217/785-1705

CONSTRUCTION PERMIT/PSD APPROVAL -- REVISED
NESHAP/NSPS SOURCE

PERMITTEE

Universal Cement
Attn: Martin Ozinga IV
2222 South Lumber Street
Chicago, Illinois 60616

Application No.: 08120011 I.D. No.: 031600GVX
Applicant's Designation: PORTCEMENT
Subject: Portland Cement Plant
Initial Date Issued: December 20, 2011
Date Application for Extension Received: February 7, 2013
Date Extension Issued: June 19, 2013
Location: South Torrence Avenue and East 117th Street, Chicago

Permit is hereby granted to the above-designated Permittee to CONSTRUCT emission unit(s) and/or air pollution control equipment consisting of a Portland cement manufacturing plant, including a preheater/precalciner kiln, with in-line raw mill, a clinker cooler, a finish mill, and storage and handling of materials, as described in the above-referenced application. This permit is subject to standard conditions attached hereto and the following special conditions:

In conjunction with this permit, approval is given with respect to the federal regulations for Prevention of Significant Deterioration of Air Quality (PSD) for the plant, as described in the application, in that the Illinois Environmental Protection Agency (Illinois EPA) finds that the application fulfills all applicable requirements of 40 CFR 52.21. This approval is issued pursuant to the federal Clean Air Act, the federal regulations promulgated thereunder at 40 CFR 52.21 for Prevention of Significant Deterioration of Air Quality (PSD), and a Delegation of Authority agreement between the United States Environmental Protection Agency (USEPA) and the Illinois EPA for the administration of the PSD Program. This approval becomes effective in accordance with the provisions of 40 CFR 124.15 and may be appealed in accordance with provisions of 40 CFR 124.19. This approval is based upon the findings that follow. This approval is subject to the following conditions. This approval is also subject to the general requirement that the plant be developed and operated consistent with the specifications and data included in the application and any significant departure from the terms expressed in the application, if not otherwise authorized by this permit, must receive prior written authorization from the Illinois EPA.

If you have any questions on this permit, please call Bob Smet at 217/785-1705.

Robert W. Bernoteit Date Signed: _____
Acting Manager, Permit Section
Division of Air Pollution Control

RWB:RPS:jws

cc: Region 1
USEPA Region V

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FINDINGS for REVISED PERMIT

1. Universal Cement has requested an extension of its construction permit/PSD approval for this cement manufacturing plant issued on December 20, 2011.

2. Pursuant to 40 CFR 52.21(r)(2), a PSD permit becomes invalid if construction is not commenced within 18 months after a permit becomes effective. This 18-month period may be extended by the permitting authority upon a satisfactory showing that an extension is justified. The Illinois EPA has determined that the extension requested by Universal Cement is justified. The proposed plant is a large and complex project. There also are no other proposed projects in the area competing for the air quality resource.

FINDINGS FOR ORIGINAL PERMIT

1. Universal Cement, Inc., has requested a construction permit for a new Portland Cement manufacturing plant with a single preheater/precalciner kiln system.

2. The plant will be located in Cook County. The site is in an area that is currently designated nonattainment for ozone and particulate matter$_{2.5}$ ($PM_{2.5}$) and attainment for all other criteria pollutants.

3a. The proposed plant is a major new source for emissions of nitrogen oxides (NO_x) and sulfur dioxide (SO_2) under Illinois' rules for Major Stationary Sources Construction and Modification (MSSCAM), 35 IAC Part 203. This is because the plant would be located in an area that is designated nonattainment for $PM_{2.5}$ and ozone and would have potential annual emissions of NO_x and SO_2 that are in excess of 100 tons.

b. The plant will be a major new source under the PSD rules. The proposed plant will trigger the requirements of PSD for NO_x, SO_2, particulate matter, as PM and PM_{10}, carbon monoxide (CO) and carbon dioxide equivalents (CO_2e) because the potential emissions of these pollutants will be in excess of 100 tons per year for these criteria pollutants and 100,000 tons per year for CO_2e.

4. After reviewing the materials submitted by Universal Cement, the Illinois EPA has determined that the proposed plant complies with all applicable Illinois Pollution Control Board Air Pollution Regulations, including Major Stationary Sources Construction and Modification (MSSCAM), 35 IAC Part 203; the federal rules for Prevention of Significant Deterioration of Air Quality Regulations (PSD), 40 CFR 52.21; applicable federal New Source Performance Standards (NSPS), 40 CFR 60; and applicable National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR 63. (The determinations of Best Available Control Technology (BACT) and Lowest Achievable Emission Rate (LAER) made by the Illinois EPA for the proposed plant are made in the Control Technology Determinations in the permit conditions for specific emission units.)

5. As a major project for emissions of NO_x and SO_2 under MSSCAM, Universal Cement must obtain NO_x and SO_2 emission offsets for its permitted emissions of NO_x and SO_2. (Refer to Condition 1.4-2(a).)

6a. The air quality analysis submitted by Universal Cement and reviewed by the Illinois EPA shows that the proposed project will not cause or contribute to violations of the ambient air quality standards or applicable PSD increments for SO_2, NO_2, PM_{10} and CO.

b. Universal Cement has also submitted the additional impact analyses required under the PSD rules, including an analysis of growth that will occur due to the project, an analysis of soil and vegetation air pollution impacts from the project, and visibility impairment analysis. These analyses adequately address these potential impacts from the project.

7. The analysis of alternatives to the project submitted by Universal Cement shows that the benefits of the proposed plant outweigh its impacts, as required by 35 IAC 203.306.

8. A copy of the application, the project summary prepared by the Illinois EPA and a draft of this construction permit was placed in a nearby public repository, the public was given notice and an opportunity to examine this material and to participate in a public hearing and to submit comments on these matters.

SECTION 1: SOURCE-WIDE PERMIT CONDITIONS

1.1 Effect of Permit

a. This permit does not relieve the Permittee of the responsibility to comply with all local, state, and federal regulations that are part of the applicable Illinois State Implementation Plan, as well as all other applicable federal, state and local requirements.

b. In particular, this permit does not relieve the Permittee from the responsibility to carry out practices during the construction of the plant, such as application of water or dust suppressant sprays to unpaved traffic areas, as necessary to minimize fugitive dust and prevent an air pollution nuisance from fugitive dust, as prohibited by 35 IAC 201.141. This permit also does not relieve the Permittee of the responsibility to comply with all applicable requirements of 35 IAC Part 848, Management of Used and Waste Tires.

1.2 Emission Offsets and Fencing of Adjacent Industrial Property

a. Pursuant to 35 IAC 203.302:

i. A. The Permittee shall provide and maintain 1003.2 tons of NO_x emission offsets generated by other sources in the Greater Chicago ozone and $PM_{2.5}$ nonattainment areas (i.e., offsets that are 1.15 times greater than the permitted NO_x emissions of the plant).

B. The Permittee shall provide and maintain 232.0 tons of SO_2 emission offsets generated by other sources in the Greater Chicago $PM_{2.5}$ nonattainment area (i.e., offsets that are such that the total is greater than the permitted SO_2 emissions of the plant).

ii. The NO_x and SO_2 emission offsets are provided by permanent emission reductions that occurred at the following source, as identified below. These offsets have been relied upon by the Illinois EPA to issue this permit and cannot be used as emission reduction credits for other purposes. The reductions at the source identified below have been made enforceable by the reduction in netted allowable emissions of the air pollution control permits for the units generating the permanent emission reductions.

Corn Products International, Bedford Park
Reduction in NO_x Emissions 1004 tons/year NO_x
Reduction in SO_2 Emissions 232 tons/year SO_2

iii. If the Permittee proposes to rely upon emission offsets from another source, the Permittee shall apply for and obtain a revision to this permit prior to relying on such emission offsets, which application shall be accompanied

by detailed documentation for the nature and amount of those alternative emission offsets.

iv. The acquisition of emission offsets shall be completed prior to commencement of construction of the plant.

b. i. Prior to commencing construction of the plant, the Permittee shall have completed an agreement with Cargill Salt for fencing of its property southwest of the plant to prevent public access by foot to this property, consistent with the approach to ambient air quality taken in the application. A copy of this agreement or relevant parts of this agreement shall be submitted to the Illinois EPA.

ii. Prior to initial operation of the kiln system, the Permittee shall complete the fencing of its property and either the Permittee or Cargill Salt shall complete the fencing for the Cargill Salt property to prevent public access to those properties, consistent with the approach to ambient air quality taken in the application.

iii. The permanent presence and maintenance of this fencing as a barrier to access by the general public is an enforceable condition of this permit.

1.3 Validity of Permit and Commencement of Construction

a. This revised permit shall become invalid if construction is not commenced within 18 months after this revised permit becomes effective, if construction of the kiln is discontinued for a period of 18 months or more, or if construction of the kiln is not completed within a reasonable period of time, pursuant to 40 CFR 52.21(r)(2). Illinois EPA may extend the 18-month period upon a satisfactory showing that an extension is justified. This condition supersedes Standard Condition 1. (See Attachment 3)

b. For purposes of the above provisions, the definitions of “construction” and “commence” at 40 CFR 52.21 (b) (8) and (9) shall apply, which requires that a source must enter into a binding agreement for on-site construction or begin actual on-site construction. (See also the definition of “begin actual construction,” 40 CFR 52.21 (b)(11).)

1.4-1 State Emission Standards of General Applicability

a. The Portland cement processes at the plant, including the kiln system, clinker cooler, raw material handling and processing, and fuel handling and processing, are subject to 35 IAC 212.421, which limits the opacity of their emissions of smoke or other particulate matter to no more than 10 percent.

Note: This standard is more stringent than the general standard for opacity, 35 IAC 212.123(a), which provides that the emission

of smoke or other particulate matter from emission units at the plant shall not have an opacity greater than 30 percent, except as allowed by 35 IAC 212.124, compliance with this standard shall be determined by 6-minute averages of opacity in accordance with USEPA Reference Method 9.

b. With respect to emissions of fugitive particulate matter, the plant shall comply with 35 IAC 212.301, which provides that emissions of fugitive particulate matter shall not be visible from any process, including any material handling or storage activity, when looking generally toward the zenith at a point beyond the property line of the source, except when the wind speed exceeds 25 miles per hour, as provided by 35 IAC 212.314.

c. Pursuant to 35 IAC 212.313, for any particulate matter collection equipment at the plant operated pursuant to 35 IAC 212.307 through 212.310 and 212.312, (i.e., control of emissions from handling of material collected by pollution control equipment and control of emissions from crushers, grinding mills, screens, conveyor systems, storage bins, and fine-product truck and railcar loading operations) emissions from such equipment shall not exceed 0.03 gr/dscf.

d. Pursuant to 35 IAC 212.307, all unloading and transporting operations of materials collected by pollution control equipment shall be enclosed or shall utilize spraying, pelletizing, screw conveying or other equivalent methods.

1.4-2 State Requirements for Fugitive Dust

a. Operating Program for Fugitive Dust

Pursuant to 35 IAC 212.309, any emission unit at the source described in 35 IAC 212.304 through 212.308 and 212.316, including all normal traffic pattern roads and parking facilities at the plant, grinding mills, conveyors, storage bins, and cement truck and rail loading operations, shall be operated under the provisions of an Operating Program, consistent with the requirements set forth in 35 IAC 212.310 and 212.312, and prepared by the Permittee and submitted to the Illinois EPA for review. (See also Condition 2.6.4(a).) Such Operating Program shall be designed to significantly reduce fugitive particulate matter emissions. For this purpose:

i. For emission units at the plant for which an Operating Program is required, an initial Operating Program shall be submitted to the Illinois EPA prior to initial startup of the units, in accordance with 35 IAC 212.309(a).

ii. For those emission units at the plant for which an Operating Program is required and an Operation and Maintenance Plan is also required by 40 CFR 63.1347 in the National Emission Standards for Hazardous Air Pollutants for the Portland Cement Manufacturing Industry, 40 CFR 63

Subpart LLL (Portland Cement NESHAP), the Operating Program shall be combined with this Operation and Maintenance Plan for the units, when this plan is developed. Thereafter, for such emission units at the plant, failure to operate these units in accordance with the relevant provisions of the Operation and Maintenance Plan that address operation of such emission units shall also be a violation of 35 IAC 212.309(a).

b. PM_{10} Contingency Plan

The Permittee shall comply with the applicable requirements of 35 IAC Part 212 Subpart U, Additional Control Measures, when the criteria of 35 IAC 212.700 are met, i.e., the plant's actual emissions of PM_{10} (filterable only) are 15 tons per year or more, as either reported in the Annual Emission Report for the plant submitted by the Permittee or as described in the application for operating permit for the source. In particular, when the criteria of 35 IAC 212.700 are met by the source:

i. In accordance with 35 IAC 212.701 within 90 days after the date that the source becomes subject to the requirements of 35 IAC Part 212 Subpart U, the Permittee shall prepare and submit to the Illinois EPA a Contingency Measure Plan for reductions in the PM_{10} emissions of the source as specified by 35 IAC 212.703, which plan shall become federally enforceable when approved by the Illinois EPA.

ii. As provided by 35 IAC 212.701, the Permittee may, consistent with the requirements of 35 IAC Part 212, Subpart U and applicable permitting requirements, propose revisions to its Contingency Measure Plan by submittal of a revised plan to the Illinois EPA for review and approval. If the Illinois EPA disapproves the initial submittal of a plan or the Permittee fails to revise a plan so that it is approvable, the Illinois EPA shall so notify the Permittee in writing and the Permittee may treat such notice as a permit denial (i.e., the Permittee may appeal the decision of the Illinois EPA disapproving the Contingency Measure Plan to the Pollution Control Board, as a final decision of the Illinois EPA).

iii. In accordance with 35 IAC 212.704 or 212.705, the Permittee shall implement relevant contingency measures for the source as set forth in its plan following a finding by the Administrator of USEPA of a failure to attain the National Ambient Air Quality Standard (NAAQS) for PM_{10} or notification by the Illinois EPA that there has been an exceedance of the NAAQS for PM_{10}.

1.4-3 Requirements for Allotment Trading Units

a. This plant is considered a "new participating source" for purposes of the Emissions Reduction Market System (ERMS), 35 IAC

Part 205. Pursuant to 35 IAC 205.150(d)(2) and 35 IAC 205.720, as of December 31 of each year, the Permittee shall hold Allotment Trading Units (ATUs) in its account in an amount not less than the ATU equivalent of its VOM emissions during the preceding seasonal allotment period (May 1 - September 30).

1.5 Federal Emission Standards

In the event that USEPA revises provisions of the National Emission Standards for Hazardous Air Pollutants for the Portland Cement Manufacturing Industry, 40 CFR 63 Subpart LLL, (Portland Cement NESHAP) or the New Source Performance Standards for Portland Cement Plants, 40 CFR 60 Subpart F (Portland Cement NSPS) and relevant provisions of this permit no longer accurately reflect regulatory requirements, the actual regulatory requirements of this NESHAP and this NSPS shall apply.

Note: The USEPA is currently engaged in reconsideration of certain aspects of these regulations. (See 76 FR 28318 (May 17, 2011).)

1.6 Nonapplicability Provisions

a. Pursuant to 40 CFR 60.62(d), if an emission unit at the plant that is subject to the Portland Cement NSPS is subject to a different emission limit or requirement for the same pollutant under another regulation in Title 40 of the Code of Federal Regulations, the unit must comply with the most stringent emission limit or requirement and is not subject to the less stringent requirement.

b. The NSPS for Nonmetallic Mineral Processing Plants, 40 CFR 60, Subpart OOO, do not apply to emissions units at the plant, pursuant to 40 CFR 60.670(b). This is because facilities at the plant that would otherwise be subject to 40 CFR 60 Subpart OOO are subject to the provisions of the Portland Cement NSPS.

c. Emission units at the plant that are Portland cement manufacturing process emission sources, as defined by 35 IAC 211.4930, are not subject to 35 IAC 212.324 pursuant to 35 IAC 212.324(a)(3). This is because these emission sources are subject to 35 IAC 212.421.

d. This permit is issued based on this plant not being a major source for emissions of hazardous air pollutants (HAPs). For this purpose, emissions of each individual HAP, including hydrogen chloride (HCl), shall not exceed 9.5 tons per year. Total emissions of HAPs shall not exceed 24.0 tons per year.

1.7 Ancillary Equipment, Including Diesel Engines

a. Ancillary equipment, including engines, shall be operated in accordance with good air pollution control practices to minimize emissions.

b. The New Source Performance Standard for Stationary Compression Ignition Internal Combustion Engines, 40 CFR 60, Subpart IIII and related provisions of 40 CFR 60, Subpart A, General Provisions, shall apply to any new engine(s) installed.

c. Engines shall only be fired on ultra low sulfur diesel.

d. i. Engines shall be used as emergency engines, as defined at 35 IAC 211.1920.

ii. The power output of each engine shall be no more than 1,500 horsepower.

iii. Operation of each engine shall not exceed 500 hours per year; provided, however, that the Illinois EPA may authorize temporary operation of engines in excess of 500 hours per year to address extraordinary circumstances that require operation of the engines, by issuance of a separate State construction permit addressing such circumstances.

e. For purpose of this permit, natural gas means “natural gas” as defined by 40 CFR 60.41b, with a total sulfur content of no more than 20.0 grains per 100 scf.

Note: These requirements constitute the determination of Lowest Achievable Emission Rate (LAER) and Best Available Control Technology (BACT) for the engines, as required under the MSSCAM and PSD rules.

1.8 Compliance with Emission Standards and Emission Limits

a. The emission limits set by this permit, including BACT and LAER limits and other permit limits for emissions, apply at all times. For example, the BACT and LAER limits for the kiln and clinker cooler in Condition 2.1.2(b) that apply on a rolling average of 30 operating days address all operation of the kiln, including periods of startup, shutdown and malfunction.

b. i. Unless otherwise provided by applicable rules, emission standards for particulate matter referenced in the conditions of this permit address only filterable particulate, as would be measured by USEPA Method 5 or other appropriate USEPA Test Methods.

ii. Unless otherwise specified in a particular condition, emissions limits for particulate matter set by this permit address both filterable and condensable particulate.

c. Unless otherwise specified in a particular provision of this permit, compliance with annual emission limits established by this permit shall be determined from a running total of 12 months of data, i.e., from the sum of the data for the current month plus the preceding 11 months (12 month total).

1.9 Good Air Pollution Control Practices

The Permittee shall operate and maintain the emission units at this plant, including associated air pollution control equipment, in a manner consistent with good air pollution control practices, as follows:

a. At all times, including periods of startup, shutdown, malfunction or breakdown, operate as practicable to minimize emissions.

b. Conduct routine inspections and perform appropriate maintenance and repairs to facilitate proper functioning of equipment and minimize or prevent malfunctions and breakdowns.

c. Install, calibrate and maintain required monitoring devices and instrumentation in accordance with good monitoring practices, following the manufacturer’s recommended operating and maintenance procedures or such other procedures as otherwise necessary to assure reliable operation of such devices.

1.10-1 Records for Required Monitoring Systems and Instrumentation

a. The Permittee shall keep records of the data measured by required monitoring systems and instrumentation. Unless otherwise provided by the applicable regulation or in a particular condition of this permit, the following requirements shall apply to such recordkeeping:

i. For required monitoring systems, data shall be automatically recorded by a central data system, dedicated data logging system, chart recorder or other data recording device. If an electronic data logging system is used, the recorded data shall be no less frequent than the hourly average value of the particular parameter for each hour. During periods when the automatic recording device is out of service, data shall be recorded at least once per shift for periods when the associated emission unit(s) are in service.

ii. For required instrumentation, the measured data shall be recorded manually at least once per day, unless otherwise specified, with data and time both recorded, for periods when the associated emission unit(s) are in service, provided however that if data from an instrument is recorded automatically, the above provisions for recording of data from monitoring systems shall apply.

b. In addition to keeping records of the data collected by required monitoring systems and instrumentation, the Permittee shall also keep records of the calibration, maintenance, repair and replacement of these devices.

1.10-2 Records of Opacity Observations

The Permittee shall keep records for all opacity measurements made in accordance with USEPA Method 9 for emission units at the plant that it conducts or that are conducted on its behest by individuals who are qualified to make such observations. For each occasion on which such measurements are made, these records shall include the formal report for the measurements if conducted pursuant to this permit or a request from the Illinois EPA, or otherwise the identity of the observer, a description of the measurements that were made, the operating condition of the affected operations, the observed opacity, and copies of the raw data for the measurements.

1.10-3 Records of HAP Emissions

The Permittee shall keep the following records for HAP emissions from the plant, with supporting data and calculations:

a. Records of emissions of HCl, lead, mercury and dioxin/furan.

b. Records of emissions of other individual HAPs for which reporting of emissions is required under the USEPA's Toxics Release Inventory Program (40 CFR Part 372).

c. Records of the total HAP emissions.

1.10-4 General Requirements for Retention and Availability of Records

a. All records, including written procedures and logs, required by this permit shall be kept at a readily accessible location at the plant and be available for inspection and copying by the Illinois EPA and USEPA and shall be retained for at least five years.

b. Upon written request by the Illinois EPA for copies of records or reports required to be kept by this permit, the Permittee shall promptly submit a copy of such material to the Illinois EPA. For this purpose, material shall be submitted to the Illinois EPA within 10 days unless additional time is provided by the Illinois EPA or the Permittee believes that the volume and nature of requested material would make this overly burdensome, in which case, the Permittee shall respond within 10 days with explanation and a schedule for submittal of the requested material, which shall provide for submittal of requested material as soon as practical.

1.11-1 General Reporting Requirements of the NESHAP and NSPS

a. i. For emission units that are subject to NESHAP, 40 CFR Part 63, the Permittee shall fulfill applicable notification requirements of the NESHAP, 40 CFR 63.9.

ii. For emission units that are subject to NSPS, 40 CFR Part 60 the Permittee shall fulfill applicable notification requirements of the NSPS, 40 CFR 60.7, including:

A. Written notification of commencement of construction no later than 30 days after such date. [40 CFR 60.7(a)(1)]

B. Written notification of the actual date of initial startup within 15 days after such date. [40 CFR 60.7(a)(3)]

b. Pursuant to 40 CFR 63.1349(d)(2) and 60.64(d), within 60 days after the date of completing each performance evaluation or test, as defined in 40 CFR 63.2, conducted to demonstrate compliance with the Portland Cement NESHAP or NSPS, the Permittee shall submit the relative accuracy test audit data and performance test data, except opacity data, to USEPA by successfully submitting the data electronically to USEPA's Central Data Exchange (CDX) by using the Electronic Reporting Tool (ERT) (see http://www.epa.gov/ttn/chief/ert/ert_tool.html/).

1.11-2 Annual Reports

a. After the plant begins operation, the Permittee shall submit Annual Emission Reports to the Illinois EPA in accordance with 35 IAC Part 254. For hazardous air pollutants, these reports shall include emissions information for at least the following pollutants: hydrogen chloride, hydrogen fluoride, dioxin/furan, mercury, arsenic, beryllium, cadmium, chromium, lead, manganese, and nickel. For this report, notwithstanding general requirements of this permit for submittal of reports, only a single copy needs to be submitted to the Illinois EPA.

b. After the plant begins operation, continuing until a CAAPP permit is issued for the plant, the terms and conditions of this construction permit shall be addressed in an annual compliance certification submitted by the Permittee by May 1 of the following year to address operation in each calendar year, as if a CAAPP permit were issued for the plant.

1.11-3 General Requirements for Notifications and Reports

a. Unless otherwise specified in the particular provision of this permit or in the written instructions distributed by the Illinois EPA for particular reports, reports and notifications shall be sent to the Illinois EPA – Air Compliance Section with a copy sent to the Illinois EPA – Air Regional Field Office.

b. As of the date of issuance of this permit, the addresses of the office that should generally be utilized for the submittal of reports and notifications are as follows:

i. Illinois EPA – Air Compliance Section

Illinois Environmental Protection Agency
Bureau of Air
Compliance and Enforcement Section (#40)
P.O. Box 19276
Springfield, Illinois 62794-9276

ii. Illinois EPA – Air Regional Field Office

Illinois Environmental Protection Agency
Division of Air Pollution Control
9511 West Harrison
Des Plaines, Illinois 60016

1.12 Standard Permit Conditions

Standard conditions for issuance of construction permits, attached hereto as Attachment 3, shall apply to this project, unless superseded by other specific conditions in the permit.

1.13 Authorization to Operate Emission Units

a. i. The kiln system and clinker cooler may be operated under this construction permit for a period that ends 365 days after the plant first processes stone feed in the kiln system to allow for equipment shakedown and required emissions testing. This period may be extended by Illinois EPA upon request of the Permittee if additional time is needed to complete shakedown or perform emission testing. This condition supersedes Standard Condition 6.

ii. Upon successful completion of required emission testing of the kiln system and clinker cooler, the Permittee may continue to operate this equipment as allowed by Section 39.5(5) of the Environmental Protection Act.

b. i. The remainder of the plant, excluding the kiln system and clinker cooler, may be operated under this construction permit for a period that ends 365 days after initial startup of the kiln system. This period of time may be extended by the Illinois EPA for up to an additional 365 days upon written request by the Permittee as needed to reasonably accommodate unforeseen difficulties experienced during shakedown of the plant. This condition supersedes Standard Condition 6.

ii. Upon successful completion of required emission testing of the kiln system and clinker cooler, the Permittee may continue to operate the remainder of the plant as allowed by Section 39.5(5) of the Environmental Protection Act.

SECTION 2: UNIT-SPECIFIC CONDITIONS FOR PARTICULAR UNITS

2.1 KILN, WITH IN-LINE RAW MILL, AND CLINKER COOLER

2.1.1 Description

In-Line Raw Mill:

The raw mill will prepare the feed to the kiln, which will consist primarily of limestone supplemented with other mineral materials, by grinding. The mill will have an in-line design. When the mill is operating, flue gases from the kiln system will pass through the mill, drying the feed. Because of this design, emission standards for the kiln also address the raw mill, with its emissions also being controlled by the kiln baghouse.

Kiln System:

The kiln system will be a “short” dry kiln equipped with a multi-stage preheater and a precalciner. The preheater and precalciner improve the energy efficiency of the kiln system, reducing fuel consumption per ton of output.

In the kiln system, the feed materials are converted into “clinker”, the intermediate product for manufacturing of Portland cement. Clinker resembles gravel in size and consistency, with most of the clinker being one-half to one inch in diameter. The hot clinker from the kiln system will be transferred to the clinker cooler to be cooled.

The kiln system will be designed to fire solid fuel (i.e., coal, petroleum coke and scrap tires). Coal and petroleum coke would be fired in the kiln and the precalciner. Scrap tires (i.e., used or waste tires), as available, would be able to be fired in the precalciner. The kiln system will be designed to fire natural gas or propane during startup.

Filterable particulate matter emissions from the kiln system will be controlled by a fabric filter baghouse. NO_x emissions will be controlled by staged combustion, with the effect of firing tires generally being to further stage combustion. A selective noncatalytic reduction (SNCR) system will also be used to control NO_x. This system will be located in the riser duct at the exit of the precalciner where conditions will be suitable for control of NO_x with SNCR.

A Circulating Fluidized Bed Absorber (Absorber) will facilitate control of SO_2 emissions. This Absorber will consist of a vertical reactor vessel in which exhaust gases are brought in contact with sorbent material. Exhaust gases will enter the vessel at the bottom and flow upward. Sorbent material and water will be sprayed into the vessel to absorb SO_2, HCl, and other acid gases in the flue gas. The water evaporates cooling

the gas. A cyclone will be used to recover sorbent from the flue gas to be recirculated back to the reactor vessel. Sorbent that is not collected by the cyclone is controlled, along with other particulate matter, by the baghouse on the kiln.

Clinker Cooler:

In the clinker cooler, air will be used to cool the clinker as it moves along a series of reciprocating cross-bars and grates. The hot air from the first stages of the clinker cooler is then used as combustion air in the kiln system. The cooled clinker is transferred from the cooler to storage silos to await finish grinding. Emissions from the clinker cooler will be controlled by a baghouse.

The “affected units” for the purpose of the unit-specific conditions in this section are the kiln (with inline raw mill), and the clinker cooler described above.

2.1.2 Control Technology Determination

a. i. Emissions from the kiln shall be controlled by the following measures:

A. Nitrogen oxides (NO_x): Staged-combustion and an SNCR system.

B. Particulate matter: Filtration (baghouse).

C. Sulfur dioxide (SO_2): Absorption in clinker and kiln dust and an add-on circulating fluidized bed absorber or equivalent SO_2 removal system.

D. Carbon monoxide (CO): Good combustion practices.

E. Greenhouse Gases (GHG): Multi-stage preheater/precalciner kiln, with selection of refractory and a kiln seal management program, and a third generation reciprocating clinker cooler.

ii. Emissions of particulate matter from the clinker cooler shall be controlled by filtration (a baghouse).

b. i. Emissions from the kiln shall not exceed the following limits:

Pollutant	Limit (Lbs/Ton Clinker)	Compliance Period	Basis
NO_x	1.2/1.5[1, 2]	30-Operating Day Rolling Average	BACT/LAER
CO	1.05[1]	30-Operating Day Rolling Average	BACT
SO_2	0.40[1]	30-Operating Day Rolling Average	BACT/LAER
PM/PM_{10} (Total)	0.14[1]	3-Hour[3]	BACT
PM (Filterable)	0.01[1]	30-Operating Day Rolling Average	BACT
GHG (as CO_2e)	1860	Annual 12-Month Rolling Average	BACT

Notes

[1] This limit does not apply during emission testing to calibrate the PM continuous emission monitoring system (CEMS).

[2] For the first 395 operating days after initial startup of the kiln system, the applicable limit is 1.5 lbs NO_x/Ton Clinker. Starting thereafter, the applicable limit is 1.2 lbs NO_x/Ton Clinker.

[3] For purposes of emission testing, compliance shall be determined from the average of two or three test runs as provided by 40 CFR 60.8(f).

ii. Emissions of PM/PM_{10} from the clinker cooler shall not exceed:

Pollutant	Limit (Lbs/Ton Clinker)	Compliance Period	Basis
PM/PM_{10} (Total)	0.01[1]	3-Hour[2]	BACT
PM (Filterable)	0.01[1]	30 Operating Day Rolling Average	BACT

Notes

[1] This limit does not apply during emission testing to calibrate the PM CEMS.

[2] For purposes of emission testing, compliance shall be determined from the average of two or three test runs as provided by 40 CFR 60.8(f).

c. During startup of the kiln, natural gas or liquefied petroleum gas (LPG) shall be fired to bring the kiln and its associated control equipment up to the operating temperature before beginning firing of solid fuel.

d. Upon occurrence of a malfunction that results in an exceedance of an applicable limit or requirement in Condition 2.1.2(b)(i) or 2.1.2(b)(ii), the Permittee shall, as soon as practicable, reduce the operating rate of the kiln, take other corrective action to end the exceedance or begin the shutdown of the kiln. Consistent with the above, if the Permittee has maintained and operated the kiln and air pollution control equipment so that malfunctions causing exceedances are infrequent, sudden, not caused by poor maintenance or careless operation, and in general are not reasonably preventable, the Permittee shall begin corrective actions within two hours of a malfunction that results in an exceedance.

2.1.3-1 Federal Emission Standards

a. i. The affected kiln and clinker cooler are subject to the NESHAP for the Portland Cement Manufacturing Industry, 40 CFR 63 Subpart LLL, and the General Provisions of the NESHAP, 40 CFR 63, Subpart A.

ii. A. Pursuant to 40 CFR 63.1343(b), the affected units shall comply with the following emission standards:

Emission Unit	Pollutant	Standard	
		Normal Operation	Startup and Shutdown
Kiln	PM	0.01 lb/ton clinker	0.0008 gr/dscf
	Dioxin/Furan	0.20 ng/dscm, TEQ[1, 4]	0.2 ng/dscm, TEQ[1,]
	Mercury	0.000021 lb/ton clinker	4.0 µg/dscm
	THC or TO HAP	24.0 or 9.0 ppmvd[2, 3, 4]	24.0 or 9.0 ppmvd[2, 3,]
Clinker Cooler	PM	0.01 lb/ton clinker	0.0008 gr/dscf

[1] If the average temperature at the inlet to the baghouse (the particulate matter control device) during the dioxin/furan (D/F) performance test is 400°F or less,

the standard is 0.4 ng/dscm, TEQ (Toxicity Equivalents).

[2] THC (total hydrocarbons) measured as propane.

[3] As an alternative to the limit for THC, the Permittee may elect to meet an alternative limit of 9 ppmvd for TO HAP (total organic HAP). If compliance with the limit for TO HAP is demonstrated under the requirements of 40 CFR 63.1349, then the kiln's THC limit will be adjusted to equal the average THC emissions measured during the TO HAP compliance test.

[4] Concentration or grain loading in the exhaust at 7 percent oxygen.

B. Pursuant to 40 CFR 63.1343(a), standards for mercury, PM, and THC are based on a 30-day rolling average, except for periods of startup and shutdown, where the standard is based on a 7-day rolling average. The 30-day and 7-day periods mean 30 and 7 consecutive operating days, respectively, where an operating day is any daily 24-hour period during which the kiln operates. Data attributed to an operating day includes all valid data obtained during the daily 24-hour period and excludes any measurements made when the kiln was not operating.

Note: This permit is issued based on the affected units not being exempted from any limits or requirements of the Portland Cement NESHAP pursuant to 40 CFR 63.1356. While 40 CFR 63.1356 provides that if any facility subject to the Portland Cement NESHAP has a different emission limit or requirement for the same pollutant under another regulation in Title 40 of the Code of Federal Regulations, such facility must comply with the most stringent emission limit or requirement and is exempt from the less stringent requirement of the NESHAP, no such more stringent requirement has been identified for the affected units.

b. i. The affected units are subject to the NSPS for Portland Cement Plants, 40 CFR 60 Subpart F, and related requirements of the General Provisions of the NSPS, 40 CFR 60 Subpart A.

ii. Pursuant to 40 CFR 60.62(a), on and after the date on which the performance test required to be conducted by 40 CFR 60.8 is completed, the Permittee may not discharge into the atmosphere from the kiln any gases which exceed the following limits. For this purpose, an operating day includes all valid data obtained in any daily 24-hour period during which the kiln operates and excludes any measurements made during the daily 24-hour period when the kiln was not operating:

A. Contain PM in excess of 0.01 pound per ton of clinker on a 30-operating day rolling average.

B. Exceed 1.50 pounds of NO_x per ton of clinker on a 30-operating day rolling average.

C. Exceed 0.4 pounds of SO_2 per ton of clinker on a 30-operating day rolling average, unless a 90 percent SO_2 emissions reduction measured across the SO_2 control device is demonstrated.

iii. Pursuant to 40 CFR 60.62(b), on and after the date on which the performance test required to be conducted by 40 CFR 60.8 is completed, the Permittee shall not discharge into the atmosphere from any clinker cooler any gases which contain PM in excess of 0.01 pound per ton of clinker on a 30-operating day rolling average. An operating day includes all valid data obtained in any daily 24-hour period during which the kiln operates, and excludes any measurements made during the daily 24-hour period when the kiln was not operating.

2.1.3-2 State Emission Standards

a. i. The affected kiln is subject to 35 IAC 212.422(b)(1), which limits its particulate matter emissions to no more than 0.3 lb/ton of feed to the kiln.

ii. The affected clinker cooker is subject to 35 IAC 212.422(b)(2), which limits its particulate matter emissions to no more than 0.1 lb/ton of feed to the kiln.

b. Each affected unit is subject to 35 IAC 212.421, which limits its opacity to no more than 10 percent.

c. i. Beginning on the compliance date set by 35 IAC 217.152, the affected kiln will be subject to 35 IAC 217.224(a), which currently provides that NO_x emissions shall not exceed 2.8 lbs/ton of clinker produced, on an ozone season and annual basis.

ii. Until the date that the affected kiln is subject to 35 IAC 217.224(a), the affected kiln is subject to 35 IAC 217.402(a)(2)(D), which limits NO_x emissions during each control period (i.e., the period from May 1 to September 30 of each year, as defined by 35 IAC 211.1515) to 2.8 lbs/ton of clinker.

d. Each affected unit is subject to 35 IAC 214.301, which limits its SO_2 emissions to no more than 2000 parts per million.

2.1.4 Non-Applicability Provisions

a. As provided by 40 CFR 60.62(a)(2) and (b)(2), the affected units are not subject to the opacity standards of the NSPS at 40 CFR 60.62 because continuous emissions monitoring systems for particulate matter must be used. As a consequence, opacity monitoring is also not required for the affected units by the NSPS.

b. The raw mill is not subject to the particulate matter standard of 35 IAC 212.321 pursuant to 35 IAC 212.422. In particular, as an in-line raw mill, the emissions of this mill are addressed with the kiln and are subject to the standard for kilns at 35 IAC 212.422(b)(1).

c. i. Pursuant to 35 IAC 217.402(a)(4), except for 35 IAC 217.408(b), the affected kiln is not subject to the requirements of 35 IAC Part 217 Subpart T, including 35 IAC 217.402(a)(2)(D), once it must comply with 35 IAC 217.224(a).

Note: 35 IAC 217.402(a)(4) provides that if another applicable rule imposes more stringent requirements than 35 IAC Part 217 Subpart T, those requirements shall apply in lieu of 35 IAC Part 217 Subpart T. 35 IAC 217.224(a) would impose such more stringent requirements since it would address annual NO_x emissions of the kiln, rather than only NO_x emissions during the control period in each year.

ii. This permit is also issued based on the testing and monitoring requirements of 35 IAC Part 217 Subpart T (35 IAC 217.404 and 217.406, respectively) being satisfied as the Permittee must conduct continuous emissions monitoring for NO_x in accordance with the Portland Cement NSPS, and, eventually, 35 IAC 217.157(b).

iii. Except for 35 IAC 217.408(b), this permit is also issued based on the reporting and recording requirements of 35 IAC Part 217, Subpart T (35 IAC 217.408(a) and 217.410, respectively), being

satisfied as the Permittee must fulfill applicable recordkeeping and reporting requirements of the Portland Cement NSPS and eventually, 35 IAC 217.156.

d. i. This permit is issued based on the affected units not being subject to the control requirements of 35 IAC 218.301 for emissions of organic material. This is because the emissions of organic material from these units will not be photochemically reactive organic material as defined by 35 IAC 211.4690.

ii. The affected units are not subject to the control requirements of 35 IAC 218.980(f). This is because the affected units are fuel combustion units for purposes of 35 IAC Part 218 Subpart TT.

2.1.5 Operating Requirements and Limits

a. i. Clinker production by the affected kiln shall not exceed 1.25 million tons per year.

ii. The kiln system shall not operate for more than 7,920 hours per year.

b. i. Except for “trial operation”, tire fuel shall not be part of the fuel supply to the kiln until the performance testing specified by Condition 2.1.7-1(a)(iv) is conducted.

ii. Except for “trial operation”, tire fuel shall not make up more than 20 percent of the fuel supply to the kiln, by weight, until additional performance testing specified by Condition 2.1.7(a)(iv) is conducted.

iii. In no case, shall tire fuel make up more than 30 percent of the fuel supply to the kiln, by weight on a daily basis.

iv. For this purpose, in Conditions 2.1.5(b)(i) and (ii), “trial operation” shall mean use of up to 12,000 tons and 18,000 tons of tires, respectively.

c. Pursuant to the Portland Cement NESHAP, for the affected kiln, the Permittee shall comply with all applicable requirements and operating limits of 40 CFR 63.1346 for the temperature of the flue gas at the inlet to the kiln baghouse, with such operating limits established during performance testing for dioxin/furan, in accordance with 40 CFR 63.1349(b)(3)(iv).

d. Pursuant to 40 CFR 63.1347, the Permittee shall prepare and implement a written Operations and Maintenance Plan for each affected unit. This plan shall include the

information specified in 40 CFR 63.1347(a)(1) through (3). The plan shall be submitted to the Illinois EPA for review and approval as part of the application for a Clean Air Act Permit Program (CAAPP) permit. Failure to comply with any provision of the plan developed in accordance with 40 CFR 63.1347 is a violation of the Portland Cement NESHAP.

e. Pursuant to 40 CFR 63.1348(d) and 60.11(d), at all times the Permittee shall, to the extent practicable, maintain and operate the affected units, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practice for minimizing emissions.

2.1.6 Emission Limits

a. Emissions from the affected units shall not exceed the limits in Attachment 2, Table 1. The hourly limits for PM, SO_2, NO_x and CO, for which continuous emissions monitoring is performed, shall apply on an hourly basis (NO_x and SO_2) or daily (24-hour) basis (PM and CO). Otherwise hourly limits shall apply on a hour-by-hour basis, except that determinations of compliance based on testing shall be based on the average of two or three test runs, consistent with 40 CFR 60.8(f). Compliance with the lbs/ton limit for mercury shall be determined on a 30-day rolling average, in accordance with the compliance procedures of the NESHAP (See Condition 2.1.3-1(a)(ii)(A)). Compliance with the lbs/ton limit for GHG (CO_2e) shall be determined on a running total of 12 months of data (See Condition 2.1.2(b)(i)).

b. Emissions of GHG, as CO_2e, from the affected units shall not exceed 1,100,000 tons/year.

2.1.7-1 Initial Performance Testing

a. The Permittee shall have initial performance tests conducted as follows:

i. Pursuant to the Portland Cement NESHAP, as provided by 40 CFR 63.7(a), tests shall be conducted for the kiln for emissions of mercury, dioxin/furan and THC and/or TO HAP, in accordance with 40 CFR 63.7 and 63.1349, using applicable methods and procedures specified by 40 CFR 63.1349.

ii. Pursuant to the Portland Cement NSPS, as provided by 40 CFR 60.8, tests shall be conducted for the kiln for emissions of NO_x and SO_2 in accordance with 40 CFR 60.8 using applicable methods and procedures specified by 40 CFR 60.64(a) and (c).

iii. Pursuant to the Portland Cement NESHAP and NSPS, as provided by 40 CFR 63.7(a) and 60.8(a), tests shall be conducted for the kiln and clinker cooler for emissions of PM, in accordance with 40 CFR 63.7, 63.1348(a), 63.1349, 60.8, and 60.64(a) and (b), using applicable methods and procedures specified in 40 CFR 63.1349(b)(1)(i) and 60.63(c).

b. i. Within 60 days after achieving the maximum production rate but not later than 180 days after initial startup of the kiln, the Permittee shall have initial performance tests conducted for the kiln for emissions of $PM/PM_{10}/PM_{2.5}$, VOM, sulfuric acid mist, reduced sulfur compounds, fluorides, hydrogen chloride, hydrogen fluoride, sulfuric acid mist and selected metals and for the clinker cooler for emissions of $PM/PM_{10}/PM_{2.5}$ and selected metals. This period of time may be extended by the Illinois EPA for up to an additional 365 days upon written request by the Permittee as needed to reasonably accommodate unforeseen difficulties in the startup and testing of the affected units.

ii. These emission tests shall be conducted by a qualified testing service while the affected units are operating at representative operating conditions. (In addition, the Permittee may also perform measurements to evaluate emissions at other operating conditions.)

iii. The following methods and procedures shall be used for these tests, unless other methods adopted by or being developed by USEPA are specified or approved by the Illinois EPA.

Location of Sample Points	Method 1
Gas Flow and Velocity	Method 2
Flue Gas Weight	Method 3 or 3A
Moisture	Method 4
$PM/PM_{10}/PM_{2.5}$ (Filterable)[1]	Method 5 or Methods 5 and 201 or 201A
PM (Condensable)	Method 202
Volatile Organic Material[2]	Methods 18 and 25A
Reduced Sulfur Compounds	Method 16A and 16B
Fluorides	Method 14
Hydrogen Chloride	Method 26
Hydrogen Fluoride	Method 26
Sulfuric Acid Mist	Method 8
Metals[3]	Method 29

Notes:

[1] The Permittee may report all PM emissions measured by USEPA Method 5 as PM_{10} and $PM_{2.5}$, in

which case separate testing for PM_{10} or $PM_{2.5}$ using USEPA Method 201 or 201A need not be performed.

[2] The Permittee may exclude methane, ethane and other “exempt compounds” from the results for VOM provided that the protocol to quantify and correct for such compounds is included in the test plan submitted to the Illinois EPA.

[3] For purpose of this testing, metals are defined as arsenic, beryllium, cadmium, chromium, lead, manganese, nickel, and zinc.

c. Test plans, test notifications, and test reports shall be submitted to the Illinois EPA for these tests in accordance with Condition 3.1, as applicable.

d. In addition to other information required in a test report, test reports shall include detailed information on the operating conditions of the affected unit during testing, including the following information:

i. The following data for the kiln system for each run:

A. Raw material feed rate to the kiln (tons/hour);

B. Fuel consumption (tons/hour by location and type of fuel); and

C. Status of in-line raw mill (on/off).

ii. Operating data for the control equipment for the kiln system (hourly average for each test run), including the following data as measured by operational monitoring systems:

A. Reagent injection rate of the SNCR system (pounds or gallons);

B. Gas temperature(s) at the SNCR injection point(s);

C. Gas temperature at the inlet to the Absorber;

D. Sorbent injection rate of the Absorber (lbs); and

E. Gas temperature at the inlet to the baghouse.

iii. Emission data for the kiln (hourly average for each test run), as measured by the continuous emissions monitoring systems.

iv. Composition of fuel during the period of testing (Refer to Condition 2.1.8-3), including sulfur, individual metals, chlorine and fluorine content, expressed in weight percent.

e. Pursuant to 40 CFR 63.1349(d)(2) and 60.64(d), within 60 days after the date of completing each performance evaluation or test, as defined in 40 CFR 63.2, conducted to demonstrate compliance with the Portland Cement NESHAP or NSPS, the Permittee shall submit the relative accuracy test audit data and performance test data, except opacity data, to USEPA by successfully submitting the data electronically to USEPA's Central Data Exchange (CDX) by using the Electronic Reporting Tool (ERT) (see http://www.epa.gov/ttn/chief/ert/ert_tool.html/).

2.1.7-2 Additional Performance Testing

a. i. A. Pursuant to 40 CFR 63.1349(c), performance tests for the affected kiln must be repeated at least every 30 months for emissions of dioxin/furan and, if the Permittee is complying with the NESHAP standard for total organic HAP for the kiln, rather than the standard for THC, total organic HAP.

B. In conjunction with the first performance tests required above for emissions of dioxin/furan, the Permittee shall also have performance testing conducted for emissions of $PM/PM_{10}/PM_{2.5}$, VOM, sulfuric acid mist, reduced sulfur compounds (including H_2S), hydrogen chloride, selected metals and other pollutants specified by the Illinois EPA.

ii. Pursuant to 40 CFR 63.1348(c), the Permittee shall conduct additional performance test(s) for the Portland Cement NESHAP if it plans to undertake operational changes that would adversely affect compliance with applicable standard(s) of this NESHAP.

iii. Until a CAAPP permit is issued for the plant, if the results of the initial performance test pursuant to this Condition 2.1.7-2 or a subsequent performance test pursuant to Condition 2.1.7-2(a)(i)(B)(iv) or (v) for emissions of HCl, H_2S, VOM, $PM_{2.5}$, lead or sulfuric acid mist show a compliance margin of less than 15 percent (i.e., the results are more than 85 percent of the applicable short-term standard), another performance test shall be conducted for the pollutant(s) as follows:

A. If the compliance margin is less than 5 percent, another performance test shall be conducted within 120 days.

B. If the compliance margin is less than 15 percent but more than 5 percent, another performance test shall be conducted within one year (365 days).

iv. During each period of trial operation with tire fuel, as provided by Condition 2.1.5(b), performance tests shall be conducted for $PM_{2.5}$, VOM and selected metals while using tire fuel at the rate that tire fuel would normally be used in the kiln. In the reports for these tests in addition to other required information, the Permittee shall include a summary of the emission data collected by the continuous emission monitoring systems on the kiln during the period of testing.

v. In addition to the testing required above, the Permittee shall have performance test(s) as specified by the Illinois EPA for the affected unit(s) conducted within 120 days of a written request for such testing by the Illinois EPA or such later date agreed to by the Illinois EPA.

Note: Additional requirements for periodic emission testing will be established in the CAAPP permit for the plant.

b. These emission tests shall be conducted in accordance with the relevant requirements of Condition 2.1.7-1, except that a detailed test plan need not be submitted if testing will be conducted in accordance with the previous test plan.

2.1.8-1 Emissions Monitoring

a. Monitoring for THC and Mercury Emissions of the Kiln

Pursuant to the Portland Cement NESHAP, 40 CFR 63.1350(i) and/or (j) and (k), for the affected kiln, the Permittee shall install, certify, operate, calibrate, and maintain continuous emissions monitoring systems (CEMS) for emissions of THC and mercury and for oxygen concentration in the exhaust. These CEMS shall be operated in accordance with the applicable requirements for monitoring in the NESHAP, 40 CFR 63.8 and 63.1350(i), (j) and (k) and addressed in the site-specific monitoring plan (Monitoring Plan) for the kiln required by 40 CFR 63.1350(d)(1) through (f). (See also Condition 2.1.8-1(g).)

b. Monitoring for NO_x and SO_2 Emissions of the Kiln

Pursuant to the Portland Cement NSPS, 40 CFR 60.63(d) and (e), for the kiln, the Permittee shall install, operate, calibrate and maintain CEMS for NO_x and SO_2. These CEMS shall be operated in accordance with 40 CFR 60.63(f) and (g) and addressed in the site-specific Monitoring Plan (Monitoring Plan) for the kiln required by 40 CFR 60.63(i)(1) through (4). (See also Condition 2.1.8-1(g).)

c. Monitoring for PM Emissions of the Kiln and Clinker Cooler

Pursuant to the Portland Cement NESHAP, 40 CFR 63.1350(b) and the NSPS, 40 CFR 60.63(c), for the kiln system and clinker cooler, the Permittee shall install, operate, calibrate and maintain CEMS for PM. These CEMS shall be operated in accordance with 40 CFR 63.1350(b) and 60.63(c) and addressed in the Monitoring Plans for the affected units.

d. Monitoring for CO Emissions of the Kiln

For the kiln system, the Permittee shall install, operate, calibrate and maintain CEMS for CO. This CEMS shall be operated in accordance with relevant provisions of the NSPS for emissions monitoring, including 40 CFR 60.136, 40 CFR Part 60 Appendix B, Performance Specification 4, and 40 CFR Part 60 Appendix F.

e. Monitoring for CO_2 Emissions of the Kiln

For the kiln, the Permittee shall install, operate, calibrate and maintain a CEMS for CO_2. This CEMS shall be operated in accordance with 40 CFR Part 98, Subparts B and F.

f. Monitoring for Mass Emissions (Flow Rate)

Pursuant to the Portland Cement NESHAP, 40 CFR 63.1350(n), and the Portland Cement NSPS, 40 CFR 60.63(h), for the kiln system and clinker cooler, the Permittee shall install, operate, calibrate and maintain continuous monitoring systems for the exhaust gas flow rate, and determine emissions of monitoring pollutants per mass flow rate. These systems shall be operated in accordance with the requirements of 40 CFR 63.1350(n) and 40 CFR 60.63(h) and be addressed in the Monitoring Plans for these units.

g. Monitoring Plans

i. Pursuant to the Portland Cement NESHAP, 40 CFR 63.1350(p), and Portland Cement NSPS, 40 CFR 60.63(i) the Permittee shall operate and maintain the required monitoring systems for the kiln systems

and for the clinker cooler according to site-specific monitoring plans (Monitoring Plans) that it develops. For this purpose, combined plans shall be prepared addressing applicable requirements of both the NESHAP and NSPS.

ii. In addition to the monitoring systems required by the NESHAP and NSPS, the Monitoring Plan for the kiln shall also address the CEMS for CO and CO_2.

iii. At least 60 days before the initial startup of the kiln system, the initial Monitoring Plans shall be submitted to the Illinois EPA for review and comment.

h. Where multiple rules apply for monitoring, e.g., both the Portland Cement NESHAP and NSPS, compliance with the most stringent monitoring requirements for a pollutant is sufficient to demonstrate compliance with emission monitoring requirements for that pollutant.

2.1.8-2 Operational Monitoring

a. Monitoring for Inlet Temperature to Kiln Baghouse

Pursuant to the Portland Cement NESHAP, 40 CFR 63.1350(g)(1), for the kiln, the Permittee shall install, calibrate, maintain and continuously operate a continuous monitoring system for the temperature of the flue gas at the inlet to the kiln baghouse. This system shall be operated in accordance with the requirements of 40 CFR 63.1350(g)(1) and be addressed in the Monitoring Plan for the kiln.

b. Monitoring for Clinker Production

Pursuant to the Portland Cement NESHAP, 40 CFR 63.1350(d), and the Portland Cement NSPS, 40 CFR 60.63(b), the Permittee shall install, calibrate, operate and maintain a permanent weigh scale system to measure and record the weight rate of either the amount of clinker produced or the amount of feed to the kiln. This system shall be addressed in the Monitoring Plan for the kiln or clinker cooler.

c. Bag Leak Detection Systems

The Permittee shall install, operate and maintain Bag Leak Detection Systems (BLDS) on the baghouses on the affected units. These BLDS shall be installed, operated and maintained in a manner that is generally consistent with the provisions of the Portland Cement NESHAP, 40 CFR 63.1350(m)(10). These BLDS shall be addressed in the Monitoring Plans for the affected units required by 40 CFR

63.1350(p), including the information specified by 40 CFR 63.1350(p)(5), and in the Operation and Maintenance Plan required by 40 CFR 63.1347.

Note: These BLDS are not required by the Portland Cement NESHAP and NSPS, which require continuous emissions monitoring for particulate matter for the units.

d. Operational Parameters of the Kiln Control System

The Permittee shall install, operate and maintain systems to measure key operating parameters of the control system for the affected kiln, including:

i. Reagent injection rates for the SNCR systems.

ii. Gas temperature at the reagent injection point(s).

iii. Absorber sorbent injection rate(s).

iv. Gas temperature at the inlet of the absorber.

2.1.8-3 Sampling and Analysis of Fuels

a. The Permittee shall have all fuels that are components of the solid fuel supply to the affected kiln, other than tires, sampled and analyzed for heat content (Btu/lb) and sulfur, individual metals, chlorine, and fluorine content, as follows:

i. Analysis of the solid fuel supply to the kiln, itself (not including tires), shall be conducted in conjunction with performance testing of the kiln.

ii. Analysis of representative samples of a fuel shall be conducted in conjunction with acceptance of fuel from a new supplier.

iii. Analysis of representative samples of fuels shall be conducted at least every three years, if a more frequent analysis is not needed pursuant to the above requirements.

b. If the affected kiln is fired on tires, the Permittee shall have a representative sample of tire fuel analyzed for heat content and sulfur, individual metals, and chlorine within 30 days of first firing tires. This sampling and analysis shall be repeated upon written request from the Illinois EPA.

c. Required analyses shall be conducted in accordance with ASTM Reference Methods, USEPA Methods, or other standard method approved by the Illinois EPA and may be conducted by the Permittee, the fuel supplier or a qualified

laboratory. The Permittee shall keep records for this sampling and analysis.

2.1.9 Recordkeeping Requirements

a. The Permittee shall fulfill all applicable recordkeeping requirements of the Portland Cement NESHAP and NSPS, including 40 CFR 63.1355 and 40 CFR 60.65, for the affected units.

b. All records required by 40 CFR 63.1355(f) for each startup and shutdown of each affected unit, which records shall contain the date of a startup or shutdown, and note any deviations from normal startup/shutdown procedures, as set forth in the Permittee's written Operations and Maintenance Plan, with description and explanation.

c. Beginning on the compliance date set by 35 IAC 217.152, the Permittee shall fulfill all applicable recordkeeping requirements of 35 IAC 217.156 for the affected kiln, which records may be combined with other required records.

d. The Permittee shall keep records of the following information for the affected kiln.

i. Operating hours of the kiln (hours/month and hours/year).

ii. A. Usage of fuel, by type.

B. Usage of tire fuel, as a percentage of the total fuel usage, by weight.

iii. Clinker production (tons/month and tons/year).

iv. Amount of reagent used in the SNCR system (tons/month and tons/year).

v. Amount of purchased sorbent used in the Absorber (tons/month and tons/year, by type).

e. The Permittee shall keep a maintenance and repair log for each affected unit and associated control equipment, listing each activity performed with date. The logs at a minimum, shall identify such activities that are performed related to components that may affect emissions; the reason for such activities, i.e., whether planned or initiated due to a specific event or condition; and any failure to carry out the established maintenance procedures, with explanation.

f. The Permittee shall maintain records for deviations from requirements of this permit for the affected units, which shall contain the information specified in Condition 3.3.

g. For the affected units, the Permittee shall maintain the following records related to actual emissions (tons/month and tons/year):

i. Records of emissions of SO_2, NO_x, THC, PM, mercury, CO and CO_2e emissions for the kiln and emissions of PM for the clinker cooler, based on data collected by the CEMS and other appropriate operating data.

ii. Records of emissions of $PM_{10}/PM_{2.5}$, VOM, HAP, CO_2e, sulfuric acid mist, fluorides, lead and reduced sulfur compounds from the kiln and emissions of $PM_{10}/PM_{2.5}$ from the clinker cooler, based on operating data and appropriate emission factors, with supporting calculations.

2.1.10 Reporting Requirements

a. The Permittee shall promptly notify the Illinois EPA when the reagent for the SNCR is selected.

b. The Permittee shall fulfill all applicable notification and reporting requirements of the Portland Cement NESHAP, and NSPS for the affected units.

c. i. The Permittee shall report the NO_x emissions of the affected kiln system during the seasonal control period by December 31 of each year, in accordance with 35 IAC 217.408(b).

ii. Beginning after the compliance date set by 35 IAC 217.152, the Permittee shall fulfill applicable reporting requirements of 35 IAC 217.156 for the affected kiln system.

iii. The Permittee shall provide the certification required under 35 IAC 217.155 by the applicable compliance date set by 35 IAC 217.152.

d. The Permittee shall report deviations from requirements set by this permit for the affected units to the Illinois EPA in accordance with Condition 3.3.

2.2 Finish Mill

2.2.1 Description

The finish mill produces finished cement from the clinker, along with cement additives (primarily gypsum). To assist in grinding, a liquid grinding aid may also be used in the mill. After grinding, air separators are used to recycle oversize material back to the mill. The cement product, in the particle size range for finished cement, is pneumatically conveyed to storage silos, pending loadout and transport off site.

At times, this mill may also be used to grind slag and other supplemental materials that could be used in either the raw feed or feed for finished cement. When supplemental materials are being prepared, a natural gas-fired burner may be used to dry wet materials as they are being ground.

The “affected unit” for the purpose of this section is the mill described above. Material handling equipment associated with the affected unit is addressed in Section 2.3.

2.2.2 Control Technology Determination

a. i. Emissions of particulate matter from the affected unit shall be controlled by a baghouse.

ii. Emissions from fuel combustion by the affected unit shall be controlled by the following:

A. NO_x: Use of an ultra low-NO_x burner.

B. PM/PM_{10}, SO_2 and CO_2e: Use of only natural gas fuel.

C. CO: Good combustion practices.

b. i. The emissions of the affected unit shall not exceed the following hourly limits when fuel is not fired:

Pollutant	Limit	Basis
PM/PM_{10} (Filterable)	0.0008 gr/dscf	BACT
PM_{10} (Total)	0.0008 gr/dscf	BACT

ii. Emissions from the affected unit shall not exceed the following hourly limits when fuel is fired:

Pollutant	Limit	Basis
PM/PM_{10} (Filterable)	0.0014 gr/dscf	BACT
PM_{10} (Total)	0.0014 gr/dscf	BACT
NO_x	0.010 lb/mmBtu	BACT/LAER
CO	0.080 lb/mmBtu	BACT

iii. For purposes of emission testing, compliance with these limits shall be determined from the average of two or three test runs as provided by 40 CFR 60.8(f).

c. There shall be no visible emissions of fugitive or uncaptured particulate matter from the affected unit, as determined by USEPA Method 22.

2.2.3-1 Federal Emission Standards

a. The affected unit is subject to the Portland Cement NSPS, and the General Provisions of the NSPS, 40 CFR 60 Subpart A. Pursuant to 40 CFR 60.62(c), on and after the date on which the performance test required to be conducted by 40 CFR 60.8 is completed, the affected unit shall not discharge into the atmosphere any gases which exhibit 10 percent opacity, or greater.

b. i. When the affected unit is operating as a raw material dryer, i.e., fuel is being fired in the affected unit, the unit is subject to the Portland Cement NESHAP and the General Provisions of the NESHAP, 40 CFR 63 Subpart A:

ii. A. Pursuant to 40 CFR 63.1343(b), when the affected unit is subject to the NESHAP, the unit shall comply with the following emission standard:

Pollutant	Standard	
	Normal Operation	Startup and Shutdown
THC or TO HAP	24.0 or 9.0 ppmvd[1, 2, 3]	24.0 or 9.0 ppmvd[1, 2]

[1] THC (total hydrocarbons) measured as propane.

[2] As an alternative to the limit for THC, the Permittee may elect to meet an alternative limit of 9.0 ppmvd for TO HAP (total organic HAP). If compliance with the limit for total organic HAP is demonstrated under the requirements of 40 CFR 63.1349, then the THC limit for the affected unit will be adjusted to equal the average THC emissions measured during the organic HAP compliance test.

[3] Concentration in the exhaust at 19 percent oxygen.

B. Pursuant to 40 CFR 63.1343(a), the standard is based on a 30-day rolling average, except for periods of startup and shutdown, where the standard is based on a 7-day rolling average. The 30-day and 7-day periods mean 30 and 7 consecutive operating days, respectively, where an operating day is any daily 24-hour period during which the unit is operating as a raw material dryer. Data attributed to an operating day includes all valid data obtained during the daily 24-hour period and excludes any measurements made when the unit was not operating as a raw material dryer.

2.2.3-2 State Emission Standards

a. The emissions of particulate matter from the affected unit shall comply with the applicable limit pursuant to 35 IAC 212.321, which rule limits emissions based on the process weight rate of emission units and allows a minimum emission rate of 0.55 lb/hour for any individual unit.

b. The affected unit is subject to 35 IAC 212.421, which limits opacity to no more than 10 percent. (See also Condition 1.4-1(a).)

c. The affected unit is subject to 35 IAC 214.301 which limits SO_2 emissions to no more than 2000 parts per million.

d. The use of grinding aids by the affected unit is subject to 35 IAC 218.301, which limits the discharge of organic material into the atmosphere to 8 lbs/hour, except as provided in 35 IAC 218.302, 218.303, 218.304 and the following exception: If no odor nuisance exists, this limit shall apply only to photochemically reactive material as defined by 35 IAC 211.4690.

2.2.4 Non-Applicability Provisions

a. Except when operating as a raw material dryer, the affected unit is not subject to the emission standards of the Portland Cement NESHAP pursuant to 40 CFR 63.1345, since the plant is not a major source of HAPs.

b. As provided by 40 CFR 63.1350(f)(4)(ii), daily observations for visible emissions are not required for the affected unit pursuant to 40 CFR 63.1350(f)(2) because the Permittee is required to operate a Bag Leak Detection System on the unit. (See Condition 2.2.8-2.)

c. The affected unit is not subject to 35 IAC 216.121 for CO emissions since this unit is direct fired.

d. This permit is issued based on the control requirements for VOM emissions in 35 IAC Part 218 Subpart TT not applying to the use of grinding aids by the affected unit pursuant to 35 IAC 218.980(d) because VOM emissions from the grinding of clinker will not exceed 2.5 tons per calendar year.

2.2.5 Operational Requirements and Limits

a. Fuel shall not be fired in the affected unit for more than 1500 hours/year.

b. i. The only fuel fired in the affected unit shall be natural gas.

ii. The rated heat input capacity of the burner(s) in the affected unit shall not exceed 60 mmBtu/hour, total.

c. Pursuant to 40 CFR 63.1347, the Permittee shall prepare and implement a written Operation and Maintenance Plan for the affected unit, as follows:

i. For the unit as it functions as a raw material dryer, this plan shall include the information specified in 40 CFR 63.1347(a)(1) through (3). For the unit as it does not function as a raw material dryer, this plan shall include the procedures for proper operation and maintenance of the unit in order to meet the requirement in Condition 2.2.5(d) below and the corrective actions that will be taken when visible emissions are present during the observations of visible emissions required for the unit by Condition 2.2.8-1.

ii. The Permittee shall submit its initial plan to the Illinois EPA for review and approval as part of its initial application for a CAAPP permit.

iii. Failure to comply with any provision of the Operation and Maintenance Plan developed in accordance with 40 CFR 63.1347 for the unit is a violation of the Portland Cement NESHAP.

d. Pursuant to 40 CFR 63.1348(d) and 60.11(d), at all times, including periods of startup, shutdown and malfunction, the Permittee shall maintain and operate the affected unit, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practice for minimizing emissions, pursuant to 40 CFR 60.11(d).

2.2.6 Emission Limits

a. Emissions from the affected unit shall not exceed the limits in Attachment 2, Table II. These limits shall apply on an hourly basis, except that compliance determinations based on emission testing shall be based on the average of two or three test runs, consistent with 40 CFR 60.8(f).

b. Emissions of CO_2e from the affected unit shall not exceed 5,200 tons/year.

2.2.7-1 Initial Performance Testing for Emissions

a. Pursuant to the Portland Cement NESHAP, as provided by 40 CFR 63.7(a), the Permittee shall have initial performance tests conducted for the affected unit when operating as a raw material dryer for emissions of THC and/or TO HAP, in accordance with 40 CFR 63.7 and 63.1349, using applicable methods and procedures specified by 40 CFR 63.1349.

b. i. A. Within 60 days after achieving the maximum production rate at which the affected unit will be operated, but no later than 180 days after initial feed to the unit, the Permittee shall have initial performance tests conducted for the unit when operating as a finish mill for emissions of particulate matter.

B. In conjunction with the initial performance tests of the affected unit as a raw material dryer for emissions of TO HAP or within one year (365 days) of first operating the affected unit as a raw material dryer, whichever occurs first, the Permittee shall have initial performance tests conducted for the unit as a dryer for emissions of particulate matter and NO_x, CO and VOM.

ii. These emission tests shall be conducted by a qualified testing service for affected units while the affected unit is operating at representative operating conditions. (In addition, the Permittee may also perform measurements to evaluate emissions at other operating conditions.)

iii. In addition to the methods and procedures for testing emissions of particulate matter specified in Condition 3.1(d), the following methods and procedures shall be used for testing emissions of NO_x, CO and VOM unless other methods adopted by or being developed by USEPA are specified or approved by the Illinois EPA.

Nitrogen Oxides	Method 7, 7E or 19
Carbon Monoxide	Method 10 or 19
Volatile Organic Material[1]	Methods 18 and 25A

Notes:

[1] The Permittee may exclude "exempt compounds" from the results for VOM provided that the protocol to quantify and correct for such compounds is included in the test plan submitted to the Illinois EPA.

c. Test plans, test notifications, and test reports shall be submitted to the Illinois EPA for these tests in accordance with Condition 3.1, as applicable.

2.2.7-2 Initial Performance Observations for Opacity

a. Pursuant to the Portland Cement NSPS, as provided by 40 CFR 60.11(e)(1), initial observations for opacity shall be conducted for the affected unit in accordance with 40 CFR 60.11(b) and (e), using the applicable methods and procedures specified by 40 CFR 60.64(a) and (b)(3). For this purpose, separate initial observations shall be conducted for operation of the unit as a finish mill and as a raw material dryer.

b. Notifications and reports for these opacity observations shall be submitted to the Illinois EPA in accordance with Condition 3.2.

2.2.7-3 Additional Performance Testing

a. i. In conjunction with the performance testing for the kiln system required by Condition 2.1.7-2(b) (i.e., within approximately 30 months of the initial performance tests for the kiln system), the Permittee shall have performance testing repeated for the affected unit for emissions of particulate matter. For this purpose, emission testing shall be conducted within two months of the testing of the kiln system.

ii. In addition to the testing required above, the Permittee shall have performance tests as specified by the Illinois EPA for the affected units conducted within 120 days of a written request for such testing by the Illinois EPA or such later date agreed to by the Illinois EPA.

b. These performance tests shall be conducted in accordance with the relevant requirements of Condition 2.2.7-1, except that a detailed test plan need not be submitted if

testing will be conducted in accordance with the previous test plan.

Note: Requirements for periodic performance tests will be established in the CAAPP permit for the plant.

2.2.8-1 Periodic Observations for Visible Emissions

a. Pursuant to 40 CFR 60.64(b)(4) and 63.1350(f)(1) and (4), the Permittee shall conduct periodic observations for the affected unit for visible emissions, and, if visible emissions are observed, opacity from the unit, in accordance with Method 22 and Method 9, respectively.

b. Pursuant to 40 CFR 63.64(b)(4) and 63.1350(f)(3), if visible emissions are observed during these observations the Permittee shall initiate, within one-hour, the corrective actions specified in its Operation and Maintenance Plan for the affected unit. (See Condition 2.2.5(c).)

c. The Permittee shall keep records documenting the performance of these observations and the actions taken.

2.2.8-2 Operational Monitoring

a. Pursuant to 40 CFR 60.64(b)(4), the Permittee shall install, operate and maintain a Bag Leak Detection System on the baghouse for the affected unit in accordance with the requirements in 40 CFR 63.1350(m)(10), (m)(11), (o) and (p).

2.2.8-3 Emissions Monitoring for THC

a. Pursuant to the Portland Cement NESHAP, 40 CFR 63.1350(i) and/or (j), for the affected unit as it functions as a raw material dryer, the Permittee shall install, certify, operate, calibrate, and maintain a CEMS for emissions of THC and oxygen concentration in the exhaust. This CEMS shall be operated in accordance with the applicable requirements for monitoring in the NESHAP, 40 CFR 63.8 and 63.1350(i) and/or (j) and addressed in a site-specific Monitoring Plan for the affected unit required by 40 CFR 63.1350(p).

2.2.9 Recordkeeping Requirements

a. For the affected unit, the Permittee shall keep all records required by the Portland Cement NESHAP and NSPS, including the records required by 40 CFR 63.1355, 60.7 and 60.65.

b. The Permittee shall keep file(s) or other records containing the following information for the affected

unit, with supporting information, which information shall be kept up to date:

i. Information related to the baghouse associated with the affected unit, including maximum design particulate matter emissions, in gr/dscf.

ii. The maximum operating capacities of the affected unit (tons/hour), as a finish mill and as a raw material dryer.

iii. The rated capacity of the burner(s) in the affected unit.

iv. A demonstration that confirms that the affected unit complies with 35 IAC 212.321 (Conditions 2.2.3-2(a)) at the maximum process weight rate at which the unit can be operated, with supporting emission calculations and documentation.

c. The Permittee shall keep records of the following information for the affected unit:

i. Amount of cement produced (tons/month and tons/year).

ii. Operation while firing fuel (hours/month and hours/year).

iii. Amount of fuel fired (million ft^3/month and million ft^3/year).

d. The Permittee shall keep the following records for use of grinding aids that contain VOM by the affected unit:

i. The VOM content of each grinding aid or category of grinding aid, in percent by weight, with supporting documentation.

ii. The usage of grinding aids (pounds/month and pounds/year, for each grinding aid or by category of grinding aid).

iii. The VOM emissions from use of grinding aid (pounds/month and pounds/year), with supporting calculations.

e. The Permittee shall maintain records for deviations from requirements of this permit for the affected unit, which shall contain the information specified in Condition 3.3.

f. The Permittee shall keep records of the emissions of $PM/PM_{10}/PM_{2.5}$, VOM, NO_x, CO, SO_2, HAPs and CO_2e from the affected unit (tons/month and tons/year), with supporting

calculations. These records shall be compiled on at least a quarterly basis.

2.2.10 Reporting Requirements

a. For the affected unit, the Permittee shall fulfill all applicable notification and reporting requirements of the Portland Cement NSPS.

b. The Permittee shall report deviations from requirements set by this permit for the affected unit to the Illinois EPA in accordance with Condition 3.3.

2.3 ENCLOSED MATERIAL HANDLING AND STORAGE

2.3.1 Description

Limestone and other raw materials will arrive at the plant by water, rail and road. Materials will be transferred into silos and other enclosed structures. Various conveyor belts (with associated hoppers and transfer points) will transfer these materials from storage to the raw mill or the finish mill, as appropriate. Additional conveyance systems will transfer blended raw materials from the raw mill to holding bins pending transfer to the kiln feed system.

Clinker will be held in the storage silos and transferred by conveyor to the finish mill system. Cement from the finish mill will be transferred to storage, pending transfer for loadout.

Particulate matter emissions associated with these operations (the “affected units”) will generally be controlled by enclosure and dust collection devices.

2.3.2 Control Technology Determination

a. Particulate matter emissions from affected units shall be controlled by:

   i. Enclosure of the unit so as to prevent visible fugitive emissions as defined by 40 CFR 60.671 and fugitive particulate matter as defined by 35 IAC 211.2490, from the affected unit.

   ii. Aspiration to a baghouse or other filtration control device designed to emit no more than 0.004 grains/dry standard cubic foot (gr/dscf), which device shall be operated in accordance with good air pollution control practice to minimize emissions. For this purpose, the control device shall be a baghouse or other filtration type device unless the Permittee demonstrates and the Illinois EPA concurs that another type of control device is preferable due to considerations of operational safety.

2.3.3-1 Applicable Federal Emission Standards

a. The affected units are subject to the Portland Cement NESHAP and applicable requirements in the General Provisions of the NESHAP, 40 CFR 63 Subpart A.

   i. Pursuant to 40 CFR 63.1343(d) and 63.1345, as clinker material storage and handling activities will occur 1,000 feet or less from the source’s property-line, these activities must be in an enclosed storage area and this enclosed storage area

shall not discharge any gases which exhibit opacity greater than 10 percent.

ii. For affected units other than clinker material storage and handling activities, no emission standards or related requirements of the NESHAP apply for such units.

b. The affected units, as they constitute raw material storage, clinker storage, finished product storage, conveyor transfer point, or bulk loading or unloading systems, are subject to the Portland Cement NSPS and the General Provisions of the NSPS, 40 CFR 60 Subpart A. Pursuant to 40 CFR 60.62(c), on and after the date on which the initial performance test required to be conducted by 40 CFR 60.8 is completed, the affected units shall not discharge into the atmosphere any gases which exhibit 10 percent opacity, or greater.

2.3.3-2 Applicable State Emission Standards

a. The emissions of PM from affected units shall comply with the applicable limit pursuant to 35 IAC 212.321, which rule limits emissions based on the process weight rate of emission units and allows a minimum emission rate of 0.55 lb/hour for any individual unit.

b. Each affected unit is subject to 35 IAC 212.421, which limits opacity to no more than 10 percent.

2.3.4 Non-Applicability Provisions

a. This permit is issued based on the emissions of the affected units not being required to be controlled with water or surfactant sprays or choke feeding, as otherwise required by 35 IAC 212.308. This is because compliance with 35 IAC 212.308 will be achieved by an equivalent method, i.e., enclosure and aspiration to control devices, as provided by Condition 2.3.1.

2.3.5 Operational Requirements

a. The Permittee shall address the affected units in the Operating Program required by 35 IAC 212.309. (See Condition 1.4-2(a).)

b. Pursuant to 40 CFR 63.1347, the Permittee shall prepare and implement a written Operation and Maintenance Plan for the affected units, as follows:

i. This plan shall include procedures for proper operation and maintenance of the units in order to meet the requirement in Condition 2.3.5(c) below and the corrective actions that will be taken when

visible emissions are present during the observations of visible emissions required for the unit by Condition 2.3.8. The Permittee shall submit its initial plan to the Illinois EPA for review and approval as part of its initial application for a CAAPP permit.

ii. Failure to comply with any provision of the Operation and Maintenance Plan developed in accordance with 40 CFR 63.1347 for the units is a violation of the Portland Cement NESHAP.

c. Pursuant to 40 CFR 63.1348(d) and 60.11(d), at all times the Permittee shall, to the extent practicable, maintain and operate the affected units, including associated air pollution control equipment, in a manner consistent with safety and good air pollution control practice for minimizing emissions.

2.3.6 Emission Limits

Emissions of particulate matter from the affected units shall not exceed the limits in Attachment 2, Table III.

2.3.7-1 Initial Performance Testing

a. Within one year (365 days) of initial startup of the kiln system, the Permittee shall have initial performance tests conducted for the affected units for emissions of particulate matter. For this purpose, emissions of five units shall be tested, as specified by the Illinois EPA, no less than 30 days before the initial scheduled date for testing.

b. These emission tests shall be conducted by a qualified testing service for affected units while operating at representative operating conditions.

c. The methods and procedures specified in Condition 3.1(d) shall be used for these tests, unless other methods adopted by or being developed by USEPA are specified or approved by the Illinois EPA.

d. Test plans, test notifications, and test reports shall be submitted to the Illinois EPA for these tests in accordance with Condition 3.1, as applicable.

2.3.7-2 Initial Performance Observations for Opacity

a. Pursuant to the Portland Cement NSPS, as provided by 40 CFR 60.11(e)(1), the Permittee shall have initial observations for opacity conducted for each affected unit in accordance with 40 CFR 60.11(b) and (e), using the

applicable methods and procedures specified by 40 CFR 60.64(a) and (b)(3).

b. Notifications and reports for these opacity observations shall be submitted to the Illinois EPA in accordance with Condition 3.2.

2.3.7-3 Additional Performance Testing

a. i. In conjunction with the performance testing for the kiln system required by Condition 2.1.7-2(a)(i)(B)(i.e., within approximately 30 months of the initial performance tests for the kiln system, the Permittee shall have performance testing repeated for emissions of $PM/PM_{10}/PM_{2.5}$. For this purpose, emissions of three units shall be tested, with testing of one unit that was initially tested and two units that were not initially tested. In addition, emission testing shall be conducted within two months of testing of the kiln system.

ii. In addition to the testing required above, the Permittee shall have performance test(s) as specified by the Illinois EPA for the affected unit(s) conducted within 120 days of a written request for such testing by the Illinois EPA or such later date agreed to by the Illinois EPA.

b. These performance tests shall be conducted in accordance with the relevant requirements of Condition 2.3.7-1, except that a detailed test plan need not be submitted if testing will be conducted in accordance with the previous test plan.

Note: Requirements for periodic performance tests will be established in the CAAPP permit for the plant.

2.3.8 Periodic Observations for Visible Emissions and Opacity

a. Pursuant to 40 CFR 60.64(b)(4) and 63.1350(f)(1), the Permittee shall conduct periodic observations for the affected units for visible emissions and, if visible emissions are observed, opacity from the units, in accordance with Method 22 and Method 9, respectively.

b. Pursuant to 40 CFR 63.64(b)(4) and 63.1350(f)(3), if visible emissions are observed during these observations the Permittee shall initiate, within one-hour, the corrective actions specified in its Operation and Maintenance Plan for the affected unit. (See Condition 2.3.5(b).)

c. The Permittee shall keep records documenting the performance of these observations and the actions taken.

2.3.9 Recordkeeping Requirements

a. The Permittee shall maintain all records required by the Portland Cement NESHAP and NSPS for the affected units, including the records required by 40 CFR 60.7 and 60.65.

b. The Permittee shall keep file(s) or other records containing the following information for the affected units, with supporting information, which information shall be kept up to date:

i. Information related to the dust collection equipment associated with the affected units, including the design performance specifications, in gr/dscf.

ii. Documentation for the emission factors that are used to determine emissions from the different units.

iii. The maximum operating capacity of each affected unit (tons/hour).

iii. A demonstration that confirms each affected unit is able to comply with the hourly limits in Condition 2.3.3-2(a) and 2.3.6 (Attachment 2, Table III) at the maximum process weight rate at which the unit can be operated (tons/hour), with supporting emission calculations and documentation for the emission factors being relied upon by the Permittee.

c. The Permittee shall maintain records of the amount of raw materials received at the plant by affected units (tons/month and tons/year, by category of material).

d. The Permittee shall maintain records for deviations from requirements of this permit for the affected units, which shall contain the information specified in Condition 3.3.

e. The Permittee shall keep records of the emissions of $PM/PM_{10}/PM_{2.5}$ from the affected units (tons/month and tons/year), based on operating data and appropriate emission factors, with supporting documentation.

2.3.10 Reporting Requirements

a. The Permittee shall fulfill all applicable notification and reporting requirements of the Portland Cement NESHAP and NSPS for the affected units.

b. The Permittee shall report deviations from requirements set by this permit for the affected units to the Illinois EPA in accordance with Condition 3.3.

2.4 FUEL HANDLING, PROCESSING AND STORAGE

2.4.1 Description of Emission Units

Various operations at the plant will handle solid fuel materials for the kiln system.

The coal and petroleum coke for the kiln system will initially be stored in a covered, enclosed structure. They will then be transferred to a series of storage bins that serve the coal mill. The coal mill will reduce the size of the fuel in preparation for firing in the kiln system. Hot air from the kiln system may be introduced into the coal mill to dry the fuel as it is milled. The milled fuel will be held in storage bins until it is fired in the kiln system. Particulate matter emissions from the fuel transfer systems and the coal mill will be controlled by enclosure and dust collection devices.

The kiln system will also be designed to use whole tires as a secondary fuel for the precalciner in the kiln system. Equipment will be present to receive and handle whole tires and to feed the whole tires into the precalciner.

The “affected units” for the purpose of the unit-specific conditions in this section are the various operations involved in handling solid fuel at the plant, including receiving, transfer, storage, and processing or preparation (milling and screening) of solid fuels, as described above.

2.4.2 Control Technology Determination

a. Particulate matter emissions from an affected unit handling coal or petroleum coke shall be controlled by:

   i. Enclosure of the unit so as to prevent visible fugitive emissions, as defined by 35 IAC 211.2490, from the affected unit.

   ii. Aspiration to a control device designed to emit no more than 0.004 grains/dry standard cubic foot (gr/dscf), which device shall be operated in accordance with good air pollution control practice to minimize emissions. For this purpose, the control device shall be a baghouse or other filtration type device unless the Permittee demonstrates and the Illinois EPA concurs that another type of control device is preferable due to considerations of operational safety.

b. Particulate matter emissions from affected units handling tires shall be controlled by the practices for unloading tires from the transport trailers, with only loads of clean tires, which are free of dirt and dried mud that would otherwise potentially be released during unloading,

being unloaded by tipping of the trailers and other tires being manually unloaded from trailers.

2.4.3-1 Applicable Federal Emission Standards

a. i. The affected units that handle, process or store coal or coal and other fuels, (i.e., the affected units that are coal processing and conveying equipment, coal storage systems, or coal transfer and loading systems), are subject to the NSPS for Coal Preparation Plants, 40 CFR 60 Subpart Y (Coal Preparation NSPS) and applicable provisions of the General Provisions of the NSPS, 40 CFR 60 Subpart A.

ii. In particular, pursuant to 40 CFR 60.254(b), except as provided by 40 CFR 60.8(c), for affected units that are subject the Coal Preparation NSPS, on and after the date on which the initial performance tests required by the NSPS are completed:

A. Gases shall not be discharged from such units which exhibit 10 percent opacity, or greater.

B. Gases shall not be discharged from the mechanical vents of such units which contain particulate matter in excess of 0.023 g/dscm (0.010 gr/dscf).

Note: These standards would not apply to open storage piles for coal and associated loading, unloading and conveying operations if they were present at the plant.

b. The affected units that handle coal, or coal and other fuels and that are located downstream of the coal mill are subject to the Portland Cement NESHAP and the General Provisions of the NESHAP, 40 CFR 63 Subpart A, but no emission standards and related requirements apply.

2.4.3-2 Applicable State Emission Standards

a. The emissions of particulate matter from affected units shall comply with the applicable limits pursuant to 35 IAC 212.321, which rule limits emissions based on the process weight rate of emission units.

b. Each affected unit is subject to 35 IAC 212.421 which limits opacity to no more than 10 percent.

2.4.4 Non-Applicability Provisions

a. This permit is issued based on the Portland Cement NESHAP only applying to the affected units that handle coal or coal and other fuels and that are located downstream of

the coal mill pursuant to 40 CFR 63.1340(b)(7), which only specifies that such fuel handling operations are affected facilities for purposes of this NESHAP.

b. This permit is issued based on the emissions of the affected units not being required to be controlled with water or surfactant sprays or choke feeding, as otherwise required by 35 IAC 212.308. This is because compliance with 35 IAC 212.308 will be achieved by an equivalent method, i.e., enclosure and aspiration to control devices, as provided by Condition 2.4.2.

c. The requirements of the Portland Cement NSPS, 40 CFR 60.254(c), for open storage piles will not apply since coal will not be stored in open storage piles.

2.4.5 Operational Requirements

a. i. Fuels other than tires shall only be stored at the plant in buildings or structures that are completely enclosed, with solid walls and roof.

ii. Tire fuel shall only be stored at the plant in transport trailers or “cages”. For this purpose, a cage is a moveable container with roof to prevent accumulation of precipitation, sides to contain the tires in the container, and wheels or skids and a hitch that enable the unit to be readily moved by a vehicle at the plant.

b. The Permittee shall address the affected units in the Operating Program required by 35 IAC 212.309. (See Condition 1.4-2(a).)

c. Pursuant to 40 CFR 63.1347, the Permittee shall prepare and implement a written Operation and Maintenance Plan for the affected units that handle coal or coal and other fuels and that are located downstream of the coal mill, as follows:

i. This plan shall include procedures for proper operation and maintenance of the units in order to meet the requirement in Condition 2.4.5(d) below and the corrective actions that will be taken when visible emissions are present during the observations of visible emissions required for the unit by Condition 2.4.8. The Permittee shall submit its initial plan to the Illinois EPA for review and approval as part of its initial application for a CAAPP permit.

ii. Failure to comply with any provision of the Operation and Maintenance Plan developed in

accordance with 40 CFR 63.1347 for the units is a violation of the Portland Cement NESHAP.

d. Pursuant to 40 CFR 63.1348(d) and 60.11(d), at all times the Permittee shall, to the extent practicable, maintain and operate the affected units, including associated air pollution control equipment, in a manner consistent with safety and good air pollution control practice for minimizing emissions.

e. The operation of the coal mill shall not exceed 7,920 hours/year.

2.4.6 Emission Limits

Emissions of particulate matter from the affected units shall not exceed the limits in Attachment 2, Table IV.

2.4.7-1 Initial Performance Testing

a. Pursuant to the Coal Preparation NSPS, as provided by 40 CFR 60.8(a), the Permittee shall have initial performance tests conducted for the affected units that are subject to the NSPS for emissions of particulate matter in accordance with 40 CFR 60.8 and 60.255, using applicable methods and procedures specified by 40 CFR 60.257, unless and except as USEPA alters or waives the requirements for such testing on a source-specific basis pursuant to 40 CFR 60.8(b).

b. i. Within one year (365 days) of initial startup of the kiln system, the Permittee shall have initial performance tests conducted for the affected units for emissions of particulate matter. For this purpose, emissions of the coal mill and two other units shall be tested, as specified by the Illinois EPA no less than 30 days before the initial scheduled date for testing.

ii. These emission tests shall be conducted by a qualified testing service while affected units are operating at representative operating conditions.

iii. The methods and procedures specified in Condition 3.1(d) shall be used for these tests, unless other methods adopted by or being developed by USEPA are specified or approved by the Illinois EPA.

c. Test plans, test notifications, and test reports shall be submitted to the Illinois EPA for these tests in accordance with Condition 3.1, as applicable.

2.4.7-2 Initial Performance Observations for Opacity

a. Pursuant to the Coal Preparation NSPS, as provided by 40 CFR 60.8(a), the Permittee shall have initial performance tests conducted for the affected units that are subject to the NSPS for opacity in accordance with 40 CFR 60.8 and 60.255, using applicable methods and procedures specified by 40 CFR 60.257.

b. Notifications and reports for these opacity observations shall be submitted to the Illinois EPA in accordance with Condition 3.2.

2.4.7-3 Additional Performance Testing

a. i. Subsequent performance tests shall be conducted for the affected units for emissions of particulate matter as required by the Coal Preparation NSPS, 40 CFR 60.255(b) unless the units meet the criteria in 40 CFR 60.255(d) for exemption from periodic emission testing, i.e., the potential PM emissions of the unit are no more than 1.0 tons/year, tested PM emissions are no more than 0.010 gr/dscf, the control device manufacturer's recommended maintenance procedures are followed, and the opacity in all required opacity observations are no more than 5 percent opacity, 6-minute average.

ii. In addition to the testing required above, the Permittee shall have performance test(s) as specified by the Illinois EPA for the affected unit(s) conducted for particulate matter within 120 days of a written request for such testing by the Illinois EPA or such later date agreed to by the Illinois EPA.

b. These performance tests shall be conducted in accordance with the relevant requirements of Condition 2.4.7-1, except that a detailed test plan need not be submitted if testing will be conducted in accordance with the previous test plan.

Note: Other requirements for periodic performance tests may be established in the CAAPP permit for the plant.

2.4.8 Periodic Observations for Visible Emissions and Opacity and Observations of Equipment

a. Pursuant to 40 CFR 60.255(f), for the affected units that are subject to the Coal Preparation NSPS, the Permittee shall either implement an approved monitoring plan in accordance with 40 CFR 60.255(f)(2), or comply with the requirements of 40 CFR 60.255(f)(1), including the following:

i. Conduct daily observations for visible emissions, with observations for opacity conducted if the visible emissions are observed and actions to eliminate such emissions are not completed within 24 hours.

ii. Conduct monthly observations of process and control equipment, with expeditious performance of necessary maintenance if deficiencies are observed.

iii. Conduct observations for opacity in accordance with 40 CFR 60.255(b)(2) at least once every 5 calendar years.

b. For affected units handling scrap tires, during each month in which tires are handled by the plant, the Permittee shall conduct monthly observations of process equipment and control practices, with expeditious performance of necessary maintenance if deficiencies are observed.

c. The Permittee shall keep records documenting the performance of these observations and the actions taken.

2.4.9 Recordkeeping Requirements

a. The Permittee shall maintain the records required by the Coal Preparation NESHAP for the affected units.

b. The Permittee shall keep file(s) or other records containing the following information for the affected units, with supporting information, which information shall be kept up to date:

i. Information related to the dust collection equipment associated with the affected units, including the design performance specifications, in gr/dscf.

ii. Documentation for the emission factors that are used to determine emissions from the different units.

iii. The maximum operating capacity of each affected unit (tons/hour).

iv. A demonstration that confirms each affected unit is able to comply with the hourly limits in Condition 2.4.3-2(a) and 2.4.6 (Attachment 2, Table IV) at the maximum process weight rate at which the unit can be operated (tons/hour), with supporting emission calculations and documentation for the emission factors being relied upon by the Permittee.

v. Operation of the coal mill (hours/month and hours/year).

c. The Permittee shall maintain records of the amounts of solid fuels received at the plant (tons/month and tons/year, by type of material).

d. The Permittee shall maintain records for deviations from requirements of this permit for the affected unit, which shall contain the information specified in Condition 3.3.

e. The Permittee shall maintain records of the emissions of $PM/PM_{10}/PM_{2.5}$ and HAP from the affected units (tons/month and tons/year), based on operating data and appropriate emission factors, with supporting documentation.

2.4.10 Reporting Requirements

a. The Permittee shall fulfill all applicable notification and reporting requirements of the Portland Cement NESHAP and Coal Preparation NSPS for the affected units.

b. The Permittee shall report deviations from requirements set by this permit for the affected units to the Illinois EPA in accordance with Condition 3.3.

2.5 RAW MATERIAL AND FUEL RECEIVING HOPPERS

2.5.1 Description of Emission Units

Raw materials and solid fuel will also be able to be received at the plant at dump hoppers. The dump hopper for raw materials will have the capability to receive material both by truck and rail. The dump hopper for fuel will only have the capability to receive material by truck. The Permittee indicates that these dump hoppers will be needed to address interruptions in the normal means of transport and receiving of materials, most notably interruptions in direct delivery of limestone by barge during winter months. Emission of particulate matter from these dump hoppers will be controlled by the properties of the material being handled and spray dust suppressions systems.

The “affected units” for the purpose of the unit-specific conditions in this section are the dump hoppers described above.

2.5.2 Control Technology Determination

a. The opacity of fugitive particulate matter emissions from each affected unit shall not exceed 5 percent opacity.

b. Particulate matter emissions from the affected units shall be controlled by either:

   i. The presence of sufficient moisture in the material being received to prevent visible emissions directly from the materials during receiving; or

   ii. The use of water or dust suppressant spray systems during receiving of a material.

c. Particulate matter emissions from the affected units shall be controlled by cleanup of spilled material that could become airborne if it dried or were subject to vehicle traffic as part of a Program for Control of Fugitive Dust. (See Condition 2.6.4(a).)

2.5.3-1 Applicable Federal Emission Standards

a. The affected unit for raw material is subject to the Portland Cement NSPS and the General Provisions of the NSPS, 40 CFR 60 Subpart A. Pursuant to 40 CFR 60.62(c), except as provided by 40 CFR 60.8(c), on and after the date on which the performance test required to be conducted by 40 CFR 60.8(a) is completed, the affected raw material unit shall not discharge into the atmosphere any gases which exhibit 10 percent opacity, or greater.

b. The affected unit for raw material is subject to the Portland Cement NESHAP and the General Provisions of the NESHAP, 40 CFR 63 Subpart A, but no emission standards or related requirements apply.

2.5.3-2 Applicable State Emission Standards

a. The emissions of particulate matter from each affected unit shall comply with the applicable limits pursuant to 35 IAC 212.321, which rule limits emissions based on the process weight rate of emission units.

b. The affected raw material unit is subject to 35 IAC 212.421, which limits opacity to no more than 10 percent.

2.5.4 Non-Applicability Provisions

a. The affected unit handling fuel is not subject to the Coal Preparation NSPS because emission units that receive coal are not affected facilities for purposes of this NSPS.

2.5.5 Operational Requirements and Limits

a. The Permittee shall implement and maintain control practices and measures for the affected units, such as unloading practices and the level of natural surface moisture in the material that is being unloaded, that provide assurance of compliance with the applicable emission standards in Conditions 2.5.3-1, 2.5.3-2 and the limits in Condition 2.5.6.

b. Pursuant to 40 CFR 63.1347, the Permittee shall prepare and implement a written Operation and Maintenance Plan for the affected unit for raw material, as follows:

i. This plan shall include procedures for proper operation and maintenance of this unit in order to meet the requirement in Condition 2.5.5(c) below and the corrective actions that will be taken when visible emissions are present during the observations of visible emissions required for the unit by Condition 2.5.8. The Permittee shall submit its initial plan to the Illinois EPA for review and approval as part of its initial application for a CAAPP permit.

ii. Failure to comply with any provision of the Operation and Maintenance Plan developed in accordance with 40 CFR 63.1347 for the unit is a violation of the Portland Cement NESHAP.

c. Pursuant to 40 CFR 63.1348(d) and 60.11(d), at all times the Permittee shall, to the extent practicable, maintain and operate the affected unit that handles raw material,

including associated air pollution control equipment, in a manner consistent with safety and good air pollution control practice for minimizing emissions.

d. For the affected unit for fuel, the Permittee shall also prepare and implement an Operation and Maintenance Plan and maintain and operate this unit in accordance with good air pollution control practice, as provided by Conditions 2.5.5(b)(i) and (c), respectively.

2.5.6 Emission Limits

Emissions of particulate matter from the affected units shall not exceed the limits in Attachment 2, Table V.

2.5.7 Initial Performance Observations for Opacity

a. Pursuant to the Portland Cement NSPS, as provided by 40 CFR 60.11(e)(1), the Permittee shall have initial observations for opacity conducted for the affected unit that handles raw material in accordance with 40 CFR 60.11(b) and (e), using the applicable methods and procedures specified by 40 CFR 60.64(a) and (b)(3).

b. For the affected unit for fuel, the Permittee shall also conduct observations for opacity in accordance with Condition 2.5.7(a).

c. Notifications and reports for these opacity observations shall be submitted to the Illinois EPA in accordance with Condition 3.2.

2.5.8 Periodic Observations for Visible Emissions and Opacity

a. i. Pursuant to 40 CFR 60.64(b)(4) and 63.1350(f), the Permittee shall conduct periodic observations for the affected unit for raw materials for visible emissions, and, if visible emissions are observed, opacity from the units, in accordance with Method 22 and Method 9, respectively.

ii. Pursuant to 40 CFR 60.64(b)(4) and 63.1350(f)(3), if visible emissions are observed during these observations the Permittee shall initiate, within one-hour, the corrective actions specified in its Operation and Maintenance Plan for the unit. (See Condition 2.5.5(b).)

b. For the affected unit for fuel, the Permittee shall also conduct observations and implement corrective actions in accordance with Condition 2.5.8(a).

c. The Permittee shall keep records documenting the performance of these observations and the actions taken.

2.5.9 Recordkeeping Requirements

a. For the affected unit for raw materials, the Permittee shall maintain all records required by the Portland Cement NESHAP and NSPS including the records required by 40 CFR 60.7 and 60.65.

b. The Permittee shall keep file(s) or other records containing the following information for the affected units, with supporting information, which information shall be kept up to date:

   i. Records of the maximum process weight rate of each affected unit (tons/hour).

   ii. A demonstration that confirms that the control measures for each affected unit are sufficient to assure compliance with the hourly limits in Conditions 2.5.3-2 and 2.5.6 (Attachment 2, Table V) at the maximum process weight rate at which each affected unit can be operated (tons/hour), with supporting emission calculations and documentation for the emission factors and the efficiency of the control measures being relied upon by the Permittee. This demonstration shall be developed using emission factors for controlled PM emissions published by USEPA and the effectiveness of control measures and practices published by USEPA.

   iii. Documentation for the emission factors and efficiencies of control measures that it is using to determine the emissions from affected units.

c. The Permittee shall maintain operating records of the amounts of material received by each affected unit (tons/month and tons/year, by type of material).

d. The Permittee shall maintain records of the following for each incident when any affected unit is operated without the required control measures.

   i. A description of the incident, including the required or established control measures that were not present or implemented; the control measures that were present, if any; other control measures or mitigation measures that were implemented, if any; and the magnitude of the PM emissions during the incident.

   ii. The length of time after the incident was identified that the affected unit(s) continued to operate before established control measures were in place or the operations were shutdown (to resume operation

only after required or established control measures were in place) and, if this time was more than one hour, an explanation why this time was not shorter, including a description of any mitigation measures that were implemented during the incident.

iii. The estimated total duration of the incident, i.e., the total length of time that the affected unit(s) ran without established control measures and the estimated amount of material received during the incident.

iv. A discussion whether any applicable emission standards or limits, as listed in Conditions 2.5.3-1, 2.5.3-2, and 2.5.6, may have been violated during the incident, with supporting explanation.

e. The Permittee shall keep records of the emissions of $PM/PM_{10}/PM_{2.5}$ from each affected unit (tons/month and tons/year), based on operating data and appropriate emission factors, with supporting documentation.

2.5.10 Reporting Requirements

a. The Permittee shall fulfill all applicable notification and reporting requirements of 40 CFR 60 Subparts F for the affected units.

b. The Permittee shall report deviations from requirements set by this permit for the affected units to the Illinois EPA in accordance with Condition 3.3.

2.6 UNIT-SPECIFIC CONDITIONS FOR ROADWAYS AND OTHER SOURCES OF FUGITIVE DUST

2.6.1 Description of Emission Units

The “affected units” for the purpose of these unit-specific conditions are roadways, parking areas, and other open areas at the plant, which may be sources of fugitive particulate matter due to vehicle traffic or windblown dust. These emissions are controlled by paving and implementation of work practices to prevent the generation and emissions of particulate matter.

2.6.2 Control Technology Determination

a. The opacity of fugitive particulate matter emissions from the affected units shall not exceed 5 percent opacity.

b. Good air pollution control practices shall be implemented to minimize dust emissions from affected units. After construction activity is complete, these practices shall provide for pavement on all regularly traveled roads and treatment (vacuum sweeping) of roadways and areas that are routinely subject to vehicle traffic.

c. The handling of material at the plant that is collected during treatment of affected units shall be enclosed or shall utilize spraying, pelletizing, screw conveying or other equivalent methods to control particulate matter emissions.

2.6.3 Applicable State Emission Standards

a. Pursuant to 35 IAC 212.306, all normal traffic pattern roads and parking facilities at the plant shall be paved or treated with water, oils or chemical dust suppressants. All paved areas shall be cleaned on a regular basis. All areas treated with water, oils, or chemical dust suppressants shall have the treatment applied on a regular basis, as needed, in accordance with the operating program required by 35 IAC 212.309, 212.310 and 212.312.

2.6.4 Operational and Production Limits and Work Practices

a. The Permittee shall carry out control of fugitive particulate emissions from affected units in accordance with a written Operating Program describing the measures being implemented in accordance with Conditions 2.6.2 and 2.6.3 to control emissions at each unit with the potential to generate significant quantities of such emissions, which program shall be kept current.

i. The written Operating Program shall include:

A. Maps or diagrams indicating the location of affected units with the potential to generate

significant quantities of fugitive particulate matter, with description of the unit (length, width, surface material, etc.) and volume and nature of expected vehicle traffic, or other activity on such unit, and an identification of any roadways that are not considered routinely traveled, with justification.

B. A detailed description of the emissions control technique(s) (e.g., wet suppression/sweeping) for the affected unit, including: typical application rate; type and concentration of additives; normal frequency with which measures would be implemented; circumstances, in which the measure would not be implemented, e.g., recent precipitation; triggers for additional control, e.g., observation of 4 percent opacity; and calculated control efficiency for PM emissions.

ii. The Permittee shall submit copies of the written Operating Program to the Illinois EPA for review as follows:

A. A program addressing affected units during the construction of the plant shall be submitted within 30 days of beginning actual construction of the plant.

B. A program addressing affected units with the operation of the affected plant shall be submitted within 90 days of initial start up of the plant.

C. Significant amendments to the program by the Permittee shall be submitted within 30 days of the date that the amendment is made.

iii. A revised Operating Program shall be submitted to the Illinois EPA for review within 90 days of a request from the Illinois EPA for revision to address observed deficiencies in control of fugitive particulate matter emissions.

b. The Permittee shall conduct inspections of affected units on at least a weekly basis during construction of the plant and on a monthly basis thereafter with personnel not directly responsible for the day-to-day implementation of control measures for fugitive dust, for the specific purpose of verifying that the measures identified in the operating program and other measures required to control emissions from affected units are being properly implemented.

2.6.5 Emission Limits

Emissions of $PM/PM_{10}/PM_{2.5}$ from the affected units shall not exceed 8.5, 1.7, and 0.24 tons/year, total, respectively. Compliance with these limits shall be determined from the amount and nature of vehicle traffic at the plant, specific operating information for affected units, and appropriate emission determination methodology published by USEPA.

2.6.6-1 Opacity Observations

a. The Permittee shall conduct observations, which include a series of observations of the opacity of fugitive emissions from the affected units as follows to determine the range of opacity from affected units and the change in opacity as related to the amount and nature of vehicle traffic and implementation of the Operating Program. For performance observations, the Permittee shall submit test plans, test notifications and test reports, as specified by Condition 3.1.

   i. Performance observations shall first be completed no later than 30 days after the date that construction of the kiln is completed, provided, however, that observation may be deferred as long as heavy construction equipment is on the site, preventing paving of roadways, in conjunction with the measurements of silt loading on the affected units required by Condition 2.6.6-2.

   ii. Performance observations shall be repeated within 30 days in the event of changes involving affected units that would act to increase opacity (so that observations that are representative of the current circumstances of the affected units have not been conducted), including changes in the amount or type of traffic on affected units, changes in the standard operating practices for affected units, such as application of salt or traction material during cold weather, and changes in the Operating Program for affected units.

b. Compliance observations shall be conducted for affected units on at least a quarterly basis to verify opacity levels and confirm the effectiveness of the Operating Program in controlling emissions.

c. Upon written request by the Illinois EPA, the Permittee shall conduct performance or compliance observations, as specified in the request. Unless another date is agreed to by the Illinois EPA, performance observations shall be completed within 30 days and compliance observations shall be completed within 5 days of the Illinois EPA’s request.

2.6.6-2 Measurement of Silt Loading

a. The Permittee shall conduct measurements of the surface silt loading on various affected roadway segments and parking areas as follows. This sampling and analysis shall be conducted using standard methodology, such as the "Procedures for Sampling Surface/Bulk Dust Loading," Appendix C.1 in USEPA's *Compilation of Air Pollutant Emission Factors*, AP-42. A series of samples shall be taken to determine the average silt loading and address the change in silt loadings as related to the amount and nature of vehicle traffic and implementation of the Operating Program.

b. Measurements shall be performed by the following dates:

   i. Measurements shall first be completed no later than 30 days after construction is completed, provided, however, that measurement may be extended 90 days as long as heavy construction equipment is on site preventing accurate measurement of silt loading.

   ii. Measurements shall be repeated within 30 days in the event of changes involving affected units that would act to increase silt loading (so that data that is representative of the current circumstances of the affected units has not been collected), including changes in the amount or type of traffic on affected units, changes in the standard operating practices for affected units, such as application of salt or traction material during cold weather, and changes in the Operating Program for affected units.

   iii. Upon written request by the Illinois EPA, the Permittee shall conduct measurements, as specified in the request, which shall be completed within 75 days of the Illinois EPA's request.

c. The Permittee shall submit test plans, test notifications and test reports for these measurements as specified by Condition 3.1, provided, however, that once a test plan has been accepted by the Illinois EPA, a new test plan need not be submitted if the accepted plan will be followed unless a new test plan is requested by the Illinois EPA.

d. The Permittee shall keep records for the measurements of silt loadings conducted for affected units pursuant to this condition, including records for the sampling and analysis activities and results.

2.6.7 Inspections

a. The Permittee shall conduct inspections of the affected units on a monthly basis with personnel who do not implement control measures for fugitive dust on a day-to-day basis for the specific purpose of verifying that the measures identified in the program and other measures required to control emissions from affected units are being properly implemented.

b. On at least a quarterly basis, these inspections shall include observations of the opacity of emissions from affected units in accordance with 35 IAC 212.109.

c. The Permittee shall keep records documenting the performance of these inspections and their findings.

2.6.8 Recordkeeping Requirements

a. The Permittee shall keep a file that contains:

i. The operating factors, if any, used to determine the amount of activity associated with the affected units or the PM emissions from the affected units, with supporting documentation.

ii. The designated $PM/PM_{10}/PM_{2.5}$ emission rate, in tons/year, from each category of affected units (e.g., traffic associated with shipment of cement, receiving raw materials, and receiving fuel), with supporting calculations and documentation. The sum of these rates shall not exceed the annual limits on emissions in Condition 2.6.5.

b. The Permittee shall maintain records documenting implementation of the Operating Program required by 35 IAC 212.309 (Condition 2.6.4(a)), including the information specified by 35 IAC 212.316(g) and the following:

i. Records for each treatment of an affected unit or units:

A. The identity of the affected unit(s), the date and time, and the identification of the truck(s) or treatment equipment used;

B. For application of dust suppressant by truck: target application rate or truck speed during application, total quantity of water or chemical used and, for application of a chemical or chemical solution, the identity of the chemical and concentration, if applicable;

C. For sweeping or cleaning: Identity of equipment used and identification of any deficiencies in the condition of equipment; and

D. For other type of treatment: A description of the action that was taken.

ii. Records for each incident when control measures were not implemented and each incident when additional control measures were implemented due to particular activities, including description, date, a statement of explanation, and expected duration of such circumstances.

c. The Permittee shall record any period during which an affected unit was not properly controlled as required by this permit, which records shall include at least the information specified by Condition 3.3 and an estimate of the additional $PM/PM_{10}/PM_{2.5}$ emissions that resulted, if any, with supporting calculations.

d. The Permittee shall maintain records for the $PM/PM_{10}/PM_{2.5}$ emissions of the affected units, based on operating data for the plant, the above records for the affected units including data for implementation of the Operating Program, and appropriate USEPA emission estimation methodology and emission factors, with supporting calculations.

2.6.9 Reporting Requirements

a. The Permittee shall fulfill all applicable reporting requirements of 35 IAC 212.316(g)(1) and (5) for the affected units.

b. The Permittee shall report deviations from requirements set by this permit for the affected units to the Illinois EPA in accordance with Condition 3.3

SECTION 3: GENERAL PERMIT CONDITIONS

3.1 General Requirements for Emission Testing

a. i. Emission testing for emission units at the plant that is required by the NESHAP shall be conducted in accordance with the applicable requirements of the General Provisions of the NESHAP for testing, including 40 CFR 63.7, Performance testing requirements.

ii. Emission testing for emission units at the plant that is required by the NSPS shall be conducted in accordance with the applicable requirements of the General Provisions of the NSPS for testing, including 40 CFR 60.8, Performance Tests.

iii. Other emission testing for emission units at the plant that is required by this permit shall be conducted in accordance with the relevant provisions of state rules dealing with emission testing, including 25 IAC Part 283, General Procedures for Emission Test Averaging.

b. i. At least 60 days prior to the actual date of initial emission testing required by this permit, a written test plan shall be submitted to the Illinois EPA for review and comment. This plan shall include the following information at a minimum:

A. For emission testing required by the NESHAP, the information required in a test plan by 40 CFR 63.7(c)(2)(i).

B. For all emission testing:

1. The person(s) who will be performing sampling and analysis and their experience with similar tests.

2. The specific conditions, e.g., operating rate and control device operating conditions, under which testing shall be performed including a discussion of why these conditions will be representative and the means by which the operating parameters will be determined.

3. The specific determinations of emissions that are intended to be made, including sampling and monitoring locations.

4. The test method(s) that will be used, with the specific analysis method if the method can be used with different analysis methods.

ii. Unless specifically requested by the Illinois EPA, the Permittee need not submit a test plan for subsequent emissions testing that will be conducted for emission unit(s) in accordance with the procedures used for previous tests accepted by the Illinois EPA or the previous test plan submitted to and approved by the Illinois EPA, provided that the Permittee's notification for testing, as required below, contains the information specified by 35 IAC 283.220(d)(1)(A), (B) and (C).

c. The Permittee shall notify the Illinois EPA prior to conducting emissions testing required by this permit to enable the Illinois EPA to observe the testing. These notifications shall identify the testing that is planned to be conducted, including the emission unit(s) that will be tested, the parties that will be performing testing and the set or sets of operating conditions under which testing will be performed.

i. For emission testing required by the NESHAP, this notification shall be submitted in accordance with 40 CFR 63.7(b), i.e., at least 60 days before the test is initially scheduled to begin.

ii. For emission testing required by the NSPS, this notification shall be submitted in accordance with 40 CFR 60.8(d, i.e., at least 30 days before the test is initially scheduled to begin.

iii. For other emission tests, notification for the expected date of testing shall be submitted a minimum of 30 days prior to the expected date. Notification of the actual date and expected time of testing shall be submitted a minimum of 5 working days prior to the actual date of testing. Notwithstanding, For a particular test, the Illinois EPA may at its discretion accept shorter advance notification provided that it does not interfere with the Illinois EPA'S ability to observe testing.

d. Emission testing for particulate matter required by the NESHAP or NSPS shall be conducted using the applicable methods and procedures specified by the NESHAP or NSPS. The following methods and procedures shall be used for other testing for emissions of particulate matter required by this permit unless other methods adopted by or being developed by USEPA are specified or approved by the Illinois EPA as part of its review of the test plan.

Location of Sample Points	Method 1
Gas Flow and Velocity	Method 2
Flue Gas Weight	Method 3 or 3A
Moisture	Method 4
$PM/PM_{10}/PM_{2.5}$ (Filterable)[1]	Method 5[2] or Methods 5[2] and 201 or 201A
PM (Condensable)	Method 202

Notes:

[1] The Permittee may report all PM emissions measured by USEPA Method 5 as PM_{10} and $PM_{2.5}$, in which case separate testing for PM_{10} or $PM_{2.5}$ using USEPA Method 201 or 201A need not be performed.

[2] Method 17 may be used in place of Method 5 if the temperature of the flue gas in the stack is no more than 250°F.

e. Three copies of the Final Reports for required emission testing shall be forwarded to the Illinois EPA within 30 days after the test results are compiled and finalized but not later than 90 days after the date of testing. At a minimum, the Final Reports for testing shall contain:

i. General information, i.e., testing personnel and test dates;

ii. A summary of results;

iii. Description of test method(s), including a description of sampling points, sampling train, analysis equipment, and test schedule;

iv. Quality assurance procedures and results, including preparation of standards, and calibration procedures;

v. The operating conditions of the emission unit and associated control devices during testing; and

vi. Data and calculations, including copies of all raw data sheets and records of laboratory analysis, sample calculations, and data on equipment calibration.

3.2 General Requirements for Performance Observations for Opacity

a. The Permittee shall notify the Illinois EPA at least 7 days in advance of the date and time of performance observations for opacity, in order to allow the Illinois EPA to witness these observations. This notification shall include the name and employer of the qualified observer(s). The Permittee shall promptly notify the Illinois EPA of any changes in the time or date for observations.

Note: Notification is not required for routine opacity observations that are not conducted as part of performance testing.

b. The Permittee shall provide a copy of its observer’s readings to the Illinois EPA at the time of testing, if Illinois EPA personnel are present.

c. The Permittee shall submit a report for the observations to the Illinois EPA within 30 days of the date of observations or with the emission test report, if observations were conducted in conjunction with emissions testing. At a minimum, the report shall include:

i. Date and time of observation.

ii. Name and employer of qualified observer, with a copy of his or her current certification.

iii. Description of observation conditions, including recent weather for observations of opacity from roadways.

iv. Description of the operating conditions of the affected unit.

v. Opacity determinations, accompanied by raw data.

vi. Conclusions.

3.3 General Requirements for Records and Reports for Deviations

a. Except as specified in a particular provision of this permit, records and reports for deviations from applicable permit requirements shall include at least the following information: the date, time and estimated duration of the event; the applicable requirement(s) that were involved; a description of the event; the manner in which the event was identified, if not readily apparent; the probable cause for deviation, if known, including a description of any equipment malfunction/breakdown associated with the event; information on the magnitude of the deviation, including actual emissions or performance in terms of the applicable standard or limit if measured or readily estimated; confirmation that standard procedures were followed or a description of any event-specific corrective actions taken; and a description of any preventative measures taken to prevent future occurrences, if appropriate.

b. Until the affected unit(s) have operated for a full calendar year, deviation reports for unit(s) shall be submitted on a quarterly basis, no later than 45 calendar days from the end of each calendar quarter. Thereafter, until a CAAPP permit is issued for the plant, deviation reports shall be submitted on a semi-annual basis concurrently with the semi-annual compliance reports per the Portland Cement NESHAP, 63.1354(b)(9).

ATTACHMENT 1: SUMMARY OF PERMITTED ANNUAL EMISSIONS OF THE PLANT (TONS/YEAR)

Pollutant	Kiln/In-Line Raw Mill and Clinker Cooler	Finish Mill	Raw Material Handling	Fuel Handling and Coal Mill	Emergency Generators	Roadways	Total
NO_x	866.3	0.44	---	---	5.6	---	872.3
CO	606.4	3.7	---	---	3.1	---	613.1
VOM	94.1	2.6	---	---	0.4	---	97.1
SO_2	231.0	0.1	---	---	0.01	---	231.1
PM	89.4	2.9	33.6	7.5	0.2	8.5	142.1
PM_{10}	89.4	2.9	33.6	6.8	0.2	1.7	134.6
$PM_{2.5}$	89.4	2.9	5.0	1.7	0.2	0.3	99.5
GHG (as CO_2e)	1,100,000	5,200	---	---	623	---	1,105,823
Sulfuric Acid Mist	6.9	---	---	---	---	---	6.9
Lead	0.1875	---	---	---	---	---	0.1875
Hydrogen Chloride	9.5	---	---	---	---	---	9.5
H_2S/TRS/RSC	9.9	---	---	---	---	---	9.9
Mercury	0.0121	---	---	---	---	---	0.0121

ATTACHMENT 2: LISTING OF EMISSION UNITS AND PERMITTED EMISSIONS OF THE PLANT

Table I: Limits for the Kiln/Raw Mill and the Clinker Cooler

Emission Unit	Control Equipment	$PM/PM_{10}/PM_{2.5}$		NO_x		SO_2		CO		VOM		Lead	
		Lb/Hr	T/Yr	Lb/Hr	T/Yr	Lb/Hr	T/Yr	Lb/Hr	T/Yr	Lb/Hr	T/Yr	Lb/Hr	T/Yr
Kiln and In-Line Raw Mill	CFBA, SNCR & Baghouse	21.1	83.6	695.3	866.3	1040	231.0	153.2	606.4	23.8	94.1	0.05	0.19
Clinker Cooler	Baghouse	1.5	5.8	---	---	---	---	---	---	---	---		
	Total	---	89.4	---	866.3	---	231.0	---	606.4	---	94.1		

Emission Unit	Sulfuric Acid Mist		Fluorides		HCl		H_2S/TRS/RSC		Mercury		GHG (as COe)	
	Lb/Hr	T/Yr	Lb/Hr	T/Yr	Lb/Hr	T/Yr	Lb/Hr	T/Yr	Lb/T	T/Yr	Lb/T	T/Yr
Kiln and In-Line Raw Mill	1.74	6.9	0.13	0.52	2.4	9.5	2.5	9.9	0.000021	0.012	1860	1,100,000

Notes:

For NO_x and SO_2, hourly emission limit reflects rate used in the 1-hour NAAQS air quality modeling for the plant. On an annual basis, for other pollutants, the annual limits require average hourly emission rates for all pollutants, except no more than 218.8 pounds of NO_x and 58.4 pounds of SO_2.

Table II: Limits for the Finish Mill

Mode of Operation	PM		PM_{10}		$PM_{2.5}$		NO_x		CO		VOM	
	Lb/Hr	T/Yr	Lb/Hr	T/Yr	Lb/Hr	T/Yr	Lb/Hr	T/Yr	Lb/Hr	T/Yr	Lb/Hr	T/Yr
Burner Off (Cement Production and Grinding Supplemental Materials)	0.6	2.6	0.6	2.6	0.6	2.6	---	---	---	---	0.6	2.4
Burner On[a] (Grinding and Drying of Supplemental Materials)	1.1	0.83?	1.1	0.83?	1.1	0.83?	0.6	0.44	4.9	3.7	0.9	1.4
Total	---	2.9[b]	---	2.9[b]	---	2.9[b]	---	0.44	---	3.7	---	2.6

Notes:

a. Operation with the burner on is restricted to 1500 hours per year.

b. The total is less than the sum of emissions for each mode of operation because it does not “double count” emissions. Rather it reflects operation with the burner on for 1500 hours per year and burner off for the remaining hours in a year.

Table III: Limits for Enclosed Material Handling and Storage Operations

Emission Unit	Unit Design.	Control	PM		PM_{10}		$PM_{2.5}$	
			Lb/Hr	T/Yr	Lb/Hr	T/Yr	Lb/Hr	T/Yr
Barge Limestone Receiving	111BF210	Baghouse	0.294	1.289	0.294	1.289	0.045	0.195
Barge Clay/Coal/Coke Receiving	112BF110	Baghouse	0.186	0.816	0.186	0.816	0.028	0.124
Clay/Coal/Coke Conveyor	112BF210	Baghouse	0.275	1.203	0.275	1.203	0.042	0.082
Barge Receiving of Materials	113BF110	Baghouse	0.202	0.886	0.202	0.886	0.031	0.134
Limestone Reclaim	131BF450	Baghouse	0.137	0.602	0.137	0.602	0.021	0.091
Clay Reclaim Conveyor	132BF450	Baghouse	0.137	0.602	0.137	0.602	0.021	0.091
Limestone Conveyor	141BF110	Baghouse	0.137	0.602	0.137	0.602	0.021	0.091
2nd Ag-Lime Bin	141BF150	Baghouse	0.137	0.602	0.137	0.602	0.021	0.091
Limestone Transport & Bin Feed	141BF250	Baghouse	0.314	1.375	0.314	1.375	0.048	0.208
Clay Feed	142BF110	Baghouse	0.137	0.602	0.137	0.602	0.021	0.091
Clay Conveyor	142BF250	Baghouse	0.153	0.671	0.153	0.671	0.023	0.102
Limestone/Gypsum/Slag Conveyor	212BF150	Baghouse	0.275	1.203	0.275	1.203	0.042	0.182
Limestone/Gypsum/Slag Conveyor Reclaim	232BF450	Baghouse	0.137	0.602	0.137	0.602	0.021	0.091
Limestone/Gypsum/Slag Conveyor	242BF250	Baghouse	0.137	0.602	0.137	0.602	0.021	0.091
Limestone/Gypsum/Slag Conveyor	242BF350	Baghouse	0.137	0.602	0.137	0.602	0.021	0.091
Conveyor to Slag Bin	242BF400	Baghouse	0.269	1.176	0.269	1.176	0.041	0.178
Limestone/Gypsum/Slag Conveyor	242BF500	Baghouse	0.201	0.881	0.201	0.881	0.03	0.133
Limestone/Gypsum/Slag Conveyor	242BF600	Baghouse	0.2	0.876	0.2	0.876	0.03	0.133
Clay Feed	311BF620	Baghouse	0.201	0.881	0.201	0.881	0.03	0.133
Raw Mill Feed Conveyor	321BF020	Baghouse	0.2	0.876	0.2	0.876	0.03	0.133
Raw Mill Reject	321BF290	Baghouse	0.121	0.532	0.121	0.532	0.018	0.081
Raw Material Airslide	321BF550	Baghouse	0.302	1.323	0.302	1.323	0.046	0.2

Emission Unit	Unit Design.	Control	PM		PM_{10}		$PM_{2.5}$	
			Lb/Hr	T/Yr	Lb/Hr	T/Yr	Lb/Hr	T/Yr
Kiln Dust Screw Conveyor	331BF580	Baghouse	0.102	0.449	0.102	0.449	0.016	0.068
Kiln Dust Transfer	341BF400	Baghouse	0.03	0.132	0.03	0.132	0.005	0.02
Raw Material Bucket Elevator	341BF410	Baghouse	0.051	0.224	0.051	0.224	0.008	0.034
Raw Material Airslide	351BF310	Baghouse	0.063	0.276	0.063	0.276	0.01	0.042
Raw Material Bucket Elevator	351BF450	Baghouse	0.069	0.303	0.069	0.303	0.01	0.046
Slag Bin	351BF520	Baghouse	0.152	0.667	0.152	0.667	0.023	0.101
Clinker Cooler Screw Conveyor	471BF110	Baghouse	0.118	0.518	0.118	0.518	0.018	0.078
Clinker Conveyor and Silo	471BF150	Baghouse	0.094	0.413	0.094	0.413	0.014	0.063
Clinker Conveyor	471BF450	Baghouse	0.097	0.423	0.097	0.423	0.015	0.064
Clinker Conveyor and Silo	481BF450	Baghouse	0.058	0.254	0.058	0.254	0.009	0.039
Additive Bins	511BF610	Baghouse	0.201	0.881	0.201	0.881	0.03	0.133
Clinker Bucket Elevator	531BF020	Baghouse	0.154	0.674	0.154	0.674	0.023	0.102
Clinker Conveyor	531BF290	Baghouse	0.134	0.588	0.134	0.588	0.02	0.089
Finish Mill Baghouse Hopper	531BF400	Baghouse	0.03	0.13	0.03	0.13	0.004	0.02
Cement Airslide	531BF640	Baghouse	0.07	0.308	0.07	0.308	0.011	0.047
Cement Bucket Elevator	541BF020	Baghouse	0.038	0.166	0.038	0.166	0.006	0.025
Cement Silo	611BF620	Baghouse	0.03	0.133	0.03	0.133	0.005	0.02
Cement Airslide	612BF610	Baghouse	0.102	0.445	0.102	0.445	0.015	0.067
Cement Silo	612BF620	Baghouse	0.03	0.133	0.03	0.133	0.005	0.02
Cement Silo	614BF620	Baghouse	0.03	0.133	0.03	0.133	0.005	0.02
Cement Silo	615BF610	Baghouse	0.102	0.445	0.102	0.445	0.015	0.067
Cement Silo	615BF620	Baghouse	0.03	0.133	0.03	0.133	0.005	0.02
Cement Airslide	621BF165	Baghouse	0.03	0.133	0.03	0.133	0.005	0.02

Emission Unit	Unit Design.	Control	PM		PM_{10}		$PM_{2.5}$	
			Lb/Hr	T/Yr	Lb/Hr	T/Yr	Lb/Hr	T/Yr
Cement Airslide	622BF165	Baghouse	0.03	0.133	0.03	0.133	0.005	0.02
Cement Silo	622BF420	Baghouse	0.03	0.133	0.03	0.133	0.005	0.02
Cement Airslide	624BF165	Baghouse	0.03	0.133	0.03	0.133	0.005	0.02
Cement Silo	624BF420	Baghouse	0.03	0.133	0.03	0.133	0.005	0.02
Cement Airslide	625BF165	Baghouse	0.03	0.133	0.03	0.133	0.005	0.02
Cement Silo	627BF410	Baghouse	0.03	0.133	0.03	0.133	0.005	0.02
Cement Silo	628BF410	Baghouse	0.03	0.133	0.03	0.133	0.005	0.02
Cement Bin for Barge Loading	631BF050	Baghouse	0.624	2.732	0.624	2.732	0.094	0.414
Cement Transport to Barge	631BF290	Baghouse	0.232	1.015	0.232	1.015	0.035	0.154
Cement Transport to Barge	631BF305	Baghouse	0.212	0.927	0.212	0.927	0.032	0.14
Loading Spout	631BF525	Baghouse	0.069	0.3	0.069	0.3	0.01	0.045
Loading Spout	631BF535	Baghouse	0.069	0.3	0.069	0.3	0.01	0.045
Lime Handler for GSA	GSALIME	Baghouse	0.069	0.301	0.069	0.301	0.01	0.046
Spent Handler for GSA	GSASPENT	Baghouse	0.069	0.301	0.069	0.301	0.01	0.046
		Total	---	33.6	---	33.6	---	5.0

Table IV: Limits for Fuel Handling Operations and the Coal Mill

Emission Unit	Unit Design.	Control	PM		PM_{10}		$PM_{2.5}$	
			Lb/Hr	T/Yr	Lb/Hr	T/Yr	Lb/Hr	T/Yr
Truck Coal/Coke Receiving Conveyor	211BF210	Baghouse	0.18	0.80	0.18	0.80	0.03	0.12
Coal/Coke Hopper to Conveyor	241BF110	Baghouse	0.19	0.82	0.19	0.82	0.03	0.12
Coal/Coke Bin	461BF020	Baghouse	0.27	1.18	0.27	1.18	0.04	0.18
Crushed Coal/Coke Screw Conveyor	461BF560	Baghouse	0.01	0.04	0.005	0.02	0.001	0.004
Coal/Coke Truck Hopper Transfer	---	Baghouse	0.18	0.80	0.18	0.80	0.03	0.12
Coal Mill		Baghouse	1.0	3.8	0.8	3.2	0.30	1.10
		Total	---	7.44	---	6.82	---	1.64

Table V: Limits for the Raw Material and Fuel Receiving Hoppers

Emission Unit	Control	PM		PM_{10}		$PM_{2.5}$	
		Lb/Hr	T/Yr	Lb/Hr	T/Yr	Lb/Hr	T/Yr
Rail/Truck Material Receiving Hoppers	Wet Suppression	0.02	0.07	0.01	0.03	0.001	0.005
Fuel Receiving Hopper	Wet Suppression	0.01	0.04	0.004	0.02	0.001	0.003
	Total	---	0.07	---	0.03	---	0.005

ATTACHMENT 3

STANDARD PERMIT CONDITIONS

STANDARD CONDITIONS FOR CONSTRUCTION/DEVELOPMENT PERMITS
ISSUED BY THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

The Illinois Environmental Protection Act (Illinois Revised Statutes, Chapter 111-1/2, Section 1039) authorizes the Illinois Environmental Protection Agency to impose conditions on permits which it issues.

The following conditions are applicable unless superseded by special condition(s).

1. Unless this permit has been extended or it has been voided by a newly issued permit, this permit will expire one year from the date of issuance, unless a continuous program of construction or development on this project has started by such time.

2. The construction or development covered by this permit shall be done in compliance with applicable provisions of the Illinois Environmental Protection Act and Regulations adopted by the Illinois Pollution Control Board.

3. There shall be no deviations from the approved plans and specifications unless a written request for modification, along with plans and specifications as required, has been submitted to the Illinois EPA and a supplemental written permit issued.

4. The Permittee shall allow any duly authorized agent of the Illinois EPA, upon the presentation of credentials, at reasonable times:

   a. To enter the Permittee’s property where actual or potential effluent, emission or noise sources are located or where any activity is to be conducted pursuant to this permit;

   b. To have access to and to copy any records required to be kept under the terms and conditions of this permit;

   c. To inspect, including during any hours of operation of equipment constructed or operated under this permit, such equipment and any equipment required to be kept, used, operated, calibrated and maintained under this permit;

   d. To obtain and remove samples of any discharge or emissions of pollutants; and

   e. To enter and utilize any photographic, recording, testing, monitoring or other equipment for the purpose of preserving, testing, monitoring, or recording any activity, discharge, or emission authorized by this permit.

5. The issuance of this permit:

   a. Shall not be considered as in any manner affecting the title of the premises upon which the permitted facilities are to be located;

   b. Does not release the Permittee from any liability for damage to person or property caused by or resulting from the construction, maintenance, or operation of the proposed facilities;

   c. Does not release the Permittee from compliance with other applicable statutes and regulations of the United States, of the State of Illinois, or with applicable local laws, ordinances and regulations;

   d. Does not take into consideration or attest to the structural stability of any units or parts of the project; and

   e. In no manner implies or suggests that the Illinois EPA (or its officers, agents or employees) assumes any liability, directly or indirectly, for any loss due to damage, installation, maintenance, or operation of the proposed equipment or facility.

6a. Unless a joint construction/operation permit has been issued, a permit for operation shall be obtained from the Illinois EPA before the equipment covered by this permit is placed into operation.

b. For purposes of shakedown and testing, unless otherwise specified by a special permit condition, the equipment covered under this permit may be operated for a period not to exceed thirty (30) days.

7. The Illinois EPA may file a complaint with the Board for modification, suspension or revocation of a permit,

   a. Upon discovery that the permit application contained misrepresentations, misinformation or false statement or that all relevant facts were not disclosed; or

   b. Upon finding that any standard or special conditions have been violated; or

   c. Upon any violations of the Environmental Protection Act or any regulation effective thereunder as a result of the construction or development authorized by this permit.