CEMEX Construction Materials Florida, LLC.
Miami Cement Plant

Facility ID No. 0250014
Miami-Dade County

Title V Air Operation Permit Revision

Permit No. 0250014-044-AV
(Revision of Title V Air Operation Permit No. 0250014-032-AV)

Permitting & Compliance Authority:
Miami-Dade County
Permitting, Environment and Regulatory Affairs (PERA) – Environmental Services
Air Quality Management Division
701 N.W. 1st Court
Second Floor
Miami, Florida 33136

Telephone: 305/372-6925
Fax: 305/372-6954

Title V Air Operation Permit Revision

Permit No. 0250014-044-AV

Table of Contents

Section **Page Number**

I. Facility Information.
A. Facility Description. 2
B. Summary of Emissions Units. 2
C. Applicable Regulations. 3

II. Facility-wide Conditions. 4

III. Emissions Units and Conditions.
A. Cement Plant Raw Material Handling System.. 6
B. Cement Plant Pyroprocessing & Raw Mill System… 8
C. Clinker Handling & Storage System 24
D. Cement Plant Finish Mill System. 26
E. Cement Plant Product Storage and Packhouse/Loadout System 30
F. Cement Plant Coal & Petroleum Coke Handling System. 33
G. Facility Fugitive Emissions 35
H. Limestone Quarry Aggregate Plant Operations. 37
I. Concrete Block & Ready Mix Plant Operations 42
J. Stone Dryer & Soil Thermal Treatment Operations 44
K. Common Conditions. 51

IV. Appendices. 53
Appendix A, Glossary.
Appendix CAM, Compliance Assurance Monitoring Plan.
Appendix I, List of Insignificant Emissions Units and/or Activities.
Appendix NESHAP, Subpart A – General Provisions.
Appendix NESHAP, 40 CFR 63 Subpart LLL – NESHAP for Portland Cement Manufacturing Industry.
Appendix NSPS, Subpart A – General Provisions.
Appendix NSPS, Subpart F – Standards of Performance for Portland Cement Plants.
Appendix NSPS, Subpart OOO – Standards of Performance for Nonmetallic Mineral Processing Plants.
Appendix NSPS, Subpart Y – Standards of Performance for Coal Preparation Plants.
Appendix TV, Title V General Conditions.
Appendix U, List of Unregulated Emissions Units and/or Activities.
Appendix SS-1, Stack Sampling Facilities.
Appendix CG, Common and General Conditions.
Appendix B, Requirements for On-Spec Used Oil Fuel.

Referenced Attachments. ..... At End
Figure 1, Summary Report-Gaseous and Opacity Excess Emission and Monitoring System Performance (40 CFR 60, July, 1996).
Table H, Permit History.
Table 297.310-1, Calibration Schedule.
Statement of Basis.

PERMITTEE:
CEMEX Construction Materials Florida, LLC.
1200 NW 137 Avenue
Miami, Florida 33182

Permit No. 0250014-044-AV
Miami Cement Plant
Facility Id No. 0250014
Title V Air Operation Permit Revision

The purpose of this permit is to issue a Title V air operation permit revision to incorporate the terms and conditions of previously issued Air Construction Permit Nos. 0250014-038-AC, and 0250014-042-AC for the above referenced facility. Air construction permit No. 0250014-038-AC was issued for the installation of one (1) 800 BBL twin-compartment silo, and one (1) concrete mixer at the Sweetwater Concrete Batch Plant. The concrete mixer was not installed, and as such will not be incorporated into this Title V air operation permit revision. Air construction permit No. 0250014-042-AC was issued to allow CEMEX to burn clean biomass as a supplemental fuel in the cement kiln on a permanent basis. The CEMEX Construction Materials Florida, LLC. is located in Miami-Dade County at 1200 NW 137 Avenue, Miami, Florida. UTM Coordinates are: Zone 17, 558.20 East and 2851.20 North. Latitude is: 25° 46'45" North; and, Longitude is: 80° 25' 10" West.

The Title V air operation permit is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210, 62-213. The above named permittee is hereby authorized to operate the facility in accordance with the terms and conditions of this permit.

Effective Date: October 4, 2011
Revision Effective Date: March 2, 2012
Renewal Application Due Date: February 21, 2016
Expiration Date: October 3, 2016

_____

H. Patrick Wong, Chief
Air Quality Management Division
Permitting, Environment & Regulatory Affairs
Miami-Dade County

HPW/tr

Subsection A. Facility Description.

The CEMEX Construction Materials Florida, LLC, Miami Cement Plant facility operates in Miami-Dade County Florida. This facility consists of the following: a dry-process kiln with pre-heater, precalciner and clinker cooler capable of producing approximately 1,300,000 tons per year of clinker, a limestone quarry and crushing system, material receiving facilities (both by rail and truck), open short-term material storage piles, a storage building for intermediate raw material and clinker storage, a stone dryer & soil thermal treatment plant, a raw mill system, six finish mills, two packhouses, thirty two cement silos, a rail and truck bulk loadout facility, and a liquid fuel tank farm. The dry-process kiln system, installed in the year 2000, replaced the previously existing two wet process cement kilns and clinker coolers in operation at this location for over 30 years. CEMEX also operates a concrete batch plant and a concrete block plant (Sweetwater). The plant is located on the adjacent property to the CEMEX, Miami Cement Plant.

Subsection B. Summary of Emissions Units.

EU No.	Brief Description
Regulated Emissions Units	
001	Finish Mill System: Finish Mill No. 1
002	Finish Mill System: Finish Mill No. 2
003	Finish Mill System: Finish Mill No. 3
004	Cement Handling System: (32) Bulk Cement Storage Silos
005	Cement Handling System: Mortar Packhouse
006	Cement Handling System: Cement Packhouse
012	Finish Mill System: Finish Mill No. 4
013	Finish Mill System: Finish Mill No. 5
014	Stone Dryer & Soil Thermal Treatment Facility
015	Cement Handling System: Cement Truck Loading
016	Facility Wide Fugitive Emissions
017	Cement Plant Raw Material Handling (Baghouses)
018	In-Line Kiln/Raw Mill/Clinker Cooler/TIMS/Clean Biomass Feeder System
019	Clinker Handling and Storage System
020	Cement Plant Coal Handling System: Coal Mill System
021	Sweetwater Concrete Block and Concrete Batch Plants
022	Quarry Operations Subject to 40 CFR 60 Subpart OOO: Aggregate Plant Crushers
023	Quarry Operations Subject to 40 CFR 60 Subpart OOO: Other Affected Screening Operations/Belt Conveyors
025	Quarry Operations Not Subject to 40 CFR 60 Subpart OOO
028	Finish Mill System: Finish Mill 6

EU No.	Brief Description
Unregulated Emissions Units	
029	Two (2) Diesel Fuel Limited Use Reciprocating Internal Combustion Engines

Subsection C. Applicable Regulations.

Based on the Title V air operation permit renewal application received March 15, 2010, this facility is a major source of hazardous air pollutants (HAP). This facility operates two (2) stationary reciprocating internal combustion engines (Emissions Unit 029) that are classified as limited use under 40 CFR 63, Subpart ZZZZ - National Emissions Standards For Hazardous Air Pollutants For Stationary Reciprocating Internal Combustion Engines, and do not have to comply with the provisions of this subpart. The existing facility is a PSD major source of air pollutants in accordance with Rule 62-212.400, F.A.C. A summary of applicable regulations is shown in the following table.

Regulation	EU No(s).
40 CFR 60, Subpart A, NSPS General Provisions	022, 023
40 CFR 60, Subpart F, NSPS for Portland Cement Plants	All except 016
40 CFR 60, Subpart OOO, NSPS for Nonmetallic Mineral Processing Plants	022, 023
40 CFR 60, Subpart Y, NSPS for Coal Preparation Plants	020
40 CFR 63, Subpart A, NESHAP General Provisions	001-006, 012, 013, 015, 017-020, 028
40 CFR 63, Subpart LLL, NESHAP for Portland Cement Manufacturing Industry	001-006, 012, 013, 015, 017-020, 028
40 CFR 63, Subpart ZZZZ, NESHAP for Reciprocating Internal Combustion Engines	029
State Rule Citations – 62-4, 62-204, 62-210, 62-212, 62-213, 62-296, 62-297	All
Local Rule – Chapter 24 – Code of Miami-Dade County	All

The following conditions apply facility-wide to all emission units and activities:

FW1. Appendices. The permittee shall comply with all documents identified in Section IV, Appendices, listed in the Table of Contents. Each document is an enforceable part of this permit unless otherwise indicated. [Rule 62-213.440, F.A.C.]

Emissions and Controls

FW2. Objectionable Odor Prohibited. No person shall cause, suffer, allow or permit the discharge of air pollutants, which cause or contribute to an objectionable odor. An "objectionable odor" means any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance.
[Rule 62-296.320(2) and 62-210.200(Definitions), F.A.C.]

FW3. General Volatile Organic Compounds (VOC) Emissions or Organic Solvents (OS) Emissions. The permittee shall allow no person to store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds or organic solvents without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department.
[Rule 62-296.320(1), F.A.C.]
{Permitting Note: Nothing is deemed necessary and ordered at this time.}

FW4. General Visible Emissions. No person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity equal to or greater than 20% opacity. EPA Method 9 is the method of compliance pursuant to Chapter 62-297, F.A.C. This regulation does not impose a specific testing requirement.
[Rule 62-296.320(4)(b)1, F.A.C.]

FW5. Unconfined Particulate Matter. No person shall cause, let, permit, suffer or allow the emissions of unconfined particulate matter from any activity, including vehicular movement; transportation of materials; construction; alteration; demolition or wrecking; or industrially related activities such as loading, unloading, storing or handling; without taking reasonable precautions to prevent such emissions. Reasonable precautions to prevent emissions of unconfined particulate matter at this facility include:

a. Use of hoods, fans, filters, and similar equipment to contain, capture, and/or vent particulate matter.
b. Application of asphalt, water, oil, chemicals or other dust suppressants to unpaved roads, yards, open stock piles and similar activities.
c. Removal of particulate matter from roads and other paved areas under the control of the owner or operator of the facility to prevent re-entrainment, and from buildings or work areas to prevent particulate from becoming airborne.
d. Landscaping or planting of vegetation.
e. Use of hoods, fans, filters, and similar equipment to contain, capture and/or vent particulate matter.
f. Confining abrasive blasting where possible.
g. Enclosure or covering of conveyor systems.

[Rule 62-296.320(4)(c), F.A.C.; and Permit No. 0250014-041-AC]

Annual Reports and Fees

See Appendix CG, Common and General Conditions for additional details.

FW6. Annual Operating Report. The permittee shall submit an annual report that summarizes the actual operating rates and emissions from this facility. Annual operating reports shall be submitted to the Compliance Authority by April 1st of each year.
[Rule 62-210.370(3), F.A.C.]

FW7. Annual Emissions Fee Form and Fee. The annual Title V emissions fees are due (postmarked) by March 1st of each year. The completed form and calculated fee shall be submitted to: Major Air Pollution Source Annual Emissions Fee, P.O. Box 3070, Tallahassee, Florida 32315-3070. The forms are available for download by accessing the Title V Annual Emissions Fee On-line Information Center at the following Internet web site: http://www.dep.state.fl.us/air/emission/tvfee.htm.
[Rule 62-213.205, F.A.C.]

FW8. Annual Statement of Compliance. The permittee shall submit an annual statement of compliance to the compliance authority at the address shown on the cover of this permit within 60 days after the end of each calendar year during which the Title V permit was effective.
[Rules 62-213.440(3)(a)2. & 3. and (3)(b), F.A.C.]

FW9. Prevention of Accidental Releases (Section 112(r) of CAA). If and when the facility becomes subject to 112(r), the permittee shall:
a. Submit its Risk Management Plan (RMP) to the Chemical Emergency Preparedness and Prevention Office (CEPPO) RMP Reporting Center. Any Risk Management Plans, original submittals, revisions or updates to submittals, should be sent to: RMP Reporting Center, Post Office Box 10162, Fairfax, VA 22038, Telephone: (703) 227-7650.
b. Submit to the permitting authority Title V certification forms or a compliance schedule in accordance with Rule 62-213.440(2), F.A.C.
[40 CFR 68]

FW10. The permittee shall submit all compliance related notifications and reports required of this permit the Permitting, Environment and Regulatory Affairs (PERA)-Environmental Services Office at the following address:

Miami-Dade County
Permitting, Environment and Regulatory Affairs (PERA)
Air Quality Management Division
701 NW 1 Court, Suite 400
Miami, Florida 33136-3912

FW11. Special Compliance Tests: When the PERA, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard 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 PERA.
[Rule 62-297.310(7)(b) F.A.C.]

The specific conditions in this section apply to the following emissions unit:

EU No.	Brief Description
-017	Cement Plant Raw Material Handling System

Raw Materials Handling operations are controlled by the following baghouses:

Emission Point ID	Description of Emissions Points
K21-BF1	Additive Transfer
K21-BF2	Additive Transfer (Vents Indoors)
K22-BF1	Soil/Ash Transfer
K22-BF2	Soil/Ash Transfer
K51-BF1	Slag/Soil Elevator (Vents Indoors)
391-BF1	Raw Meal Transfer Elevator
391-BF2	Raw Meal Silo
391-BF3	Dust Bin
431-BF1	Kiln Feed Transfer
431-BF2	Kiln Feed Transfer Return

{Permit Note: Emission points venting inside a building are considered fugitive sources and not subject to visible emissions testing.}

Federal Rule Requirements

A.1. Rule Applicability: This emissions unit shall comply with all the applicable standards contained in 40 CFR 63 Subpart LLL – National Emission Standards for Hazardous Air Pollutants From the Portland Cement Manufacturing Industry, and 40 CFR 63 Subpart A – General Provisions.
[40 CFR 63.1340]

Essential Potential to Emit (PTE) Parameters

A.2. Hours of Operation: This emissions unit system is allowed to operate 8,760 hours per year.
[Rule 62-210.200(PTE), and Permit No. 0250014-002-AC]

Emission Limitations, Test Methods and Standards

A.3. Visible Emissions Limits: Visible emissions are limited to 10 percent from each of the above listed baghouses, except where noted. Compliance shall be determined in the manner described in 40 CFR 63.1350(a)(4)(i), (ii), (iii) and (iv) below. Numeration tracks the referenced CFR provision.

(4) Procedures to be used to periodically monitor affected sources subject to opacity standards under Sections 63.1346 and 63.1348. Such procedures must include the provisions of Paragraphs (a)(4)(i) through (a)(4)(iv) of this section.

i. The owner or operator must conduct a monthly 1-minute visible emissions test of each affected source in accordance with Method 22 of Appendix A-7 to 40 CFR 60. The performance test must be conducted while the affected source is in operation.

ii. If no visible emissions are observed in six consecutive monthly tests for any affected source, the owner or operator may decrease the frequency of performance testing from monthly to semi-annually for that affected source. If visible emissions are observed during any semi-annual test, the owner or operator must resume performance testing of

that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.

iii. If no visible emissions are observed during the semi-annual test for any affected source, the owner or operator may decrease the frequency of performance testing from semi-annually to annually for that affected source. If visible emissions are observed during any annual performance test, the owner or operator must resume performance testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six (6) consecutive monthly tests.

iv. If visible emissions are observed during any Method 22 performance test, of Appendix A-7 to 40 CFR 60, the owner or operator must conduct a 6-minute test of opacity in accordance with Method 9 of Appendix A-4 to 40 CFR 60. The Method 9 performance test, of Appendix A-4 to 40 CFR 60, must begin within 1 hour of any observation of visible emissions.

[63.1350(a)(4)(i) through (a)(4)(iv), and Rule 62-4.030(3), F.A.C.]

A.4. Particulate Emissions Limits: The maximum permitted particulate emissions rates from this emissions unit (from each of these emissions points) is 0.01gr/dscf. Pursuant to Rule 62-297.620(4), F.A.C., in lieu of particulate stack testing the permittee shall demonstrate compliance by adhering to an opacity limit of 5%.
If the PERA has reason to believe that the applicable particulate weight emission standard is not being met, PERA shall require that compliance be demonstrated by the test method specified in the applicable rule.
[Permit No. 0250014-002-AC]

A.5. The fly ash handling system including transfer equipment, flyash bin, and pneumatic system exhaust, shall be totally enclosed and vented through fabric filters.
[Permit No. 0250014-002-AC]

Test Procedures, Recordkeeping and Additional Requirements

A.6. Common and General Conditions: This emissions unit is subject to all applicable requirements of the attached Appendices, made part of the permit.

The specific conditions in this section apply to the following emissions unit:

EU No.	Brief Description
-018	In-Line Kiln, Raw Mill, Clinker Cooler, Tire Injection Mechanism System (TIMS), and Clean Biomass Feeder System

Emission Point	Description of Emission Point
421 – BF1	Main Stack with dust collector for preheater/precalciner/raw mill/kiln/clinker cooler

Federal Rule Requirements

B.1. Rule Applicability: This emissions unit shall comply with all the applicable standards contained in 40 CFR 63 Subpart LLL – National Emission Standards for Hazardous Air Pollutants From the Portland Cement Manufacturing Industry, and 40 CFR 63 Subpart A - General Provisions.
[40 CFR 63.1340]

Essential Potential to Emit (PTE) Parameters

B.2. Production Limits: The preheater dry feed rate shall not exceed 267 tons per hour (TPH, 1-hour average). The preheater feed rate is the mass of material (on a dry basis) entering the preheater/kiln as determined by the Pfister weighing/feeding system. The clinker production rate of the kiln shall not exceed 162 tons per hour (TPH, 1-hour average) and 1,300,000 tons during any consecutive 12 months. The clinker production rate shall be determined as a function of the preheater dry feed rate and a conversion factor (multiplier) for the kiln system of 0.607. Continuous operation is allowed (8,760 hours per year) provided the annual clinker production is not exceeded.
[Rule 62-210.200(PTE), F.A.C.; Permit Nos. 0250014-016-AC/PSD-FL-324A, and 0250014-041-AC]

B.3. Maximum Whole Tire Feed Rate: The whole tire feed rate shall not exceed 2.50 tons per hour, or 77.55 mmBtu/hr based on a 24-hour average.
[Rule 62-4.070(3), F.A.C.; Permit No. 0250014-041-AC]

B.4. Paper Currency: The permittee is allowed to burn up to a maximum of 2,000 tons of paper currency as a fuel on a consecutive 12-month period.
[Rule 62-4.070(3), F.A.C., and Permit No. 0250014-042-AC]

B.5. Fly Ash Injection Limit: Fly ash injection to the precalciner shall not exceed 35 tons per hour (TPH, 24-hour average).
[Rule 62-4.070(3), F.A.C.; Permit Nos. 0250014-016-AC/PSD-FL-324A, and 0250014-041-AC]

B.6. Heat Input Limit & Fuels: Fuels fired in the pyroprocessing system (Emissions Unit 018) shall not exceed a total heat input rate of 485 MMBtu/hr on a 24-hour average and shall consist only of the following:

1. Start-Up Fuels: Bituminous coal, natural gas, petroleum coke, propane, No. 2 fuel oil, residual fuel oil, and on-specification and off-specification used oil.

    a. Coal and Petroleum Coke: The coal usage rate shall not exceed 18.7 TPH based on a 24-hour average. The petroleum coke usage rate shall not exceed 16.3 TPH on a 24-hour basis.

b. Used Oil:

i. The constituents and properties of the *on-spec used oil* shall comply with the following allowable concentration levels as stipulated in Table 1 below, unless otherwise noted, and defined in 40 CFR 279.11, which is adopted by reference in Rule 62-710.210, F.A.C.

Table 1

Constituent/Property	Allowable Concentration
Cadmium	2 ppm maximum
Arsenic	5 ppm maximum
Chromium	10 ppm maximum
Lead	100 ppm maximum
Total Halogens	1000 ppm maximum (Permit No. 0250014-002-AC)
Flash Point	100^0F minimum
Polychlorinated Byphenyls (PCBs)	Less than 2 ppm (Permit No. 0250014-002-AC)

ii. *On-specification/Off-specification used oil* burned at this facility shall not be a hazardous waste as defined by Rule 62-730.030, F.A.C., or 40 CFR Part 261 (July 1, 1996 version). It shall not include fuels or blended fuels consisting in whole or in part of hazardous waste or which include mixture of any solid waste generated from the treatment, storage, or disposal of hazardous waste. Used oil shall be burned in compliance with Section 403.769(3), F.S.

iii. *On-specification/Off-specification used oil* samples shall be analyzed by EPA Recommended Analytical Procedures for Used Oil for the following constituent/property, associated unit, and using the test methods indicated in Table 2 below.

Table 2

Constituent/Property	Unit	Test Method
Cadmium	ppm	EPA SW-846(6010)
Arsenic	ppm	EPA SW-846(6010)
Chromium	ppm	EPA SW-846(6010)
Lead	ppm	EPA SW-846(6010)
Total Halogens	ppm	EPA SW-846(9252)
Sulfur	Percent	ASTM D129 or ASTM D1552
Flash Point	degree F	EPA SW-846(1010)
Heat of Combustion	Btu/gal	ASTM D240
Polychlorinated Byphenyls (PCBs)	ppm	EPA SW-846 (0010) and EPA 680

NOTE: Other test methods may be used only after receiving written prior approval from the PERA.

iv. The maximum annual consumption rate of used oil shall not exceed 31,886,000 gallons.

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

2. <u>Supplemental Fuels/Non Start-Up Fuels</u>

a. The following permitted non-hazardous solid waste may be used as supplemental fuel: whole tires and tire-derived fuels, booms and rags from clean petroleum spill clean ups, oil filters, unused paper by-products, clean non-chlorinated plastic by-products, and clean biomass. Clean

biomass means clean cellulosic biomass and/or agricultural organic fibrous organic byproducts as defined in i & ii of this condition. This non-hazardous solid waste material shall not be used as a start-up fuel.

i. Clean Cellulosic Biomass: This material includes clean untreated lumber, tree stumps, tree limbs, slash, bark, sawdust, sander dust, wood chips scraps, wood scraps, wood slabs, wood millings, wood shavings, paper currency, and processed pellets made from wood or other forest residues. This material excludes copper-chromium-arsenic (CCA)-treated wood, creosote-treated wood, construction and demolition (C&D) debris, plywood, particle board, medium density fiberboard, oriented strand board, laminated beams, finger-jointed trim and sheet goods.

ii. Agricultural Organic Fibrous Byproducts: This material includes peanut hulls, rice hulls, corn husks, citrus peels, cotton gin byproducts, animal bedding and other similar types of materials that may be fired with prior written approval of the PERA.

[Miami-Dade County Environmental Quality Control Board, Board Order 99-55 dated December 9, 1999; Rule 62-4.070(3), F.A.C., Permit Nos. 0250014-002-AC, and 0250014-042-AC]

b. Before initiating the burning of whole tires, the gases exiting the kiln shall reach a minimum temperature of 1,400 degrees F for one hour and the oxygen level in the kiln, as measured at the cement plant induced draft fan, shall reach at least 3 percent (1-hour average). Upon reaching steady state conditions, and within 6 hours, gases exiting the kiln shall be maintained at an outlet temperature of at least 1,750 degrees F.
[Permit Nos. 0250014-002-AC, and 0250014-041-AC]

c. Tire Injection Mechanism System (TIMS) Equipment: A tire injection mechanism system (TIMS) that consists of a door (portal) located externally on the left front face of the kiln burner hood, centered horizontally between the west burner hood wall and the burner pipe. It also has a tire feed belt, and a tire injection mechanism. The TIMS uses an automated "pitching" device to shoot a tire, one at a time, into the kiln. A single gate valve opens for a few seconds every time a tire is fed to the front of the kiln.
[Rule 62-4.070(3), F.A.C., and Permit No. 0250014-041-AC]

d. Clean Biomass Feeder System: A Schenck Accurate feeder system or equivalent to measure and dose clean biomass pneumatically through a port into the precalciner; a diesel-powered Vermeer Model No. HG6000 grinder and screen or equivalent (approximately 630 HP); and other miscellaneous equipment to unload, store and handle the clean biomass.
[Rule 62-4.070(3), F.A.C., and Permit No. 0250014-042-AC]

B.7. Receiving Clean Biomass: For clean biomass received at the plant, the permittee shall comply with the following requirements.

a. All clean biomass received at the plant shall be in covered trucks and/or enclosed containers. When unloading and handling clean biomass, the permittee shall take reasonable precautions to prevent fugitive dust emissions. The permittee shall also visually check the delivered clean biomass for particle size and components.

b. Fuel Analyses Parameters: The following information shall be included when reporting the analytical results for clean biomass: lower heating value (Btu/lb) of clean biomass; moisture, ash, volatiles, fixed carbon, sulfur and chlorine content (percent by weight); arsenic, cadmium, chromium, copper, lead and mercury contents (ppmw). All concentrations are on a dry basis.

[Rule 62-4.070(3), and Permit No. 0250014-042-AC]

B.8. Sampling/Analysis Frequency: When the facility receives clean biomass from a new supplier, the permittee shall comply with the following requirements:

a. On the first day that clean biomass from a new supplier is fired, the permittee shall collect a grab sample at least once every four hours of as-fired material (approximately one gallon) before transfer to the feed bin of the feeder system. At the end of the day, the grab samples shall be thoroughly mixed and a representative composite sample made (approximately 2 lb). This procedure shall be followed for each day of sample collection.
b. Analytical tests shall be conducted for the parameters specified in Specific Condition B.7.b. on a minimum of three daily composite samples, each collected at least three days apart.
c. For every subsequent 10,000 tons of clean biomass received on site from a supplier, the permittee shall obtain the analytical results for a representative composite sample of the clean biomass.
d. The permittee shall collect and obtain analytical results of a representative daily composite sample for each day that stack testing is conducted.

[Rules 62-4.070(3), 62-296.320, F.A.C., and Permit No. 0250014-042-AC]

B.9. Analytical Methods: The permittee shall use the following analytical methods in Table 3 below to determine the composition of the clean biomass.

Table 3

Parameter	**Analytical Methods**
Moisture, Volatiles, Ash and Fixed Carbon	Proximate Analysis appropriate for given fuel
Carbon, and Sulfur	Ultimate Analysis appropriate for given fuel
Heating Value	ASTM E711 - 87(2004) Standard Test Method for Gross Calorific Value of Refuse-Derived Fuel by the Bomb Calorimeter, or ASTM D5468 - 02(2007) Standard Test Method for Gross Calorific and Ash Value of Waste Materials
Chlorine	EPA SW-846 or EPA Method 9056
Mercury	EPA 7470A/7471A
Other Metals	EPA SW-846 or EPA Method 6010B

Other equivalent methods may be used with prior written approval from the State of Florida Department of Environmental Protection (FDEP).

[Rule 62-4.070(3), F.A.C., and Permit No. 0250014-042-AC]

B.10. Storing and Handling Clean Biomass: The clean biomass shall be stored:

a. Under cover or in covered trailers or containers;
b. On top of a paved or compacted clay surface;
c. To promote containment and prevent contamination of air, water and soil; and
d. Storage design should be appropriate to maintain the quality of the materials (e.g., first in, first out).

[Rules 62-4.070(3), 62-296.320, F.A.C., and Permit No. 0250014-042-AC]

B.11. Whole Tire Storage: Whole Tires shall be received and stored in containers, or on an impervious surface under roof outside the Northwest Wellfield Protection Area.
[Miami-Dade County Environmental Quality Control Board Order 99-55 dated December 9, 1999, and Permit No. 0250014-041-AC]

B.12. Hazardous Waste Burning: The permittee is not allowed to burn any type of hazardous waste in the kiln.
[Miami-Dade County Environmental Quality Control Board Order 99-55 dated December 9, 1999]

B.13. Hours of Operation: This emissions unit system is allowed to operate 8,760 hours per year.
[Rule 62-210.200(PTE), F.A.C., and Permit No. 0250014-041-AC]

Emission Limitations and Standards

B.14. Main Stack – Pyroprocessing System: In-Line Kiln/Raw Mill/Clinker Cooler Emissions Limits: Emissions from the kiln system shall not exceed the limits specified in Table 4 below, and allowable operating rates from Table 5 on the following page.

Table 4

Pollutant ID	Fuel(s) [2]	Allowable Emissions [1], [3], [5]		Equivalent Emissions [4], [5]	Basis
		Permit Limits	lb/hr	TPY	
PM	coal/gas/WTDF/ oil/OWW	0.152 lb/ton $kiln_{ph}$ feed *	40.6	163	Avoid PSD–
		0.10 lb/ton kiln feed (clinker cooler limit)	-	-	40 CFR 63 Subpart LLL
PM_{10}	coal/gas/WTDF/ oil/OWW	0.121 lb/ton $kiln_{ph}$ feed *	32.3	130	Avoid PSD
SO_2	coal/gas/WTDF/ oil/OWW	0.50 lb/ton of clinker	81.0	325	Avoid PSD
NO_X	coal/gas/WTDF/ oil/OWW	4.0 lb/ton of clinker	648	2,600	Avoid PSD
CO	coal/gas/WTDF/ oil/OWW	2.81 lb/ton clinker	455	1,827	Avoid PSD
VOC	coal/gas/WTDF/ oil/OWW	0.12 lb/ton clinker	19.4	78	PSD-BACT
H_2SO_4mist	coal/gas/WTDF/ oil/OWW	0.020 lb/ton clinker	3.24	13.0	Avoid PSD
Mercury	coal/gas/WTDF/ oil/OWW	$1.4x10^{-4}$ lb/ton clinker	0.023	0.091	Avoid PSD
Lead	coal/gas/WTDF/ oil/OWW	$3.0x10^{-6}$ lb/ton clinker	0.049	0.195	Avoid PSD

VE	coal/gas/WTDF/ oil/OWW	10% opacity (clinker cooler limit)	---	---	40 CFR 63 Subpart LLL
Dioxins/ Furans	coal/gas/WTDF/ oil/OWW	0.20 ng/dscm TEQ or 0.40 ng/dscm TEQ ($T<204^0$ C) at 7% O_2	---	---	40 CFR 63, Subpart LLL

* Kiln preheater feed rate (Kiln) ph
* OWW = Oily Wastewater

Table 5

ALLOWABLE OPERATING RATES

	In-Line Kiln/Raw Mill/Cooler		
Hours of operation per year	Hours	8760	
Kiln preheater feed rate ($kiln_{ph}$)*	TPH	267	(1-hour average)
Kiln Heat Input	MMBtu/hr	485	(24-hour average)
Clinker Production [1]	TPH	162	(1-hour average)
Cooler throughput rate	TPH	162	(1-hour average)
Gas temperature at inlet to kiln baghouse not to exceed the applicable limit established during D/F testing per 40 CFR 63.1350(f)			(3-hour rolling average)

NOTES
[1] Based on the maximum preheater feed rate of 267 TPH and a conversion factor of 0.607, the maximum clinker production rate is 162 TPH (267 TPH, kiln ph x 0.607 = 162 TPH, clinker.)
[2] Fuel combustion as specified in Specific Condition No. B.6, and the protocols established by PERA. See also APPENDIX CG, Common and General Conditions.
[3] Compliance Units. This facility shall demonstrate compliance based on these standards.
[4] "Equivalent Emissions" represent annual emissions based on operation at the maximum permitted emissions and production rates. "Equivalent Emissions" are listed for informational purposes, for PSD applicability and recordkeeping/tracking purposes.
[5] The original air construction permit for the kiln modernization project is Permit No. 0250014-002-AC. Table 1-2 was modified by Permit No. 0250014-007-AC to remove the beryllium emissions limit. It was subsequently modified by Permit No. 0250014-008-AC to: revise the SO_2 limit from 0.7 lb/MMBtu to 2.23 lb/ton of clinker; revise the NO_X emissions limit from 1.53 lb/MMBtu to 4.9 lb/ton of clinker; and revise the VOC emission limits from 0.1 to 0.12 lb/ton of clinker, 13.7 to 16.4 lb/hour, and 60 to 72 TPY (BACT).
[Permit Nos. 0250014-016-AC/PSD-FL-324A, and 0250014-041-AC; Rules 62-4.070(3), 62-210.200(PTE), and 62-212.400(BACT), F.A.C.; 40 CFR 63, Subpart LLL]

B.15. Dioxins and Furans (D/F) Operating Limits for Kilns and In-line Kiln/Raw Mills

(a) The owner or operator of a kiln subject to a D/F emission limitation under 40 CFR 63.1343 must operate the kiln such that the temperature of the gas at the inlet to the kiln particulate matter control device (PMCD) does not exceed the applicable temperature limit specified in 40 CFR 63.1344(b). The owner or operator of an in-line kiln/raw mill subject to a D/F emission limitation under 40 CFR 63.1343 must operate the in-line kiln/raw mill, such that,

(1) When the raw mill of the in-line kiln/raw mill is operating, the applicable temperature limit for the main in-line kiln/raw mill exhaust, specified in 40 CFR 63.1344(b) and established during the performance test when the raw mill was operating is not exceeded.

(2) When the raw mill of the in-line kiln/raw mill is not operating, the applicable temperature limit for the main in-line kiln/raw mill exhaust, specified in 40 CFR 63.1344(b) and established during the performance test when the raw mill was not operating, is not exceeded.

(b) The temperature limit for affected sources meeting the limits above is determined in accordance with the following: the run average temperature must be calculated for each run, and the average of the run average temperatures must be determined and included in the performance test report and will determine the applicable temperature limit.

[40 CFR 63.1344(a)(1), (a)(2) and (b), and Permit No. 0250014-041-AC]

B.16. Significant Change: Dioxin/Furan, Hg and PM/PM10: 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/PM10. 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 loss on ignition (LOI) of the coal ash; a change between non-beneficiated coal ash and beneficiated coal ash. Based on the information provided, the Compliance Authority (PERA) 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/PM10 emission limits.

[40 CFR 63, Subpart LLL; Rule 62-4.070(3), F.A.C.; and Permit Nos. 0250014-016-AC/PSD-FL-324A, and 0250014-041-AC]

Monitoring of Operations

B.17. CAM Plan: This emissions unit is subject to the Compliance Assurance Monitoring (CAM) requirements contained in the attached Appendix CAM. Failure to adhere to the monitoring requirements specified does not necessarily indicate an exceedance of a specific emissions limitation, it may constitute good reason to require compliance testing pursuant to Rule 62-297.310(b), F.A.C.

[40 CFR 64; Rules 62-204.800 and 62-213.440(1)(b)1.2., F.A.C.]

B.18. Operation: Clean biomass shall only be fired once the kiln has achieved steady operation, temperatures and production (i.e., when raw materials are introduced).

a. Depending on the clean biomass to be fired, the operator shall carefully select the appropriate clean biomass feed system and feed location according to the nature of the clean biomass to promote efficient combustion and reduce emissions impacts. Key clean biomass parameters include the particle size, heating value, moisture content, chlorine content and ash content. Clean biomass shall be introduced only in the high-temperature combustion zones of the main kiln burner, the precalciner burner or appropriate secondary firing points in the precalciner.

b. Based on the clean biomass fuel analysis, the permittee shall develop a written informational plan identifying operating practices for firing clean biomass to provide and maintain steady kiln operation. Elements of the plan are not enforceable and may be changed by the plant at any time. The purpose of the plan is to make all operators aware of good operating practices for clean biomass. *{Permitting Note: As a matter of practical operations, the kiln operators will gradually introduce clean biomass to provide steady kiln operations and minimize emissions. Once the desired clean biomass fuel feed rate is achieved, the operator will maintain a constant feed rate to promote efficient combustion, minimize emissions and steady-state operation. Indicators of complete combustion include flue gas oxygen content, CO levels and THC levels.*

As necessary, operators will review the clean biomass characteristics for possible adjustments to promote steady operation (e.g., account for increased flue gas volume and velocity from elevated moisture content, high chlorine and/or sulfur contents that may cause buildups, etc.).}

c. Operators shall discontinue firing clean biomass if:
   (1) One of the CEMS, COMS or other continuous monitors indicates a non-compliance issue;
   (2) One of the CEMS, COMS or other continuous monitors is down for more than two consecutive hours; or
   (3) The operator is made aware that the kiln is producing off-specification clinker due to clean biomass. The firing of that clean biomass may resume once the issue is addressed and corrective action taken.

[Rule 62-4.070(3), F.A.C., and Permit No. 0250014-042-AC]

B.19. Reasonable Precautions to Prevent Fugitive Dust: The permittee shall employ the following "reasonable precautions" to minimize fugitive dust emissions at the plant:

a. Substantially enclose conveyors and bucket elevators to prevent clean biomass loss and fugitive dust emissions;
b. Store clean biomass under cover;
c. Conduct secondary processing (shredding, screening and sizing) under cover;
d. If necessary to prevent fugitive dust caused by any clean biomass from leaving the plant property, the permittee shall apply water to the clean biomass; otherwise, the clean biomass shall be kept dry to facilitate burning; and

[Rules 62-4.070(3), 62-296.320, F.A.C., and Permit No. 0250014-042-AC]

B.20. Operations and Emissions: The permittee shall continuously monitor the: fuel feed rates, kiln feed rate, clinker production rate and baghouse inlet temperature.
[Rule 62-4.070(3), F.A.C., and Permit No. 0250014-042-AC]

Test Methods and Monitoring Procedures

B.21. Compliance with the allowable emission limiting standards for the main stack listed in this Subsection (EU-018) shall be determined by using the following reference methods as described in 40 CFR 60, Appendix A and 40 CFR 61 Appendix B adopted by reference in Chapter 62-204, F.A.C.
This emission unit shall comply with all applicable requirements of Rule 62-297.310, F.A.C., General Test Requirements of Table 6 below.

Table 6

Description	Pollutant Name or parameter	Fuel(s) [1]	EPA/Reference Method/CMS *	Time Frequency	Compliance Test Duration	CMS * Compliance
Kiln/Cooler/ Raw Mill	PM/PM_{10}	Oil/Coal/Gas/ WTDF	5 or 201/201A	Annual [8]	3 one-hr runs	No
Kiln/Cooler/ Raw Mill	VE/Opacity	Oil/Coal/Gas/ WTDF	9/COMS	Annual/COMS	One-hr/ Continuous	Yes [4]
Kiln/Cooler/ Raw Mill	SO_2	Oil/Coal/Gas/ WTDF	CEMS	Daily average	Continuous	Yes [6]
Kiln/Cooler/ Raw Mill	NOx	Oil/Coal/Gas/ WTDF	CEMS	Daily average	Continuous	Yes [3]
Kiln/Cooler/ Raw Mill	CO	Oil/Coal/Gas/ WTDF	10/CMS	Annual/CMS	3 one-hr runs/	No [5]
Kiln/Cooler/ Raw Mill	VOC/THC	Oil/Coal/Gas/ WTDF	25 or 25A/CMS	Annual/CMS	3 one-hr runs/ Continuous	No [2]
Kiln/Cooler/ Raw Mill	H_2SO_4 mist	Oil/Coal/Gas/ WTDF	8	Prior to Renewal	3 one-hr runs	No
Kiln/Cooler/ Raw Mill	Pb	Oil/Coal/Gas/ WTDF	29	Prior to Renewal	3 one-hr runs	No
Kiln/Cooler/ Raw Mill	Hg	Oil/Coal/Gas/ WTDF	29 + Materials Balance/CEMS	[7]	[7]	[7]
Kiln/Cooler/ Raw Mill	Dioxins/Furans	Oil/Coal/Gas/ WTDF	23	Every 30 months	3 three-hr runs	No

Notes:
[1] Annual testing of emissions shall be conducted during the worst case scenario that this facility would normally operate under and according to the testing requirements specified in APPENDIX CG, Common and General Conditions, and includes the protocol for different fuel scenarios. Fuels to be burned are specified in Specific Condition B.6.
[2] Annual Testing. At CEMEX's option, Method 25A can be corrected for methane through a concurrently conducted Method 18 determination or through another method approved by PERA. If a concurrent demonstration of methane is not performed, then the results of the Method 25A determination shall be used to demonstrate compliance with the VOC emission limit. In other words, CEMEX has the option of using Method 25A alone if they stipulate that all of the THC is VOC.
[3] NOx - The continuous emission monitoring system (CEMS) data shall be used to demonstrate compliance with the kiln/cooler/raw mill emissions limits. The CEMS calibration and maintenance shall meet the applicable requirements of 40 CFR 60, Appendix B and Appendix F.
[4] Monitoring of the opacity of emissions shall be demonstrated by COMS pursuant to 40 CFR 60.63 and 40 CFR 63.1350. Notification and recordkeeping shall be in accordance with 40 CFR 60.7 and 40 CFR 60.65.
[5] Continuous process monitors for CO and/or O_2 to optimize combustion conditions for pollution control shall be part of the process.
[6] SO_2 - The continuous emission monitoring system (CEMS) data shall be used for the Kiln/cooler/raw mill compliance requirement. The CEMS calibration and maintenance shall meet the applicable requirements of 40 CFR 60, Appendix B and Appendix F.
[7] For mercury compliance testing options, frequency and duration, see Specific Condition No. B.22.
[8] CEMEX has the option of using Method 5 if they stipulate that all of the PM is PM_{10}.

* CMS [=] compliance demonstrated by a continuous monitoring system: CEMS or COMS.
[Rule 62-4.070(3)]

[Permit Nos. 0250014-002-AC, 0250014-008-AC/PSD-FL-324, and 0250014-041-AC]

B.22. Mercury Compliance Demonstration: The permittee shall demonstrate compliance with the allowable emissions limiting standards for mercury (Hg) by using one of the following options specified in items a or b of this condition:

a) *Stack testing using EPA Method 29 and Material Balance Demonstration:* The permittee shall demonstrate compliance with the mercury throughput limitation by conducting an initial and annual EPA Method 29 test, 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 single composite daily sample shall be made from all samples collected during a 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. 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). No other methods may be used unless prior written approval is received from PERA. 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, composting, analyzing and calculating the Hg leaving the process via the clinker or dust permanently withdrawn from the pyroprocessing system. If the mercury concentration is below the detectable limit or limits of quantification (for the clinker or dust

withdrawn), 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.

b) *Mercury Continuous Emissions Monitoring System (Hg-CEMS):* The permittee 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 permittee shall certify the Hg-CEMS and begin reporting Hg mass emissions data. The permittee 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 and average monthly mass emissions shall be reported based on the actual data collected not later than 10 days following the end of month. Upon certification, the permittee may use the Hg-CEMS to demonstrate compliance with the cumulative 12-month rolling mass emission limitation as specified in Permit 0250014-016-AC/ PSD-FL-324A, in lieu of the procedures described in the preceding paragraph. Prior to use of the Hg-CEMS as the method to demonstrate compliance, the permittee shall submit written notice to the FDEP, and receive approval for a missing data substitution plan. The installed Hg-CEMS shall be capable of speciating the form of Hg measured as Hg(0) and Hg++ but will be 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., and Permit No. 0250014-041-AC]

B.23. Mercury Compliance Option Selection Notification: The permittee shall notify this office in writing of the mercury compliance demonstration option selected. If the facility wants to change the compliance testing option to comply with the mercury standards, the permittee shall obtain prior written approval from the PERA before switching.
[Rule 62-4.070(3), F.A.C., and Permit No. 0250014-041-AC]

B.24. Carbon Monoxide (CO) Monitoring

a. Continuous Monitoring: Continuous monitors shall be installed for CO or O_2 to insure proper combustion practices and for use in determining plant operating parameters to optimize emissions of CO, NO_X, and SO_2.
[Permit Nos. 0250014-002-AC, and 0250014-041-AC; 40 CFR 60 Appendix B; Rule 62-4.070(3) F.A.C.]

b. CO Process Alarm: The permittee shall add a control room alarm to the existing CO process monitor to alert operators of elevated CO emissions. The alarm shall be set to activate when the process monitor records CO emissions of 1,200 ppmv or more. When an alarm occurs, operators shall take appropriate corrective actions to return CO emissions below the alarm set point. For each incident of an alarm, the operator shall record the following in a written log: date and time of alarm; amount of time above the

alarm level; highest concentration above the alarm level; corrective action taken to regain appropriate operating levels.
[Permit Nos. 0250014-016-AC/PSD-FL-324, and 0250014-041-AC; Rules 62-4.070(3) and 62-212.400(2)(g), F.A.C.]

B.25. Total Hydrocarbons (THC) Continuous Emission Monitoring System (CEMS): A CEMS shall be installed, calibrated, maintained and operated in the kiln/raw mill/cooler stack to measure and record the emissions of total hydrocarbons (THC) from the kiln/raw mill/cooler. Fuel used for the flame ionization process shall consist of a hydrogen/helium mix specified by the CEMS manufacturer. The CEMS shall be installed, certified, operated and maintained in accordance with 40 CFR 60, Appendix B, Performance Specification 8A. The CEMS shall be used in conjunction with a flow rate sensor certified in accordance with 40 CFR 60, Appendix B, Performance Specification 6. The CEMS data shall be quality assured using the procedures of Appendix F of 40 CFR 60.

Every day, the 24-hour average (daily average) THC emission rate for the previous day shall be calculated and recorded. Emissions shall be calculated in units of pounds per hour (propane equivalence) and pounds per ton of clinker (propane equivalence). Daily averages are to be calculated as the arithmetic mean of each monitored operating hour.

Every day, the 30-day rolling average THC emission rate for the previous 30 operating days shall be calculated and recorded. Emissions shall be calculated in units of pounds per hour (propane equivalence) and pounds per ton of clinker (propane equivalence). The 30-day rolling averages are to be calculated as the sum of the THC emission rates for all monitored operating hours divided by the number of monitored operating hours, both taken over the previous 30 operating days.

A monitored operating hour is each hour in which fuel is fired in the unit and at least two emission measurements are recorded at least 15 minutes apart. Data taken during periods of startup, or when fuel is not fired to the unit, or when the CEMS is not calibrated, shall be excluded from the averages. Data recorded during periods of shutdown, malfunction, load change, and continuous operating periods shall be included in the averages.

To the extent the monitoring system is available to record emissions data, the CEMS shall be operated and shall record data at all operating hours when fuel is fired in the unit, including periods of startup, shutdown, load change, continuous operation, and malfunction. Monitor downtimes shall be reported on a quarterly basis using the SUMMARY REPORT in 40 CFR 60.7. A listing of monitor downtime occurrences shall accompany the SUMMARY REPORT if the monitoring system downtime is 5% or greater of the total monitored operating hours.

The permittee shall document the corrective actions taken (such as adjusting combustion parameters, feed rates, or raw material selection) and notify PERA within 24 hours if (1) the 30-day rolling average THC emission rate exceeds 0.12 pounds per ton of clinker (propane equivalence), or (2) ten consecutive daily average THC emission rates exceed 0.12 pound per ton of clinker (propane equivalence).

{Permitting Note: The THC monitor results include methane and other non-VOC constituents. Therefore, the monitor provides reasonable assurance that the VOC standard is being met, but it is not the compliance method for the VOC standard. However, when the FDEP or PERA has good reason (including but not limited to the criteria specified in the above paragraph) to believe that the VOC emission standard is being

violated, they have the authority under Rule 62-297.310(7)(b), F.A.C. to require the permittee to conduct compliance tests which identify the nature and quantity of VOC emissions from the kiln.}
The permittee shall report to PERA no later than the 15th day following each calendar quarter a summary of the daily average and 30-day rolling average THC emission rates for each day of that calendar quarter. These results should be reported as pounds per hour (propane equivalence) and pounds per ton of clinker (propane equivalence).
[Rules 62-4.070 and 62-297.310, F.A.C.; Permit Nos. 0250014-008-AC/PSD-FL-324, and 0250014-041-AC]

B.26. Nitrogen Oxides (NO_X) and Sulfur Dioxide (SO_2) Continuous Emissions Monitoring System (CEMS): A continuous emissions monitoring system (CEMS) shall be installed, calibrated, maintained, operated, and used to determine compliance with the emissions limits for NO_X and SO_2 in B.9. CEMS shall be installed and certified, before the initial performance test, and operated in compliance with 40 CFR 60, Appendix F, Quality Assurance Procedures (1996 version) or other PERA-approved QA plan; and with 40 CFR 60, Appendix B, Performance Specification 1, 2, and 3 (1996 version).

The CEMS shall calculate and record emission rates in units of pounds of NO_X and SO_2 per hour. Clinker production rates shall be recorded daily. The permittee may establish a relationship between material feed rates and production rates of clinker if material feed rates are measured more accurately than clinker production rates and the relationship is accurate within 10%.

Every day, the 24-hour average NO_X and SO_2 emission rate for the previous day shall be calculated. Emissions shall be calculated in units of pounds per hour and pounds per ton of clinker. Daily averages are to be calculated as the arithmetic mean of each monitored operating hour. A monitored operating hour is each hour in which fuel is fired in the unit and at least two emission measurements are recorded at least 15 minutes apart. Data taken during periods of startup, or when fuel is not fired to the unit, or when the CEMS is not calibrated, shall be excluded from the daily average.

For compliance with the NO_X and SO_2 emission limits, the daily average shall not include data from periods of startup when no clinker is being produced. However, emissions during startup periods shall not exceed the pound per hour limits. Data recorded during periods of shutdown, malfunction, load change, and continuous operating periods shall be included in the daily average.
To the extent the monitoring system is available to record emissions data, the CEMS shall be operated and shall record data at all operating hours when fuel is fired in the unit, including periods of startup, shutdown, load change, continuous operation and malfunction.

Monitor downtimes and excess emissions based on daily averages, which include startup emissions, shall be reported on a quarterly basis. A detailed report of the cause, duration, magnitude, and corrective action taken or preventative measures adopted for each excess emission occurrence, and a listing of monitor downtime occurrences shall also be sent to the PERA when the total duration of excess emissions is 1% or greater or if the monitoring system downtime is 5% or greater of the total monitored operating hours.

The CEMS shall be used in conjunction with a flow sensor certified in accordance with 40 CFR 60, Appendix B, Performance Specification 6. The CEMS data shall be quality assured using the procedures of Appendix F of 40 CFR 60.
[Rules 62-4.070(3) and 62-204.800 F.A.C.; Permit Nos. 0250014-008-AC/PSD-FL-324, and 0250014-041-AC]

B.27. Continuous Emissions Monitoring System (CEMS) Requirements: All CEMS shall be operational, recording and continuously transmitting available data. The monitoring systems shall be certified in accordance with the appropriate Performance Specification in 40 CFR 60 Appendix B. The systems shall comply with the requirements for continuous monitoring systems found in the general provisions of 40 CFR 63, Subpart A including development of a quality control program. Data on monitoring equipment specifications, manufacturer, type calibration and maintenance requirements, and the proposed location of each monitor shall be provided to PERA for review at least 90 days prior to installation of a new CEMS and at least 45 days prior to replacement of any CEMS.
[Rules 62-4.070(3) and 62-204.800, F.A.C., and Permit No. 0250014-041-AC]

Notification, Recordkeeping and Reporting Requirements

B.28. Excess Emissions: The owner or operator shall submit reports of excess emissions based upon data from the continuous opacity monitoring system. Periods of excess emissions that shall be reported are defined as all 6-minute periods during which the average opacity exceeds that which is allowed.
[Rule 62-204.800, F.A.C., and Permit No. 0250014-041-AC]

B.29. Whole Tire Burning: In order to document compliance with whole tire fuel usage limits, the following records shall be established and maintained**:**

(1) A log to document the number of hours per day, number of days per month, and number of hours per month that whole tires were introduced into the kiln.
(2) A log indicating the whole tire utilization rate in tons per hour.
(3) A log that includes the date of all whole tire deliveries to the facility, and the quantity of whole tires received (in tons) in each delivery.

[Rule 62-4.070(3), F.A.C., and Permit No. 0250014-041-AC]

B.30. Clean Biomass Burning: In order to document compliance with clean biomass fuel usage limits, the following records shall be established and maintained**:**

(1) A log to document the number of hours per day, and number of days per month that clean biomass was introduced into the kiln.
(2) A log indicating the clean biomass utilization rate in tons per hour, as well as the dates and times the clean biomass was utilized.
(3) A log that includes the date of all clean biomass deliveries to the facility, the supplier, and the quantity of clean biomass received (in tons) in each delivery.

[Rule 62-4.070(3), F.A.C., and Permit No. 0250014-042-AC]

B.31. Coal and Petroleum Coke Usage: In order to document compliance with the Coal and Petroleum Coke maximum usage rates**,** a fuel usage control system shall be established to assure that the coal and petroleum coke usage rates does not exceed 18.7 and 16.3 tons per hour (TPH, 24-hour average) respectively.
[Permit No. 0250014-041-AC]

B.32. Used Oil Fuel Usage: In order to document compliance with the Used Oil Fuel Usage restrictions of this permit, the following requirements shall be adhered to as a minimum:

(1) Recordkeeping when burning used oil shall be in accordance with applicable provisions of 40 CFR Part 279, Subpart B and Subpart G (July 1, 1996 version), Standards For The Management of Used Oil and Chapter 62.710, F.A.C.
(2) Pursuant to Permit AO 13-233208, the following shall be recorded on the delivery receipt:
   - the use of tamper proof seals on the delivery receipt

- the volume of fuel delivery
- a cross reference to the analysis which establishes that the used oil meets EPA used oil fuel specifications
- the results of the screening analysis
- the name of the person performing the test
- the specific test kit used
- the amount of oil sampled
- the amount and name of the solution used to dilute the oil

(3) The following procedures shall be implemented for used oil:

- Used oil fuel that is delivered without a delivery receipt containing all the above information, or which is not properly sealed, or for which the delivery receipt does not contain all the necessary information, is not to be accepted and PERA is to be notified by phone immediately (with written confirmation to follow), if such a delivery is attempted.
- Verification by signature on the delivery receipt shall be provided by plant personnel that the delivery truck arrived on site with all seals intact. As delivered samples of all used oil fuel received shall be accumulated through each quarter for each supplier.
- The results of each sample analysis (on the laboratory's letterhead) shall be submitted to PERA within 30 days after a sample is taken and analyzed.
- The dates and quantities of both on and off-spec purchased fuel oil transferred to the facility storage tank shall be reported quarterly (i.e., Jan-Mar, April-June, July-Sept, and Oct-Dec). The report is due in the month following the ending quarter.
- The unused portion of the fuel oil sample shall be retained for six months following the submittal of the analyses in case further testing is required.

[Permit Nos. 0250014-002-AC, and 0250014-041-AC]

B.33. Malfunction Reports: The owner or operator shall submit semiannual reports of the malfunction information required by 40 CFR 60.7(b). These reports shall include the frequency, duration, and cause of any incident resulting in de-energization of any device controlling kiln emissions or in the venting of emissions directly to the atmosphere. The permittee shall also comply with the Periodic and Immediate malfunction reporting requirements of 40 CFR 63.10(d).
[Rules 62-204.800, F.A.C.; 40 CFR 60.65(c); 40 CFR 63.10(d)(5); Permit Nos. 0250014-002-AC, and 0250014-041-AC]

B.34. Excess Emissions Reports: In the case of excess emissions resulting from malfunctions, each owner or operator shall notify the PERA in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report.
[Rules 62-210.700(6) and 62-4.070(3), F.A.C., and Permit No. 0250014-041-AC]

B.35. PSD Pollutant Emissions Monitoring, Reporting and Recordkeeping: The permittee shall monitor the emissions of any PSD pollutant that the PERA identifies could increase as a result of the construction or modification and that is emitted by any emissions unit that could be affected; and, using the most reliable information available, calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of five (5) years following resumption of regular operations after the change, or for a period of 10 years following resumption of regular operations if the change increases the design capacity of that emissions unit or its potential to emit that PSD pollutant. Emissions shall be computed in accordance with Rule 62-210.370, F.A.C.
[Rule 62-212.300(1)(e)1, F.A.C., Permit Nos. 0250014-041-AC, and 0250014-042-AC]

B.36. Additional PSD Pollutant Record Keeping & Reporting: The permittee shall report to the PERA within sixty (60) days after the end of each year during which records must be generated under subparagraph 62-212.300(1)(e)1., F.A.C., setting out the unit's annual emissions during the calendar year that preceded submission of the report. The report shall contain the following:

a. The name, address and telephone number of the owner or operator of the major stationary source;
b. The annual emissions as calculated pursuant to subparagraph 62-212.300(1)(e)1., F.A.C.
c. If the emissions differ from the preconstruction projection, an explanation as to why there is a difference.

d. Any other information that the owner or operator wishes to include in the report.

[Rule 62-212.300(1)(e)2, F.A.C., Permit Nos. 0250014-041-AC, and 0250014-042-AC]

Test Procedures, Recordkeeping and Additional Requirements

B.37. Common and General Conditions: This emissions unit is subject to all applicable requirements of the attached Appendices, made part of the permit.

The specific conditions in this section apply to the following emissions unit:

ARMS Emissions Unit No.	Brief Description of Emissions Unit
019	Clinker Handling and Storage System

The Clinker Handling & Storage System is controlled by the following baghouses:

Emission Point	Descriptions of Emissions Points
491-BF1	Clinker Cooler Discharge Pan Conveyor
491-BF2	Clinker Silo
491-BF3	Reject Clinker Bin
510-BF1	Clinker Silo Discharge and Transfer
510-BF2	Clinker Silo Discharge and Transfer (Vents Indoors)
510-BF3	Clinker Feed Bin (Vents Indoors)
510-BF4	Clinker Additional Transfer (Vents Indoors)
596-BF2	Mill Return Conveyor (Vents Indoors)

{Permit Note: Emission points venting inside a building are considered fugitive sources and not subject to visible emissions testing.}

Federal Rule Requirements

C.1. Rule Applicability: This emissions unit shall comply with all the applicable standards contained in 40 CFR 63 Subpart LLL – National Emission Standards for Hazardous Air Pollutants From the Portland Cement Manufacturing Industry, and 40 CFR 63 Subpart A - General Provisions.
[40 CFR 63.1340]

Essential Potential to Emit (PTE) Parameters

C.2. Hours of Operation: This emissions unit system is allowed to operate 8,760 hours per year. Clinker throughput is automatically limited by the clinker production limit established in Permit 0250014-016-AC, Specific Condition 5 and in Table 1-2 Allowable Operating Rates.
[Rule 62-210(PTE), and Permit No. 0250014-016-AC, PSD-FL-324A]

Emissions Limitations, Test Methods and Standards

C.3. Visible Emissions Limits: Visible emissions are limited to 10 percent from each of the above listed baghouses, except where noted. Compliance shall be determined in the manner described in 40 CFR 63.1350(a)(4)(i), (ii), (iii) and (iv) below. Numeration tracks the referenced CFR provision.

(4) Procedures to be used to periodically monitor affected sources subject to opacity standards under Sections 63.1346 and 63.1348. Such procedures must include the provisions of Paragraphs (a)(4)(i) through (a)(4)(iv) of this section.

(i) The owner or operator must conduct a monthly 1-minute visible emissions test of each affected source in accordance with Method 22 of Appendix A-7 to 40 CFR 60 . The performance test must be conducted while the affected source is in operation.

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

(iii) If no visible emissions are observed during the semi-annual test for any affected source, the owner or operator may decrease the frequency of performance testing from semi-annually to annually for that affected source. If visible emissions are observed during any annual performance test, the owner or operator must resume performance testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six (6) consecutive monthly tests.

(iv) If visible emissions are observed during any Method 22 performance test, of Appendix A-7 to 40 CFR 60, the owner or operator must conduct a 6-minute test of opacity in accordance with Method 9 of Appendix A-4 to 40 CFR 60. The Method 9 performance test, of Appendix A-4 to 40 CFR 60, must begin within 1 hour of any observation of visible emissions.

[40 CFR 63.1350(a)(4)(i)-(iv), and Rule 62-4.030(3), F.A.C.]

C.4. Particulate Emissions Limits: The maximum permitted particulate emissions rates from this emissions unit (from each of these emissions points) is 0.01gr/dscf. Pursuant to Rule 62-297.620(4), in lieu of particulate stack testing, the permittee shall demonstrate compliance by adhering to an opacity limit of 5%.

If the PERA has reason to believe that the particulate matter standard set forth is not being met, PERA shall require that compliance be demonstrated by the test method specified in the applicable rule.
[Permit No. 0250014-002-AC]

Test Procedures, Recordkeeping and Additional Requirements

C.5. Common and General Conditions: This emissions unit is subject to all applicable requirements of the attached Appendices, made part of the permit.

The specific conditions in this section apply to the following emissions units:

ARMS Emissions Unit No.	Brief Description of Emissions Unit
EU 001 - Finish Mill 1 EU 002 - Finish Mill 2 EU 003 - Finish Mill 3 EU 012 - Finish Mill 4 EU 013 - Finish Mill 5 EU 028 - Finish Mill 6	Cement Plant Finish Mill System

The Finish Mill handling operations are controlled by the following baghouses:

Emission Point ID	Description of Emissions Points
10-10	Finish Mill No. 1
10-25	Finish Mill No. 2
10-40	Finish Mill No. 3
10-110	Finish Mill No. 4 Feed
10-99	Finish Mill No. 4
10-188	Finish Mill No. 5 Feed
10-165	Finish Mill No. 5
536-BF1	Finish Mill No. 6 Feed Transfer
536-BF2	Clinker/Gypsum Transfer
566-BF1	Finish Mill No. 6 Air Separator

Emission Unit ID Nos. 001, 002, 003: Finish Mills Nos. 1, 2 and 3; Particulate emissions are controlled by Northern Blower Company baghouses (10-10, 10-25, 10-40), each with a 20,000 acfm design flow rate & discharge 48 feet above ground level.
[Permit No. 0250014-010-AC]

Emission Unit ID No. 012: Finish Mill No. 4; Air particle separator, cement pump, two dust collectors and associated material handling equipment. The particulate emissions are controlled by two baghouses, one for the finish mill feed material (10-110) and one for the finish mill itself (10-99).

The particulate emissions from the Finish Mill No.4 Feed and the Finish Mill No.4 are controlled by the following:

Source	Baghouse ID.	Manufacturer	Flow Rate (acfm)
Finish Mill No.4 Feed	10-110	BHA	10,000
Finish Mill No.4	10-99	BHA	10,000

Emission Unit ID No. 013: Finish Mill No.5; Air particle separator, cement pump, two dust collectors and associated material handling equipment. The particulate emissions are controlled by two baghouses, one for the finish mill feed material (10-188) and one for the finish mill itself (10-165).

The particulate emissions from the Finish Mill Feed and the Finish Mill are controlled by the following:

Source	Baghouse ID.	Manufacturer	Model No.	Flow Rate (acfm)
Finish Mill No.5 Feed	10-188	Mikro Pul Corp	144S8-20	7,600
Finish Mill No.5	10-165	Mikro Pul Corp	144S8-20	6,000

Finish Mill No. 6 particulate emissions are controlled by the following baghouses:

Source	Baghouse ID.	Manufacturer	Model No.	Flow Rate (acfm)
FM No.6 Feed Transfer	536-BF1	Fuller Bulk Handling	144C10	12,000
FM No.6 Clinker/ Gypsum Transfer	536-BF2	Torit	DFT 3-18	5,000
FM No.6 Air Separator	566-BF1	Fuller Bulk Handling	2D624S12	83,500

Federal Rule Requirements

D.1. Rule Applicability: This emissions unit shall comply with all the applicable standards contained in 40 CFR 63 Subpart LLL – National Emission Standards for Hazardous Air Pollutants From the Portland Cement Manufacturing Industry, and 40 CFR 63 Subpart A - General Provisions.
[40 CFR 63.1340]

Essential Potential to Emit (PTE) Parameters

D.2. Hours of Operation: These emissions units are allowed to operate 8,760 hours per year.
[Rule 62-210.200(PTE), and Permit No. 0250014-010-AC]

D.3. Finish Mill Process Rates: The individual finish mill process rates are 27 TPH each for Finish Mills 1, 2, 3 & 5; 25 TPH for Finish Mill 4. The process rates for Finish Mill 6 are 100 TPH for the Feed Transfer & Air Separator, and 250 TPH for the Clinker/Gypsum Transfer.
[Permit Nos. 0250014-010-AC & 0250014-027-AC.]

Emissions Limitations, Test Methods and Standards

D.4. Visible Emissions Limits: Visible emissions are limited to 10% from each of the baghouses listed under the Finish Mill System. Compliance shall be determined in the manner described in 40 CFR 63.1350(a)(4)(i), (ii), (iii) and (iv) below. Numeration tracks the referenced CFR provision.

(4) Procedures to be used to periodically monitor affected sources subject to opacity standards under Sections 63.1346 and 63.1348. Such procedures must include the provisions of Paragraphs (a)(4)(i) through (a)(4)(iv) of this section.

(i) The owner or operator must conduct a monthly 1-minute visible emissions test of each affected source in accordance with Method 22 of Appendix A-7 to 40 CFR 60. The performance test must be conducted while the affected source is in operation.

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

(iii) If no visible emissions are observed during the semi-annual test for any affected source, the owner or operator may decrease the frequency of performance testing from semi-annually to annually for that affected source. If visible emissions are observed during any annual performance test, the owner or operator must resume performance testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six (6) consecutive monthly tests.

(iv) If visible emissions are observed during any Method 22 performance test, of Appendix A-7 to 40 CFR 60, the owner or operator must conduct a 6-minute test of opacity in accordance with Method 9 of Appendix A-4 to 40 CFR 60. The Method 9 performance test, of Appendix A-4 to 40 CFR 60, must begin within 1 hour of any observation of visible emissions.

[40 CFR 63.1350(f)(1)(i)-(iv), and Rule 62-4.030(3), F.A.C., and Permit No. 0250014-027-AC; 40 CFR 63.1348]

D.5. Particulate Emissions Limits: The maximum permitted particulate emissions rate from these emissions units (from each of these emissions points) is 0.01gr/dscf. Pursuant to Rule 62-297.620(4), in lieu of particulate matter stack testing, the permittee shall demonstrate compliance by adhering to an opacity limit of 5%.

If the PERA has reason to believe that the particulate matter standard set forth is not being met, PERA shall require that compliance be demonstrated by the test method specified in the applicable rule.
[Permit Nos. 0250014-002-AC & 0250014-027-AC]

D.6. Finish Mill Monitoring: The owner or operator of a finish mill shall monitor opacity by conducting daily visual emissions observations of the mill sweep and air separator particulate matter control devices (PMCDs) of this affected emissions unit, in accordance with the procedures of Method 22 of Appendix A-7, 40 CFR 60. The Method 22 test shall be conducted while the affected emissions unit is operating at the highest load or capacity level reasonably expected to occur within the day. The duration of the Method 22 test shall be six minutes. If visible emissions are observed during any Method 22 visible emissions test, the owner or operator must:

(1) Initiate, within one-hour, the corrective actions specified in the site specific operating and maintenance plan developed in accordance with paragraphs 40 CFR 63.1350(a)(1) and (a)(2); and

(2) Within 24 hours of the end of the Method 22 test in which visible emissions were observed, conduct a follow-up Method 22 test of each stack from which visible emissions were observed during the

previous Method 22 test. If visible emissions are observed during the follow-up Method 22 from any stack from which visible emissions were observed during the previous Method 22 test, conduct a visual opacity test of each stack from which emissions were observed during the follow-up Method 22 test in accordance with Method 9 of Appendix A, 40 CFR Part 60. The duration of the Method 9 test shall be thirty minutes.

[Permit No. 0250014-027-AC; Rule 62-204.800, F.A.C.; and, 40 CFR 63.1350(e)]

Test Procedures, Recordkeeping and Additional Requirements

D.7. Common and General Conditions: This emissions unit is subject to all applicable requirements of the attached Appendices, made part of the permit.

The specific conditions in this section apply to the following emissions units:

ARMS Emissions Unit No.	Brief Description of Emissions Units
004- 32 Bulk Cement Storage Silos 005 – Mortar Packhouse 006 – Cement Packhouse 015 – Cement Truck Loading	Cement Plant Product Storage and Packhouse/Loadout System

Cement handling operations are controlled by the following baghouses:

E.U. No.	Emissions Point No.	Description of Emissions Points
004	590-BF1	Cement Silo – NE Corner
004	590-BF2	Cement Silo – SW Corner
004	10-129	Cement Silo – SE Corner
004	10-119	Cement Silo – NW Corner
004	596-BF1	Cement Silos 351/352
004	BH-A	Truck Loadout (North)
004	BH-B	Truck Loadout (South)
004	00000	FK Pump (North)
004	00000	FK Pump (South)
005	16-092	Mortar Packhouse Packer
005	16-058	Mortar Packhouse Alleviator
006	16-089	Cement Packhouse Packer (West)
006	16-027	Cement Packhouse Alleviator (West)
015	16-137	Truck Loading Bay #3 (Vents Indoors)
015	16-138	Truck Loading Bay #4 (Vents Indoors)
015	611-BF1	Truck Loading Spout (Vents Indoors)
015	612-BF1	Truck Loading Spout (Vents Indoors)
015	613-BF1	Truck Loading Spout (Vents Indoors)
015	616-BF1	Truck Loading Airslides (Vents Indoors)
015	616-BF2	Truck Loading Airslides (Vents Indoors)

{Permit Note: Emission points venting inside a building are considered fugitive sources and not subject to visible emissions testing}

Emission Unit ARMS ID No. 004, the Bulk Cement Storage System, consists of thirty (30) 2,800 ton and two (2) 7,500 ton bulk cement storage silos, all interconnected by a pneumatic transfer system, with a maximum process rate of 205 TPH. Cement is withdrawn from these silos for distribution via trucks, railroad cars and bags. Control equipment consists of a total of five (5) low temperature baghouses - two (2) Northern Blower Co. No.156AMS baghouses discharging 45 feet above ground level for control of truck loadout; (1) 590-BFI baghouse on Silo No. 11 (flow rate 9,000 acfm; for the East Bank of 15 silos); one (1) 590-BF2 baghouse on Silo No. 46 (flow rate 8,500 acfm; for the West Bank of 15 silos); one 596-BF1 baghouse for the two 7,500 ton silos (flow rate 8,000 acfm). EU-004 includes the two truck loadout and two FK pump baghouses listed in the table above.

Emission Unit ID No. 005, the Mortar Packhouse, is a packing plant with a maximum process rate of 8.1 TPH and two (2) low temperature baghouses for control of particulate emissions – one (1) Northern Blower Model No. 156A Dust Arrestor Alleviator discharging 53 feet above the ground level (storage area stack); one (1) Northern Blower Model No. 312A baghouse discharging 55 feet above ground level (packaging operation stack).

Emission Unit ID No. 006, the Cement Packhouse, is a packing plant with a maximum process rate of 8.1 TPH and two (2) low temperature baghouses for control of particulate emissions – one (1) Northern Blower Model No.156A Dust Arrestor Alleviator discharging 53 feet above the ground level (storage area stack); one (1) Northern Blower Model No.312A baghouse discharging 55 feet above ground level (packaging operation stack).

Emission Unit ID No. 015, Cement Truck Loading Operations have a maximum process rate of 450 TPH and a total of seven (7) baghouses as control equipment. Each of the EU-015 baghouses vent indoors.

Federal Rule Requirements

E.1. Rule Applicability: This emissions unit shall comply with all the applicable standards contained in 40 CFR 63 Subpart LLL – National Emission Standards for Hazardous Air Pollutants From the Portland Cement Manufacturing Industry, and 40 CFR 63 Subpart A - General Provisions.
[40 CFR 63.1340]

Essential Potential to Emit (PTE) Parameters

E.2. Hours of Operation: This emissions unit system is allowed to operate 8,760 hours per year.
[Rules 62-4.160(2) and 62-210.200 (PTE), F.A.C.]

E.3. Cement Storage Silo/Packhouse/Loadout Process: The maximum throughput rate of the bulk cement storage silo system is 204 TPH, of the mortar and cement packhouse systems is 8.1 TPH each, and of the cement truck loadout is 450 TPH.
[Rule 62-210.200(PTE), F.A.C. and Permit No. 0250014-010-AC]

Emissions Limitations, Test Methods, and Standards

E.4. Visible Emissions Limits: Visible emissions are limited to 10 percent opacity from each of the EU-004, 005 & 006 baghouses listed above, except where noted, pursuant to 40 CFR 63.1345, Standards for affected sources other than kiln; in/line kiln/raw mills; clinker coolers; new and reconstructed raw material dryers; and raw and finish mills. Compliance shall be determined in the manner described in 40 CFR 63.1350(a)(4)(i), (ii), (iii) and (iv) below. Numeration tracks the referenced CFR provision.

(4) Procedures to be used to periodically monitor affected sources subject to opacity standards under Sections 63.1346 and 63.1348. Such procedures must include the provisions of Paragraphs (a)(4)(i) through (a)(4)(iv) of this section.

(i) The owner or operator must conduct a monthly 1-minute visible emissions test of each affected source in accordance with Method 22 of Appendix A-7 to 40 CFR 60. The performance test must be conducted while the affected source is in operation.

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

(iii) If no visible emissions are observed during the semi-annual test for any affected source, the owner or operator may decrease the frequency of performance testing from semi-annually to annually for that affected source. If visible emissions are observed during any annual performance test, the owner or operator must resume performance testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six (6) consecutive monthly tests.

(iv) If visible emissions are observed during any Method 22 performance test, of Appendix A-7 to 40 CFR 60, the owner or operator must conduct a 6-minute test of opacity in accordance with Method 9 of Appendix A-4 to 40 CFR 60. The Method 9 performance test, of Appendix A-4 to 40 CFR 60, must begin within 1 hour of any observation of visible emissions.

[40 CFR 63.1350(f)(1)(i)-(iv), and Rule 62-4.030(3), F.A.C.]

Test Procedures, Recordkeeping and Additional Requirements

E.5. Common and General Conditions: This emissions unit is subject to all applicable requirements of the attached Appendices, made part of the permit.

The specific conditions in this section apply to the following emissions unit:

ARMS Emissions Unit No.	Brief Description of Emissions Unit
020	Cement Plant Coal & Petroleum Coke Handling System

The cement plant coal & petroleum coke handling system is controlled by the following baghouses:

Emissions Points ID No	Descriptions of Emissions Points
L61-BF1	Coal/Coke Mill
L91-BF1	Coal/Coke Bin

Emission Unit ID No. 020, the Coal Mill System is used for unloading and processing of coal (fuel). Coal is dumped into the rail car unloading hopper and then conveyed by covered belt conveyors to the material storage gallery. The coal is recovered from the storage gallery by a clamshell bucket, an elevator, and belt conveyors to the coal storage silo. From the silos it is transferred via covered belt conveyors to the coal mill for grinding, drying and temporary storage in the pulverized coal bin. From the bin, coal is weighed and pneumatically transported to the kiln and calciner burners. Control equipment consists of two (2) low temperature baghouses.

Federal Rule Requirements

F.1. Rule Applicability: This emissions unit shall comply with all the applicable standards contained in 40 CFR 60 Subpart Y – Standards of Performance for Coal Preparation Plants, and 40 CFR 60 Subpart A – General Provisions.
[40 CFR 60.250]

Essential Potential to Emit (PTE) Parameters

F.2. Hours of Operation: This emissions unit system is allowed to operate 8,760 hours per year. [Rule 62-210.200 (PTE), F.A.C., and Permit No. 0250014-002-AC]

F.3. Coal/Petroleum Coke Maximum Usage: The coal usage rate in the kiln shall not exceed 18.7 tons per hour (TPH, 24-hour average) and the petroleum coke usage rate in the kiln shall not exceed 16.3 tons per hour (TPH, 24-hour average).
[Permit No. 0250014-041-AC]

Emissions Limitations, Test Methods, and Standards

F.4. Visible Emissions Limits: Visible emissions are limited to 5 percent opacity from each of the above listed baghouses. Compliance shall be demonstrated annually using EPA Reference Method 9 and the procedures specified in 40 CFR 60.11.
[Permit No. 0250014-002-AC]

F.5. Particulate Emissions Limits: The maximum permitted particulate emissions rates from this emissions unit (from each of these emissions points) is 0.01gr/dscf. Pursuant to Rule 62-297.620(4), in lieu of particulate matter stack testing, the permittee shall demonstrate compliance by adhering to an opacity limit of 5%.

If the PERA has reason to believe that the particulate matter standard set forth is not being met, PERA shall require that compliance be demonstrated by the test method specified in the applicable rule.
[Permit No. 0250014-002-AC]

F.6. Minimizing Particulate Emissions: Particulate emissions from coal handling facilities shall be minimized by following the procedures listed below:

(1) All conveyers and transfer points shall be enclosed to preclude particulate emissions (except those directly associated with coal stacking/reclaiming).

(2) Coal storage piles shall be shaped, compacted and oriented to minimize wind erosion.

(3) Water sprays or chemical wetting agents and stabilizers shall be applied to storage piles, handling equipment, etc., during dry periods and as necessary to all facilities to maintain an opacity of less than 5 percent, except when adding, moving or removing coal from the coal pile, during which the opacity shall be no more than 20%.

[Permit No. 0250014-002-AC; Rule 62-4.070(3), F.A.C.]

Test Procedures, Recordkeeping and Additional Requirements

F.6. Common and General Conditions: This emissions unit is subject to all applicable requirements of the attached Appendices, made part of the permit.

The specific conditions in this section apply to the following emissions unit:

ARMS Emissions Unit No.	Brief Description of Emissions Unit
016	Facility-wide fugitive emissions from transportation, miscellaneous transfers and storage and miscellaneous activities such as truck operations throughout the facility, wind erosion.

Emission Unit ID No. 016: Facility-wide Fugitive Emissions are related to the production of cement from the following:

- Raw Material Storage & Handling (uncontrolled)
- Clinker Storage & Handling (uncontrolled)
- Vehicle Traffic on Paved and Unpaved Roads
- Wind Erosion from Stockpiles
- Mining Activities such as land clearing, drilling, & blasting
- Maintenance Activities: Including Maintenance Painting, Parts Cleaning, Welding
- Diesel Engines
- Sand and Media Blasting for Maintenance Painting
- Emergency Generators
- Railcar Traffic
- Fugitive Emissions from Other Emission Units
- Fugitive VOC/HAP Emissions from Contaminated Soil Storage & Handling and Fuel Storage Tanks:

Tank ID	Fuel Stored	Capacity (gal)
B	Waste Oil	600,000
C	Waste Oil	600,000
D1	Waste Oil	25,000
D2	Waste Oil	25,000
D3	Waste Oil	25,000
D4	Waste Oil	25,000
E1	Oily Water	20,000
E2	Oily Water	20,000
F	Waste Oil	30,000
G	No. 2 Fuel Oil/ Waste Oil	30,000
H	Diesel Fuel	20,000

G.1. Additional Reasonable Precautions of Emissions of Unconfined Particulate Matter: The provisions of Rule 62-296.320(4)(c) shall apply to all sources of unconfined particulate emissions, including but not limited to vehicular movement, transportation of materials, construction, alteration, demolition or wrecking, or related activities such as loading, storing and handling.

The permittee shall follow the protocol below for unconfined particulate matter (UPM, Fugitive Emissions):

(1) Material handling activities at the plant covered by this protocol include loading and unloading, storage, and conveying of:
- Limestone and overburden
- Iron oxide source (coal ash, iron ore, or other)
- Gypsum
- Coal

(2) The following reasonable precautions shall be implemented at the facility:
- The plant area shall be paved to limit the generation of UPM from truck and equipment traffic.
- A sweeper truck shall be maintained and operated at the plant to limit dust buildup on paved surfaces.
- All materials are to be received and used with excess surface moisture.
- Water supply lines, hoses and sprinklers shall be located near all material stockpiles.
- All plant equipment operators shall be trained in basic environmental compliance, and will perform visual inspections of materials before handling. If the visual inspections indicate a lack of excess surface moisture, the materials shall be wetted with the sprinklers. Such wetting shall continue until the materials can be handled without generating UPM.

(3) The permittee shall "immediately collect" any spilled cement kiln dust (CKD) to prevent fugitive emissions.

[Permit No. 0250014-002-AC; Rule 62-296.320(4)(c)2, F.A.C.]

G.2. Unconfined Particulate Matter: Refer to Section II, Facility-wide Condition No. 5.

Test Procedures, Recordkeeping and Additional Requirements

G.3. Common and General Conditions: This emissions unit is subject to all applicable requirements of the attached Appendices, made part of the permit.

The specific conditions in this section apply to the following emissions units:

EU ID	EU Description
-022	Quarry Operations Subject to 40 CFR 60, Subpart OOO: Aggregate Plant Crushers
-023	Quarry Operations Subject to 40 CFR 60, Subpart OOO: Other Affected Screening Operations/Belt Conveyors
-025	Quarry Operations NOT Subject to 40 CFR 60, Subpart OOO

Limestone quarry operations consist of nonmetallic mineral processing activities such as crushing, screening and conveying operations.

EU ID	EP ID	Emission Point Description	Manufacturer	Size/Capacity	Saturated Material
-022	110-CR1	Primary Crusher CR-1	Cedar Rapids	300 hp	No
-022	110-CR2	Secondary Crusher CR-2	Stedman GrandSlam	600 hp	No
-022	110-CR3	Secondary Crusher CR-3	Canica-Jaques	700 hp	No
-025	110-HP1	Hopper	--	85 tons	No
-023	110-VF1	Grizzly Feeder VGF-1	Deister	75 hp	No
-023	110-BC1	Conveyor Belt BC-1	--	48" x 235'	No
-023	110-BI1	Surge Bin BI-1	--	150 tons	No
-023	110-VF2	Vibrating Feeder VPF-2	Syntron	10 hp	No
-023	110-BC2	Conveyor Belt BC-2	--	48" x 230'	No
-023	110-VS1	Scalping Screen VS-1	Deister	100 hp	No
-023	110-BC3	Conveyor Belt BC-3	--	48" x 138'	No
-023	110-BC5	Conveyor Belt BC-5	--	30" x 171'	No
-025	110-HP2	Hopper	--	30 tons	No
-023	110-VF5	Feeder VF5	--	--	No
-023	110-VF4	Feeder VPF-4	Kinergy	20 hp	No
-023	110-BC4	Radial Stacker Conveyor BC-4	--	48" x 144'	No
-023	110-FY1	Feed Bin	--	250 tons	No
-023	110-VF3	Feeder VPF-3	Syntron	10 hp	No
-023	110-BC6	Conveyor Belt BC-6	--	42" x 4118'	No
-023	110-BC7	Conveyor Belt BC-7	--	48" x 325'	No
-023	110-VS2	Sizing Screen VS-2	Deister	8 x 20	**Yes**
-023	110-VS3	Sizing Screen VS-3	Deister	8 x 20	**Yes**
-023	110-BC8	Conveyor Belt BC-8	--	42" x 60'	**Yes**
-023	110-BC10	Conveyor Belt BC-10	--	30" x 180'	**Yes**

-023	110-BC12	Conveyor Belt BC-12	--	30" x 110'	**Yes**
-023	110-BC9	Conveyor Belt BC-9	--	40 hp	No
-023	110-BC11	Radial Stacker Conveyor BC-11	--	30" x 125'	**Yes**
-023	110-BC13	Radial Stacker Conveyor BC-13	--	30" x 25'	**Yes**
-023	110-BC14	Radial Stacker Conveyor BC-14	--	30" x 125'	**Yes**
-023	110-BC15	Radial Stacker Conveyor BC-15	--	24" x 125'	**Yes**

{Permit Note: Emission points meeting the 40 CFR 60 Subpart OOO definition of "wet screening operations" are exempt from regular visible emissions testing pursuant to 40 CFR 63.671}.

Federal Rule Requirements

H.1. Rule Applicability: Emissions Units 022 and 023 shall comply with all the applicable standards contained in 40 CFR 60 Subpart OOO – Standards of Performance for Nonmetallic Mineral Processing Plants, and 40 CFR 60 Subpart A – General Provisions.
[40 CFR 60.670]

Essential Potential to Emit (PTE) Parameters

H.2. Hours of Operation: The referenced emissions unit(s) may operate continuously (8,760 hours per year).
[Rule 62-210.200(PTE), F.A.C., and Permit No. 0250014-015-AC]

Emissions Limitations and Standards

H.3. General Visible Emissions: No person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity, the density of which is equal to or greater than that designated as Number 1 on the Ringelmann Chart (20 percent opacity).
[Rule 62-296.320(4)(b), F.A.C.]

H.4. Unconfined Emissions of Particulate Matter: Refer to Section II, Condition No. 5 of this permit.
[Rule 62-296.320(4)(c), F.A.C.]

H.5. Crusher Visible Emissions: Affected facilities must meet the fugitive emissions limits and compliance requirements in Table 3 of 40 CFR 60 Subpart OOO within 60 days after achieving the maximum production rate at which the affected facility will be operated, but no later than 180 days after initial startup as required under 40 CFR 60.11. The owner or operator must meet the following fugitive emissions limit for crushers at which a capture system is not used.

Affected facilities (as defined in 40 CFR 60.670 and 40 CFR 60.671) that commenced construction, modification, or reconstruction on after August 31, 1983 but before April 22, 2008	15 percent opacity
Affected facilities (as defined in 40 CFR 60.670 and 40 CFR 60.671) that commenced construction, modification, or reconstruction on or after April 22, 2008	12 percent opacity

[40 CFR 60.672(b); Permit No. 0250014-015-AC]

H.6. Conveyor/Screen Visible Emissions: Affected facilities must meet the fugitive emissions limits and compliance requirements in Table 3 of 40 CFR 60 Subpart OOO within 60 days after achieving the maximum production rate at which the affected facility will be operated, but no later than 180 days after initial startup as required under 40 CFR 60.11. The owner or operator must meet the following fugitive emissions limit for grinding mills, screening operations, bucket elevators, transfer points on belt conveyors, bagging operations, storage bins, enclosed truck or railcar loading stations or from any other affected facility (as defined in 40 CFR 60.670 and 40 CFR 60.671)

Affected facilities (as defined in 40 CFR 60.670 and 40 CFR 60.671) that commenced construction, modification, or reconstruction on after August 31, 1983 but before April 22, 2008	10 percent opacity
Affected facilities (as defined in 40 CFR 60.670 and 40 CFR 60.671) that commenced construction, modification, or reconstruction on or after April 22, 2008	7 percent opacity

[40 CFR 60.672(b); Permit No. 0250014-015-AC]

H.7. Truck Dumping Visible Emissions: Truck dumping of nonmetallic minerals into any screening operation, feed hopper, or crusher is exempt from the requirements of 40 CFR 60.672.
[40 CFR 60.672(d); Permit No. 0250014-015-AC]

H.8. Replacement With Equal or Smaller Facility: Prior to replacing any facility covered under this permit with a piece of equipment of equal or smaller size, as defined in 40 CFR 60.671, having the same function as the facility, the permittee shall submit the information required by 40 CFR 60.676 (a) and (b) to the PERA, Air Quality Management Division.

- For a conveyor belt:
  (i) The width of the existing belt being replaced and
  (ii) The width of the replacement conveyor belt.
- For a storage bin:
  (i) The rated capacity in megagrams or tons of the existing storage bin being replaced and
  (ii) The rated capacity in megagrams or tons of replacement storage bins.

[Rules 62-4.070(3), F.A.C. and 40 CFR 60.676(a)(3)&(4) F.A.C.; Permit No. 0250014-015-AC]

H.9. Replacement With Larger Facility: The permittee shall not replace any facility covered under this permit with a piece of equipment of larger size or different function without applying for, and receiving, a modification of this permit to allow such replacement, unless this requirement is specifically waived in writing by the PERA, Air Quality Management Division.
[Rule 62-4.070(3), F.A.C.; 40 CFR 60.670; Permit No. 0250014-015-AC]

Compliance Monitoring and Testing Requirements

H.10. Visible Emissions Test Required: The owner or operator shall have a formal compliance test for visible emissions conducted in the calendar year prior to renewal of the operating permit by EPA Method 9 and the procedures in 60.11, with the following additions:

1. The minimum distance between the observer and the emission source shall be 4.57 meters (15 feet).

2. The observer shall, when possible, select a position that minimizes interference from other fugitive emission sources (e.g., road dust). The required observer position relative to the sun (Method 9, Section 2.1) must be followed.

[40 CFR 60.675(c)(1)(i)&(ii); Rules 62-297.310(7)(a)4, and 62-297.401(9) F.A.C.; Permit No. 0250014-015-AC]

H.11. Alternative VE Test Methods: The permittee may use the following as alternatives to the reference methods and procedures specified in 40 CFR 60 Subpart OOO:

(1) For the method and procedure as specified in 40 CFR Subpart 60.675(c), if emissions from two or more facilities continuously interfere so that the opacity of fugitive emissions from an individual affected facility cannot be read, either of the following procedures may be used:
   (i) Use for the combined emission stream the highest fugitive opacity standard applicable to any of the individual affected facilities contributing to the emissions stream.
   (ii) Separate the emissions so that the opacity of emissions from each affected facility can be read.

(2) A single visible emission observer may conduct visible emission observations for up to three fugitive, stack, or vent emission points within a 15-second interval if the following conditions are met:
   (i) No more than three emission points may be read concurrently.
   (ii) All three emission points must be within a 70 degree viewing sector or angle in front of the observer such that the proper sun position can be maintained for all three points.
   (iii) If an opacity reading for any one of the three emission points equals or exceeds the applicable standard, then the observer must stop taking readings for the other two points and continue reading just that single point.

[40 CFR 60.675(e)(1)&(2); Permit No. 0250014-015-AC]

H.12. Initial Testing Exceptions: Initial Method 9 performance tests under 40 CFR 60.11 and 40 CFR 60.675 of Subpart OOO are not required for:

(1) Wet screening operations and subsequent screening operations, bucket elevators, and belt conveyors that process saturated material in the production line up to, but not including the next crusher, grinding mill or storage bin.

(2) Screening operations, bucket elevators, and belt conveyors in the production line downstream of wet mining operations, that process saturated materials up to the first crusher, grinding mill, or storage bin in the production line.

[Permit No. 0250014-015-AC]

Reporting and Recordkeeping Requirements

H.13. Initial Notification: The permittee shall submit a notification of the actual date of initial startup of each affected facility to the PERA.

(1) For a combination of affected facilities in a production line that begin actual initial startup on the same day, a single notification of startup may be submitted by the owner or operator to the PERA. The notification shall be postmarked within 15 days after such date and shall include a description of each affected facility, equipment manufacturer, and serial number of the equipment, if available.

(2) For portable aggregate processing plants, the notification of the actual date of initial startup shall include both the home office and the current address or location of the portable plant.

[40 CFR 60.676(i); Permit No. 0250014-015-AC]

H.14. Processing Material Change Notification: The owner or operator of any wet material processing operation that processes saturated and subsequently processes unsaturated materials, shall submit a report of this change within 30 days following such change. At the time of such change, this screening operation, bucket elevator, or belt conveyor becomes subject to the 10 percent opacity limit in 40 CFR 60.672(b) and the emission test requirements of 40 CFR 60.11 and 40 CFR 60 Subpart OOO.
[40 CFR 60.676(g); Permit No. 0250014-015-AC]

Test Procedures, Recordkeeping and Additional Requirements

H.15. Common and General Conditions: This emissions unit is subject to all applicable requirements of the attached Appendices, made part of the permit.

The specific conditions in this section apply to the following emissions unit:

ARMS Emissions Unit No.	Brief Description of Emissions Unit
021	Sweetwater Concrete Batch Plant & Concrete Block Plant

Emission Unit ID No. 021: The Sweetwater Ready Mix Concrete Batch Facility and Concrete Block Plant, with a 94 TPH process rate, is adjacent to the cement plant site, and are of the same SIC Major Group. Particulate emissions are controlled by six (6) dust collectors; five (5) for the ready mix operation and one (1) for the concrete block plant as described below.

Emission Point ID	Description of Emissions Points	Manufacturer	Model No.	Flow Rate (acfm)	Cloth Area (ft^2)	Air to Cloth Ratio
No ID	Bin Dust Collector (Concrete Block Plant)	BHA	Pulse-Pleat	750	150	5.1 to 1.0
No ID	Truck Loadout Mixer Central Dust Collector (Ready Mix Plant)	C&W	CP-900-1278	5,000	912	5.5 to 1.0
No ID	Two (2) Dust Collectors (Ready Mix Plant Twin-Compartment Silo)	C&W	CP-305-839	1,600	304	5.3 to 1.0
No ID	Two (2) Dust Collectors (Ready Mix Plant 800 BBL Twin-Compartment Silo)	C&W	CP-305-839	1,600	356	5.3 to 1.0

Essential Potential to Emit (PTE) Parameters

I.1. Hours of Operation: This emissions unit system is allowed to operate 8,760 hours per year. [Rule 62-210.200 (PTE), F.A.C., Permit Nos. 0250014-026-AC, and 0250014-038-AC]

Emissions Limitations, Test Methods, and Standards

I.2. Visible Emissions (VE) Limits: Stack emissions from silos, weigh hoppers (batchers), and other enclosed storage and conveying equipment shall be controlled to the extent necessary to limit visible emissions to 5% opacity.
[Rule 62-296.414(l), F.A.C.; Permit Nos. 0250014-026-AC, and 0250014-038-AC]

I.3. Test Methods and Procedures: All emissions tests performed on the Sweetwater Concrete Block & Ready Mix Plant shall comply with the following requirements:

a. The reference test method for visible emissions shall be EPA Method 9, as described at 40 CFR, Part 60, Appendix A, adopted and incorporated by reference at Rule 62-204.800, F.A.C.
b. Test procedures shall conform to the procedures specified in Rule 62-297.310, F.A.C. All test results shall be reported to the PERA in accordance with the provisions of Rule 62-297.310, F.A.C.
c. Visible emissions tests of silo dust collector exhaust points shall be conducted while loading the silo at a rate that is representative of the normal silo loading rate. The minimum loading rate shall be 25 tons per hour unless such rate is unachievable in practice. If emissions from the weigh hopper (batcher) operation are also controlled by the silo dust collector, then the batching operation shall be in operation during the visible emissions test. The batching rate during the emissions test shall be representative of the normal batching rate and duration. Each test report shall state the actual silo loading rate during emissions testing and, if applicable, whether or not batching occurred during emissions testing.

d. If emissions from the weigh hopper (batcher) operation are controlled by a dust collector which is separate from the silo dust collector, visible emissions tests of the weigh hopper (batcher) dust collector exhaust point shall be conducted while batching at a rate that is representative of the normal batching rate and duration. Each test report shall state the actual batching rate during emissions testing.

[Rule 62-296.414(3), F.A.C.; Permit Nos. 0250014-026-AC, and 0250014-038-AC]

I.4. Frequency of Testing: The owner or operator of any concrete batching plant operating under the authority of an air construction permit or air operation permit shall have a performance test conducted for visible emissions for each dust collector exhaust point prior to submitting the application for an air operation permit, and annually thereafter.
[Rule 62-296.414(4)(b), F.A.C.; Permit Nos. 0250014-026-AC, and 0250014-038-AC]

I.5. Unconfined Emissions of Particulate Matter: Refer to Section II, Condition No. 5 of this permit.
[Rule 62-296.320(4)(c), F.A.C.]

I.6. Concrete Batching & Ready Mix Plant Reasonable Precautions: The owner or operator shall take reasonable precautions to control unconfined emissions from hoppers, storage and conveying equipment, conveyor drop points, truck loading and unloading, roads, parking areas, stock piles, and yards as required by paragraph 62-296.320(4)(c), F.A.C. The following shall constitute additional reasonable precautions to control Unconfined Emissions of Particulate Matter for this emissions unit:

a. Reduction of stock pile height or installation of wind breaks to mitigate wind entrainment of particulate matter from stock piles.
b. Use of spray bar, chute, or partial enclosure to mitigate emissions at the drop point to the truck.

[Rule 62-296.414(2), F.A.C.; Permit Nos. 0250014-026-AC, and 0250014-038-AC]

Test Procedures, Recordkeeping and Additional Requirements

I.7. Common and General Conditions: This emissions unit is subject to all applicable requirements of the attached Appendices, made part of the permit.

The specific conditions in this section apply to the following emissions unit:

ARMS E.U. ID No.	Brief Description
-014	**Stone Dryer and Soil Thermal Treatment Facility**

The Stone Dryer and Soil Thermal Treatment Facility thermally treat petroleum contaminated soil. The major components of this emissions unit are the rotary dryer, a raw material gallery, material handling system (screens, inclined belt feeders, bucket elevator, crusher, and stacker), fuel systems, a bypass stack and associated equipment, as described in the table below:

Gencor Ultraflame	Low excess air oil burners for the existing 7 feet diameter by 80 feet long rotary dryer
Joy-Western Multicyclone	85% efficiency
Micropul baghouse	99.9% efficient with 3,366 square feet of cloth area
IT/McGIll afterburner	Natural gas, on-specification used oil, or propane fired.
Two (2) heat exchangers for energy recovery	99.5% efficiency
Raw material gallery controlled with a Micropul baghouse	Discharges approximately 500 acfm at 400 °F through a 1.0 feet square stack that is 45 feet high, collects from material handling equipment (screen, inclined belt feeders, bucket elevator, crusher, and stacker).
Fuel systems	Used petroleum oil meeting the provisions of 40 CFR 266, Subpart E, propane, natural gas, and No. 2 fuel oil for the dryer, and on-specification used oil per 40 CFR 279.11, natural gas and propane for the afterburner.
By-pass stack	To be used only when the kiln is drying stone, and associated equipment.
Dryer	Discharges approximately 43,500 acfm, 8900 dscfm of 1330°F flue gases through a 3.75 feet diameter by 80 feet high stack.

The Stone Dryer and Soil Thermal Treatment Facility Operations are controlled by the following:

Emission Point ID Nos.	Description of Emissions Points
020-06	Dryer
020-16	Raw Material Gallery (Micropul) Baghouse

<u>Essential Potential to Emit (PTE) Parameters</u>

J.1. <u>Hours of Operation</u>: This emissions unit system is allowed to operate 8,760 hours per year.
[Permit No. AC 13-187599A, and Rule 62-210.200 (PTE), F.A.C.]

J.2. <u>Stone Dryer and Soil Thermal Treatment Facility Maximum Process Rates</u>: The Stone Dryer System process rate shall not exceed 25 tons per hour (TPH, 24-hour average) and the Soil Thermal Treatment System process rate shall not exceed 40 tons per hour (TPH, 24-hour average).

Soil containing more than 1.4 percent petroleum (daily average) products shall not be treated in this facility unless it is processed at a rate less than 40 TPH.
[Permit Nos. 0250014-004-AC and AC 13-187599A]

J.3. Dryer Fuels: The dryer is authorized to burn up to 27.4 MMBtu/hr of waste oil (193 GPH) containing a maximum of 0.4 percent sulfur and 100 ppm lead, No. 2 distillate oil (193 GPH) containing a maximum of 0.5 percent sulfur, and propane (180 GPH) or natural gas (460 CFM). The maximum fuel oil consumption shall not exceed 769,459 gallons in any 12-month period.
[40 CFR 279.11; Permit No. AC 13-187599A]

J.4. Fume Incinerator (Afterburner) Fuels: The fume incinerator (afterburner) is authorized to burn up to 15.0 MMBtu/hr of on-specification used oil (106 GPH) containing no more than 0.4% sulfur, natural gas (250 CFM) or propane (100 CFM). The used oil fuel shall meet the EPA requirements for on-specification used oil fuel and the requirements of Appendix B of this permit. The fume incinerator shall be in service any time the Stone Dryer is being used to process material containing contaminated soil. The by-pass stack must be closed when the unit is processing contaminated soil.
[Permit Nos. 0250014-005-AC and AC 13-187599A]

J.5. Afterburner Temperature: The permittee shall install, operate, and maintain an afterburner designed to expose the organic vapors driven off from the soil in the drum dryer during thermal treatment to at least 1600 °F for a minimum retention time of 0.5 seconds. If the permittee can document that the retention time of the flue gases in the afterburner is one (1) second or more, the afterburner temperature may be reduced to 1500 °F. The owner or operator shall demonstrate that the temperature and retention time requirements will continue to be met before any changes are made to the afterburner, induced draft fan, or any other equipment which may affect the temperature and retention time requirements.
[Permit No. 0250014-005-AC; Rule 62-296.415(1)(a) F.A.C.]

J.6. Dryer Baghouse: The permittee shall install, operate and maintain a high temperature, high efficiency baghouse to control emissions or particulate matter from the drum dryer during thermal treatment of soils.
[Permit No. 0250014-005-AC]

J.7. Contaminated Coal Tar Daily Average: The input of coal tar in the soil into the facility shall not exceed 1,120 pounds per hour (daily average).
[Permit 0250014-004-AC]

Emissions Limitations and Standards

J.8. Stone Dryer and Soil Thermal Treatment Facility Maximum Allowable Emissions:

a. Carbon Monoxide: The average CO emissions shall not exceed 100 parts per million (ppm) by volume, dry basis, during all sixty (60) consecutive minute periods of plant operation. The average CO emissions is the arithmetic mean of all CO concentration measurements during any consecutive 60 minutes of plant operation that were recorded by the continuous emissions monitor required pursuant to Rule 62-297.500, F.A.C.
[Permit No. 0250014-005-AC; Rule 62-296.415(1)(b), F.A.C.]

b.1. Particulate Matter (Dryer): Emissions of particulate matter from the dryer shall not exceed 0.04 grains per dry standard cubic foot (gr/dscf) of exhaust gas nor 3.3 pounds per hour, as determined by EPA Method 5. Compliance with this limit shall be demonstrated at least annually with the testing required by this permit. This limit applies during all periods of soil thermal treatment.
[Permit No. 0250014-005-AC; Rule 62-296.415(3), F.A.C.]

b.2. Particulate Matter (Fugitives Baghouse): Emissions of particulate matter from the fugitive dust baghouse shall not exceed 0.02 grains/dscf, nor 0.5 lbs/hr.
[Permit Nos. 0250014-005-AC and AC 13-187599A]

c. VOC: Potential emissions of VOCs from this facility shall not exceed 22.8 lb/hr.
[Permit Nos. 0250014-005-AC and AC 13-187599A]

d. Sulfur Dioxide: SO_2 emissions emissions shall be limited to 1.1 lbs/MMBtu heat input.
[Miami-Dade County Environmental Protection Ordinance 24-41.3(2)(b)(i)]

e. Lead: Emissions of lead from the dryer shall not exceed 0.13 lb/hr.
[Permit Nos. 0250014-005-AC and AC 13-187599A]

f. PCB: Emissions of PCB's from the stack shall not exceed 154 pounds in any consecutive 12-month period.
[Permit No. 0250014-005-AC and AC 13-187599A]

g. Visible Emissions: Visible emissions from the afterburner stack shall not exceed 5% opacity as determined by EPA Method 9. This limit applies during all periods of soil thermal treatment.
[Rule 62-296.415(2), F.A.C.]

Monitoring of Operations

J.9. CAM Plan: This emissions unit is subject to the Compliance Assurance Monitoring (CAM) requirements contained in the attached Appendix CAM. Failure to adhere to the monitoring requirements specified does not necessarily indicate an exceedance of a specific emissions limitation, it may constitute good reason to require compliance testing pursuant to Rule 62-297.310(b), F.A.C.
[40 CFR 64; Rules 62-204.800 and 62-213.440(1)(b)1.2., F.A.C.]

Test Methods and Monitoring Procedures

J.10. Particulate Matter: Particulate matter emissions compliance testing shall be demonstrated annually using EPA Method 5 pursuant to 40 CFR 60, Appendix A, and Chapter 62-297, F.A.C.
[Rules 62-296.415(b), 62-204.800 and 62-297.401, F.A.C.]

J.11. Visible Emissions: Visible emissions compliance testing shall be demonstrated annually using EPA Method 9 pursuant to 40 CFR 60, Appendix A, and Chapter 62-297, F.A.C.
[Rules 62-296.415(A), 62-204.800 and 62-297.401, F.A.C.]

J.12. Carbon Monoxide: The test method for CO shall be EPA Method 10, pursuant to 40 CFR, Appendix A, and Chapter 62-297.
[Rule 62-296.415(5)(c), F.A.C.]

J.13. The maximum permitted allowable particulate emission rate (gr/dscf) from the fugitives baghouse are as stated in J.8.b.2. The permittee shall demonstrate compliance by adhering to an opacity limit of 5% in lieu of particulate stack tests.
[Rule 62-297.620(4), F.A.C.]

J.14. Should PERA have reason to believe the particulate matter standards set forth in this subsection are not being met, PERA may require that compliance with the particulate emission standards be demonstrated by testing the subject emission unit.
[Rules 62-297.620(4) and 62-297.310, F.A.C.]

J.15. Compliance with the allowable emission limiting standards listed shall be determined by using the following reference methods as described in 40 CFR 60, Appendix A and 40 CFR 61 Appendix B adopted by reference in Chapter 62-204, F.A.C.
These emission units shall comply with all applicable requirements of Rule 62-297.310, F.A.C. General Test Requirements.

Pollutant Name or Parameter	Allowable Emissions	Basis	EPA/Reference Method/CMS *	Time Frequency	Compliance Test Duration
CO	100 PPM	Rule 62-296.415, F.A.C.	10/CEMS	Continuous	Continuous
PM (dryer)	0.04 gr/dscf (3.3 lb/hr)	Rule 62-296.415, F.A.C.	5	Annual	3 one-hr runs
PM (fugitives baghouse)	0.02 gr/dscf (0.5 lb/hr)	Rule 62-296.415, F.A.C.	5	Annual	3 one-hr runs
VE	5% Opacity	Rule 62-296.415, F.A.C.	9	Annual	30-minute test
VOC	22.8 lb/hr	Permit No. AC 13-187599A	25A	Prior to Renewal	3 one-hr runs
SO_2	1.1 lb/MMBtu	Miami-Dade County Ordinance	6	Prior to Renewal	3 one-hr runs
Pb	0.13 lb/hr	Permit No. AC 13- 187599A	29	Prior to Renewal	3 one-hr runs
PCB	154 lbs/year	Permit No. AC 13-187599A	Materials Balance	Consecutive 12-month	(Refer to Condition J.19.)

[Rule 62-297.310, F.A.C. and Rule 62-4.070(3), F.A.C.]

J.16. Operating procedures shall include good operating practices and proper training of all operators and supervisors. The good operating practices shall meet the guidelines and procedures as established by the equipment manufacturers. All operators (including supervisors) of air pollution control devices shall be properly trained in plant specific equipment.
[Permit No. 0250014-002-AC; Rule 62-4.070(3), F.A.C.]

J.17. Afterburner Temperature: The permittee shall install, calibrate, operate, and maintain instruments to continuously monitor and record the temperature of the flue gases leaving the high temperature zone, but before any dilution air is mixed with the flue gases.
a. A soil thermal treatment facility shall be designed and operated to expose the organic vapors from the soil during thermal treatment to one of the following combinations:

Minimum Temperature (Fahrenheit)		Minimum Time (Seconds)
1,500	and	1.0
1,600	and	0.5
1,800	and	0.3

The minimum temperature shall be determined by a continuous temperature monitor pursuant to the applicable continuous emissions monitoring requirements of F.A.C. 62-296.415(6). When soil is being treated, the minimum temperature shall be met or exceeded at all times except for 4 minutes in any 60 minute period, provided that the temperature does not fall below 100 degrees Fahrenheit of the required minimum temperature of the corresponding residence time. The minimum residence time shall be met or exceeded at all times while soil is being treated.

A soil thermal treatment facility shall continually monitor the temperature and carbon monoxide content of the flue gases leaving the high temperature zone pursuant to the applicable continuous emissions monitoring requirements of F.A.C. 62-296.415. Temperature and carbon monoxide monitors shall be co-located unless otherwise approved by the PERA.

b. The continuous temperature monitor shall be certified by the manufacturer to be accurate to within 1% of the temperature being measured. The temperature monitoring system shall be calibrated at least annually by the procedure recommended by the manufacturer. The calibration shall be at a minimum of three temperatures and over a range from 10% below to 10% above the designed flue gas hot zone temperature of the soil thermal treatment facility.
[Rules 62-296.415(1)(a) and (c), 62-296.415(6), F.A.C.]

J.18. Carbon Monoxide: The permittee shall install, calibrate, operate, and maintain instruments to continuously monitor and record the carbon monoxide concentration of the flue gases leaving the high temperature zone, but before any dilution air is mixed with the flue gases.
[Rules 62-296.415(1)(b) and (6), F.A.C.]

a. This continuous monitoring system shall be the method of demonstrating compliance with emission limiting standard for carbon monoxide. The average carbon monoxide emissions shall not exceed 100 parts per million (ppm) by volume, dry basis, during all 60 consecutive minute periods of plant operation. The average CO emissions is the arithmetic mean of all carbon monoxide concentration measurements during any consecutive (60) minutes of plant operation that were recorded by the continuous emissions monitor pursuant to Rule 62-297.500, F.A.C.
[Rules 62-296.415(1)(b) and (c), F.A.C.]

b. The carbon monoxide monitor shall be certified by the manufacturer to be accurate to within 10% of the carbon monoxide concentration by volume, mean value, or 5% of the applicable standard of 100 ppm, whichever is greater, as determined by EPA Test Method 10 in 40 CFR Part 60, Appendix A, adopted by referenced in Rule 62-204.800(7), F.A.C. The carbon monoxide continuous emission monitoring device shall be certified, calibrated, and operated according the Performance Specification 4 of 40 CFR Part 60, Appendix B, adopted by reference in 62-204.800(7), F.A.C., excluding Section 5.2, Calibration Draft Test Period, of Performance Specification 2.
[Rule 62-296.415, F.A.C.]

J.19. PCB Log: The permittee shall maintain a log that shows the PCB content of any soil containing used oil, hydraulic oil, and/or mineral oil; the source of the PCB contaminated soil; the tons of PCB contaminated soil treated; the PCB content of the oil that contaminated the soil; the quantity of PCBs in each batch of soil treated; and the total amount of PCBs treated during the preceding 12-month period. The cumulative weight of emissions shall be calculated using either of the following methods:

(a) The weight of PCBs entering the kiln shall be assumed to be the weight emitted.

(b) The weight of emissions shall be calculated using the weight entering the kiln with adjustment for documented destruction in the facility by a test program conducted by the permittee that is approved by the FDEP.

The Method specified in (a) of this condition shall be used until a destruction rate has been established on this system by stack test. Test protocol and methods to be used in determining destruction efficiency shall be submitted to the FDEP for approval.
[Permit No. AC 13-187599A]

J.20. Continuous Monitor Log: A complete file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; and all other information required, shall be recorded in a permanent legible form available for inspection. All continuous monitoring records shall be retained for at least three years following the date of such measurements, maintenance, reports and records.
[Permit No. 0250014-005-AC; Rule 62-296.415(6), F.A.C.]

J.21. Belt Weigh Scale: The permittee shall install, calibrate, operate and maintain a belt weigh scale or equivalent device which continuously indicates the soil processing rate in tons per hour. After each hour of thermal treatment, the operator shall record the soil processing rate in the Operation Log.
[Permit No. 0250014-004-AC]

J.22. Baghouse Pressure Differential Indicator: The permittee shall install, calibrate, operate and maintain a device which continuously indicates the pressure differential across the baghouse. After each hour of thermal treatment, the operator shall record the average pressure differential across the baghouse in the Operation Log.
[Permit No. 0250014-004-AC]

J.23. Unconfined Emissions: A soil thermal treatment facility is subject to Rule 62-296.320, F.A.C., Unconfined Emissions of Particulate Matter. As a minimum, before and after thermal soil treatment is accomplished, unconfined emissions of particulate matter from the soil shall be controlled by application of water or containment.
[Rule 62-296.415(4), F.A.C.]

Test Procedures, Recordkeeping and Additional Requirements

J.24. Common and General Conditions: This emissions unit is subject to all applicable requirements of the attached Appendices, made part of the permit.

Common Conditions
General Requirements

This Section addresses the following emissions unit(s), emissions unit systems, and the regulations to which they are subject which are contained in the Appendices listed in Section IV (attached).

ARMS E.U. ID No.	Brief Description
-001	Finish Mill System: Finish Mill No. 1
-002	Finish Mill System: Finish Mill No. 2
-003	Finish Mill System: Finish Mill No. 3
-004	Cement Handling System (32) Bulk Cement Storage Silos
-005	Cement Handling System Mortar Packhouse
-006	Cement Handling System Packhouse
-012	Finish Mill System: Finish Mill No. 4
-013	Finish Mill System: Finish Mill No. 5
-014	Stone Dryer & Soil Thermal Treatment Facility
-015	Cement Handling System Cement Truck Loading
-016	Facility Wide Fugitive Emissions
-017	Cement Plant Raw Material Handling (Baghouses)
-018	In-Line Kiln/Raw Mill & Clinker Cooler
-019	Clinker Handling and Storage System
-020	Cement Plant Coal Handling System Coal Mill System
-021	Sweetwater Concrete Block and Concrete Batch Plants
-022	Quarry Operations Subject to NSPS Subpart OOO Aggregate Plant Crushers
-023	Quarry Operations Subject to NSPS Subpart OOO Other Affected Screening Operations/Belt Conveyors
-025	Quarry Operations Not Subject to NSPS Subpart OOO
-028	Finish Mill System: Finish Mill 6
-029	Two (2) Diesel Fuel Limited Use Reciprocating Internal Combustion Engines

1. All of the listed emission units (except emissions units 014, 016, 021, 022, 023 & 025) have at least one component that is subject to 40 CFR 63, Subpart LLL - National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry. The listed emission units shall comply with Subpart LLL only to the extent that the regulations apply to the facility or its operations.

2. Some of the listed emission units have at least one component that was subject to 40 CFR 60, Subpart F - Standards of Performance for Portland Cement Plants (NSPS) when originally constructed. The listed emission units shall comply with Subpart F only to the extent that the applicable Subpart F requirements were not subsumed by 40 CFR 63, Subpart LLL. Specifically, 40 CFR 63.1356 exempts units from compliance with NSPS Subpart F if they are complying with NESHAP Subpart LLL.

3. The listed emission units shall comply with 40 CFR 60 Subpart A, General Provisions and 40 CFR 63, Subpart A, General Provisions only to the extent that the requirements apply to the facility or its operations.

4. Emissions Unit 020, the Cement Plant Coal Handling System, is subject to 40 CFR 60 Subpart Y, Standards of Performance for Coal Preparation Plants.

5. Emissions Unit 014, the Stone Dryer & Soil Thermal Treatment Facility, is subject to Rule 62-296.415, F.A.C., Soil Thermal Treatment Facilities.

6. Emissions Units 022 and 023 are subject to 40 CFR 60, Subpart OOO – Standards of Performance for Nonmetallic Mineral Processing Plants.

7. This facility shall maintain a central file containing all measurements, records, and other data that are required to be collected pursuant to the various specific conditions of this permit. Operators shall keep a daily Operation and Maintenance log to include, at a minimum, the following information:

- The data collected from in-stack monitoring instruments
- The records on daily feed rates and clinker production rate
- The amount and type of fuel burned
- Total quantity (by weight) of tires used as supplemental fuel
- The firing rate of whole tires shall be quantified (weighed) continuously and recorded
- Calibration logs for all instruments
- Maintenance/repair logs for any work performed on equipment or instrument which is subject to this permit;
- Total coal, petroleum coke, natural gas, solid waste material, and oil usage.

All measurements, records, and any other data required to be maintained by CEMEX shall be retained for at least five (5) years following the date on which such measurements, records, or data are recorded. These data shall be made available to the FDEP and to PERA upon request. PERA shall be notified in writing at least 15 days prior to the testing (auditing) of any instrument required to be operated by these specific conditions in order to allow witnessing by authorized personnel.
[Rule 62-4.070(3), F.A.C. and Permit No. 0250014-002-AC]

8. Source Obligation/Relaxations of Restrictions on Pollutant Emitting Capacity: If a previously permitted facility or modification becomes a facility or modification which would be subject to the preconstruction review requirements of this rule if it were a proposed new facility or modification solely by virtue of a relaxation in any federally enforceable limitation on the capacity of the facility or modification to emit a pollutant (such as a restriction on hours of operation), which limitation was established after August 7, 1980, then at the time of such relaxation the preconstruction review requirements of this rule shall apply to the facility or modification as though construction had not yet commenced on it.
[Rule 62-212.400 (12)(b), F.A.C.; Permit No. 0250014-016-AC/PSD-FL-324]

{This facility avoided preconstruction review pursuant to Paragraph 62-212.400, F.A.C., except for VOC, by taking federally enforceable limitations on the capacity to emit certain criteria pollutants from each of the emission units listed above. Refer to PSD-FL324/0250014-016-AC}

The FDEP adopted the provisions of the referenced NSPS and NESHAP regulations from 40 CFR 60 and 40 CFR 63, respectively by reference into Rule 62-204.800, F.A.C. The provisions of these regulations are included in this permit as attached Appendices.

SECTION IV. APPENDICES

The Following Appendices Are Enforceable Parts of This Permit:

Appendix A, Glossary.
Appendix CAM, Compliance Assurance Monitoring Plan.
Appendix I, List of Insignificant Emissions Units and/or Activities.
Appendix NESHAP, Subpart A – General Provisions.
Appendix NESHAP, 40 CFR 63 Subpart LLL – NESHAP for Portland Cement Manufacturing Industry.
Appendix NSPS, Subpart A – General Provisions.
Appendix NSPS, Subpart F – Standards of Performance for Portland Cement Plants.
Appendix NSPS, Subpart OOO – Standards of Performance for Nonmetallic Mineral Processing Plants.
Appendix NSPS, Subpart Y – Standards of Performance for Coal Preparation Plants.
Appendix TV, Title V General Conditions.
Appendix U, List of Unregulated Emissions Units and/or Activities.
Appendix SS-1, Stack Sampling Facilities.
Appendix CG, Common and General Conditions.
Appendix B, Requirements for On-Spec Used Oil Fuel.

REFERENCED ATTACHMENTS.

The Following Attachments Are Included for Applicant Convenience:

Figure 1, Summary Report-Gaseous and Opacity Excess Emission and Monitoring System Performance (40 CFR 60, July, 1996).
Table H, Permit History.
Table 297.310-1, Calibration Schedule.
Statement of Basis.