills at major sources (including alkali bypass)/particulate matter.	Particulate matter continuous emission monitoring system.	Deferred.
	Combustion system inspection	Conduct annual inspection of components of combustion system.
Kilns and in-line kiln raw mills at major and area sources (including alkali bypass)/ D/F.	Continuous temperature monitoring at PMCD inlet.	Install, operate, calibrate and maintain continuous temperature monitoring and recording system; calculate three-hour rolling averages; verify temperature sensor calibration at least quarterly.
	Activated carbon injection rate monitor, if applicable.	Install, operate, calibrate and maintain continuous activated carbon injection rate monitor; calculate three-hour rolling averages; verify calibration at least quarterly; install, operate, calibrate and maintain carrier gas flow rate monitor or carrier gas pressure drop monitor; calculate three-hour rolling averages; document carbon specifications.
Kilns and in-line kiln raw mills at major and area sources (including alkali bypass)/ D/F (continued).	Total hydrocarbon continuous emission monitor.	Install, operate, and maintain THC CEM in accordance with PS-8A; calculate 30-day block average THC concentration.
New greenfield kilns and in-line kiln raw mills at major and area sources/THC.	Continuous opacity monitor, if applicable	Install, calibrate, maintain and operate in accordance with general provisions and with PS-1.
	Method 9 opacity test, if applicable	Daily test of at least 30-minutes, while kiln is at highest load or capacity level.
Clinker coolers at major sources/opacity ..	Method 22 visible emissions test	Conduct daily 6-minute Method 22 visible emissions test while mill is operating at highest load or capacity level; if visible emissions are observed, initiate corrective action within one hour and conduct 30-minute Method 9 test within 24 hours.
	Total hydrocarbon continuous emission monitor.	Install, operate, and maintain THC CEM in accordance with PS-8A; calculate 30-day block average THC concentration.
Raw mills and finish mills at major sources/opacity.	Method 22 visible emissions test	As specified in operation and maintenance plan.
	Total hydrocarbon continuous emission monitor.	Install, operate, and maintain THC CEM in accordance with PS-8A; calculate 30-day block average THC concentration.
New greenfield raw material dryers at major and area sources/THC.	Method 22 visible emissions test	As specified in operation and maintenance plan.
	Total hydrocarbon continuous emission monitor.	Install, operate, and maintain THC CEM in accordance with PS-8A; calculate 30-day block average THC concentration.
Raw material dryers; raw material, clinker, finished product storage bins; conveying system transfer points; bagging systems; and bulk loading and unloading systems at major sources/opacity.	Method 22 visible emissions test	As specified in operation and maintenance plan.
	Total hydrocarbon continuous emission monitor.	Install, operate, and maintain THC CEM in accordance with PS-8A; calculate 30-day block average THC concentration.

[64 FR 31925, June 14, 1999, as amended at 64 FR 53070, Sept. 30, 1999]

§ 63.1351 Compliance dates.

(a) The compliance date for an owner or operator of an existing affected source subject to the provisions of this subpart is June 10, 2002.

(b) The compliance date for an owner or operator of an affected source subject to the provisions of this subpart that commences new construction or reconstruction after March 24, 1998 is

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June 9, 1999 or immediately upon start-up of operations, whichever is later.

§ 63.1352 Additional test methods.

(a) Owners or operators conducting tests to determine the rates of emission of hydrogen chloride (HCl) from kilns, in-line kiln/raw mills and associated bypass stacks at portland cement manufacturing facilities, for use in applicability determinations under § 63.1340 are permitted to use Method 320 or Method 321 of appendix A of this part.

(b) Owners or operators conducting tests to determine the rates of emission of hydrogen chloride (HCl) from kilns, in-line kiln/raw mills and associated bypass stacks at portland cement manufacturing facilities, for use in applicability determinations under § 63.1340 are permitted to use Methods 26 or 26A of appendix A to part 60 of this chapter, except that the results of these tests shall not be used to establish status as an area source.

(c) Owners or operators conducting tests to determine the rates of emission of specific organic HAP from raw material dryers, kilns and in-line kiln/raw mills at portland cement manufacturing facilities, for use in applicability determinations under § 63.1340 of this subpart are permitted to use Method 320 of appendix A to this part, or Method 18 of appendix A to part 60 of this chapter.

NOTIFICATION, REPORTING AND
RECORDKEEPING

§ 63.1353 Notification requirements.

(a) The notification provisions of 40 CFR part 63, subpart A that apply and those that do not apply to owners and operators of affected sources subject to this subpart are listed in Table 1 of this subpart. If any State requires a notice that contains all of the information required in a notification listed in this section, the owner or operator may send the Administrator a copy of the notice sent to the State to satisfy the requirements of this section for that notification.

(b) Each owner or operator subject to the requirements of this subpart shall comply with the notification requirements in § 63.9 as follows:

(1) Initial notifications as required by § 63.9(b) through (d). For the purposes of this subpart, a Title V or 40 CFR part 70 permit application may be used in lieu of the initial notification required under § 63.9(b), provided the same information is contained in the permit application as required by § 63.9(b), and the State to which the permit application has been submitted has an approved operating permit program under part 70 of this chapter and has received delegation of authority from the EPA. Permit applications shall be submitted by the same due dates as those specified for the initial notification.

(2) Notification of performance tests, as required by §§ 63.7 and 63.9(e).

(3) Notification of opacity and visible emission observations required by § 63.1349 in accordance with §§ 63.6(h)(5) and 63.9(f).

(4) Notification, as required by § 63.9(g), of the date that the continuous emission monitor performance evaluation required by § 63.8(e) is scheduled to begin.

(5) Notification of compliance status, as required by § 63.9(h).

§ 63.1354 Reporting requirements.

(a) The reporting provisions of subpart A of this part that apply and those that do not apply to owners or operators of affected sources subject to this subpart are listed in Table 1 of this subpart. If any State requires a report that contains all of the information required in a report listed in this section, the owner or operator may send the Administrator a copy of the report sent to the State to satisfy the requirements of this section for that report.

(b) The owner or operator of an affected source shall comply with the reporting requirements specified in § 63.10 of the general provisions of this part 63, subpart A as follows:

(1) As required by § 63.10(d)(2), the owner or operator shall report the results of performance tests as part of the notification of compliance status.

(2) As required by § 63.10(d)(3), the owner or operator of an affected source shall report the opacity results from tests required by § 63.1349.

(3) As required by § 63.10(d)(4), the owner or operator of an affected source

who is required to submit progress reports as a condition of receiving an extension of compliance under § 63.6(i) shall submit such reports by the dates specified in the written extension of compliance.

(4) As required by § 63.10(d)(5), if actions taken by an owner or operator 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 § 63.6(e)(3), the owner or operator shall state such information in a semi-annual 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; and

(5) Any time an action taken by an owner or operator 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 owner or operator shall make an immediate report of the actions taken for that event within 2 working days, by telephone call or facsimile (FAX) transmission. The immediate report shall be followed by a letter, certified by the owner or operator or other responsible official, 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.

(6) As required by § 63.10(e)(2), the owner or operator shall submit a written report of the results of the performance evaluation for the continuous monitoring system required by § 63.8(e). The owner or operator shall submit the report simultaneously with the results of the performance test.

(7) As required by § 63.10(e)(2), the owner or operator of an affected source using a continuous opacity monitoring system to determine opacity compliance during any performance test required under § 63.7 and described in § 63.6(d)(6) shall report the results of

the continuous opacity monitoring system performance evaluation conducted under § 63.8(e).

(8) As required by § 63.10(e)(3), the owner or operator of an affected source equipped with a continuous emission monitor shall submit an excess emissions and continuous monitoring system performance report for any event when the continuous monitoring system data indicate the source is not in compliance with the applicable emission limitation or operating parameter limit.

(9) The owner or operator shall submit a summary report semiannually which contains the information specified in § 63.10(e)(3)(vi). In addition, the summary report shall include:

(i) All exceedences of maximum control device inlet gas temperature limits specified in § 63.1344(a) and (b);

(ii) All failures to calibrate thermocouples and other temperature sensors as required under § 63.1350(f)(7) of this subpart; and

(iii) All failures to maintain the activated carbon injection rate, and the activated carbon injection carrier gas flow rate or pressure drop, as applicable, as required under § 63.1344(c).

(iv) The results of any combustion system component inspections conducted within the reporting period as required under § 63.1350(i).

(v) All failures to comply with any provision of the operation and maintenance plan developed in accordance with § 63.1350(a).

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

§ 63.1355 Recordkeeping requirements.

(a) The owner or operator shall maintain files of all information (including all reports and notifications) required by this section recorded in a form suitable and readily available for inspection and review as required by § 63.10(b)(1). The files shall be retained for at least five years following the

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date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent two years of data shall be retained on site. The remaining three years of data may be retained off site. The files may be maintained on microfilm, on a computer, on floppy disks, on magnetic tape, or on microfiche.

(b) The owner or operator shall maintain records for each affected source as required by § 63.10(b)(2) and (b)(3) of this part; and

(1) All documentation supporting initial notifications and notifications of compliance status under § 63.9;

(2) All records of applicability determination, including supporting analyses; and

(3) If the owner or operator has been granted a waiver under § 63.8(f)(6), any information demonstrating whether a source is meeting the requirements for a waiver of recordkeeping or reporting requirements.

(c) In addition to the recordkeeping requirements in paragraph (b) of this section, the owner or operator of an affected source equipped with a continuous monitoring system shall maintain all records required by § 63.10(c).

OTHER

§ 63.1356 Exemption from new source performance standards.

(a) Except as provided in paragraphs (a)(1) and (a)(2) of this section, any affected source subject to the provisions of this subpart is exempted from any otherwise applicable new source performance standard contained in 40 CFR part 60, subpart F.

(1) Kilns and in-line kiln/raw mills, as applicable under 40 CFR 60.60(b), located at area sources are subject to PM and opacity limits and associated reporting and recordkeeping, under 40 CFR part 60, subpart F.

(2) Greenfield raw material dryers, as applicable under 40 CFR 60.60(b), located at area sources are subject to opacity limits and associated reporting and recordkeeping under 40 CFR part 60, subpart F.

§ 63.1357 Temporary, conditioned exemption from particulate matter and opacity standards.

(a) Subject to the limitations of paragraphs (b) through (f) of this section, an owner or operator conducting PM CEMS correlation tests (that is, correlation with manual stack methods) is exempt from:

(1) Any particulate matter and opacity standards of part 60 or part 63 of this chapter that are applicable to cement kilns and in-line kiln/raw mills.

(2) Any permit or other emissions or operating parameter or other limitation on workplace practices that are applicable to cement kilns and in-line kiln raw mills to ensure compliance with any particulate matter and opacity standards of this part or part 60 of this chapter.

(b) The owner or operator must develop a PM CEMS correlation test plan. The plan must be submitted to the Administrator for approval at least 90 days before the correlation test is scheduled to be conducted. The plan must include:

(1) The number of test conditions and the number of runs for each test condition;

(2) The target particulate matter emission level for each test condition;

(3) How the operation of the affected source will be modified to attain the desired particulate matter emission rate; and

(4) The anticipated normal particulate matter emission level.

(c) The Administrator will review and approve or disapprove the correlation test plan in accordance with § 63.7(c)(3)(i) and (iii). If the Administrator fails to approve or disapprove the correlation test plan within the time period specified in § 63.7(c)(3)(iii), the plan shall be considered approved, unless the Administrator has requested additional information.

(d) The stack sampling team must be on-site and prepared to perform correlation testing no later than 24 hours after operations are modified to attain the desired particulate matter emissions concentrations, unless the correlation test plan documents that a longer period is appropriate.

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(e) The particulate matter and opacity standards and associated operating limits and conditions will not be waived for more than 96 hours, in the aggregate, for a correlation test, including all runs and conditions.

(f) The owner or operator must return the affected source to operating conditions indicative of compliance with the applicable particulate matter and opacity standards as soon as possible after correlation testing is completed.

§ 63.1358 Delegation of authority.

(a) In delegating implementation and enforcement authority to a State under subpart E of this part, the authorities contained in paragraph (b) of this section shall be retained by the Administrator and not transferred to a State.

(b) Authority which will not be delegated to States:

(1) Approval of alternative non-opacity emission standards under § 63.6(g).

(2) Approval of alternative opacity standards under § 63.6(h)(9).

(3) Approval of major changes to test methods under §§ 63.7(e)(2)(ii) and 63.7(f). A major change to a test method is a modification to a federally enforceable test method that uses unproven technology or procedures or is an entirely new method (sometimes necessary when the required test method is unsuitable).

(4) Approval of major changes to monitoring under § 63.8(f). A major change to monitoring is a modification to federally enforceable monitoring that uses unproven technology or procedures, is an entirely new method (sometimes necessary when the required monitoring is unsuitable), or is a change in the averaging period.

(5) Waiver of recordkeeping under § 63.10(f).

§ 63.1359 [Reserved]

TABLE 1 TO SUBPART LLL.—APPLICABILITY OF GENERAL PROVISIONS

General Provisions 40 CFR Citation	Requirement	Applies to Subpart LLL	Comment
63.1(a)(1) through (4)	Applicability	Yes.	
63.1(a)(5)		No	[Reserved].
63.1(a)(6) through (a)(8)	Applicability	Yes.	
63.1(a)(9)		No	[Reserved].
63.1(a)(10) through (14)	Applicability	Yes.	
63.1(b)(1)	Initial Applicability Determination	No	§ 63.1340 specifies applicability.
63.1(b)(2) and (3)	Initial Applicability Determination	Yes.	
63.1(c)(1)	Applicability After Standard Established.	Yes.	
63.1(c)(2)	Permit Requirements	Yes	Area sources must obtain Title V permits.
63.1(c)(3)		No	[Reserved].
63.1(c)(4) and (5)	Extensions, Notifications	Yes.	
63.1(d)		No	[Reserved].
63.1(e)	Applicability of Permit Program	Yes.	
63.2	Definitions	Yes.	Additional definitions in § 63.1341.
63.3(a) through (c)	Units and Abbreviations	Yes.	
63.4(a)(1) through (a)(3)	Prohibited Activities	Yes.	
63.4(a)(4)		No	[Reserved].
63.4(a)(5)	Compliance date	Yes.	
63.4(b) and (c)	Circumvention, Severability	Yes.	
63.5(a)(1) and (2)	Construction/Reconstruction	Yes.	
63.5(b)(1)	Compliance Dates	Yes.	
63.5(b)(2)		No	[Reserved].
63.5(b)(3) through (6)	Construction Approval, Applicability.	Yes.	
63.5(c)		No	[Reserved].
63.5(d)(1) through (4)	Approval of Construction/Reconstruction.	Yes.	
63.5(e)	Approval of Construction/Reconstruction.	Yes.	
63.5(f)(1) and (2)	Approval of Construction/Reconstruction.	Yes.	
63.6(a)	Compliance for Standards and Maintenance.	Yes.	
63.6(b)(1) through (5)	Compliance Dates	Yes.	
63.6(b)(6)		No	[Reserved].

TABLE 1 TO SUBPART LLL.—APPLICABILITY OF GENERAL PROVISIONS—Continued

General Provisions 40 CFR Citation	Requirement	Applies to Subpart LLL	Comment
63.6(b)(7)	Compliance Dates	Yes.	
63.6(c)(1) and (2)	Compliance Dates	Yes.	
63.6(c)(3) and (c)(4)	Compliance Dates	No	[Reserved].
63.6(c)(5)	Compliance Dates	Yes.	
63.6(d)	Compliance Dates	No	[Reserved].
63.6(e)(1) and (e)(2)	Operation & Maintenance	Yes.	
63.6(e)(3)	Startup, Shutdown Malfunction Plan.	Yes.	
63.6(f)(1) through (3)	Compliance with Emission Standards.	Yes.	
63.6(g)(1) through (g)(3)	Alternative Standard	Yes.	
63.6(h)(1) and (2)	Opacity/VE Standards	Yes.	
63.6(h)(3)	Opacity/VE Standards	No	Reserved
63.6(h)(4) and (h)(5)(i)	Opacity/VE Standards	Yes.	
63.6(h)(5)(ii) through (iv)	Opacity/VE Standards	No	Test duration specified in Subpart LLL.
63.6(h)(6)	Opacity/VE Standards	Yes.	
63.6(i)(1) through (i)(14)	Extension of Compliance	Yes.	
63.6(i)(15)	Extension of Compliance	No	[Reserved].
63.6(i)(16)	Extension of Compliance	Yes.	
63.6(j)	Exemption from Compliance	Yes.	
63.7(a)(1) through (a)(3)	Performance Testing Requirements.	Yes	§ 63.1349 has specific requirements.
63.7(b)	Notification	Yes.	
63.7(c)	Quality Assurance/Test Plan	Yes.	
63.7(d)	Testing Facilities	Yes.	
63.7(e)(1) through (4)	Conduct of Tests	Yes.	
63.7(f)	Alternative Test Method	Yes.	
63.7(g)	Data Analysis	Yes.	
63.7(h)	Waiver of Tests	Yes.	
63.8(a)(1)	Monitoring Requirements	Yes.	
63.8(a)(2)	Monitoring	No	§ 63.1350 includes CEM requirements.
63.8(a)(3)	Monitoring	No	[Reserved].
63.8(a)(4)	Monitoring	No	Flares not applicable.
63.8(b)(1) through (3)	Conduct of Monitoring	Yes.	
63.8(c)(1) through (8)	CMS Operation/ Maintenance	Yes.	Performance specification supersedes requirements for THC CEM. Temperature and activated carbon injection monitoring data reduction requirements given in subpart LLL.
63.8(d)	Quality Control	Yes.	
63.8(e)	Performance Evaluation for CMS	Yes	Performance specification supersedes requirements for THC CEM.
63.8(f)(1) through (f)(5)	Alternative Monitoring Method	Yes	Additional requirements in § 1350(l).
63.8(f)(6)	Alternative to RATA Test	Yes.	
63.8(g)	Data Reduction	Yes.	
63.9(a)	Notification Requirements	Yes.	
63.9(b)(1) through (5)	Initial Notifications	Yes.	
63.9(c)	Request for Compliance Extension.	Yes.	
63.9(d)	New Source Notification for Special Compliance Requirements.	Yes.	
63.9(e)	Notification of Performance Test ..	Yes.	
63.9(f)	Notification of VE/Opacity Test	Yes	Notification not required for VE/opacity test under § 63.1350(e) and (j).
63.9(g)	Additional CMS Notifications	Yes.	
63.9(h)(1) through (h)(3)	Notification of Compliance Status	Yes.	
63.9(h)(4)	Notification of Compliance Status	No	[Reserved].
63.9(h)(5) and (h)(6)	Notification of Compliance Status	Yes.	
63.9(i)	Adjustment of Deadlines	Yes.	
63.9(j)	Change in Previous Information ...	Yes.	
63.10(a)	Recordkeeping/Reporting	Yes	Yes.
63.10(b)	General Requirements	Yes.	
63.10(c)(1)	Additional CMS Recordkeeping ...	Yes	PS-8A applies.
63.10(c)(2) through (c)(4)	Additional CMS Recordkeeping ...	No	Reserved]
63.10(c)(5) through (c)(8)	Additional CMS Recordkeeping ...	Yes	PS-8A applies instead of requirements for THC CEM.

TABLE 1 TO SUBPART LLL.—APPLICABILITY OF GENERAL PROVISIONS—Continued

General Provisions 40 CFR Citation	Requirement	Applies to Subpart LLL	Comment	
63.10(c)(9)	Additional CMS Recordkeeping ...	No	[Reserved] PS-8A applies instead of requirements for THC CEM.	
63.10(c)(10) through (15)		Yes		
63.10(d)(1)	General Reporting Requirements	Yes.		
63.10(d)(2)		Performance Test Results		Yes.
63.10(d)(3)		Opacity or VE Observations		Yes.
63.10(d)(4)		Progress Reports		Yes.
63.10(d)(5)		Startup, Shutdown, Malfunction Reports.		Yes.
63.10(e)(1) and (e)(2)	Additional CMS Reports	Yes.	Exceedences are defined in subpart LLL.	
63.10(e)(3)		Excess Emissions and CMS Performance Reports.		Yes
63.10(f)	Waiver for Recordkeeping/ Reporting.	Yes.		
63.11(a) and (b)	Control Device Requirements	No	Flares not applicable.	
63.12(a)–(c)	State Authority and Delegations ...	Yes.		
63.13(a)–(c)	State/Regional Addresses	Yes.		
63.14(a) and (b)	Incorporation by Reference	Yes.		
63.15(a) and (b)	Availability of Information	Yes.		

Subpart MMM—National Emission Standards for Hazardous Air Pollutants for Pesticide Active Ingredient Production

SOURCE: 64 FR 33589, June 23, 1999, unless otherwise noted.

§ 63.1360 Applicability.

(a) *Definition of affected source.* The affected source subject to this subpart is the facility-wide collection of pesticide active ingredient manufacturing process units (PAI process units) that process, use, or produce HAP, and are located at a plant site that is a major source, as defined in section 112(a) of the CAA. An affected source also includes waste management units, heat exchange systems, and cooling towers that are associated with the PAI process units. Exemptions from an affected source are specified in paragraph (d) of this section.

(b) *New source applicability.* A new affected source subject to this subpart and to which the requirements for new sources apply is defined according to the criteria in either paragraph (b)(1) or (2) of this section.

(1) An affected source for which construction or reconstruction commenced after November 10, 1997.

(2) Any single PAI process unit that:

(i) Is not part of a process unit group; and

(ii) For which construction, as defined in § 63.1361, commenced after November 10, 1997; and

(iii) Has the potential to emit 10 tons/yr of any one HAP or 25 tons/yr of combined HAP.

(c) *General provisions.* Table 1 of this subpart specifies the provisions of subpart A of this part that apply to an owner or operator of an affected source subject to this subpart, and clarifies specific provisions in subpart A of this part as necessary for this subpart.

(d) *Exemptions from the requirements of this subpart.* The provisions of this subpart do not apply to:

(1) Research and development facilities;

(2) PAI process units that are subject to subpart F of this part;

(3) Production of ethylene; and

(4) The following emission points listed:

(i) Storm water from segregated sewers;

(ii) Water from fire-fighting and deluge systems, including testing of such systems;

(iii) Spills;

(iv) Water from safety showers;

(v) Noncontact steam boiler blowdown and condensate;

(vi) Laundry water;

(vii) Vessels storing material that contains no organic HAP or contains organic HAP as impurities only; and

(viii) Equipment, as defined in § 63.1363, that is intended to operate in