DRAFT AIR CONSTRUCTION PERMIT NO. 0530010-029-AC (PSD-FL-384)

PERMITTEE:

CEMEX Cement, Inc.
16301 Ponce De Leon Boulevard
Brooksville, Florida 34614-0849

Authorized Representative:
Michael Gonzales, Plant Manager

Air Permit No 0530010-029-AC
PSD Permit No. PSD-FL-384
Brooksville Cement Plant
Facility ID No. 0530010
SIC No. 3241 Cement, Hydraulic,
Cement Processing Line No. 3
Permit Expires: June 30, 2011

PROJECT AND LOCATION

This permit authorizes the construction of a 1,734,500 tons per year portland cement line designated as Line 3. The new equipment will be installed at the existing CEMEX Cement Brooksville Plant which is located in Hernando County at 16301 Ponce De Leon Boulevard northwest of Brooksville, Florida.

STATEMENT OF BASIS

The permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.) and Title 40, Parts 60 and 63 of the Code of Federal Regulations (CFR). The permittee is authorized to install the proposed equipment in accordance with the conditions of this permit and as described in the application, approved drawings, plans, and other documents on file with the Department.

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Joseph Kahn, P.E., Director (Date)
Division of Air Resource Management

FACILITY AND PROJECT DESCRIPTION

CEMEX Cement Company (CEMEX) operates the Brooksville Cement Plant which is a portland cement facility (SIC 3241 Cement, Hydraulic). The plant currently consists of:

Two portland cement lines designated as Lines 1 and 2, including two Polysius GEPOL preheater kilns (Kilns 1 and 2), two clinker coolers, associated raw mills, finish mills, cement and clinker handling equipment, coal handling equipment, silos, air pollution control devices, raw material extraction and receiving facilities and product shipping facilities.

This project authorizes the addition of a third portland cement line (Line 3). The key components are Clinker Cooler No. 3 and the pyroprocessing system that includes Kiln No. 3 with a preheater, calciner and in-line raw mill. The production capacity of Line 3 is 1,405,100 tons per year (TPY) of clinker and, after addition of slag, limestone dust and gypsum, 1,734,500 TPY of cement. Associated emission units are listed in the following table:

EU ID	Emissions Unit Description
031	Raw Material Quarrying, Crushing and Storage System
033	Raw Materials Receiving, Handling and Storage System
034	Raw Mix and Raw Meal Handling and Storage System
035	Pyroprocessing System. Kiln No. 3 with preheater, calciner, in-line raw mill and air heater
036	Clinker Cooler No. 3
037	Clinker Handling and Storage Clinker Silo
038	Finish Mill Feed Transportation
039	Finish Mill Processing and Recovery
040	Cement Silos & Loadout
041	Coal and Petroleum Coke Mill
042	Fugitive Emissions from Vehicle Travel and Miscellaneous Sources
043	Non-hazardous Waste Fuel Handling

Line 3 will have two main stacks with baghouses to control particulate emissions from the pyroprocessing system and the clinker cooler. Other key environmental equipment includes:

- An ammonia injection system to reduce NO_X from the pyroprocessing system;
- Continuous emissions monitoring systems (CEMS) to measure NO_X, SO_2, CO, VOC and Hg; and
- Continuous opacity monitoring systems (COMS) on the main stack and clinker cooler stack.

REGULATORY CLASSIFICATION

Title I, Section 111, Clean Air Act (CAA): This facility is subject to certain Standards of Performance for New Stationary Sources. They are adopted and incorporated by reference in Rule 62-204.800, F.A.C. These include:

- 40 CFR 60, Subpart A - General Provisions;
- 40 CFR 60, Subpart F - Standards of Performance for Portland Cement Plants. Certain requirements from Subpart F are replaced by requirements from 40 CFR 63, Subpart LLL listed below;
- 40 CFR 60, Subpart Y - Standards of Performance for Coal Preparation Plants; and
- 40 CFR 60, Subpart OOO – Standards of Performance for Non-Metallic Mineral Processing Plants.

Title I, Section 112 CAA: The facility has the potential to emit 10 tons per year or more of any one hazardous air pollutant (HAP) or 25 tons per year or more of any combination of HAPs. This facility is subject to the Major Source provisions of:

- 40 CFR 63 Subparts A - National Emission Standards for Hazardous Air Pollutants – General Provisions.
- 40 CFR, Subpart LLL - National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry.

Title I, Part C (PSD): The facility is located in an area designated as "attainment", "maintenance", or "unclassifiable" for each pollutant subject to a National Ambient Air Quality Standard. The facility is considered a "portland cement plant", which is one of the 28 Prevention of Significant Deterioration (PSD) source categories with the lower PSD applicability threshold of 100 tons per year. Potential emissions of at least one regulated pollutant exceed 100 tons per year. Therefore, the facility is classified as a PSD-major source of air pollution with respect to Rule 62-212.400, F.A.C., Prevention of Significant Deterioration.

Title IV, CAA: The facility does not operate any units subject to the Acid Rain provisions of the Clean Air Act.

Title V, CAA: The facility is a Title V or "Major Source" of air pollution because the potential emissions of at least one regulated pollutant exceed 100 tons per year or because it is a major source of HAPS. Regulated pollutants include pollutants such as carbon monoxide (CO), nitrogen oxides (NO_X), particulate matter (PM/PM_{10}), sulfur dioxide (SO_2), and volatile organic compounds (VOC).

State Rules: The cement plant is subject to state Rule 62-296.407, F.A.C. (Portland Cement Plants).

RELEVANT DOCUMENTS

The following relevant documents are not a part of this permit, but helped form the basis for this permitting action: the permit application received on October 27, 2006 and additional information received to make it complete; the draft permit package including the Department's Technical Evaluation and Preliminary Determination dated July 17, 2007; publication and comments; and the Department's Final Determination issued

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1. Permitting Authority: The Permitting Authority for this project is the Bureau of Air Regulation in the Division of Air Resource Management of the Florida Department of Environmental Protection. The mailing address for the Bureau of Air Regulation is 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400.
2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Air Resources Section of the Department's Southwest District Office. The mailing address and phone number of the Southwest District Office are: 13051 N. Telecom Parkway, Temple Terrace, Florida 33637-0926 and (813) 632-7600.
3. Appendices: The following Appendices are attached as part of this permit: Appendix BD (Best Available Control Technology Determination); Appendix C (Common Conditions); Appendix GC (General Conditions); Appendix LLL (40 CFR 63, Subpart LLL-Cement Plants); Appendix OOO (40 CFR 60 Subpart OOO-Non Metallic Mineral Processing); and Appendix Y (40 CFR 60, Subpart Y-Coal Preparation Plants.
4. Applicable Regulations, Forms and Application Procedures: Unless otherwise specified in this permit, the construction and operation of the subject emissions units shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403, F.S.; and Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296, and 62-297, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations.
5. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]
6. Modifications: No emissions unit shall be constructed or modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]
7. Title V Permit: This permit authorizes specific modifications and/or new construction on the affected emissions units as well as initial operation to determine compliance with conditions of this permit. A Title V Operation Permit is required for regular operation of the permitted emissions unit. The permittee shall apply for a Title V Operation Permit at least 90 days prior to expiration of this permit, but no later than 180 days after completing the required work and commencing operation. To apply for a Title V Operation Permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the Air Resources Section of the Department's Southwest District Office at the address given in Condition 2 above. [Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]
8. Permit Expiration: The permit expiration date includes sufficient time to complete construction, perform required testing, submit test reports, and submit an application for a Title V operation permit to the Department. For good cause, the permittee may request that this PSD air construction permit be extended. Such a request shall be submitted to the Department's Bureau of Air Regulation at least sixty (60) days prior to the expiration of this permit. [Rules 62-4.070(4) and 62-4.080(3), F.A.C.]

9. Source Obligation:

   a. Authorization to construct shall expire if construction is not commenced within 18 months after receipt of the permit, if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable time. This provision does not apply to the time period between construction of the approved phases of a phased construction project except that each phase must commence construction within 18 months of the commencement date established by the Department in the permit.

   b. At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by virtue of a relaxation in any enforceable limitation which was established after August 7, 1980, on the capacity of the source or modification otherwise to emit a pollutant, such as a restriction on hours of operation, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification.

   c. At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by exceeding its projected actual emissions, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification.

   [Rule 62-212.400(12)(a), F.A.C., Source Obligation]

A. Raw Material Quarrying, Crushing and Storage System

The specific conditions of this subsection apply to the following emissions unit after construction is complete.

EU ID	Emissions Unit Description
031	Raw Material Quarrying, Crushing and Storage System.

The Raw Material Crushing System includes raw limestone quarrying, crushing and storage in the Limestone Storage Building. The existing primary crusher and secondary crushers that are presently used for Lines 1 and 2 will be replaced with a new set of crushers under the present project and will suffice for all three lines.

APPLICABLE STANDARDS AND REGULATIONS

1. NSPS Requirements: This unit is subject to 40 CFR 60, Subpart OOO - Standards of Performance for Nonmetallic Mineral Processing Plants. The requirements of this Subpart are attached as Appendix OOO in Section 4 of this permit. [40 CFR 60, Subparts A and OOO]
2. BACT Determinations: A determination of the Best Available Control Technology (BACT) was made for PM/PM_{10} Line No. 3. It consists of the work practice and visible emissions requirements of Subpart OOO, [Rule 62-212.400, F.A.C]
3. Equipment Description: The permittee is authorized to replace the existing crushers and to expand the existing Limestone Storage Building to store approximately 61,000 tons of limestone. Equipment will include conveyors, feeder bins, belts, loaders, hoppers, and meters. [Applicant]

PERFORMANCE REQUIREMENTS

4. Hours of Operation: The hours of operation of this emissions unit are not limited (8760 hours per year). [Rule 62-210.200(PTE), F.A.C.]
5. Process Rate Limitation: The primary crusher and secondary crushers shall not process more than 1,500 tons per hour of limestone on a 24-hour basis. The permittee shall maintain written records of the monthly processing rate.
6. Test Reports. For each test conducted, the permittee shall file a test report including the information specified in Rule 62-297.310(8), F.A.C. with the Department as soon as practical, but no later than 45 days after the last sampling run of each test is completed. [Rules 62-297.310(8), F.A.C.]

B. Raw Materials Handling And Storage System

The specific conditions of this subsection apply to the following emissions unit after construction is complete.

EU ID	Emissions Unit Description
033	Raw Materials Receiving, Handling and Storage System

The Raw Materials Receiving, Handling and Storage System includes hoppers and transfer points of raw materials and additives. Emissions Unit 033 contains the following emission points that are controlled by baghouses:

Point ID	Emissions Point Description
PS61	Sand/Mill Scale Reception Hopper
PS62	Ash Reception Hopper
PS65	Limestone Silo and Clay Silo
PS63	Ash/Mill Scale/Sand Bins

APPLICABLE STANDARDS AND REGULATIONS

1. BACT Determinations: A determination of the Best Available Control Technology (BACT) was made for particulate matter (PM/PM_{10}). To satisfy the BACT requirements for this unit the visible emissions limits are surrogate standards for PM.

2. NESHAP Requirements: This unit is subject to 40 CFR 63, Subpart A (Identification of General Provisions) and 40 CFR 63, Subpart LLL (National Emissions Standard for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry). The Department determines that the BACT emissions performance requirements are as stringent as or more stringent than the limits imposed by this Subpart. Some separate reporting and monitoring may be required by this Subpart.

EQUIPMENT AND CONTROL TECHNOLOGY

3. Equipment Description: The permittee is authorized to construct, operate, and maintain equipment needed for the conveyance and handling of the raw materials. Equipment will include conveyors, feeder bins, belts, loaders, hoppers, and meters. [Applicant]

4. Baghouse Controls: Each emissions point identified for raw material receiving, handling and storage shall be controlled by a baghouse system. Each required baghouse shall be designed, operated, and maintained to achieve a PM design specification of 0.01 gr/dscf and a PM_{10} design specification of 0.007 gr/dscf. [Rule 62-212.400(BACT), F.A.C.]

PERFORMANCE REQUIREMENTS

5. Hours of Operation: This emissions unit is allowed to operate 8,760 hours per year. [Applicant Request, Rule62-210.200(PTE), F.A.C

EMISSIONS AND TESTING REQUIREMENTS

6. Emissions Limits:

   a. Visible emissions are limited to 5% opacity from each of the above listed emissions points controlled by a baghouse. Exceedance of the 5% opacity limit shall be deemed an exceedance of this permit condition and not necessarily an exceedance of the opacity limitations given in 40 CFR 63, Subpart LLL.

   b. Fugitive emissions from any emissions point not controlled by a baghouse shall not exceed 10% opacity.

   [Rules 62-4.070(3), 62-212.400 (BACT), F.A.C. and 40 CFR 63.1348]

B. Raw Materials Handling And Storage System

7. Compliance Demonstrations: Each emission point shall be tested to demonstrate initial compliance with the emission standards for visible emissions in accordance with EPA Method 9. The tests shall be conducted within 60 days after achieving the maximum production rate at which the unit will be operated, but not later than 180 days after the initial startup. Thereafter, compliance with the visible emission limits for each emission point shall be demonstrated during each federal fiscal year (October 1st to September 30th). [Rules 62-4.070(3), 62-297.310(7)(a), F.A.C. and 40 CFR 63.1349(b)(2)]

8. Periodic Monitoring Requirements: Each affected source subject to an opacity standard shall be periodically monitored using the procedures described in 40 CFR 63.1350(a) (4) (i) through (vii) to ensure compliance with the emissions limits of condition No. 6. [Rule 62-4.070(3), and 40 CFR, 63.1350, Subpart LLL]

9. Test Methods: Any required tests shall be performed in accordance with the following reference methods and the applicable requirements of Appendix C of this permit, and the applicable NESHAP provisions.

Method	Description of Method and Comments
9	Visual Determination of the Opacity of Emissions from Stationary Sources
22	Visual Determination of Fugitive Emissions From Material Sources

REPORTING AND RECORD KEEPING

10. Baghouse O&M Plan: For each baghouse the permittee shall prepare an operation and maintenance (O&M) plan to address proper operation, parametric monitoring, and a schedule for conducting periodic inspections and preventive maintenance. Baghouse inspections and maintenance activities shall be recorded in a log. The O&M plan shall be submitted to the Compliance Authority prior to the initial compliance tests for this unit. [Rule 62-4.070(3), and 40 CFR 63.1350, Subpart LLL]

11. Test Reports: For each test conducted, the permittee shall file a test report including the information specified in Rule 62-297.310(8), F.A.C. with the compliance authority no later than 45 days after the last run of each test is completed. [Rules 62-297.310(8), F.A.C.]

C. Raw Mill System

The specific conditions of this subsection apply to the following emissions unit after construction is complete.

EU ID	Emissions Unit Description
034	Raw Mix and Raw Meal Handling and Storage System

The Raw Mix and Raw Meal Handling and Storage System includes hoppers and transfer points to the Raw Mill and from the Raw Mill to the preheater. Emissions Unit 034 contains the following emission points controlled by baghouses:

Point ID	Emissions Point Description
PS64	Additive Bins – Feeders
PS64A	Additive Transfer Point
PS64AA	Additive Transfer Point
PS61A	Hoppers to Mill Transfer (1 of 2)
PS62A	Hoppers to Mill Transfer (2 of 2)
PS66	Cyclones to Feeding Silo
PS69	Bottom of Bucket Elevator to Blending Silo
PS70	Blending Silo
PS71	Weigh Hopper After Blending Silo
PS72	Air Slide After Weigh Hopper to Bucket Elevator (1 of 2)
PS72A	Air Slide After Weigh Hopper to Bucket Elevator (2 of 2)
PS73	Air Slide After Bucket Elevator to Preheater
PS68	Filter Dust Hopper

APPLICABLE STANDARDS AND REGULATIONS

1. BACT Determinations: A determination of the Best Available Control Technology (BACT) was made for particulate matter (PM/PM_{10}). To satisfy the BACT requirements for this unit the visible emissions limits are surrogate standards for PM.

2. NESHAP Requirements: This unit is subject to 40 CFR 63, Subpart A (Identification of General Provisions) and 40 CFR 63, Subpart LLL (National Emissions Standard for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry). The Department determines that the BACT emissions performance requirements are as stringent as or more stringent than the limits imposed by this Subpart. Some separate reporting and monitoring may be required by this Subpart.

EQUIPMENT AND CONTROL TECHNOLOGY

3. Equipment Description: The permittee is authorized to construct, operate, and maintain equipment needed for the conveyance and handling of the raw materials. Equipment will include reclaimers, conveyors, belts, loaders, hoppers, and a cross belt analyzer. [Applicant]

C. Raw Mill System

4. Baghouse Controls: Each emissions point identified for raw material handling and storage shall be controlled by a baghouse system. Each required baghouse shall be designed, operated, and maintained to achieve a PM design specification of 0.01 gr/dscf and a PM_{10} design specification of 0.007 gr/dscf. [Rule 62-212.400(BACT), F.A.C.]

PERFORMANCE REQUIREMENTS

5. Hours of Operation: This emissions unit system is allowed to operate 8,760 hours per year. [Applicant Request, Rule62-210.200(PTE), F.A.C.]

EMISSIONS AND TESTING REQUIREMENTS

6. Emissions Limits:

   a. Visible emissions are limited to 5% opacity from each of the above listed emissions points controlled by a baghouse. Exceedance of the 5% opacity limit shall be deemed an exceedance of this permit condition and not necessarily an exceedance of the opacity limitations given in 40 CFR 63, Subpart LLL.

   b. Fugitive emissions from any emissions point not controlled by a baghouse shall not exceed 10% opacity.

   [Rules 62-4.070(3), 62-212.400 (BACT), F.A.C. and 40 CFR 63.1348]

7. Compliance Demonstrations: Each emission point shall be tested to demonstrate initial compliance with the emission standards for visible emissions in accordance with EPA Method 9. The tests shall be conducted within 60 days after achieving the maximum production rate at which the unit will be operated, but not later than 180 days after the initial startup. Thereafter, compliance with the visible emission limits for each emission point shall be demonstrated during each federal fiscal year (October 1st to September 30th). [Rules 62-4.070(3), 62-297.310(7)(a), F.A.C. and 40 CFR 63.1349(b)(2)]

8. Periodic Monitoring Requirements: Each affected source subject to an opacity standard shall be periodically monitored using the procedures described in 40 CFR 63.1350(a) (4) (i) through (vii) to ensure compliance with the emissions limits of condition No. 6. [Rule 62-4.070(3), and 40 CFR, 63.1350, Subpart LLL]

9. Test Methods: Any required tests shall be performed in accordance with the following reference methods and the applicable requirements of Appendix C of this permit, and the applicable NESHAP provisions.

Method	Description of Method and Comments
9	Visual Determination of the Opacity of Emissions from Stationary Sources
22	Visual Determination of Fugitive Emissions From Material Sources

REPORTING AND RECORD KEEPING

10. Baghouse O&M Plan: For each baghouse the permittee shall prepare an operation and maintenance (O&M) plan to address proper operation, parametric monitoring, and a schedule for conducting periodic inspections and preventive maintenance. Baghouse inspections and maintenance activities shall be recorded in a log. The O&M plan shall be submitted to the Compliance Authority prior to the initial compliance tests for this unit. [Rule 62-4.070(3), and 40 CFR 63.1350, Subpart LLL]

11. Test Reports: For each test conducted, the permittee shall file a test report including the information specified in Rule 62-297.310(8), F.A.C. with the compliance authority no later than 45 days after the last run of each test is completed. [Rules 62-297.310(8), F.A.C.]

D. Pyroprocessing System

The specific conditions of this subsection apply to the following emissions unit after construction is complete.

ID No.	Emissions Unit Description
035	Pyroprocessing System including Preheater/Calciner Kiln with In-line Raw Mill and Air Heater

The Emissions Point for the Pyroprocessing System is the stack following the large baghouse that serves as the main Particulate Matter Control Device (PMCD):

Point ID	Emissions Point Description
PS67	Pyroprocessing System Stack

APPLICABLE STANDARDS AND REGULATIONS

1. BACT Determinations: A determination of the Best Available Control Technology (BACT) was made for carbon monoxide (CO), nitrogen oxides (NO_X), sulfur dioxide (SO_2), volatile organic compounds (VOC), and particulate matter (PM/PM_{10}).

2. NESHAP Requirements: This unit is subject to 40 CFR 63, Subpart A (Identification of General Provisions) and 40 CFR 63, Subpart LLL (National Emissions Standard for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry). The Department determines that the BACT emissions performance requirements are as stringent as or more stringent than the limits imposed by this Subpart. Some separate reporting and monitoring may be required by this Subpart.

EQUIPMENT AND CONTROL TECHNOLOGY

3. Pyroprocessing System: The permittee is authorized to construct a pyroprocessing system consisting of a dry process pre-heater/calciner (PH/C) rotary kiln with in-line raw mill that simultaneously dries raw materials using the exhaust gas from the kiln, PH/C or clinker cooler. The preheater is designed with a staged combustion calciner and shall incorporate additional NO_X control measures as described in Condition 5 below. The kiln will be equipped with a Low NO_X main kiln burner capable of burning coal, petroleum coke, natural gas, used oil, and fuel oil. Other equipment includes an air heater for use when additional drying capacity is required, and hot air ducting to the kiln, PH/C and/or in-line raw mill. The air heater will be capable of firing fuel oil and natural gas. All emissions from the pyroprocessing system are directed to a single stack. The exhaust stack shall be no more than 14 feet in diameter and no less than 319 feet tall. [Applicant Request]

4. Kiln Design: The kiln will be designed to process approximately 260 tons per hour of dry preheater feed material (including baghouse dust recirculation and excluding dry coal ash) with an annual nominal throughput of 2,278,000 tons per year. The preheater feed rate is indirectly limited by the clinker production limitations specified in Condition 9 below. [Applicant Request]

5. NO_X Controls
   a) *Primary NO_X Control:* The main kiln and calciner will be equipped with Low NO_X burners that will create distinct combustion zones within the flame. An indirect firing system will be used to reduce the amount of primary air injected with the fuel used in the main kiln burner.
   b) *Secondary NO_X Control:* Staged Combustion in the Calciner (SCC) shall be incorporated into the design such that introduction of fuel, air and meal to the calciner will be staged or sequenced for the reduction of NO_X emissions.

c) *Add-on NO_X Control:* An Ammonia Injection System (AIS) shall be designed, constructed and operated to achieve the permitted levels for NO_X emissions from the pyroprocessing system. The AIS will include at least aqueous ammonia and/or urea storage tank(s), pumps, piping, compressed air delivery, injectors, control system, ancillary equipment and, at the option of the permittee, a reactor and catalyst. Aqueous ammonia and/or urea solution will be injected at location(s) in the preheater/calciner or downcomer with appropriate temperature profiles. The applicant may submit an application with supporting information to install an alternative add-on NO_X control system.

6. Particulate Matter (PM/PM_{10}) Controls: The permittee shall install a particulate matter control device consisting of at least a baghouse to remove particulate matter emissions from the pyroprocessing exhaust gas stream to achieve the PM/PM_{10} emissions standards specified in this permit.

7. Sulfur Dioxide Controls: The permittee shall primarily use low-sulfur raw materials to achieve the SO_2 permitted limits. The permittee is authorized to install a hydrated lime injection system for utilization as needed to reduce SO_2 emissions.

PERFORMANCE REQUIREMENTS

8. Hours of Operation: The hours of operation for this emissions unit are not limited (8760 hours per year). [Rule 62-210.200(PTE), F.A.C.]

9. Process Rate Limitations: Kiln preheater feed rate shall be monitored and recorded for purposes of determining clinker production. The nominal clinker production rate is 160.4 tons per hour (TPH) and shall not exceed 176.5 TPH (24-hour rolling average) and 1,405,100 tons during any consecutive 12 month period. The clinker production rate shall be determined using kiln feed loss on ignition (LOI) factors. The feed rates and kiln feed LOIs shall be based on a 30 operating-day block average of daily measurements. For purposes of this requirement, an operating day is any day that the kiln produces clinker or burns fuel. [Rules 62-4.070(3), and 62-212.200(PTE), F.A.C.]

10. Authorized Fuels: Only the following authorized fuels shall be fired in the pyroprocessing system (kiln and calciner): coal, petroleum coke, tire derived fuel (whole or chipped tires), natural gas, distillate oil, "on-specification" used oil fuel, and other non-hazardous wastes described in paragraph d). The maximum heat input rate to the pyroprocessing system (kiln and calciner) shall not exceed 13,200 MMBtu per day (nominally 550 MMBtu/hr).

    a) The maximum heat input rate from tire derived fuel (TDF) shall not exceed 35% of the total pyroprocessing heat input rate (kiln and calciner) and shall not exceed 200 MMBtu per hour (24-hour rolling basis). TDF may be fed anywhere between the kiln feed shelf and lower cyclone. TDF may be injected through the main kiln burner and the discharge end of the kiln. The whole tire feed mechanisms shall be designed with an airlock/gate system. TDF shall be stored, handled and managed in accordance with the provisions of Chapter 62-711, F.A.C.

    b) The air heater shall fire only natural gas or distillate fuel oil (No. 2 or No. 4) with a design maximum heat input rate of 55 MMBtu per hour.

    c) The firing of "on-specification" used oil fuel shall not exceed 2000 gallons per hour and 3,000,000 gallons during any consecutive 12 months. On-Specification Used Oil Fuel shall meet the following specifications:

        1. Arsenic shall not exceed 5.0 ppm;
        2. Cadmium shall not exceed 2.0 ppm;
        3. Chromium shall not exceed 10.0 ppm;
        4. Lead shall not exceed 100.0 ppm;
        5. Total halogens shall not exceed 1000 ppm; and
        6. Flash point shall not be less than 100° F.

Used oil fired as a fuel may be generated from on site sources or purchased from a vendor. Used oil shall not contain any PCB's. [40 CFR 279.61; 40 CFR 761.20(e); Rule 62-4.070(3), F.A.C.]

d) The maximum heat input rate from other non-hazardous waste shall not exceed 15% of the total pyroprocessing heat input rate (kiln and calciner) and shall not exceed 85 MMBtu per hour (24-hour rolling basis). Such fuels will be stored in enclosed bins or silos, pneumatically fed through a metering system and introduced into the kiln via the main kiln burner. The approved fuels are limited to: rice hulls; corn husks; cotton gin wastes; sugarcane bagasse; sawdust and wood chips from clean untreated and unpainted wood; paper and cardboard; non-chlorinated plastic; citrus peel waste; and carpet derived fuel.

e) Prior to initial use of any fuel listed in d) above, the permittee shall provide a notification from the including: origin of the fuel, percent fuel substitution, a schedule for firing such fuels, and a proposal to evaluate emissions of NO_X, CO, VOC and SO_2 from the CEMS record to demonstrate no increase in emissions above permitted levels. Air contaminants to be tested for include (but are not limited to) NO_X, SO_2, and CO.

f) The permittee shall maintain records indicating the origin and profile of sawdust and wood chips derived from clean untreated and unpainted wood. The permittee is required to maintain records to demonstrate that material is not and does not contain hazardous waste as defined by Rule 62-730.030, F.A.C., or 40 CFR Part 261.

[Applicant request, Rule 62-4.070(3), F.A.C.]

EMISSIONS AND TESTING REQUIREMENTS

11. Emissions Standards: Emissions from the pyroprocessing system (including the air heater) shall not exceed the following emissions standards.

Pollutant	Emission Limit	Averaging Time	Compliance Method	Basis
CO[a]	2.0 lb/ton of clinker	30-day rolling	CEMS	BACT
	321 lb/hr			
NO_X[b]	1.50 lb/ton of clinker	30-day rolling	CEMS	BACT
	241 lb/hr			
PM/PM_{10}[c]	0.10 lb/ton of clinker	Three 1-hr runs	Annual Test	BACT
	17.6 lb/hr			
Visible Emissions	10 % opacity	6-minute block	COMS	BACT
SO_2	0.20 lb/ton of clinker	24-hr rolling	CEMS	BACT
	32.1 lb/hr			
VOC[d]	0.115 lb/ton of clinker	30-day block	CEMS	BACT
	18.5 lb/hr			
Dioxin/Furan[e]	0.20 ng/dscm (TEQ) @ 7% O_2	Three 3-hr runs	Temperature Monitoring	NESHAP LLL
	0.40 ng/dscm (TEQ) @ 7% O_2			
THC[f]	20 ppmvd (as propane)@ 7% O_2 or 98 percent reduction	1-hour block	CEMS	NESHAP LLL
Mercury[g]	190 lb/12-month period	12-month rolling	Fuel/Materials and/or CEMS	Avoid PSD
	41 µg/dscm @ 7% O_2	Three 1-hr runs	Annual Test	NESHAP LLL

a. For an "initial startup period" (0 to 269 calendar days after startup) CO emissions shall not exceed 2.9 lb/ton of clinker (466 lb/hour) based on a 30-day rolling average. In the event the permittee has not burned a fuel mix of at least 30% petcoke averaged over a period of 30 operating days, the final 2.0 lb/ton limit shall apply 270 calendar days and thereafter. Otherwise a 2.5 lb/ton limit (401 lb/hr) shall apply from 270 to 629 calendar days after startup and the final 2.0 lb/ton limit (321 lb/hr) shall apply 630 calendar days after startup and thereafter.

b. For an "initial startup period" (0 to 269 calendar days after startup) NO_X emissions shall not exceed 3.0 lb/ton of clinker (481 lb/hour) based on a 30-day rolling average. In the event the permittee has not burned a fuel mix of at least 30% petcoke averaged over a period of 30 operating days, the final 1.50 lb/ton limit (241 lb/hr) shall apply 270 calendar days after startup and thereafter. Otherwise a limit of 1.95 lb/ton limit (313 lb/hr) shall apply from 270 to 629 calendar days after startup and the final 1.50 lb/ton limit (241 lb/hr) shall apply thereafter.

c. All PM emitted from the baghouse exhaust is assumed to be PM_{10}. The BACT standard for the PM is equivalent to approximately 0.06 lb per ton of preheater feed. The emissions limits for particulate matter and visible emissions imposed by Rule 62-212.400(BACT) are as stringent as or more stringent than the limits imposed by the applicable NESHAP provisions. The BACT requirements do not waive or vary any applicable NESHAP monitoring or record keeping requirements.

d. Compliance shall be demonstrated by THC CEMS. VOC emissions shall be measured as total hydrocarbons (THC) and expressed as "propane" for the mass emissions rate.

e. Dioxin/furans shall not exceed 0.20 ng/dscm (TEQ) @ 7% oxygen when the average of the performance test run temperatures at the inlet to the particulate matter control device is 204° C (400° F) or more and shall not exceed 0.40 ng/dscm (TEQ) @ 7% oxygen when the average of the performance test run average particulate matter control device inlet temperature is 204° C (400° F) or less.

f. The owner or operator may demonstrate a 98% reduction from the kiln exit to the discharge. The basis of this condition is 40 CFR 63, Subpart LLL that is under reconsideration by EPA. The THC limit will be revised in accordance with any future revision of Subpart LLL.

g. Compliance with the Hg requirements shall be demonstrated using the sampling, analysis, and calculation methods specified in Condition No. 20 of this subsection. The basis of the concentration-based limit is 40 CFR 63, Subpart LLL that is under reconsideration by EPA. The concentration based limit will be revised in accordance with any future revision of Subpart LLL.

[Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]

12. Test Methods: Any required stack tests shall be performed in accordance with the following methods.

Method	Description of Method and Comments
EPA 1 - 4	Determination of Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content. Methods shall be performed as necessary to support other methods.
EPA 5	Determination of Particulate Emissions. The minimum sample volume shall be 30 dry standard cubic feet.
EPA 6C	Determination of SO_2 Emissions (Instrumental).
EPA 7E	Determination of NO_X Emissions (Instrumental). NO_X emissions testing shall be conducted with the air heater operating at the highest heat input possible during the test.
EPA 9	Visual Determination of Opacity
EPA 10	Measurement of Carbon Monoxide Emissions (Instrumental). The method shall be based on a continuous sampling train.
EPA 23	Measurement of Dioxin/Furan Emissions
EPA 25A	Measurement of Gaseous Organic Concentrations (Flame Ionization – Instrumental)
EPA 29 or ASTM D6784–02	Determination of Metals Emissions from Stationary Sources
	Standard Test Method for Elemental, Oxidized, Particle-Bound and Total Mercury Gas Generated from Coal-Fired Stationary Sources (Ontario Hydro Method).

The EPA methods are specified in Appendix A of 40 CFR 60, adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used unless prior written approval is received from the Department. Tests shall be conducted in accordance with the appropriate test method and the applicable requirements specified in Appendix C of this permit, NSPS Subpart A in 40 CFR 60, and NESHAP Subparts A and LLL in 40 CFR 63. [Rules 62-204.800, F.A.C.; 40 CFR 60, Appendix A]

13. Testing Requirements: Initial tests shall be conducted between 90% and 100% of permitted capacity; otherwise, this permit shall be modified to reflect the true maximum capacity as constructed. Subsequent annual tests shall be conducted between 90% and 100% of permitted capacity in accordance with the requirements of Rule 62-297.310(2), F.A.C. Tests shall be conducted for each required pollutant under the fuel scenario representing the highest potential for generating emissions. In general, this fuel scenario is firing coal as the primary fuel and TDF and petroleum coke as secondary fuels. If a secondary fuel listed above is not available at the time of testing, tests shall be based on the fuels that are available. If a secondary fuel is added later, additional tests shall be conducted with that fuel scenario within 60 days of first fire of the new secondary fuel. [Rule 62-297.310(7)(a) and (b), F.A.C.; 40 CFR 60.8]
14. Initial Compliance Demonstration: Initial compliance stack tests shall be conducted within 60 days after achieving a 24-hour clinker production rate of 160.4 tons per hour, but not later than 180 days after the initial startup. In accordance with the test methods specified in this permit, the kiln system exhaust stack shall be tested to demonstrate compliance with the emission standards for particulate matter, CO, SO_2, NO_X, dioxin/furans, Hg and THC. The initial compliance demonstration with the THC, Hg and dioxin/furans emissions standards shall be carried out in accordance with 63.1349(b). The permittee shall provide the Compliance Authority with any other initial emissions performance tests conducted to satisfy vendor guarantees. [Rule 62-297.310(7)(a) and (b), F.A.C.; 40 CFR 60.8]
15. Subsequent Compliance Testing: Annual compliance stack tests for particulate matter CO, NO_X, and SO_2 shall be conducted during each federal fiscal year (October 1st to September 30th). Subsequent dioxins/furans tests shall be conducted in accordance with the provisions of 40 CFR 63.1349. Data collected from the reference method during the required RATA tests for CO, NO_X, and SO_2 may be used to satisfy the annual testing requirement provided the notification requirements and emission testing requirements for performance and compliance tests of this permit are satisfied.
[Rules 62-297.310(7)(a) and (b), F.A.C.; 40 CFR 60.8]
16. Continuous Compliance: Continuous compliance with the permit standards for opacity and emissions of CO, NO_X, SO_2, and VOC/THC shall be demonstrated with data collected from the required continuous monitoring systems. [Rules 62-212.400(5)(c) and 62-297.310(7)(a) and (b), F.A.C.; 40 CFR 60.8]
17. Significant Change: Dioxin/Furan, Hg and PM/PM_{10}: The owner or operator shall notify the Compliance Authority prior to initiating any significant change in the feed or fuel used in the most recent compliant performance test for dioxin/furan, Hg or PM/PM_{10}. For purposes of this condition, significant means any of the following: a physical or chemical change in the feed or fuel; the use of a raw material not previously used; a change in the LOI of the coal ash; a change between non-beneficiated coal ash and beneficiated coal ash. Based on the information provided, the Compliance Authority will promptly determine if performance testing pursuant to 40 CFR 63.1349 will be required for the new feed or fuel. A significant change shall not include switching to a feed/fuel mix for which the permittee already tested in compliance with the dioxin/furan and PM/PM_{10} emission limits. [62-4.070(3), F.A.C.]

18. Special Compliance Tests: When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it shall require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department. [Rule 62-297.310(7)(b), F.A.C.]

19. Additional Mercury (Hg) Compliance Demonstration:

    a. *Material Balance Demonstration:* The owner or operator shall demonstrate compliance with the mercury throughput limitation by material balance and maintaining records of the monthly and rolling 12-month mercury throughput.

    Samples of the raw mill feed and all fuels shall be collected each day. A monthly composite sample shall be made from each of the daily composite samples. Each monthly composite sample shall be analyzed to determine the mercury concentration of the materials representative for the month.

    For each raw material and fuel, the monthly mercury throughput rate (pounds per month) shall be the product of the mercury concentration from the monthly composite sample and the mass of raw material or fuel used during the month. If the mercury concentration is below detection limit or below the limits of quantification, the detection limit will be assumed for the concentration of the raw material or fuel.

    The permittee shall have the option of collecting, compositing, analyzing and calculating the Hg leaving the process via the clinker or dust permanently withdrawn from the pyroprocessing system. If the Hg concentration is below the detectable limit or limits of quantification, a value of zero will be assumed for the concentration in the clinker or dust.

    For each month, the mass of mercury introduced into the pyroprocessing system (pounds per month) shall be the sum of the monthly mercury throughput rate for each raw material and fuel minus the amounts in the clinker and permanently withdrawn dust. The consecutive 12-month mercury throughput rate shall be the sum of the individual monthly records for the current month and the preceding eleven months (pounds of mercury per consecutive 12-months). Such records, including calculations and data, shall be completed no later than 25 days following the month of the records.

    The analytical methods used to determine mercury concentration shall be EPA or ASTM methods such as EPA Method 7471A (Mercury in Solid or Semisolid Waste) or EPA Method 1631. No other methods may be used unless prior written approval is received from the Department.

    b. *Mercury Continuous Emissions Monitoring System (Hg-CEMS)*: Within 60 days following the first year of operation, the owner or operator shall install any model of Hg-CEMS that has been demonstrated to meet the requirements in Performance Specification 12A (PS-12A), "Specifications and Test Procedures for Total Vapor phase Mercury Continuous Monitoring Systems in Stationary Sources," or that has passed verification tests conducted under the auspices of the U.S. Environmental Protection Agency's (EPA) Environmental Technology Verification (ETV) Program. During the subsequent 90 days, the owner or operator shall certify the Hg-CEMS and begin reporting Hg mass emissions data.

    The owner or operator shall adhere to the calibration drift and quarterly accuracy assessment procedures in 40 CFR Part 60, Appendix F or 40 CFR Part 75, Appendix B. The 12-month rolling mass emissions shall be estimated based on the actual data collected no later than 10 days following the end of the month. Upon certification, the owner or operator may use the Hg-CEMS to demonstrate compliance with the cumulative 12-month rolling mass emission limitation (190 pounds per rolling 12-month period) in lieu of the procedures described in Condition 20.a. above. Prior to use of the Hg-CEMS as the method to demonstrate compliance, the owner or operator shall submit written notice to the

Department, and receive approval for a missing data substitution plan. For purposes of this requirement, the first year of operation ends 365 calendar days following the first day the kiln produces clinker.

The installed Hg-CEMS shall be capable of speciating the form of Hg measured as $Hg^{(0)}$ and Hg^{++} but will held only to the manufacturer's performance specifications for the total (i.e. all Hg) values.

The owner or operator may submit an alternative sampling procedure request to the Department for evaluation by EPA to use the Hg-CEMS or the associated relative accuracy test audit (RATA) to demonstrate compliance with the Hg test requirements pursuant to 40 CFR 63, Subpart LLL.

[Rules 62-4.070(3), 62-212.400 (12)(c) and 62-204.800, F.A.C.]

20. Main Baghouse Dust and Cement Kiln Dust (CKD): Main baghouse dust and CKD shall be re-circulated to the process or to the product clinker or cement to the extent feasible without contravening the requirements of 40 CFR 63, Subpart LLL. Dust classified as cement kiln dust (CKD) shall be confined and controlled at all times and shall be managed in accordance with the applicable provisions of 40 CFR 261.
[Rule 62-4.070(3), F.A.C.]

EXCESS EMISSIONS

{Note: The following conditions apply only to the SIP-based emissions standards specified in Condition No. 13 of this section. Rule 62-210-700, F.A.C. (Excess Emissions) cannot vary or supersede any federal provision of the NSPS or the NESHAP programs.}

21. Operating Procedures: The Best Available Control Technology (BACT) determinations established by this permit rely on "good operating practices" to reduce emissions. Therefore, all operators and supervisors shall be properly trained to operate and maintain the kiln and calciner, and pollution control systems in accordance with the guidelines and procedures established by each manufacturer. The training shall include good operating practices as well as methods for minimizing excess emissions.
[Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]

22. Definitions:
    a. *Startup* is defined as the commencement of operation of any emissions unit which has shut down or ceased operation for a period of time sufficient to cause temperature, pressure, chemical or pollution control device imbalances, which result in excess emissions.
    b. *Shutdown* means the cessation of the operation of an emissions unit for any purpose.
    c. *Malfunction* means any unavoidable mechanical and/or electrical failure of air pollution control equipment or process equipment or of a process resulting in operation in an abnormal or unusual manner.

    [Rules 62-210.200 and 62-4.070(3), F.A.C.]

23. Excess Emissions Prohibited: Excess emissions caused entirely or in part by poor maintenance, poor operation or any other equipment or process failure that may reasonably be prevented during startup, shutdown or malfunction shall be prohibited. All such preventable emissions shall be included in any compliance determinations based on CEMS data. [Rule 62-210.700(4), F.A.C.]

24. Allowable Data Exclusions: Continuous monitoring data collected during periods of startup, shutdown, and malfunction may be excluded from the compliance demonstrations only in accordance with the following requirements, provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions are minimized. As provided by the authority in Rule 62-210.700(5), F.A.C., the following conditions replace the provisions in Rule 62-210.700(1), F.A.C.

    a. *CO Data*: Each 30-day rolling average shall include all periods of operation (including startup, shutdown, and malfunction), but may exclude limited periods due to equipment malfunctions. No more than 30 hours in any calendar month shall be excluded from the compliance determinations due to equipment malfunctions. Malfunctions do not include process upsets that occur as a normal part of cement production.

    b. *NO_X Data*: Each 30-day rolling average shall include all periods of operation (including startup, shutdown, and malfunction), but may exclude limited periods due to malfunctions of the SNCR or SCR system. "Malfunctions of the SNCR or SCR system" are defined as any unavoidable mechanical and/or electrical failure that prevents introduction of ammonia-based solutions into the kiln system. No more than 30 hours in any calendar month shall be excluded from the compliance determinations due to malfunctions of the SNCR or SCR system.

    c. *SO_2 Data.* Each 24-hr rolling average shall include all periods of operation (including startup, shutdown, and malfunction).

    d. *Other Data*: All opacity and VOC data shall be included in the compliance determination. If the mercury CEMS is used as the method for demonstrating compliance, all valid data shall be included in the compliance determination.

    The permittee shall notify the Compliance Authority within one working day of discovering any emissions in excess of a CEMS standard subject to the specified averaging period. Within one working day of occurrence, the owner or operator shall notify the Compliance Authority of any malfunction resulting in the exclusion of CEMS data. All such reasonably preventable emissions shall be included in any CEMS compliance determinations. All valid emissions data (including data collected during startup, shutdown and malfunction) shall be used to report emissions for the Annual Operating Report.

    [Rules 62-210.200, 62-212.400(BACT) and 62-210.700, F.A.C.]

CONTINUOUS MONITORING REQUIREMENTS

25. CEM Systems: The permittee shall install, calibrate, operate and maintain continuous emissions monitoring systems (CEMS) to measure and record concentrations of CO, NO_X, SO_2, and VOC/THC in the kiln system exhaust stack in a manner sufficient to demonstrate continuous compliance with the emissions standards specified in this section. All continuous monitoring systems other than the Hg CEMS shall be installed and functioning within the required performance specifications by the time of the initial performance tests. The Hg CEMS shall be installed and functioning within the required performance specifications following the first year of operation as specified in condition No. 21.

    a. *CO Monitor.* The CO monitor shall be certified pursuant to 40 CFR 60, Appendix B, Performance Specification 4 or 4A. Quality assurance procedures shall conform to the requirements of 40 CFR 60, Appendix F. The required RATA tests shall be performed using EPA Method 10 in Appendix A of 40 CFR 60 and shall be based on a continuous sampling train. The CO monitor span values shall be set appropriately, considering the expected range of emissions and corresponding emission standards.

b. *NO_X Monitor.* The NO_X monitor shall be certified pursuant to 40 CFR 60, Appendix B, Performance Specification 2. Quality assurance procedures shall conform to the requirements of in 40 CFR 60, Appendix F. The required RATA tests shall be performed using EPA Method 7E in Appendix A of 40 CFR 60. The NO_X monitor span values shall be set appropriately, considering the expected range of emissions and corresponding emission standards.

c. *SO_2 Monitor.* The SO_2 monitor shall be certified pursuant to 40 CFR 60, Appendix B, Performance Specification 2. Quality assurance procedures shall conform to the requirements of 40 CFR 60, Appendix F. The required RATA tests shall be performed using EPA Method 6C in Appendix A of 40 CFR 60. The SO_2 monitor span values shall be set appropriately, considering the expected range of emissions and corresponding emission standards.

d. *THC Monitor.* A monitor shall be installed to determine THC emissions from the stack and shall meet the requirements of NESHAP Subpart LLL in 40 CFR 63 (40 CFR 63.1349 and 63.1350). The THC monitor shall include provisions to determine the moisture content of the exhaust gas and an algorithm to enable correction of the monitoring results to a dry basis (0% moisture).

e. *Diluent Monitor.* An oxygen monitor shall be installed at the THC monitor location to correct measured THC emissions to the required oxygen concentration. The basis of this requirement is 40 CFR 63, Subpart LLL that is under reconsideration by EPA. The requirement will be revised in accordance with any future revision of Subpart LLL.

f. *Mercury Monitor.* A mercury monitor (Hg-CEMS) shall be installed and operated as described in Condition 21 b. of this subsection.

CEMS, other than the Hg CEMS, are also subject to the General Provisions specified in Subpart A of 40 CFR 60 (CO, NO_X, and SO_2) and Subpart A of 40 CFR 63 (THC/VOC).
[Rules 62-4.070(3), 62-210.800, 62-212.400(BACT) and 62-297.520, F.A.C.]

26. COMS: A continuous opacity monitoring system (COMS) shall be installed, calibrated, operated, and maintained in the kiln system exhaust stack, after the baghouse, in a manner sufficient to demonstrate continuous compliance with the opacity standards specified in this section. Opacity shall be based on a 6-minute block average computed from at least one observation (measurement) every 15 seconds. For the COMS, the 6-minute block averages shall begin at the top of each hour. The COMS shall meet the applicable requirements of 40 CFR 63.1350. [NESHAP Subpart LLL in 40 CFR 63]

27. CEMS/COMS Certification and Initial Startup: Each CEMS/COMS required by this permit, other than Hg, shall be installed prior to startup. Within 60 calendar days of achieving an average daily clinker production rate of 160 tons per hour, but no later than 180 calendar days after initial startup, the owner or operator shall certify each CEMS/COMS. Upon certification of each CEMS/COMS, the owner or operator shall demonstrate compliance with all applicable standards as specified in this permit. The Hg CEMS shall be installed and functioning within the required performance specifications following the first year of operation as specified in condition No. 21 b. [Rules 62-4.070(3), 62-210.800, 62-212.400(BACT) and 62-297.520, F.A.C.; 40 CFR 60.7(a), 60.13(b) and Appendix B; and 40 CFR 63.7(a)(2)]

28. CEMS Data Requirements: The CEMS shall be installed, calibrated, maintained, and operated in the in-line kiln/raw mill stack to measure and record the emissions of CO, NO_X, SO_2, and THC/VOC in a manner sufficient to demonstrate compliance with the emission limits of this permit. The CEMS shall express the results in units of pounds per ton of clinker produced, and pounds per hour. Emissions of THC/VOC shall be reported in units of the standards (lb/hr, lb/ton of clinker) and ppmvd as propane.

a. *Valid Hourly Averages:* Each CEMS shall be designed and operated to sample, analyze, and record data evenly spaced over the hour at a minimum of one measurement per minute. Except as provided in Condition 25, all valid measurements collected during an hour shall be used to calculate a 1-hour block average that begins at the top of each hour. Each 1-hour block average shall be computed using at least one data point in each fifteen-minute quadrant of an hour, where the unit combusted fuel (or produced clinker) during that quadrant of an hour. Notwithstanding this requirement, a 1-hour average shall be computed from at least two data points separated by a minimum of 15 minutes (where the unit operates for more than one quadrant of an hour). If less than two such data points are available, there is insufficient data and the 1-hour block average is not valid.

- Hours during which there is no kiln feed and no fuel fired are not valid hours.
- Hours during which the plant is firing fuel but producing no clinker are valid, but these hours are excluded from the production-normalized emission rate computation (pounds per ton of clinker). These hours are included in any pollutant mass emission rate computation (pounds per hour).

b. *24-hour Rolling Averages*: Compliance with the emission limit for SO_2 shall be based on a 24-hour rolling average that shall be recomputed after every valid hour as the arithmetic average of that hourly average and the preceding 23 valid hourly averages.

c. *30-day Rolling Averages*: Compliance with the emission limits for CO and NO_X shall be based on a 30-day rolling average. Each 30-day rolling average shall be the arithmetic average of all valid hourly averages collected during the last 30 operating days. A new 30-day rolling average shall be recomputed after every day of operation for the new day and the preceding 29 operating days. For purposes of computing these emission limits, an operating day is any day that the kiln produces clinker or fires fuel.

d. *30-day Block Average:* Compliance with the emission limit for VOC shall be based on a 30-day block average. Each 30-day block average shall be the arithmetic average of all valid hourly averages occurring within each 30 operating-day block and shall be consistent with the averaging period specified in 40 CFR 63.1350(h) for THC emissions.

e. *Data Exclusion*: Except for monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments, each CEMS shall monitor and record emissions during all operations including episodes of startups, shutdowns, and malfunctions. Limited amounts of CEMS emissions data recorded during some of these episodes may be excluded from the corresponding compliance demonstration subject to the provisions of Condition No. 25 in this section. The permittee shall minimize the duration of data excluded for such episodes to the extent practicable.

f. *Availability*. Monitor availability for each CEMS used to demonstrate compliance shall be 95% or greater in any calendar quarter. Monitor availability shall be reported in the quarterly excess emissions report. In the event 95% availability is not achieved, the permittee shall provide the Department with a report identifying the problems in achieving 95% availability and a plan of corrective actions that will be taken to achieve 95% availability. The permittee shall implement the reported corrective actions within the next calendar quarter. Failure to take corrective actions or continued failure to achieve the minimum monitor availability shall be violations of this permit, except as otherwise authorized by the Compliance Authority.

g. *Public Access:* Emission data will be available in real time on the company website.

29. Continuous Flow Monitor: A continuous flow monitor shall be installed to determine the stack exhaust flow rate to be used in determining mass emission rates. The flow monitor shall be certified pursuant to 40 CFR 60, Appendix B, Performance Specification 6.

30. Baghouse Temperature Monitor: A continuous temperature monitor shall be installed, calibrated, operated, and maintained at the inlet to the baghouse for the kiln system exhaust in accordance with the requirements of 40 CFR 63.1350(f). [NESHAP Subpart LLL in 40 CFR 63]
31. Ammonia Injection Monitoring: A system to continuously monitor and record the ammonia and/or urea injection rate (1-hour block averages) shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations. [Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]

REPORTING AND RECORD KEEPING REQUIREMENTS

32. Operational Records: To demonstrate compliance with the limitations specified in this section, the owner or operator shall maintain the following records on site.
    a. For each 1-hour block of operation, continuously monitor and record the dry preheater feed rate, clinker production rate, fuel firing rate, heat input rate (the representative heating value of each fuel and the hourly fuel firing rate), and estimates of the ammonia injection rate or NH_3/NO_X molar ratio. Records shall also document the dry preheater feed rate and clinker production rates for each 24-hour rolling period and consecutive12 months.
    b. For each fuel delivery, maintain records of the quantity of fuel delivered and a representative analysis of the fuel. Records shall include the sulfur content, higher and lower heating value, proximate analysis, and ultimate analyses.
    c. Maintain records demonstrating compliance with the mercury throughput limitation as required in Conditions No. 13 and 20 of this subsection.

    All records shall be made available to the Department and Compliance Authority upon request. [Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]
33. Stack Test Reports: The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Compliance Authority on the results of each such test. The required test report shall be filed with the Compliance Authority as soon as practical but no later than 45 days after the last sampling run of each test is completed. The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Compliance Authority to determine if the test was properly conducted and the test results properly computed. As a minimum, the test report, other than for an EPA or DEP Method 9 test, shall provide the specified in Rule 62-297.310(8), F.A.C. [Rule 62-297.310(8), F.A.C.]
34. Malfunction Notifications: If temporarily unable to comply with any condition of the permit due to breakdown of equipment (malfunction) or destruction by hazard of fire, wind or by other cause, the permittee shall immediately (within one working day) notify the Compliance Authority. Notification shall include pertinent information as to the cause of the problem, and what steps are being taken to correct the problem and to prevent its recurrence, and where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with Department rules. If requested by the Compliance Authority, the owner or operator shall submit a quarterly written report describing the malfunction. [Rules 62-210.700(6) and 62-4.130, F.A.C.]
35. SIP Quarterly Report: Within 30 days following the end of each calendar quarter, the permittee shall submit a report to the Compliance Authority summarizing: equipment malfunctions resulting in excluded CEMS data and/or excess emissions; mercury throughput rates; and the monitor availability of each CEMS. The report shall contain the information and follow the general format specified in Appendix F of this permit. [Rules 62-4.070(3), 62-4.130, and 62-212.400(BACT), F.A.C.]

36. Used Oil Records: For each shipment of used oil received, the owner or operator shall maintain records from the vendor certifying that the used oil meets the above requirements for "on-specification" used oil fuel. Records shall include the following parameters: arsenic, cadmium, chromium, lead, total halogens, flash point, PCBs, sulfur content, ash, and heating value. Otherwise, the owner or operator shall sample and analyze each shipment of used oil received for the above parameters. If vendor certifications are relied upon, the owner or operator shall analyze at least one sample obtained each calendar year for the above parameters. If analytical results show that the used oil does not meet the above requirements, the owner or operator shall immediately: cease burning of the used oil, and notify the Compliance Authority of the analytical results. The analysis shall be performed via EPA-approved or ASTM methods. The permittee shall obtain, make, and keep the following records: Gallons of on-specification used oil received and burned each month;
    a. Gallons of on-specification used oil received and burned each month;
    b. Name and address of all vendors delivering used oil to the facility
    c. Copies of the vendor certifications, if obtained, and any supporting information; and
    d. Analytical results.

    The records shall be retained in a form suitable for inspection at the facility by the Department, and shall be retained permanently. [40 CFR 279.61; 40 CFR 761.20(e), and Rule 62-4.070(3), F.A.C.]

37. O&M Plan for Baghouse: The permittee shall prepare an operation and maintenance (O&M) plan to address the schedule for inspection and preventive maintenance of the baghouse control system. The O&M plan shall be submitted to the Compliance Authority prior to expiration of this permit. The permittee shall maintain records of the condition of the control equipment for each inspection and any maintenance activities performed. [Rule 62-4.070(3), F.A.C., and 40 CFR 63.1350, Subpart LLL]

E. Clinker Production System

The specific conditions of this subsection apply to the following emissions unit after construction is complete.

EU ID	Emissions Unit Description
036	Clinker Cooler No.3
037	Clinker Handling and Storage Clinker Silo

The Clinker Cooler and the Clinker Handling and Storage System include clinker handling from the point of discharge from the kiln, through the cooler grate and air system and subsequent conveyance to the clinker silo, including truck unloading of clinker. The Emissions Point for the Clinker Cooler is the stack following a large baghouse. Emissions Unit 036 and 37 contains the following emission points controlled by baghouses:

Point ID	Emissions Point Description
PS74	Clinker Cooler Stack
PS75	Clinker Transfer Deep Pan Conveyor
PS76	Clinker Silo
PS77	Truck Unload Clinker Buffer

APPLICABLE STANDARDS AND REGULATIONS

1. BACT Determinations: A determination of the Best Available Control Technology (BACT) was made for particulate matter (PM/PM_{10}). To satisfy the BACT requirements for each unit the visible emissions limits act as surrogate standards for PM.

2. NESHAP Requirements: Each unit is subject to 40 CFR 63, Subpart A (Identification of General Provisions) and 40 CFR 63, Subpart LLL (National Emissions Standard for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry). The Department determines that the BACT emissions performance requirements are as stringent as or more stringent than the limits imposed by this Subpart. Some separate reporting and monitoring may be required by this Subpart.

EQUIPMENT AND CONTROL TECHNOLOGY

3. Process Rate Limitations: The clinker process/production rate is calculated and limited by the rates given for the pyroprocessing equipment in Section 3.D.9 above.

4. Equipment Description: The permittee is authorized to construct, operate, and maintain equipment needed for the cooling, handling and conveyance of clinker from the kiln discharge to the clinker silo, including truck unloading of clinker. Equipment will include a clinker cooler, clinker silo, deep-pan conveyor, and control equipment.

5. Baghouse Controls: Each emissions point identified for storage and conveyance shall be controlled by a baghouse system. Each required baghouse shall be designed, operated, and maintained to achieve a PM design specification of 0.01 gr/dscf and a PM_{10} design specification of 0.007 gr/dscf.
[Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]

PERFORMANCE REQUIREMENTS

6. Hours of Operation: These emissions units are allowed to operate 8,760 hours per year.
[Applicant Request, Rule 62-210.200(PTE), F.A.C]

E. Clinker Production System

EMISSIONS AND TESTING REQUIREMENTS

7. Emissions Limits: The following standards apply to each emissions point of these units including the clinker cooler and all clinker handling and clinker silo transfer points:

   a. A continuous opacity monitor systems shall be installed, operated, and maintained at the outlet of the clinker cooler baghouse pursuant to 40 CFR 60.63.

   b. Particulate matter emissions from the clinker cooler are limited to 0.05 lb/ton of clinker and 8.8 lb/hr controlled by baghouse PS74. Visible emissions shall not exceed 10% opacity.

   c. Emissions are limited to 5% opacity from each of the above Clinker Handling and Clinker Silo unit emissions points controlled by a baghouse. Exceedance of the 5% opacity limit shall be deemed an exceedance of this permit condition and not necessarily an exceedance of the opacity limitations given in 40 CFR 63, Subpart LLL.

   d. Emissions are limited to 10% opacity from any emissions point not controlled by a baghouse.

   [Rules 62-4.070(3), 62-212.400 (BACT), F.A.C. and 40 CFR 63.1348]

8. Compliance Demonstrations: Each emission point shall be tested to demonstrate initial compliance with the emission standards for visible emissions in accordance with EPA Method 9. The tests shall be conducted within 60 days after achieving the maximum production rate at which the unit will be operated, but not later than 180 days after the initial startup. Thereafter, compliance with the visible emission limits shall be demonstrated during each federal fiscal year (October 1st to September 30th).
   [Rules 62-4.070(3), 62-297.310(7)(a), F.A.C. and 40 CFR 63.1349(b)(2)]

9. Periodic Monitoring Requirements: Each affected source subject to an opacity standard shall be periodically monitored using the procedures described in 40 CFR 63.1350(a) (4) (i) through (vii) to ensure compliance with the emissions limits of condition No. 6. [Rule 62-4.070(3), and 40 CFR, 63.1350, Subpart LLL]

10. Test Methods: Any required tests shall be performed in accordance with the following reference methods and the applicable requirements of Appendix C of this permit, and the applicable NESHAP provisions.

Method	Description of Method and Comments
9	Visual Determination of the Opacity of Emissions from Stationary Sources
22	Visual Determination of Fugitive Emissions From Material Sources

REPORTING AND RECORD KEEPING

11. Baghouse O&M Plan: For each baghouse the permittee shall prepare an operation and maintenance (O&M) plan to address proper operation, parametric monitoring, and a schedule for conducting periodic inspections and preventive maintenance. Baghouse inspections and maintenance activities shall be recorded in a written log. The O&M plan shall be submitted to the Compliance Authority prior to the initial compliance tests for this unit. [Rule 62-4.070(3), and 40 CFR 63.1350, Subpart LLL]

12. Test Reports: For each test conducted, the permittee shall file a test report including the information specified in Rule 62-297.310(8), F.A.C. with the compliance authority no later than 45 days after the last run of each test is completed. [Rules 62-297.310(8), F.A.C.]

F. Finish Mill System

The specific conditions of this subsection apply to the following emissions unit after construction is complete.

EU ID	Emissions Unit Description
038	Finish Mill Feed Transportation
039	Finish Mill Processing and Product Recovery

The Finish Mill Feed Transportation emissions unit includes the finish mill feed from the clinker silo and the additive silos (slag, gypsum and limestone) to the finish mills. The Finish Mill Processing and Recovery emissions unit controls the air stream containing the finished product. Emissions Units 038 and 039 contains the following emission points controlled by fabric filter baghouses.

Point ID	Emissions Point Description
PS78	Finish Mill Feed
PS78G	Gyspsum Silo
PS78S	Slag Silo
PS78L	Limestone Dust Silo
PS78GO	Gypsum Transfer From Silo
PS78SO	Slag Transfer From Silo
PS78LO	Limestone Dust Transfer From Silo
PS79	Finish Mill Processing and Product Recovery Stack

APPLICABLE STANDARDS AND REGULATIONS

1. BACT Determinations: A determination of the Best Available Control Technology (BACT) was made for particulate matter (PM/PM_{10}). To satisfy the BACT requirements for this unit the visible emissions limits act as surrogate standards for PM.

2. NESHAP Requirements: This unit is subject to 40 CFR 63, Subpart A (Identification of General Provisions) and 40 CFR 63, Subpart LLL (National Emissions Standard for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry). The Department determines that the BACT emissions performance requirements are as stringent as or more stringent than the limits imposed by this Subpart. Some separate reporting and monitoring may be required by this Subpart.

EQUIPMENT AND CONTROL TECHNOLOGY

3. Equipment Description: The permittee is authorized to construct, operate, and maintain equipment needed for the handling, conveying and grinding of clinker from Line 3 storage silos together with gypsum, slag or limestone dust from their respective silos to make the final cement product. Equipment will include associated conveyors, and control equipment.

4. Process Rate Specification: The nominal cement production rate is 198 TPH and shall not exceed 220 TPH (24-hour rolling average) and 1,734,500 tons during any consecutive 12 month period. [Applicant Request]

5. Baghouse Controls: Each emissions point identified for clinker storage and conveying shall be controlled by a baghouse system. Each required baghouse shall be designed, operated, and maintained to achieve a PM design specification of 0.01 gr/dscf and a PM_{10} design specification of 0.007 gr/dscf. [Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]

F. Finish Mill System

PERFORMANCE REQUIREMENTS

6. Hours of Operation: This emissions unit is allowed to operate 8,760 hours per year. [Applicant Request, Rule 62-210.200(PTE), F.A.C]

EMISSIONS AND TESTING REQUIREMENTS

7. Emissions Limits: The following standards apply to each emissions point of this unit including clinker and additive conveyance to the finish mill, the finish mill and cement product exiting the finish mill.

   a. Particulate matter emissions from the finish mill baghouse PS79 are limited to 18.8 lb/hr. Visible emissions shall not exceed 10% opacity.

   b. Emissions are limited to 5% opacity from each of the Finish Mill Feed Transportation unit emissions points controlled by a baghouse. Exceedance of the 5% opacity limit shall be deemed an exceedance of this permit condition and not necessarily an exceedance of the opacity limitations given in 40 CFR 63, Subpart LLL.

   c. Emissions are limited to 10% opacity from any emissions point not controlled by a baghouse.

   [Rules 62-4.070(3), 62-212.400 (BACT), F.A.C. and 40 CFR 63.1348]

8. Testing Requirements: The finish mill (baghouse PS79) shall be stack tested to demonstrate initial compliance with the applicable emission standards for PM/PM_{10} and visible emissions. The tests shall be conducted within 60 days after achieving the maximum production rate at which the unit will be operated, but not later than 180 days after the initial startup. Thereafter, compliance with the particulate limits (PM/PM_{10}) shall be demonstrated within the 12 month period prior to each renewal of the operation permit and compliance with the visible emissions limits for each unenclosed transfer point shall be demonstrated during each federal fiscal year (October 1st to September 30th). [Rule 62-297.310(7)(a), F.A.C.]

9. Compliance Demonstrations: Each emission point shall be tested to demonstrate initial compliance with the emission standards for visible emissions in accordance with EPA Method 9. The tests shall be conducted within 60 days after achieving the maximum production rate at which the unit will be operated, but not later than 180 days after the initial startup. Thereafter, compliance with the visible emission limits shall be demonstrated during each federal fiscal year (October 1st to September 30th).
   [Rules 62-4.070(3), 62-297.310(7)(a), F.A.C. and 40 CFR 63.1349(b)(2)]

10. Periodic Monitoring Requirements: Each affected source subject to an opacity standard shall be periodically monitored using the procedures described in 40 CFR 63.1350(a) (4) (i) through (vii) to ensure compliance with the emissions limits of condition No. 6. [Rule 62-4.070(3), and 40 CFR, 63.1350, Subpart LLL]

11. Test Methods: Any required tests shall be performed in accordance with the following reference methods and the applicable requirements of Appendix C of this permit, and the applicable NESHAP provisions.

Method	Description of Method and Comments
1 - 4	Determination of Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content. Methods shall be performed as necessary to support other methods.
5	Determination Particulate Matter from Stationary Sources
9	Visual Determination of the Opacity of Emissions from Stationary Sources
22	Visual Determination of Fugitive Emissions From Material Sources

REPORTING AND RECORD KEEPING

12. Baghouse O&M Plan: For each baghouse the permittee shall prepare an operation and maintenance (O&M) plan to address proper operation, parametric monitoring, and a schedule for conducting periodic inspections and preventive maintenance. Baghouse inspections and maintenance activities shall be recorded in a written log. The O&M plan shall be submitted to the Compliance Authority prior to the initial compliance tests for this unit. [Rule 62-4.070(3), and 40 CFR 63.1350, Subpart LLL]

13. Test Reports: For each test conducted, the permittee shall file a test report including the information specified in Rule 62-297.310(8), F.A.C. with the compliance authority no later than 45 days after the last run of each test is completed. [Rules 62-297.310(8), F.A.C.]

G. Cement Silos and Loadout System

The specific conditions of this subsection apply to the following emissions unit after construction is complete.

EU ID	Emissions Unit Description
040	Cement Silos & Loadout

The Cement Silos and Loadout system includes cement conveyed into silos, the cement packhouse and cement loadout to trucks and railcars from the cement silos. Emission unit 040 contains the following emission points controlled by fabric filter baghouses.

Point ID	Emissions Point Description
PS80	Cement Transfer
PS81	Cement From Bucket Elevator to Belt Conveyor
PS82A	Quadrate Silo #8
PS83A	Quadrate Silo #9
PS82	Loadout Spout, #8 Side
PS83	Loadout Spout, #9 Side

APPLICABLE STANDARDS AND REGULATIONS

1. BACT Determinations: A determination of the Best Available Control Technology (BACT) was made for particulate matter (PM/PM_{10}). To satisfy some of the BACT requirements for this unit the visible emissions limits act as surrogate standards for PM.

2. NESHAP Requirements: This unit is subject to 40 CFR 63, Subpart A (Identification of General Provisions) and 40 CFR 63, Subpart LLL (National Emissions Standard for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry). The Department determines that the BACT emissions performance requirements are as stringent as or more stringent than the limits imposed by this Subpart. Some separate reporting and monitoring may be required by this Subpart.

EQUIPMENT AND CONTROL TECHNOLOGY

3. Equipment Description: The permittee is authorized to construct, operate, and maintain equipment needed for cement storage, packaging and loadout. Equipment will include conveyors, bucket elevators, silos, distribution box, and air slides to vented loading spouts.

4. Baghouse Controls: Each emissions point identified for cement silos and loadout shall be controlled by a baghouse system. Each required baghouse shall be designed, operated, and maintained to achieve a PM design specification of 0.01 gr/dscf and a PM_{10} design specification of 0.007 gr/dscf.
[Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]

PERFORMANCE REQUIREMENTS

5. Hours of Operation: This emissions unit is allowed to operate 8,760 hours per year.
[Applicant Request, Rule 62-210.200(PTE), F.A.C]

EMISSIONS AND TESTING REQUIREMENTS

6. Emissions Limits: The following standards apply to each emissions point of this unit including all cement handling and cement silo transfer points:

a. Emissions are limited to 5% opacity from each of the above listed emissions points controlled by a baghouse. Exceedance of the 5% opacity limit shall be deemed an exceedance of this permit condition and not necessarily an exceedance of the opacity limitations given in 40 CFR 63, Subpart LLL.

b. Emissions are limited to 10% opacity from any emissions point not controlled by a baghouse.

[Rules 62-4.070(3), 62-212.400 (BACT), F.A.C. and 40 CFR 63.1348]

7. Compliance Demonstrations: Each emission point shall be tested to demonstrate initial compliance with the emission standards for visible emissions in accordance with EPA Method 9. The tests shall be conducted within 60 days after achieving the maximum production rate at which the unit will be operated, but not later than 180 days after the initial startup. Thereafter, compliance with the visible emission limits shall be demonstrated during each federal fiscal year (October 1st to September 30th).
[Rules 62-4.070(3), 62-297.310(7)(a), F.A.C. and 40 CFR 63.1349(b)(2)]

8. Periodic Monitoring Requirements: Each affected source subject to an opacity standard shall be periodically monitored using the procedures described in 40 CFR 63.1350(a) (4) (i) through (vii) to ensure compliance with the emissions limits of condition No. 6. [Rule 62-4.070(3), and 40 CFR, 63.1350, Subpart LLL]

9. Test Methods: Any required tests shall be performed in accordance with the following reference methods and the applicable requirements of Appendix C of this permit, and the applicable NESHAP provisions.

Method	Description of Method and Comments
9	Visual Determination of the Opacity of Emissions from Stationary Sources
22	Visual Determination of Fugitive Emissions From Material Sources

REPORTING AND RECORD KEEPING

10. Baghouse O&M Plan: For each baghouse the permittee shall prepare an operation and maintenance (O&M) plan to address proper operation, parametric monitoring, and a schedule for conducting periodic inspections and preventive maintenance. Baghouse inspections and maintenance activities shall be recorded in a written log. The O&M plan shall be submitted to the Compliance Authority prior to the initial compliance tests for this unit. [Rule 62-4.070(3), and 40 CFR 63.1350, Subpart LLL]

11. Test Reports: For each test conducted, the permittee shall file a test report including the information specified in Rule 62-297.310(8), F.A.C. with the compliance authority no later than 45 days after the last run of each test is completed. [Rules 62-297.310(8), F.A.C.

H. Coal and Petroleum Coke Mill System

The specific conditions of this subsection apply to the following emissions unit.

EU ID	Emissions Unit Description
041	Coal and Petroleum Coke Mill

The Coal and Petroleum Coke (Petcoke) Mill system includes coal/coke handling from storage to the pulverized fuel bins. Emissions unit 041 contains the following emission points controlled by fabric filter baghouses.

Point ID	Emissions Point Description
PS84	Coal/Petcoke Transfer to Mill
PS84A	Coal/Petcoke Transfer to Mill
PS87	Coal/Petcoke Mill
PS88	Pulverized Fuel Bin (1 of 2)
PS89	Pulverized Fuel Bin (2 of 2)
PS85	Coal/Petcoke Bin
PS86	Coal/Petcoke Bin

APPLICABLE STANDARDS AND REGULATIONS

1. BACT Determinations: A determination of the Best Available Control Technology (BACT) was made for particulate matter (PM/PM_{10}). To satisfy some of the BACT requirements for this unit the visible emissions limits act as surrogate standards for PM.

2. NSPS Requirements: This unit is subject to 40 CFR 60, Subpart A (Identification of General Provisions) and 40 CFR 60, Subpart Y (Standards of Performance for Coal Preparation Plants). The Department determines that the BACT emissions performance requirements are as stringent as or more stringent than the limits imposed by this Subpart. Some separate reporting and monitoring may be required by this Subpart.

EQUIPMENT AND CONTROL TECHNOLOGY

3. Equipment Description: The permittee is authorized to construct, operate, and maintain equipment needed for coal and petroleum coke grinding and storage. Equipment will include a coal/petcoke grinding mill, storage bins and associated conveyor systems. Clinker cooler gas will be used for drying.

4. Baghouse Controls: Each emissions point identified for the coal and petroleum coke grinding and storage system shall be controlled by a baghouse system. Each required baghouse shall be designed, operated, and maintained to achieve a PM design specification of 0.01 gr/dscf and a PM_{10} design specification of 0.007 gr/dscf. [Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]

PERFORMANCE REQUIREMENTS

5. Hours of Operation: The hours of operation for this emissions unit are not limited (8760 hours per year). [Rule 62-210.200(PTE), F.A.C.]

6. Process Rate Limitation: The coal/petroleum coke mill may process up to 50 tons per hour of coal/petroleum coke. No more than 394,200 tons of coal/petroleum coke shall be process during any consecutive 12 months. [Rule62-210.200(PTE), F.A.C.]

H. Coal and Petroleum Coke Mill System

EMISSIONS AND TESTING REQUIREMENTS

7. Particulate Matter Standards: Particulate matter emissions from the coal/petcoke mill (Emissions Point PS87) shall not exceed 0.007 grains per dscf of exhaust gas and shall not exceed 3.35 lb/hr as determined by EPA Method 5. All PM emitted from the baghouse exhaust is assumed to be PM_{10}. The BACT requirements do not waive or vary any applicable NESHAP monitoring or record keeping requirements. [Rules 62-212.400 (BACT), F.A.C. and 40 CFR 60.252]

8. Visible Emissions Standards: Visible emissions shall not exceed the following limits.
   a. Visible emission from any emissions point described above and controlled by a baghouses shall not exceed 5% opacity.
   b. Visible emissions from all coal/petcoke processing and conveying equipment, coal/petcoke storage system, or coal/petcoke transfer and loading system processing coal/petcoke, and not controlled by a baghouse, shall not exceed 10% opacity.

   [Rules 62-212.400 (BACT), F.A.C. and CFR 60.252]

9. Testing and Compliance Requirements: Emissions Point PS87 shall be stack tested to demonstrate initial compliance with the applicable emission standards for PM/PM_{10} and visible emissions. All other emissions points shall be tested for visible emissions only. The tests shall be conducted within 60 days after achieving the maximum production rate at which the unit will be operated, but not later than 180 days after the initial startup. Thereafter, Emissions Point PS87 shall be stack tested within the 12 month period prior to each renewal of the operation permit and compliance with the visible emission limits shall be demonstrated for all of the emissions points during each federal fiscal year (October 1st to September 30th). [Rule 62-297.310(7)(a), F.A.C.]

10. Test Methods: Any required tests shall be performed in accordance with the following reference methods and the applicable requirements of Appendix C of this permit, and the applicable NSPS provisions.

Method	Description of Method and Comments
1 - 4	Determination of Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content. Methods shall be performed as necessary to support other methods.
5	Determination Particulate Matter from Stationary Sources
9	Visual Determination of the Opacity of Emissions from Stationary Sources

CONTINUOUS MONITORING REQUIREMENTS

11. Thermal Dryer Exit Temperature: A monitoring device for the continuous measurement of the temperature of the gas stream at the exit of the thermal dryer shall be installed, calibrated, maintained, and continuously operated to measure the temperature of the gas stream in pursuant to the requirements of 40 CFR 60.253.

REPORTING AND RECORD KEEPING

12. Baghouse O&M Plan: For each baghouse the permittee shall prepare an operation and maintenance (O&M) plan to address proper operation, parametric monitoring, and a schedule for conducting periodic inspections and preventive maintenance. Baghouse inspections and maintenance activities shall be recorded in a written log. The O&M plan shall be submitted to the Compliance Authority prior to the initial compliance tests for this unit. [Rule 62-4.070(3), and 40 CFR 63.1350, Subpart LLL]

13. Test Reports: For each test conducted, the permittee shall file a test report including the information specified in Rule 62-297.310(8), F.A.C. with the compliance authority no later than 45 days after the last run of each test is completed. [Rules 62-297.310(8), F.A.C.]

I. Fugitive Emissions

The following specific conditions apply to the following emissions unit after construction.

EU ID	Emissions Unit Description
042	Fugitive Emissions from Vehicle Travel and Miscellaneous Sources

The Fugitive Emissions from Vehicle Travel emission unit addresses paved road emissions from raw material and cement hauling associated with Line No. 3.

PERFORMANCE REQUIREMENTS

1. Unconfined Emissions of Particulate Matter

   a. No person shall cause, let, permit, suffer or allow the emissions of unconfined particulate matter from any activity without taking reasonable precautions to prevent such emissions. Such activities include, but are not limited to: vehicular movement; transportation of materials; construction, alteration, demolition or wrecking; or industrially related activities such as loading, unloading, storing or handling.

   b. Reasonable precautions shall include the following:

      (1) Landscaping and planting of vegetation.

      (2) Application of water to control fugitive dust from activities such as demolition of buildings, grading roads, construction, and land clearing.

      (3) Water supply lines, hoses and sprinklers shall be located near all stockpiles of raw materials, coal, and petroleum coke.

      (4) All plant operators shall be trained in basic environmental compliance and shall perform visual inspections of raw materials, coal and petroleum coke periodically and before handling. If the visual inspections indicate a lack of surface moisture, such materials shall be wetted with sprinklers. Wetting shall continue until the potential for unconfined particulate matter emissions are minimized.

      (5) Water spray shall be used to wet the materials and fuel if inherent moisture and moisture from wetting the storage piles are not sufficient to prevent unconfined particulate matter emissions.

      (6) As necessary, applications of asphalt, water, or dust suppressants to unpaved roads, yards, open stockpiles and similar activities.

      (7) Paving of access roadways, parking areas, manufacture area, and fuel storage yard.

      (8) Removal of dust from buildings, roads, and other paved areas under the control of the owner or operator of the facility to prevent particulate matter from becoming airborne.

      (9) A vacuum sweeper shall be used to remove dust from paved roads, parking, and other work areas.

      (10) Enclosure or covering of conveyor systems where practicably feasible.

      (11) All materials at the plant shall be stored under roof. Materials, other than quarried materials, shall be stored on compacted clay or concrete, or in enclosed vessels.

      (12) Use of hoods, fans, filters, and similar equipment to contain, capture and/or vent particulate matter.

      (13) Confining abrasive blasting where possible.

   c. In determining what constitutes reasonable precautions for a particular source, the Department shall consider the cost of the control technique or work practice, the environmental impacts of the technique or practice, and the degree of reduction of emissions expected from a particular technique or practice.

   [Rules 62-212.400(BACT) and 62-296.320(4)(c), F.A.C.]

2. Fugitive Dust Improvement Plan: Prior to actual construction, the owner or operator shall submit to the Department a facility-wide specific Fugitive Dust Improvement Plan outlining how the measures in the previous condition will be implemented for the proposed project as well as measures to improve the present fugitive dust control program.

AMBIENT MONITORING REQUIREMENTS

3. Ambient Monitoring Required:

   a. The owner or operator shall operate a continuous ambient monitoring device for suspended particulate matter less than 2.5 microns ($PM_{2.5}$) at an offsite location (site) to be determined in consultation with the Department. The device shall be operational within 120 days of final issuance of this permit. This device shall operate continuously with access to the instrument provided to the Ambient Monitoring Section (AMS) of the Department's Bureau of Ambient Monitoring and Mobile Sources (BAMMS) by means of telephone. The monitoring equipment shall be operated as long as required by the Department, however, the owner or operator may petition the Department to review the monitoring requirements after five years of operation, and every five years thereafter. Requests for review shall be directed to the AMS. Ambient monitoring activities required by this permit for $PM_{2.5}$ shall be conducted in such a manner so as to meet the Department's minimum quality assurance requirements as delineated in 40 CFR Parts 50 and 58.11(3); Part 58, Appendices A, C, D and E; and the Department's *Quality Assurance Project Plan for the State of Florida's $PM_{2.5}$ Ambient Air Monitoring Program at State and Local Monitoring Stations* (*Plan*). Changes to the *Plan* will be distributed by the BAMMS to the owner or operator. The owner or operator shall comply with *Plan* changes as soon as practicable, but no later than upon renewal of this permit.

   b. The owner or operator shall, within ninety (90) days of the effective permit date, submit to the Department for review and approval standard operating procedures for each monitor, calibrator and ancillary piece of equipment utilized in the production of the required ambient air quality data. The owner or operator shall submit the verified monitoring data and quality assurance results to BAMMS within sixty (60) days after the end of each calendar quarter in an electronic medium and format: either the Air Quality System (AQS) [preferred] or the Aerometric Information Retrieval System (AIRS) for the monitoring data, and the Precision and Accuracy Data (PAData) format for the quality assurance data, or as specified by the Department. In addition, the owner or operator shall verify the data in the Department's data base within sixty (60) days after the end of the quarter in which those data were produced. The owner or operator shall allow Department auditors, with a minimum of seven (7) days prior notification, access to the monitoring locations for the purpose of the performance of accuracy audits which may be completed in lieu of, or in addition to, the owner or operator's quarterly accuracy audits as specified in 40 CFR, Part 58, Appendix A, 3.2 and 3.3. The owner or operator shall also submit to an annual management systems audit. The management systems audit, which reviews the quality assurance and monitoring effort for the preceding year, shall be conducted between February and June of the year following the year in which the audited data were produced. In addition, the Department staff shall be allowed access to the monitoring locations, with a minimum of seven (7) days prior notification, on an annual basis, for the purpose of determining compliance with the siting requirements as specified in 40 CFR Part 58, Appendix E.

   [Rule 62-212.400(7) F.A.C.]

J. Non-hazardous Waste Fuel Handling

The following specific conditions apply to the following emissions unit after construction.

EU ID	Emissions Unit Description
043	Non-hazardous Waste Fuel Handling

The Non-hazardous Waste Fuel Handling Unit includes receipt, storage and conveyance of the following fuels that may be burned in the main kiln burner or calciner: rice hulls; corn husks; cotton gin wastes; sugarcane bagasse; sawdust and wood chips from clean untreated and unpainted wood; paper and cardboard; non-chlorinated plastic; citrus peel waste; and carpet derived fuel.

1. Unconfined Emissions of Particulate Matter: The receiving areas and storage areas for these fuels must be fully enclosed, and vented to a fabric filter. If conveyed pneumatically, the exhaust shall be vented to the fabric filter. If conveyed mechanically, the system shall be fully enclosed.

2. Cemex shall work with suppliers to ensure that the wood chips/sawdust are free of plastics, rubber, glass, painted wood, chemically treated wood, and non-combustible materials. The firing of any household garbage, hazardous wastes, or toxic materials is prohibited. A list of suppliers and contact information shall be maintained on site.

3. Adequate staff shall be properly trained as "Fuel Handlers" to visually inspect deliveries of wood chips/sawdust in Cemex's truck receiving area. Wood chip/sawdust loads that contain any amounts of household garbage, hazardous wastes, or toxic materials shall be immediately rejected. Wood chip/sawdust loads that contain plastics, rubber, glass, painted wood, chemically treated wood, and other non-combustible materials shall also be rejected.

4. Six grab samples shall be taken from each shipment destined for use in Kiln 3. Each grab sample shall be approximately one pound, and be stored in sealable plastic bags. The six grab samples shall be combined to form a "composite sample", which shall be produced by mixing the individual grab samples into a homogeneous mixture and then cutting out a single representative sample. In accordance with Methods 3050/6010 (EPA Method SW-846) the composite sample shall be analyzed for copper, chromium, and arsenic and reported as ppmw (wet and dry basis). Results of each analysis shall be available within 10 calendar days of making the composite sample. The remaining portion of the homogenous mixture shall be retained on site for use as a control sample to the verify lab test results, if necessary.

   If analysis of a composite sample indicates concentrations in excess of 50 ppmw (dry) for copper, chromium, or arsenic, Cemex shall take the following actions within 3 working days of receiving the results:

   - Provide results to the Bureau of Air Regulation and the Air Resource Section of the Southwest District Office.
   - Produce two additional representative samples from the remainder of the composite sample and send to a lab for analysis.
   - Review the material screening and segregation procedures with the suppliers.

   Results of each analysis shall be available within 10 calendar days of making the additional composite samples. If one of the additional composite samples also indicates concentrations of copper, chromium, or arsenic exceeding the levels specified above, Cemex shall discontinue firing wood chips and begin an investigation to evaluate the source of contamination. If the source and cause can be identified and corrected, Cemex may submit to the Department's Bureau of Air Regulation a corrective action plan and request the resumption of wood chip firing. Cemex may resume firing wood chips only with written approval from the Department.