



# Florida Department of Environmental Protection

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*Sent by Electronic Mail – Received Receipt Requested*

## PERMITTEE

CEMEX Construction Materials Florida, LLC  
Brooksville South Cement Plant  
Portland Cement Line No. 1  
10311 Cement Plant Road  
Brooksville, Florida 34601

Permit No. 0530021-043-AC (PSD-FL-091K)  
Permit Expires: December 31, 2015  
Re-Permitting of Cement Line No. 1 and  
Separation from Central Power and Lime Power  
Plant

Authorized Representative:

Jim Daniel, Cement Plant Manager

## PROJECT AND LOCATION

The facility is owned by CEMEX Construction Materials Florida, LLC (CEMEX). The facility includes two Portland cement manufacturing lines (Cement Lines No. 1 and No. 2), a coal yard and all the required auxiliary equipment. The applicant operates this existing site as a single Title V facility. This facility is in an area that is in attainment (or designated as unclassifiable) for all air pollutants subject to a National Ambient Air Quality Standard (NAAQS). The facility is located approximately 20 kilometers (km) east of the Prevention of Significant Deterioration of Air Quality (PSD) Class I Chassahowitzka Wilderness Area. This facility is located in Hernando County at 10311 Cement Plant Road, Brooksville. UTM Coordinates are: Zone 17; 360.00 km East; and, 3162.50 km North.

This permit is organized into the following sections: Section 1 (General Information), Section 2 (Administrative Requirements), Section 3 (Emissions Unit Specific Conditions) and Section 4 (Appendices). Because of the technical nature of the project, the permit contains numerous acronyms and abbreviations, which are defined in Appendix CF of Section 4 of this permit.

## STATEMENT OF BASIS

This air pollution construction permit is issued under the provisions of: Chapter 403 of the Florida Statutes (F.S.) and Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297 of the Florida Administrative Code (F.A.C.). The permittee is authorized to conduct the proposed work in accordance with the conditions of this permit. This project is subject to the general preconstruction review requirements in Rule 62-212.300, F.A.C.

Upon issuance of this final permit, any party to this order has the right to seek judicial review of it under Section 120.68 of the Florida Statutes by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection (Department) in the Office of General Counsel (Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000) and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within 30 days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida  
(*Electronic Signature*)

## CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Final Permit (including the Final Determination, Final Permit, and Appendices) was sent by electronic mail, or a link to these documents made available electronically on a publicly accessible server, with received receipt requested before the close of business on the date indicated below to the following persons.

Mr. James Daniel, Cement Plant Manager, CEMEX: [jdaniel@cemexusa.com](mailto:jdaniel@cemexusa.com)

Mr. George Townsend, CEMEX: [gtownsend@cemexusa.com](mailto:gtownsend@cemexusa.com)

Mr. John B. Koogler, Ph.D, P.E, Koogler and Associates, Inc.: [jkoogler@kooglerassociates.com](mailto:jkoogler@kooglerassociates.com)

Ms. Robert Wong, DEP SWD: [robert.wong@dep.state.fl.us](mailto:robert.wong@dep.state.fl.us)

Ms. Kathleen Forney, EPA Region 4: [forney.kathleen@epa.gov](mailto:forney.kathleen@epa.gov)

Ms. Heather Ceron, EPA Region 4: [ceron.heather@epa.gov](mailto:ceron.heather@epa.gov)

Mr. David Langston, EPA Region 4: [langston.david@epa.gov](mailto:langston.david@epa.gov)

Ms. Barbara Friday, DEP OPC: [barbara.friday@dep.state.fl.us](mailto:barbara.friday@dep.state.fl.us)

Ms. Lynn Scearce, DEP OPC: [lynn.scearce@dep.state.fl.us](mailto:lynn.scearce@dep.state.fl.us)

Clerk Stamp

**FILING AND ACKNOWLEDGMENT FILED**, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated agency clerk, receipt of which is hereby acknowledged.  
(*Electronic Signature*)

## SECTION 1. GENERAL INFORMATION

### FACILITY DESCRIPTION

The facility includes Cement Lines No. 1 and No. 2 which includes in-line kiln/raw mills, clinker coolers, associated process equipment, all the required auxiliary equipment and a coal yard. Waste heat from the kilns is used to provide heat to the raw mills and the kiln preheaters, which is used to drive off moisture from or preheat the materials used for making clinker. All of the materials handling activities are controlled by baghouses, except for the Clinker Receiving/Handling Systems and the coal yard activities. For the Clinker Receiving/Handling Systems, the fugitive particulate matter emissions generated from the transfer of clinker from the receiving hoppers to the belt conveyors is controlled using atomized water sprays or an equivalent dust suppression system.

### PROJECT DETAILS

This permitting action is to re-permit Portland Cement Line No. 1 (Cement Line No. 1) at the CEMEX Brooksville South cement plant by incorporating the original PSD construction permit (PSD-FL-091) and all subsequent construction permit modifications pertaining to Cement Line No. 1 into a “clean” new construction permit. Obsolete and redundant permit conditions and emission limits will be removed with the most recent New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAP) emission limits incorporated into the permit, as applicable.

In addition, this new construction permit will remove any reference to the recently separated Central Power and Lime (CP&L) power plant which is now under the control of Florida Power Development, LLC. The CP&L power plant was recently separated from Cement Line No. 1 by Air Construction Permit No. 0530380-001-AC (PSD-FL-090E). In the PSD-FL-090E permitting action, the power plant was converted from coal to biomass as its primary fuel and derated in power output from 150 megawatts (MW) to approximately 80 MW. In addition, CP&L was authorized to build a new electrostatic precipitator (ESP) to control particulate matter (PM) emissions and a new stack to vent pollutant emissions to the atmosphere. This permit along with other relevant documents can be found at:

[www.dep.state.fl.us/air/emission/bioenergy/central\\_power.htm](http://www.dep.state.fl.us/air/emission/bioenergy/central_power.htm)

Previously, for Cement Line No. 1, the cement kiln, in-line kiln/raw mill and clinker cooler shared a common baghouse (for PM emissions control) and stack with the CP&L power plant. Dry limestone injection was used to control SO<sub>2</sub> emissions from the power plant boiler, which was then collected in the baghouse shared with Cement Line No. 1. After this permitting action, Cement Line No. 1 will share no commonality with the power plant and may have a new baghouse and stack. If a new stack is not constructed for Cement Line No. 1, the stack previously shared with the power plant will continue to be used. If a new baghouse is not constructed, Cement Line No. 1 will continue to use the existing baghouse. Fuels allowed to be used in the pyroprocessing systems of Cement Line No. 1 are natural gas, fuel oil, on-specification used oil, coal, petroleum coke, propane, flyash, whole tires and tire derived fuels (TDF).

Cement Line No. 1 consists of the following emission units (EU).

EU ID No.	Facility's Internal ID No.	Emissions Unit Description
001	D-75	Filter Dust Bin with Baghouse
002	D-67	Fly Ash & Equilibrium Storage Silo with Baghouse
004	F-14	Raw Meal Transfer with Baghouse
006	G-12 (A & B)	Two Blend Silos with Baghouse
007	H-15	Kiln Feed Surge Bin with Baghouse
008	S-04	Clinker Receiving & Handling System
009	K-07 & L-03	Clinker Cooler Discharge with Baghouse
010	L-05, L-06 & L-07	Clinker Storage Silos with Baghouse

## SECTION 1. GENERAL INFORMATION

EU ID No.	Facility's Internal ID No.	Emissions Unit Description
011	L-08	Gypsum and Limestone Bins with Baghouse
012	M-03 M-08	Clinker Feed Belt Silo Discharge with Baghouse
013	N-13	Finish Mill with Baghouse
014	Q-17	A-Side Cement Storage Silo #1 and #2 with Baghouse
015	Q-15	Cement Storage Silos #1 and #2 with Baghouse
019	M-05	Finish Mill Feed Belt with Baghouse
020	N/A	Cement Kiln No. 1, In-Line Kiln/Raw Mill and Clinker Cooler 1 with Baghouse
021	Q-18	B-Side Cement Storage Silos #1, #2 & #3 Discharge System with Baghouse
022	Z-15	Cement Storage Silo #3 with Baghouse
023	N/A	Cement Storage Silo #4 and Truck Loadout System with Baghouse
024	Z-18	Cement Storage Silo and Railcar Loadout System with Baghouse
<b>Shared Emission Unit - Cement Lines No. 1 and 2: Fugitive Emissions and Coal Yard</b>		
042	N/A	Coal Receiving, Handling and Transfer System (fugitives)

### REGULATORY CLASSIFICATION

- The facility includes two Portland cement manufacturing lines (Cement Lines No. 1 and No. 2), a coal yard and all the required auxiliary equipment.
- The facility is a major source of hazardous air pollutants (HAP).
- The facility has emission units that are subject to the New Source Performance Standards (NSPS) under Section 111 of the Clean Air Act (CAA). Specifically, emission units are subject to 60 Subpart A, General Provisions, Subpart F, NSPS for Portland Cement Plants and Subpart Y NSPS for Coal Preparation Plants.
- The facility has emission units that are subject to the National Emissions Standards for Hazardous Air Pollutants (NESHAP) under Section 112 of the CAA. Specifically, the facility is subject to 40 CFR 63, Subpart A, General Provisions and Subpart LLL, NESHAP for Portland Cement Manufacturing (Subpart LLL).
- The facility has no units subject to the acid rain provisions of the Clean Air Act.
- The facility is a Title V major source of air pollution in accordance with Chapter 62-213, F.A.C.
- The facility is a major stationary source in accordance with Rule 62-212.400, F.A.C. (PSD)

These emissions units are also subject to the requirements of the state rules as indicated in this permit, particularly Rule 62-212.400, F.A.C., Prevention of Significant Deterioration.

### PREVIOUS PERMITS

The permits listed below preceded this permit and pertain entirely or in part to Portland Cement Line No. 1. They are specifically related to this permitting action. These documents are on file with the Department.

- Original permit PSD-FL-091 for Cement Line No. 1 (March 24, 1984).
- Original permit PSD-FL-090 for CP&L Power Plant (March 24, 1984).
- PSD –FL-091A: allowed use of shredded tires as a supplemental fuel (August 30, 1991).

## SECTION 1. GENERAL INFORMATION

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- PSD –FL-091B: allowed testing of whole tires as a supplemental fuel (August 30, 1991).
- PSD –FL-091C: allowed use of whole tires as a supplemental fuel (December 22, 1992).
- PSD –FL-091D: allowed utilization of on-specification used fuel oil (December 17, 1993).
- PSD –FL-091F: authorized the installation of a tire injection system on Cement Line No. 1 (March 4, 2009).
- PSD –FL-091G: extended expiration date of permit PSD-FL-091F (September 15, 2009).
- PSD –FL-091H: second extension of the expiration date of permit PSD-FL-091F (June 17, 2010).
- PSD –FL-091I: authorized the addition of a baghouse between clinker belt weight feeder and clinker belt conveyor (February 23, 2011).
- PSD –FL-091J: application for concurrent AC/AV permit revision for Cement Plant Lines No.1and No. 2, application subsequently withdrawn.
- PSD –FL-091K: re-permitting of Cement Lines No.1 and No. 2.

## SECTION 2. ADMINISTRATIVE REQUIREMENTS

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The following specific conditions apply to all emissions units at this facility addressed by this permit.

1. Permitting Authority: The Permitting Authority for this project is the Office of Permitting and Compliance (OPC) in the Division of Air Resource Management of the Department of Environmental Protection (Department). The mailing address for the OPC is 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400.
2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Air Resource Section of the Department's Southwest District Office at: 13051 North Telecom Parkway, Temple Terrace, Florida 33637-0926 (Ph: 813-632-7600).
3. Appendices: The following Appendices are attached as a part of this permit and the permittee must comply with the requirement of the appendices:
  - a. Appendix CC: Common Conditions;
  - b. Appendix CF: Citation Formats and Glossary of Common Terms;
  - c. Appendix CTR: Common Testing Requirements;
  - d. Appendix F: NSPS Subpart F - Standards of Performance for Portland Cement Plants;
  - e. Appendix GC: General Conditions;
  - f. Appendix GP: Identification of General Provisions - NSPS 40 CFR 60, Subpart A and NESHAP 40 CFR 63, Subpart A
  - g. Appendix LLL: NESHAP, Subpart LLL - National Emission Standards for Hazardous Air Pollutants From the Portland Cement Manufacturing Industry; and,
  - h. Appendix Y: NSPS Subpart Y – Standards of Performance for Coal Preparation and Processing Plants.
4. Applicable Regulations, Forms and Application Procedures: Unless otherwise specified in this permit, the construction and operation of the subject emissions units shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403, F.S.; and Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296 and 62-297, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations.
5. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]
6. Modifications: No emissions unit shall be constructed or modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]
7. Source Obligation:
  - (a) At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by virtue of a relaxation in any enforceable limitation which was established after August 7, 1980, on the capacity of the source or modification otherwise to emit a pollutant, such as a restriction on hours of operation, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification.

## SECTION 2. ADMINISTRATIVE REQUIREMENTS

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

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

8. **Objectionable Odors Prohibited:** No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor. [Rule 62-296.320(2), F.A.C.]  
*{Note: An objectionable odor is defined in Rule 62-210.200(Definitions), F.A.C., as 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.}*
9. **Unconfined Emissions of 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. Any permit issued to a facility with emissions of unconfined particulate matter shall specify the reasonable precautions to be taken by that facility to control the emissions of unconfined particulate matter. General reasonable precautions include the following:
- (a) Paving and maintenance of roads, parking areas and yards;
  - (b) Application of water or chemicals to control emissions from such activities as demolition of buildings, grading roads, construction, and land clearing;
  - (c) Application of asphalt, water, oil, chemicals or other dust suppressants to unpaved roads, yards, open stock piles and similar activities;
  - (d) 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;
  - (e) Landscaping or planting of vegetation;
  - (f) Use of hoods, fans, filters, and similar equipment to contain, capture and/or vent particulate matter;
  - (g) Confining abrasive blasting where possible; and
  - (h) Enclosure or covering of conveyor systems. In determining what constitutes reasonable precautions for a particular facility, the Department shall consider the cost of the control technique or work practice, the environmental impacts of the technique or practice, and the degree of reduction of emissions expected from a particular technique or practice.

[Rule 62-296.320(4)(c), F.A.C. and Applicant's Request]

10. **Previous Construction Permits PSD-FL-090, PSD-FL-091 and Title V Permit No. 0530021-029-AV:** The Cement Line No. 1 and the Power Plant were originally permitted under common ownership as a co-generation facility (Power Plant subject to PURPA definition of co-generating facility) that physically exhausted emissions through a common stack. Today, the Cement Line No.1 and the Power plant are under separate ownership and the two units will in the future exhaust to separate stacks. Further the co-generation definition no longer applies to the Power Plant. This project separates the air permitting of these two units into separate facilities and the related enforceable

## SECTION 2. ADMINISTRATIVE REQUIREMENTS

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requirements of Cement Line No. 1 at the Brooksville South Cement Plant from the Brooksville Power Plant. One facility is the power plant that was recently permitted to authorize its conversion from a 150 MW pulverized coal-fired boiler to an approximately 80 MW biomass-fired grate-suspension boiler. The other facility includes two Portland cement manufacturing lines (Cement Lines No. 1 and No. 2), a coal yard and all the required auxiliary equipment. The enforceable requirements within this permit establish two separate facilities not under common control. Further:

- a. This permit supersedes and replaces all previous air construction permits and applicable conditions related to Cement Line No. 1 at the CEMEX Brooksville South Cement Plant.
- b. As specified in Air Construction Permit No. 0210380-001-AC (PSD-FL-90E), upon initiation of actual construction of the grate within the existing furnace of the CP&L power plant, the Power Plant is prohibited from sharing the baghouse and the exhaust stack with Cement Line No. 1 of the CEMEX Brooksville South Cement Plant.
- c. Upon initiation of actual construction of the grate within the existing furnace, the conditions contained in the original air construction permits PSD-FL-090 (power plant) and PSD-FL-091 (cement plant) issued by the EPA on March 24, 1984, related to the operation of Cement Line No. 1 in combination with the Power Plant, are obsolete. This includes any modified versions of those permits through the date of issuance of this permit for the separation of the cement line from the power plant.
- d. Upon initiation of actual construction of the grate within the existing furnace, the conditions contained in the current Title V permit No. 0530021-029-AV, related to the operation of a coal-fired power plant in combination with Cement Line 1, are obsolete.

*{Permitting Note: As a separate action, the Cement Line No. 2 is simultaneously being issued an air construction permit to separate the air permitting conditions that were previously combined into the Title V permit (0530021-029-AV). As another separate permitting action, the current Title V Permit No. 0530021-029-AV will be revised accordingly to reflect the separation of Cement Line No. 1 from the power Plant. The revised Title V permit will reflect the operation of Cement Lines No. 1 and 2 at the CEMEX Brooksville South Cement Plant and will not include the operation of the Power Plant. The Power Plant will be issued a separate Title V permit for facility ID No. 0530380 reflecting its conversion to approximately 80 MW biomass fired facility.}*

[Rules 62-4.070(3); 62-210.200(PTE); and 62-212.400 (PSD) F.A.C.]

11. **Title V Permit for CEMEX Brooksville South Cement Plant:** This permit authorizes specific actions to determine compliance with conditions of this permit. A Title V operation permit is required for regular operation of the permitted emissions units. The permittee shall apply for a Title V operation permit at least 90 days prior to expiration of this permit, but no later than 180 days after completing the required work and commencing operation. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the appropriate Permitting Authority with copies to the Compliance Authority.  
[Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]
12. **General Visible Emissions Standard:** Except for emissions units that are subject to a particulate matter or opacity limit set forth or established by rule and reflected by conditions in this permit, 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 20 percent opacity. The test method for visible emissions shall be EPA Method 9, incorporated and adopted by reference in Chapter 62-297, F.A.C. Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C. [Rule 62-296.320(4)(b)1, F.A.C.]

## SECTION 2. ADMINISTRATIVE REQUIREMENTS

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13. Plant Operation - Problems: If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by hazard of fire, wind or by other cause, the permittee shall immediately notify the Department's district office. The notification shall include pertinent information as to the cause of the problem, and what steps are being taken to correct the problem and to prevent its recurrence, and where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with Department rules. [Rule 62-4.130, F.A.C.]
14. Circumvention: No person shall circumvent any air pollution control device or allow the emission of air pollutants without the applicable air pollution control device operating properly. [Rule 62-210.650, F.A.C.]
15. Excess Emissions: The following excess emissions provisions cannot be used to vary any NSPS or NESHAP requirements from any subpart of 40 CFR 60 or 40 CFR 63.  
Excess emissions resulting from startup, shutdown or malfunction of any emissions unit shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration. Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during start-up, shutdown, or malfunction shall be prohibited. [Rule 62-210.700, F.A.C.]
16. Records Retention: All measurements, records, and other data required by this permit shall be documented in a permanent, legible format and retained for at least five (5) years following the date on which such measurements, records, or data are recorded. Records shall be made available to the Department, upon request. [Rules 62-4.160(14) and 62-213.440(1)(b)2., F.A.C.]
17. Excess Emissions Report: If excess emissions occur, the owner or operator shall notify the Department within one working day of: the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. In addition, the Department may request a written summary report of the incident. Pursuant to the New Source Performance Standards, excess emissions shall also be reported in accordance with 40 CFR 60.7, Subpart A. [Rule 62-4.130, F.A.C.]
18. Excess Emissions Report - Malfunctions: In case of excess emissions resulting from malfunctions, each owner or operator shall notify the Department in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report. A quarterly written report is hereby requested by the Department for every quarter that the facility is in operation. If no malfunctions occurred during a quarter, a written report stating that no malfunctions occurred shall be submitted. [Rule 62-210.700(6), F.A.C.]
19. Annual Operating Report for Air Pollutant Emitting Facility: The Annual Operating Report for Air Pollutant Emitting Facility shall be completed each year and shall be submitted to the Department's Southwest District office by April 1 of the following year. [Rule 62-210.370(3), F.A.C.]

## SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

### A. Miscellaneous Baghouse Systems (EU 001 to EU 024)

The following specific conditions apply to the following miscellaneous emissions units of Cement Line No. 1 with particulate matter (PM) emission controlled by baghouses.

#### EMISSION UNIT SUMMARY

1. Emission Unit Parameters: The critical operational parameters of these miscellaneous emission units are given below:

EU ID No.	Description	Stack <sup>1</sup>	BH <sup>2</sup>	Temp <sup>3</sup>	Flow <sup>4</sup>	Throughput
001	Filter Dust Bin - storage bin for fines (dust)	125/2.0	low	77	6,800 6,686	45 tons/hour (TPH)
002	Fly Ash/Equilibrium Catalyst Store Bin	125/2.0	low	77	4,200 4,130	25 TPH
004	Raw Meal Transfer - raw meal being transferred from the storage bins to the raw mil	70/1.0	low	180	1,200 970	138 TPH
006	Two Blend Storage Silos - storage silos for the raw meal being transferred from the raw mill	240/3.5	low	180	17,000 13,745	138 TPH
007	Kiln Feed Surge Bin - is an activity of materials being pre-heated in the pre-heater and transferred to the kiln	50/2.0	medium	200	6,000 4,704	138 TPH
009	Clinker Cooler Discharge - is an activity of clinker transfer from the clinker cooler to the deep bucket conveyor	10/1.0	medium	250	5,100 3,717	83 TPH
010	Clinker Storage Silos - unit is an activity of clinker being transferred to the finish mill	200/1.5	medium	200	2,600 2,038	83 TPH
011	Gypsum and Limestone Bins - is an activity of gypsum and limestone being stored and transferred	135/1.5	Medium	200	5,000 3,920	75 TPH
012	Silo Discharge -is an activity of clinker, gypsum or limestone being transferred from their silos	135/2.5	low	100	9,000 8,316	122 TPH
013	Finish Mill - combines clinker, limestone and gypsum to form cement	70/5.0	medium	210	40,000 30,892	125 TPH; 876,000 TPY
014	A-Side Cement Storage Silos #1 & #2 - unloading of cement from the three storage silos	50/1.5	Low	160	3,200 2,671	300 TPH
015	Cement Storage Silos #1 & #2 - is an activity of cement being pneumatically transferred to two storage silos from the finish mill	200/2.0	Low	180	7,400 5,983	125 TPH each & 876,000 TPY each
019	Finish Mill Feed Belt - is an activity of transferring clinker, gypsum or limestone to the finish mill	29/2.0	Low	85	9,000 8,820	120 TPH

## SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

### A. Miscellaneous Baghouse Systems (EU 001 to EU 024)

EU ID No.	Description	Stack <sup>1</sup>	BH <sup>2</sup>	Temp <sup>3</sup>	Flow <sup>4</sup>	Throughput
021	B-Side Cement Storage Silos #1, #2 & #3 Discharge System - used for the unloading of cement from a storage silo	50/1.5	Low	160	10,000 ---	300 TPH
022	Cement Storage Silo #3 - is an activity of cement being pneumatically transferred to a silo from the finish mill	200/2.0	Low	180	5,300 ---	125 TPH; 876,000 TPY
023	Cement Storage Silo #4 and Truck Loadout System - is an activity of cement being pneumatically transferred to the silo from the finish mill and cement loaded into trucks	75/0.8	Low	77	860 829	125 TPH: silo & 390 TPH: trucks
024	Cement Storage Silo and Railcar Loadout System - is an activity of cement being pneumatically transferred to the railcar silo from the cement storage silos #1, #2, and #3	80/1.5	Low	77	6,000 5,899	30 TPH: silo & 100 TPH: railcars
		10/0.5	Low	77	500 490	
<ol style="list-style-type: none"> <li>1. Height (ft)/diameter(ft)</li> <li>2. Baghouse temperature range.</li> <li>3. Temperature degrees Fahrenheit (°F)</li> <li>4. Flow in actual cubic feet per minute (acfm) and standard cubic feet per minute (scfm).</li> </ol>						

*{Permitting note: These emissions units are regulated under Rules 62-212.400 and 62-212.400(6), F.A.C., Prevention of Significant Deterioration (PSD-FL-091 and PSD-FL-091K) and Best Available Control Technology, respectively; 40 CFR 63, Subpart LLL - National Emissions Standards for Hazardous Air Pollutants from Portland Cement Manufacturing Industry; and 40 CFR 60, Subpart F - Standards of Performance for Portland Cement Plants.}*

#### NSPS AND NESHAP APPLICABILITY

2. NSPS Subpart F and NESHAP Subpart LLL: Cement Line No. 1 is an affected facility subject to the provisions of 40 CFR 60, Subpart F - NSPS for Portland Cement Plants. This affected facility is also subject to 40 CFR 63, Subpart LLL - NESHAP for the Portland Cement Manufacturing Industry. If an affected facility subject to 40 CFR 63, Subpart LLL has a different emission limit or requirement for the same pollutant under another regulation in title 40, in this case Subpart F, the owner or operator of the affected facility must comply with the most stringent emission limit or requirement and is exempt from the less stringent requirement. NSPS Subpart F and NESHAP Subpart LLL (final version dated September 9, 2010) are contained in Appendices F and LLL of this permit. [Rule 62-204.800, F.A.C.; 40 CFR 63, Subpart LLL; and 40 CFR 60, Subpart F]

*{Permitting Note: On July 18, 2012, the EPA proposed changes to the Final NESHAP Subpart LLL (dated September 9, 2010). The **major** changes are: (1) adjust the way cement kiln owner's measure and monitor particulate matter emissions, i.e., the removal of the PM CEMS requirement and allowing stack testing in its place; (2) extend the deadline by two years – from September 9, 2013 to September 9, 2015 – for existing cement kilns to comply with the 2010 rule; and (3) raise the allowable emissions levels for particulate matter emissions.}*

**SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS**

**A. Miscellaneous Baghouse Systems (EU 001 to EU 024)**

3. NSPS Subpart A and NESHAP Subpart A: These emissions units are subject to the General Provisions of NSPS Subpart A and NESHAP Subpart A (see Appendix GP of this permit). [40 CFR 60, Subpart A and 40 CFR 63, Subpart A]

**PERFORMANCE RESTRICTIONS**

4. Hours of Operation: These emission units may operate continuously, i.e., 8,760 hours per year. [Rule 62-210.200, F.A.C., Definitions -- potential to emit (PTE)]
5. Method of Operation. These emissions units either process or transfer materials used in the production of Portland cement. The dry fly ash handling system (including transfer and silo storage) shall be totally enclosed and vented (including pneumatic system exhaust) through fabric filters. [Rule 62-213.410, F.A.C.; PA 82-17 and PA 82-17E; and, PSD-FL-091K]

**EMISSIONS STANDARDS**

6. Particulate Matter Emissions. From these emission units, the maximum allowable PM emissions are:

<b>EU ID No.</b>	<b>Brief Description</b>	<b>Emission Limits</b>	<b>Basis</b>
001	Filter Dust Bin	0.015 gr/acf; 0.7 lb/hr; 3.07 TPY	BACT <sup>1</sup>
002	Fly Ash/Equilibrium Catalyst	0.015 gr/acf; 0.4 lb/hr; 1.75 TPY	BACT
004	Raw Meal Transfer	0.015 gr/acf; 0.2 lb/hr; 0.88 TPY	BACT
006	Two Blend Silos	0.015 gr/acf; 2.2 lbs/hr; 9.64 TPY	BACT
007	Kiln Feed Surge Bin	0.015 gr/acf; 0.8 lb/hr; 3.50 TPY	BACT
009	Clinker Cooler Discharge	0.015 gr/acf; 0.66 lb/hr; 2.9 TPY	BACT
010	Clinker Storage Silos	0.015 gr/acf; 0.3 lb/hr; 1.31 TPY	BACT
011	Gypsum and Limestone Bins	0.015 gr/acf; 0.6 lb/hr; 2.63 TPY	BACT
012	Silo Discharge	0.015 gr/acf; 1.2 lbs/hr; 5.26 TPY	BACT
013	Finish Mill	0.015 gr/acf; 5.1 lbs/hr; 22.34 TPY	BACT
014	A-Side Cement Storage Silos #1 & #2 Discharge System	0.015 gr/acf; 0.4 lb/hr; 1.75 TPY	BACT
015	Cement Storage Silos #1 & #2	0.015 gr/acf; 1.0 lb/hr; 4.38 TPY	BACT
019	Finish Mill Feed Belt	1.16 lbs/hr; 5.08 tons/rolling 12-months	BACT
021	B-Side Cement Storage Silos #1, #2 & #3 Discharge System	0.015 gr/acf; 1.29 lbs/hr; 5.65 TPY	BACT
022	Cement Storage Silo #3	0.015 gr/acf; 0.68 lb/hr; 3.00 TPY	BACT
023	Cement Storage Silo #4 and Truck Loadout System	0.015 gr/acf; 0.11 lb/hr; 0.48 TPY	BACT
024	Cement Storage Silo and Railcar Loadout System	0.02 gr/acf	BACT

1. PSD-FL-091K replaces all previous PSD permits and represents latest BACT, NSPS and NESHAP emission limits.

7. Visible Emissions: For all emission units visible emissions (VE) shall not exceed 5 percent opacity. For all emission units as long as the VE does not exceed 5 percent opacity, compliance is assumed for the PM emission limits given in **Specific Condition 6** of this subsection. If the Department has reason to believe that the PM mass emissions standard is not being met, it shall require that compliance be demonstrated by the stack testing utilizing EPA Method 5 pursuant to 40 CFR 60, Appendix A, and Chapter 62-297, F.A.C. By meeting the 5 percent opacity requirement, the Finish

**SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS**

**A. Miscellaneous Baghouse Systems (EU 001 to EU 024)**

Mill (EU 013) meets the 10 percent opacity requirement of NESHAP 40 CFR 63, Subpart LLL. [Rule 2-212.400, F.A.C. (PSD), BACT and NESHAP 40 CFR 63, Subpart LLL]

**TESTING AND MONITORING REQUIREMENTS**

8. **Annual VE Compliance Tests:** Per Rule 62-297.310 F.A.C., during each federal fiscal year (October 1<sup>st</sup> to September 30<sup>th</sup>), the outlets of the drop points, transfer points, the silo vent screens associated with the fuel bins and the baghouses of these emissions units shall be tested to demonstrate compliance with the emissions standards for opacity. [Rule 62-297.310(7)(a)4, F.A.C.]

9. **PM Compliance Tests:** If required by the Department, per Rule 62-297.310 F.A.C., PM compliance testing, shall be used to demonstrate compliance with the mass emission limits given in **Specific Conditions 6** of this subsection. [Rules 62-204.800 and 62-297.401, F.A.C.]

*{Permitting Note: Per proposed NESHAP Subpart LLL (dated July 18, 2012) annual stack testing unitizing EPA Method 5 will be required to shown compliance with the NESHAP Subpart LLL PM limit for the clinker cooler discharge (EU 009.)}*

10. **Test Methods:** Required tests shall be performed in accordance with the following reference method.

Method	Description of Method and Comments
1 - 4	Determination of Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content <i>{Notes: Methods shall be performed as necessary to support other methods.}</i>
5	Particulate Matter (PM)
9	Visual Determination of the Opacity of Emissions from Stationary Sources

The above methods are described in Appendix A of 40 CFR 60 which is included as Appendix GP of this permit and as adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used unless prior written approval is received from the Department. [Rules 62-204.800 and 62-297.100, F.A.C.; and Appendix A of 40 CFR 60]

11. **Compliance With NESHAP Subpart LLL Emission Limits:** The owner or operator of an affected emissions unit subject to 40 CFR 63, Subpart LLL, shall demonstrate initial compliance with the emission limits of 40 CFR 63.1347 and 40 CFR 63.1348 using the test methods and procedures in paragraph 40 CFR 63.1349(b) and 40 CFR 63.7. Performance test results shall be documented in complete test reports that contain the information required by paragraphs 40 CFR 63.1349(a)(1) through (a)(10), as well as all other relevant information. The plan to be followed during testing shall be made available to the Administrator prior to testing, if requested. [Rule 62-204.800, F.A.C.; and, 40 CFR 63.1349(a)]

**MONITORING OF OPERATIONS**

12. **Operations and Maintenance Plan:** The owner or operator of each Portland cement plant shall prepare for each affected source subject to the provisions of 40 CFR 63, Subpart LLL, a written operations and maintenance plan. [Rule 62-204.800, F.A.C.; and, 40 CFR 63.1350(a)(1), (2) & (4) and (b)]  
*{Permitting Note: Failure to comply with any provision of the operations and maintenance plan developed in accordance with paragraph 40 CFR 63.1350(a) shall be a violation of the standard.}*

13. **Finish Mill - Opacity Monitoring:** The owner or operator of a finish mill shall monitor opacity by conducting daily visual emissions observations of the mill sweep PM control device of this affected source, in accordance with the procedures of Method 22 of Appendix A, 40 CFR Part 60. The Method 22 test shall be conducted while the affected source is operating at the representative

## SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

### A. Miscellaneous Baghouse Systems (EU 001 to EU 024)

performance conditions. The duration of the Method 22 test shall be six (6) minutes. If visible emissions are observed during any Method 22 visible emissions test, the owner or operator must:

- a. 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
- b. 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 test, conduct a visual opacity test of each stack from which visible 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.

[Rule 62-204.800, F.A.C.; and, 40 CFR 63.1350(e)]

*{Permitting Note: Per §63.1350, monitoring requirements of NESHAP Subpart LLL, the frequency of opacity monitoring may be decrease if no opacity is observed during Method 22 testing.}*

14. **Opacity Monitoring:** The owner or operator of an affected source subject to a limitation on opacity under 40 CFR 63.1348 shall monitor opacity in accordance with the operation and maintenance plan developed in accordance with paragraph 40 CFR 63.1350(a).

[Rule 62-206.800, F.A.C.; and, 40 CFR 63.1350(j)]

### NOTIFICATIONS, RECORDS AND REPORTS

15. **Notification Requirements:** The notification provisions of 40 CFR 63, Subpart A (See Appendix GP) are applicable. If any State requires a notice that contains all of the information required in a notification listed in 40 CFR 63.1353, the owner or operator may send the Administrator a copy of the notice sent to the State to satisfy the requirements of 40 CFR 63.1353 for that notification. Each owner or operator subject to the requirements of 40 CFR 63, Subpart LLL shall comply with the notification requirements in 40 CFR 63.9.

[Rule 62-204.800, F.A.C.; and, 40 CFR 63.1353(a) and (b)(1), (2), (3) & (5)]

16. **Reporting Requirements:** The reporting provisions of 40 CFR 63, Subpart A, are contained in Appendix 40 CFR 63, Subpart A (see Appendix GP), and are applicable. If any State requires a report that contains all of the information required in a report listed in 40 CFR 63.1354, the owner or operator may send the Administrator a copy of the report sent to the State to satisfy the requirements of 40 CFR 63.1354 for that report. The owner or operator of an affected source shall comply with the reporting requirements specified in 40 CFR 63.10 of the general provisions of 40 CFR Part 63, Subpart A. [Rule 62-204.800, F.A.C.; and, 40 CFR 63.1354(a) and (b)(1) thru (5)]

17. **Recordkeeping Requirements:** The owner or operator shall maintain files of all information (including all reports and notifications) required by 40 CFR 63.1355 recorded in a form suitable and readily available for inspection and review as required by 40 CFR 63.10(b)(1). The files shall be retained for at least five years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent **five** years of data shall be retained on site. The files may be maintained on microfilm, on a computer, on floppy disks, on magnetic tape, or on microfiche. The owner or operator shall maintain records for each affected source as required by 40 CFR 63.10(b)(2) and (b)(3). In addition: (1) all documentation supporting initial notifications and notifications of compliance status under 40 CFR 63.9; (2) all records of applicability determination, including supporting analyses; and (3) if the owner or operator has been granted a waiver under 40 CFR 63.8(f)(6), any information demonstrating whether a source is meeting the requirements for a waiver of recordkeeping or reporting requirements.

[Rules 62-204.800 and 62-213.440, F.A.C.; and, 40 CFR 63.1355(a) and (b)]

### **SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS**

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#### **A. Miscellaneous Baghouse Systems (EU 001 to EU 024)**

18. Test Reports: The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Appendix CTR (Common Testing Requirements) of this permit.  
[Rule 62-297.310(8), F.A.C.]

**SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS**

**B. Clinker Receiving/Handling System (EU 008)**

The following specific conditions apply to the following emission unit.

EU ID No	Brief Description
008	<u>Clinker Receiving/Handling System</u> : This emissions unit is an integrated system for handling clinker that includes an above ground clinker receiving hopper that is loaded by front-end loader. Clinker is transported from the hopper to the deep-bucket clinker conveyor by belt conveyor. The fugitive PM emissions generated from the transfer of clinker from the receiving hopper to the belt conveyor shall be controlled by the use an atomized water spray system, or equivalent dust suppression system.

**NSPS AND NESHAP APPLICABILITY**

1. NSPS Subpart F and NESHAP Subpart LLL: Cement Line No. 1 is an affected facility subject to the provisions of 40 CFR 60, Subpart F - Standards of Performance for Portland Cement Plants. However, this affected facility is also subject to 40 CFR 63, Subpart LLL - National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry. NSPS Subpart F and NESHAP Subpart LLL are contained in Appendices F and LLL of this permit. [Rule 62-204.800, F.A.C.; 40 CFR 63, Subpart LLL; and 40 CFR 60, Subpart F]  
*{Permitting Note: On July 18, 2012, the EPA proposed changes to the Final NESHAP Subpart LLL (dated September 9, 2010)}.*
2. NSPS Subpart A and NESHAP Subpart A: These emissions units are subject to the General Provisions of NSPS Subpart A and NESHAP Subpart A see Appendix GP of this permit). [40 CFR 60, Subpart A and 40 CFR 63, Subpart A]

**PERFORMANCE RESTRICTIONS**

3. Permitted Capacity: The maximum process/transfer/throughput rate of clinker is 100 TPH. [Rules 62-210.200(PTE), and 62-212.400 (PSD), F.A.C.]
4. Hours of Operation. This emissions unit is allowed to operate continuously (8,760 hours/year). [Rules 62-210.200(PTE), and 62-212.400 (PSD), F.A.C]

**EMISSIONS STANDARDS**

5. Particulate Matter: The allowable particulate matter emissions from the clinker handling system shall not exceed 0.7 lb/hr. [Rules 62-210.200(PTE), and 62-212.400 (PSD), F.A.C]
6. Visible Emissions: VE shall not exceed 10 percent opacity. Compliance with the particulate matter emissions limit in **Specific Condition 5** of this subsection shall be assumed if the visible emissions limit in this condition is met. However, if visible emissions exceed 10 percent opacity, then the owner or operator shall install hoods, ducts, and air pollution control equipment that will reduce the particulate matter emissions to the standard listed in **Specific Condition 5**. [40 CFR 63.1348; Rules 62-210.200(PTE), and 62-212.400 (PSD), F.A.C]  
*{Permitting Note: By meeting this opacity requirement, the Clinker Receiving/Handling System (EU 008) meets the opacity requirement of the Final and Proposed NESHAP Subpart LLL}.*

**TESTING AND MONITORING REQUIREMENTS**

7. Visible Emissions. Visible emissions compliance shall be demonstrated during each federal fiscal year (October 1<sup>st</sup> to September 30<sup>th</sup>) using DEP Method 9 pursuant to Chapter 62-297, F.A.C. [Rules 62-210.200(PTE), 62-212.400 (PSD), and 62-297.401, F.A.C.; and, 40 CFR 63.1349(b)(2)]

**SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS**

**B. Clinker Receiving/Handling System (EU 008)**

8. Test Methods: Required tests shall be performed in accordance with the following reference method.

Method	Description of Method and Comments
9	Visual Determination of the Opacity of Emissions from Stationary Sources

The above method is described in Appendix A of 40 CFR 60 which is included as Appendix GP of this permit and as adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used unless prior written approval is received from the Department.

[Rules 62-204.800 and 62-297.100, F.A.C.; and Appendix A of 40 CFR 60]

9. Compliance With NESHAP Subpart LLL: The owner or operator of an affected emissions unit subject to 40 CFR 63, Subpart LLL, shall demonstrate initial compliance with the emission limits of 40 CFR 63.1347 and 40 CFR 63.1348 using the test methods and procedures in paragraph 40 CFR 63.1349(b) and 40 CFR 63.7. Performance test results shall be documented in complete test reports that contain the information required by paragraphs 40 CFR 63.1349(a)(1) through (a)(10), as well as all other relevant information. The plan to be followed during testing shall be made available to the Administrator prior to testing, if requested. [Rule 62-204.800, F.A.C.; and, 40 CFR 63.1349(a)]
10. Operations and Maintenance Plan: The owner or operator of each Portland cement plant shall prepare for each affected source subject to the provisions of 40 CFR 63, Subpart LLL, a written operations and maintenance plan. [Rule 62-204.800, F.A.C.; and, 40 CFR 63.1350(a)(1), (2) & (4) and (b)]  
*{Permitting Note: Failure to comply with any provision of the operations and maintenance plan developed in accordance with paragraph 40 CFR 63.1350(a) shall be a violation of the standard.}*
11. Opacity Monitoring: The owner or operator of an affected source subject to a limitation on opacity under 40 CFR 63.1348 shall monitor opacity in accordance with the operation and maintenance plan developed in accordance with paragraph 40 CFR 63.1350(a).  
[Rule 62-206.800, F.A.C.; and, 40 CFR 63.1350(j)]

**NOTIFICATIONS, RECORDS AND REPORTS**

12. Notification Requirements: The notification provisions of 40 CFR 63, Subpart A (See Appendix GP) are applicable. If any State requires a notice that contains all of the information required in a notification listed in 40 CFR 63.1353, the owner or operator may send the Administrator a copy of the notice sent to the State to satisfy the requirements of 40 CFR 63.1353 for that notification. Each owner or operator subject to the requirements of 40 CFR 63, Subpart LLL shall comply with the notification requirements in 40 CFR 63.9.  
[Rule 62-204.800, F.A.C.; and, 40 CFR 63.1353(a) and (b)(1), (2), (3) & (5)]
13. Reporting Requirements: The reporting provisions of 40 CFR 63, Subpart A, are contained in Appendix 40 CFR 63, Subpart A (see Appendix GP), and are applicable. If any State requires a report that contains all of the information required in a report listed in 40 CFR 63.1354, the owner or operator may send the Administrator a copy of the report sent to the State to satisfy the requirements of 40 CFR 63.1354 for that report. The owner or operator of an affected source shall comply with the reporting requirements specified in 40 CFR 63.10 of the general provisions of 40 CFR Part 63, Subpart A. [Rule 62-204.800, F.A.C.; and, 40 CFR 63.1354(a) and (b)(1) thru (5)]
14. Recordkeeping Requirements: The owner or operator shall maintain files of all information (including all reports and notifications) required by 40 CFR 63.1355 recorded in a form suitable and readily available for inspection and review as required by 40 CFR 63.10(b)(1). The files shall be retained for at least five years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent **five** years of data shall be retained on site. The files may be maintained on microfilm, on a computer, on floppy disks, on magnetic tape, or on microfiche. The owner or operator shall maintain records for each affected source as required

### SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

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#### B. Clinker Receiving/Handling System (EU 008)

by 40 CFR 63.10(b)(2) and (b)(3). In addition: (1) all documentation supporting initial notifications and notifications of compliance status under 40 CFR 63.9; (2) all records of applicability determination, including supporting analyses; and (3) if the owner or operator has been granted a waiver under 40 CFR 63.8(f)(6), any information demonstrating whether a source is meeting the requirements for a waiver of recordkeeping or reporting requirements.  
[Rules 62-204.800 and 62-213.440, F.A.C.; and, 40 CFR 63.1355(a) and (b)]

15. Test Reports: The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Appendix CTR (Common Testing Requirements) of this permit.  
[Rule 62-297.310(8), F.A.C.]

#### MISCELLANEOUS REQUIREMENTS

16. Water Spray System: A water spray system shall be installed and used as necessary to control fugitive dust emissions during clinker unloading operations from front-end loaders or trucks to the receiving hopper. [Rules 62-210.200(PTE), 62-212.400 (PSD), and Rule 62-296.320(4)(c), F.A.C.]

**SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS**

**C. Cement Kiln No. 1, In-Line Kiln/Raw Mill and Clinker Cooler No. 1 (EU 020)**

The following specific conditions apply to the following emission unit.

EU ID No	Brief Description
020	<p><u>Cement Kiln No. 1, In-Line Kiln/Raw Mill and Clinker Cooler No. 1 with Baghouse:</u> Portland Cement Line 1 is designed for 83 TPH of cement clinker product. The cement kiln No. 1, in-line kiln/raw mill and clinker cooler No. 1 currently share a common baghouse (for PM emissions control) and stack with the CP&amp;L power plant. This power plant is being repowered to fire biomass instead of coal. Once repowered it will have its own stack and ESP to control PM.</p> <p>Waste heat from the kiln is used to provide heat to the raw mill and the kiln preheater, which is used to drive off moisture from or preheat the materials used for making clinker. The movement of raw materials, recycled materials, and product will be through enclosed transfer systems. All gas streams from the various transfer systems will vent through a single baghouse system into the ambient air. The existing site is zoned for mining, so limestone and clay used in the production of cement will be supplied on site. The kiln is allowed to fire coal, petcoke, natural gas, distillate and residual fuel oil, on-specification used oil and shredded and whole tires. Continuous stack monitoring includes a COMS installed to measure opacity.</p>

**NEW EQUIPMENT**

1. Exhaust Stack: The existing stack, which is 322 feet in height and 18.65 feet in diameter, was designed for Cement Kiln No. 1, the In-Line Raw Mill and Clinker Cooler No. 1 (Kiln No. 1), and also for the CP&L power plant. As the power plant has been re-permitted as a stand-alone facility with its own dedicated stack, CEMEX may continue using the existing stack or replace the existing stack with a stack dedicated to the Kiln No. 1. If installed, the new exhaust stack shall have a maximum design height of 165 feet and a maximum diameter of 13 feet. [Application]
2. Baghouse: The applicant requested three options with regard to the existing Baghouse.
  - a. *Modify the Existing Baghouse.* The existing baghouse is a high-temperature, pulse jet baghouse with 14 compartments. Each compartment contains 360 bags, for a total of 5,040 bags. The bags are currently fiberglass and the total cloth area is 509,039 square feet (ft<sup>2</sup>), at 101 ft<sup>2</sup> per bag. The air flow from Cement Kiln No. 1, the Kiln No. 1 and the CP&L power plant was approximately 1,150,000 acfm; resulting in an air to cloth ratio of approximately 2.26. The gas flow from Kiln No. 1 will be 530,000 acfm; less than 50% of the Kiln No.1 and the CP&L power plant flow. CEMEX may modify the baghouse by removing some compartments and/or bags, or CEMEX may elect to continue using the baghouse as it is. If modified, an air to cloth ratio similar to or less than the current air to cloth ratio (2.08) will be maintained.
  - b. *Change of Bag Type.* CEMEX will continue to use fiberglass bags, but is authorized convert to membrane bags to meet the revised NESHAP Subpart LLL PM emission limit.
  - c. *Replace Baghouse.* If CEMEX elects to replace the Kiln No.1 and the CP&L power plant baghouse, it shall be a reverse air or pulse jet baghouse with design and performance characteristics similar to, or exceeding those quoted above for the modified baghouse.

CEMEX shall select from the above options, with no time constraint on the decision, so long as all PM emission limits stipulated in this subsection are met in the applicable timeframe. CEMEX shall notify the Department of a decision to modify or replace the existing baghouse within 30 days after the decision has been reached.

[Application]

*{Permitting Note: Note that regardless of what is decided on the baghouse, CEMEX will replace and reroute the duct from the No. 1 Clinker Cooler to the baghouse so that the rerouted duct will bypass*

## SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

### C. Cement Kiln No. 1, In-Line Kiln/Raw Mill and Clinker Cooler No. 1 (EU 020)

*the CP&L power plant; rather than pass through the power plant as was the original design. This rerouting will have no effect on emissions from the cooler, nor will it affect the production capacity of the cooler.*

#### NSPS AND NESHAP APPLICABILITY

3. NSPS Subpart F and NESHAP Subpart LLL: The in-line kiln No. 1/raw mill and clinker cooler 1 with baghouse are at an affected facility subject to the provisions of 40 CFR 60, Subpart F - Standards of Performance for Portland Cement Plants. However, this affected facility is also subject to 40 CFR 63, Subpart LLL - National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry. If an affected facility subject to 40 CFR 63, Subpart LLL has a different emission limit or requirement for the same pollutant under another regulation in title 40 of this chapter, in this case Subpart F, the owner or operator of the affected facility must comply with the most stringent emission limit or requirement and is exempt from the less stringent requirement. NESHAP Subpart LLL emission limits for mercury (Hg), PM, Dioxin /Furans (D/F), total hydrocarbons (THC) and hydrogen chloride (HCl) are more stringent or do not exist in NSPS Subpart F for kiln No. 1, the raw mill and the clinker cooler and will hence govern. NSPS Subpart F and NESHAP Subpart LLL are contained in Appendices F and LLL of this permit. [Rule 62-204.800, F.A.C.; 40 CFR 63, Subpart LLL; and 40 CFR 60, Subpart F]

*{Permitting Note: On July 18, 2012, the EPA proposed changes to the Final NESHAP Subpart LLL (dated September 9, 2010). The **major** changes are: (1) adjust the way cement kiln owner's measure and monitor particulate matter emissions, i.e., the removal of the PM CEMS requirement and allow stack testing; (2) extend the deadline by two years – from September 9, 2013 to September 9, 2015 – for existing cement kilns to comply with the 2010 rule; and (3) raise the allowable emissions levels for particulate matter emissions.}*

4. NSPS Subpart A and NESHAP Subpart A: These emissions units are subject to the General Provisions of NSPS Subpart A and NESHAP Subpart A. [40 CFR 60, Subpart A and 40 CFR 63, Subpart A]

#### PERFORMANCE RESTRICTIONS

5. Permitted Capacity: For the cement kiln No. 1, the maximum clinker production rate shall not exceed 83.0 TPH, 24-hour average and 727,800 tons in any consecutive 12-month period. [Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.]
6. Hours of Operation: The emissions units are allowed to operate continuously (8,760 hours/year). Shredded and whole tire (TDF) utilization shall not exceed 8,300 hours/year. [Rules 62-210.200(PTE), and 62-212.400 (PSD), F.A.C.]
7. Fuels: Fuels fired in the pyroprocessing system shall consist only of:
  - a. Coal, petcoke, natural gas, No. 2 distillate fuel oil, residual fuel oil, "on-specification" used oil, and tire derived fuel (TDF), including shredded and whole tires;
  - b. No. 2 fuel oil shall be used for the cement kiln No. 1's startup/preheating operation;
  - c. "On-specification" used oil is allowed to be fired as a blend with purchased fuel oil as a startup fuel only; and
  - d. The TDF may be introduced at the base of the preheater (i.e., kiln No. 1's inlet). The firing of the TDF shall not commence or be conducted unless the kiln No. 1 has reached an operating temperature, which shall be measured at the cement kiln No. 1's inlet, of at least 1,400° F for one hour and the oxygen level in the kiln, as measured at the cement plant's induced draft fan, is at least 2 percent (1-hour average).

[Rules 62-210.200(PTE), and 62-212.400 (PSD), F.A.C.]

**SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS**

**C. Cement Kiln No. 1, In-Line Kiln/Raw Mill and Clinker Cooler No. 1 (EU 020)**

- 8. **“On-Specification” Used Oil:** The burning of “on-specification” used oil is allowed at this facility in accordance with all other conditions of this permit and the following additional conditions:
  - a. The permittee may blend “on-specification” used oil generated at the CEMEX Company's Gregg Mine, the Cement Plant Complex, or purchased on-specification used oil with the purchased new fuel oil, which is to be used only as a startup fuel for preheating the cement kiln No. 1. “On-specification” used oil is defined as each used oil delivery that meets the 40 CFR 279 (Standards for the Management of Used Oil) specifications listed below. Used oil that does not meet all of the following specifications is considered “off-specification” oil and shall not be fired.

<u>Constituent/Property *</u>	<u>Allowable Level</u>	<u>Test Method</u>
Arsenic	5 ppm maximum	EPA SW-846 (3040-7130)
Cadmium	2 ppm maximum	EPA SW-846 (3040-7130)
Chromium	10 ppm maximum	EPA SW-846 (3040-7130)
Lead	100 ppm maximum	EPA SW-846 (3040-7130)
Total Halogens	1000 ppm maximum	ASTM E442
Flash Point	140 °F minimum	ASTM D93
Sulfur	percent	ASTM D2622-92, ASTM D4294-90 or both ASTM D4057-88 & ASTM D129-91
Heat of Combustion	Btu/gal	ASTM D240-76
Density	lbs/gal	ASTM D1298-80

\* As determined by approved methods specified in EPA Publication SW-846 (Test Methods for Evaluating Solid Waste, Physical/Chemical Methods).

- b. Permittee agrees that the used oil to be blended and burned at this facility shall not be a hazardous waste as defined in Rule 62-210.200, F.A.C., or 40 CFR Part 261, and will not include fuels or blended fuels consisting in whole or part of hazardous waste or which include mixtures of any solid waste generated from the treatment, storage, or disposal of hazardous waste, and such burning shall be in compliance with Section 403.769(3), F.S.
  - c. Fuel analysis shall be in accordance with 40 CFR 266.43(b)(1) & (6).  
[40 CFR 279.11]

9. **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 paragraph 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 paragraph 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 paragraph 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 of paragraph 40 CFR 63.1344(a) or paragraphs 40 CFR 63.1344(a)(1) and (a)(2) is determined in accordance with 40 CFR 63.1349(b)(3)(iv).

[Rule 62-204.800, F.A.C.; and, 40 CFR 63.1344(a)(1) & (2) and (b)]

**SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS**

**C. Cement Kiln No. 1, In-Line Kiln/Raw Mill and Clinker Cooler No. 1 (EU 020)**

**EMISSIONS STANDARDS**

10. **Emission Limits:** Based on a maximum preheater feed rate of 138.0 TPH to kiln No. 1 and 83 TPH of cement clinker product the allowable pollutant emissions shall not exceed the following:

Poll. <sup>1</sup>	Unit <sup>2</sup>	Units <sup>3</sup>							Comp. <sup>4</sup>	Basis
		lb/ton-f	lb/hr	TPY	lb/ton-c	lb/Mt-c	ng/dscm TEQ	ppmvd		
PM	KC&M	0.40	49.5	216	---	---	---	---	ST	BACT <sup>5</sup>
	KM	0.30	37.1	162	---	---	---	---	ST	LLL <sup>6</sup>
	C	0.10	12.4	54					ST	LLL <sup>6</sup>
	C	---	---	---	0.04 <sup>7</sup>				CEMS <sup>8</sup>	LLL <sup>9</sup>
	KM	---	---	---	0.04 <sup>7</sup>	---	---	---	CEMS <sup>8</sup>	LLL <sup>9</sup>
SO <sub>2</sub>	KC&M	0.60	50.0	325	---	---	---	---	ST	BACT <sup>5</sup>
NO <sub>x</sub>	KC&M	2.9	359.0	1,572	---	---	---	---	ST	BACT <sup>5</sup>
D/F	KM	---	---	---	---	---	0.2 <sup>10</sup>	---	ST	LLL <sup>6, 9, 11</sup>
Hg	KM	---	---	---	---	55 <sup>12</sup>	---	---	SBT <sup>13</sup>	LLL <sup>9, 11</sup>
THC	KM	---	---	---	---	---	---	24 <sup>14</sup>	CEMS	LLL <sup>9, 11</sup>
HCl	KM	---	---	---	---	---	---	3 <sup>15</sup>	CEMS	LLL <sup>9, 11</sup>
Opacity	KC&M	10 percent <sup>16</sup>							COMS	BACT

- Pollutant: PM = particulate matter; SO<sub>2</sub> = sulfur dioxide; NO<sub>x</sub> = nitrogen oxide; D/F = dioxin and furans; THC = total hydrocarbons; and HCl = hydrogen chloride. PSD-FL-091K replaces all previous PSD permits and represents latest BACT, NSPS and NESHAP emission limits and compliance methods.
- Emission subunit: K = kiln; C = clinker cooler; and M = raw mill.
- Units of emission limits: lb/ton-f = pounds per ton of feed; lb/hr = pounds per hour; lb/ton-c = pounds per ton of clinker; lb/Mt-c = pounds per million tons of clinker; ng/dscm TEQ = nanograms per dry standard cubic meter, toxic equivalents; ppmvd = parts per million volume dry.
- Comp. = method of compliance: ST = annual stack test; CEMS – continuous emission monitor system; SBT = sorbent trap EMS; COMS = continuous opacity monitoring system.
- Original Best Available Control Technology determination (PSD-FL-091 and PSD-FL-091K).
- Final NESHAP Subpart LLL (date September 9, 2009), **emission limits in effect prior to September 9, 2010.**
- Proposed NESHAP Subpart LLL (dated July 18, 2012) limit is 0.07 lbs/ton of clinker with effective date of September 9, 2015. Final and proposed NESHAP Subpart LLL startup/shutdown limits are 0.04 grains per dry standard cubic foot (gr/dscf).
- Proposed NESHAP Subpart LLL allows stack testing for compliance in lieu of PM CEMS. Final NESHAP Subpart LLL (dated September 8, 2010), **compliance with emission limits by September 9, 2013** (Proposed compliance date is September 9, 2015).
- If the average temperature at the inlet to the first PM control device (fabric filter or electrostatic precipitator) during the D/F performance test is 400 °F or less this limit is changed to 0.4 ng/dscm
- Proposed NESHAP LLL (dated July 18, 2012), **compliance with emission limits by September 9, 2015.**
- Final and proposed NESHAP Subpart LLL Hg emission limit during startup/shutdown is 10 ng/dscm. The emission limit is based on 30 kiln operating days.
- Hg CEMS can be used in lieu of sorbent trap CEMS to show compliance.
- Measured as propane. Any source subject to the 24 ppmvd THC limit may elect to meet an alternative limit of 12 ppmvd for total organic HAP. The emission limit is based on 30 kiln operating days.
- Per Final NESHAP Subpart LLL, if the kiln does not have an HCl CEMS, the emissions limit is zero. In proposed NESHAP Subpart LLL, §63.1350(l)(3), if the source is equipped with a wet or dry scrubber or tray tower, and you choose to monitor SO<sub>2</sub> emissions, monitor SO<sub>2</sub> emissions continuously according to the requirements of § 60.63(e) through (f) of part 60 subpart F of this chapter. The emission limit is based on 30 kiln operating days.
- Meeting 10 percent opacity requirement for kiln, raw mill and clinker cooler fulfills all BACT and NESHAP requirements.

[Rules 62-4.160(2); 62-210.200(PTE); and 62-212.400 (PSD), F.A.C]

11. **Fuel Sulfur Content:** The maximum sulfur contents of virgin fuel oil and/or the blend of on-specification used oil and purchased fuel oil are 1.5 percent by weight, for the purpose of preheating the Cement Kiln No. 1. [Rules 62-210.200(PTE), and 62-212.400 (PSD), F.A.C]

## SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

### C. Cement Kiln No. 1, In-Line Kiln/Raw Mill and Clinker Cooler No. 1 (EU 020)

#### CONTINUOUS MONITORING REQUIREMENTS

12. **PM CEMS:** For a kiln and clinker cooler subject to an emissions limitation on PM emissions in §63.1343(b) and using a PM CEMS, the permittee shall install and operate a continuous emissions monitor in accordance with Performance Specification 11 of appendix B and Procedure 2 of appendix F to 40 CFR part 60. The performance test method and the correlation test method for Performance Specification 11 must be Method 5 or Method 5i of appendix A to 40 CFR part 60. The permittee shall also develop an emissions monitoring plan in accordance with paragraphs (o)(1) through (o)(4) of §63.1350. Compliance with the NESHAP PM limit given in **Specific Condition 10** of this subsection shall be shown by September 9, 2013 (Proposed compliance date is September 9, 2015). [NESHAP 40 CFR 63, Subpart LLL, Final September 9, 2010]  
*{Permitting Note: the proposed NESHAP Subpart LLL, dated July 18, 2012 allows stack testing for PM compliance in lieu of a PM CEMS. The compliance date in the proposed NESHAP is September 9, 2015}*
13. **THC CEMS:** The permittee shall operate a THC CEMS in accordance with the requirements in §63.1350(i). For the purposes of conducting the accuracy and quality assurance evaluations for the CEMS, the THC span value (as propane) is 50 ppmvd and the reference method (RM) is Method 25A of appendix A to part 60. The permittee shall install, operate, and maintain a THC continuous emission monitoring system in accordance with Performance Specification 8A of appendix B to part 60 and comply with all of the requirements for continuous monitoring systems found in the general provisions, subpart A. The permittee shall operate and maintain each CEMS according to the quality assurance requirements in Procedure 1 of appendix F in part 60. Compliance with the NESHAP THC limit given in **Specific Condition 10** of this subsection and the THC CEMS requirements of this Condition shall be shown by September 9, 2013 (Proposed compliance date is September 9, 2015). [NESHAP 40 CFR 63, Subpart LLL, Final September 9, 2010]
14. **HCl CEMS:** The permittee shall operate an HCl CEMS in accordance with the requirements in §63.1350(l). The permittee shall show compliance with the HCl emissions limit by operating an HCl CEMS in accordance with Performance Specification 15 (PS 15) of appendix B to part 60, or, upon promulgation, in accordance with any other performance specification for HCl CEMS in appendix B to part 60. The permittee shall operate, maintain and quality assure an HCl CEMS installed and certified under PS 15 according to the quality assurance requirements in Procedure 1 of appendix F to part 60 except that the Relative Accuracy Test Audit requirements of Procedure 1 must be replaced with the validation requirements and criteria of sections 11.1.1 and 12.0 of PS 15. If the permittee installs and operates an HCl CEMS in accordance with any other performance specification for HCl CEMS in appendix B to part 60, the permittee must operate, maintain and quality assure the HCl CEMS using the procedure of appendix F to part 60 applicable to the performance specification. The permittee shall use Method 321 of appendix A to part 63 as the reference test method for conducting relative accuracy testing. The span value and calibration requirements in paragraphs §63.1350(l)(1)(i) and §63.1350(l)(1)(ii) apply to HCl CEMS other than those installed and certified under PS 15. Compliance with the NESHAP HCl limit given in **Specific Condition 10** of this subsection and the HCl CEMS requirements of this Condition shall be shown by September 9, 2013 (Proposed compliance date is September 9, 2015). [NESHAP 40 CFR 63, Subpart LLL, Final September 9, 2010]
15. **Hg CEMS or Sorbent Trap:** The permittee must operate a mercury CEMS (including sorbent trap) in accordance with the requirements of §63.1350(k). The mercury CEMS shall be installed and operated in accordance with Performance Specification 12A (PS 12A) of appendix B to part 60 or a sorbent trap-based integrated monitoring system in accordance with Performance Specification 12B (PS 12B) of appendix B to part 60. The permittee shall continuously monitor mercury according to paragraphs §63.1350(k)(1) through §63.1350(k)(5). The permittee shall also develop an emissions

**SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS**

**C. Cement Kiln No. 1, In-Line Kiln/Raw Mill and Clinker Cooler No. 1 (EU 020)**

monitoring plan in accordance with paragraphs §63.1350 (p)(1) through §63.1350 (p)(4). Compliance with the NESHAP Hg limit given in **Specific Condition 10** of this subsection and the Hg CEMS/sorbent trap requirements of this Condition shall be shown by September 9, 2013 (Proposed compliance date is September 9, 2015). [NESHAP Subpart LLL, Final and Proposed]

16. **COMS**: The permittee shall operate and maintain continuous monitoring device for the Kiln No. 1 main stack exhaust for opacity to demonstrate compliance with the visible emissions limits, in **Specific Condition 10** of this subsection. The monitoring device shall meet the applicable requirements of Chapter 62-297, F.A.C., and 40 CFR 60.45 and 40 CFR 60.13, including certification of the device. The permittee shall provide the Department with 30 days notice on each recertification. If the permittee elects to install a PM CEMS in accordance with **Specific Condition 12** of this subsection, the requirement of this Condition to operate and maintain a COMS is not applicable after September 9, 2013. (Proposed compliance date is September 9, 2015). [40 CFR 60, Appendix B; Rules 62-297.520, 62-4.160(2) and 62-210.200(PTE), F.A.C.; and, 40 CFR 63.1350(c)(1)]

**TESTING AND MONITORING REQUIREMENTS**

17. **PM, NO<sub>x</sub> and SO<sub>2</sub>**: The permittee shall annually during each federal fiscal year conduct emission tests on the main stack for PM, NO<sub>x</sub> and SO<sub>2</sub> at 90 percent of production capacity or greater. If a PM CEMS becomes a compliance requirement, per the Final NESHAP Subpart LLL, annual stack testing of PM is no longer required and is superseded by the CEMS requirement with compliance by CEMS shown by September 9, 2013 (Proposed compliance date is September 9, 2015). [Rule 62-297.310(7), F.A.C.; and NESHAP Subpart LLL (dated September 9, 2010)]

18. **Initial and Subsequent Performance Testing**:

- a. The owner or operator of an affected emissions unit subject to 40 CFR 63, Subpart LLL, shall demonstrate initial compliance with the emission limits of 40 CFR 63.1343 and 40 CFR 63.1345 (See **Specific Condition 10** of this subsection) using the test methods and procedures in paragraph 40 CFR 63.1349(b) and 40 CFR 63.7. Performance test results shall be documented in complete test reports that contain the information required by paragraphs 40 CFR 63.1349(a)(1) through (a)(10), as well as all other relevant information. The plan to be followed during testing shall be made available to the Administrator prior to testing, if requested.
- b. Performance tests to demonstrate initial compliance with 40 CFR 63, Subpart LLL, shall be conducted as specified in paragraphs 40 CFR 63.1349(b)(1) through (b)(3).
- c. Except as provided in paragraph 40 CFR 63.1349(e), performance tests required under paragraphs 40 CFR 63.1349(b)(1) shall be repeated every five years. See **Specific Condition 17** of this subsection.
- d. Performance tests required under paragraph 40 CFR 63.1349(b)(3) shall be repeated every 30 months.

[Rules 62-204.800 and 62-297.310(7)(a)4., F.A.C.; and, 40 CFR 63.1349(a); (b)(1)(i), (ii), (iii) & (v); (b)(3)(i), (ii), (iii) & (iv); (c); (d); and, (e)]

19. **Test Methods**: Required applicable tests shall be performed in accordance with 40 CFR 63 Subpart LLL and the following reference methods.

<b>Method</b>	<b>Description of Method and Comments</b>
1 - 4	Determination of Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content <i>{Notes: Methods shall be performed as necessary to support other methods.}</i>
5	Particulate Matter (PM)
6 or 6C	Sulfur Dioxide (SO <sub>2</sub> ) or SO <sub>2</sub> - Instrumental
7 or 7E	Nitrogen Oxide (NO <sub>x</sub> ) or NO <sub>x</sub> - Instrumental

### SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

#### C. Cement Kiln No. 1, In-Line Kiln/Raw Mill and Clinker Cooler No. 1 (EU 020)

Method	Description of Method and Comments
9	Visual Determination of the Opacity of Emissions from Stationary Sources
23	Dioxin and Furan
25A	Gaseous Organic Concentration (Flame Ionization) - for THC
29	Metals Emissions from Stationary Sources
321	Gaseous HCl Emissions at Portland Cement Kilns by FTIR
ASTM D6784-02	Standard Test Method for Elemental, Oxidized, Particle-Bound and Total Mercury in Flue Gas Generated from Coal-Fired Stationary Sources (Ontario Hydro Method)

The above methods are described in Appendix A of 40 CFR 60 which is included as Appendix GP of this permit and as adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used unless prior written approval is received from the Department.

[Rules 62-204.800 and 62-297.100, F.A.C.; and Appendix A of 40 CFR 60]

#### MONITORING OF OPERATIONS

20. **Operations and Maintenance Plan:** The owner or operator of each Portland cement plant shall prepare for each affected source subject to the provisions of 40 CFR 63, Subpart LLL, a written operations and maintenance plan. [Rule 62-204.800, F.A.C.; and, 40 CFR 63.1350(a)(1), (2) & (4) and (b)]

*{Permitting Note: Failure to comply with any provision of the operations and maintenance plan developed in accordance with paragraph 40 CFR 63.1350(a) shall be a violation of the standard.}*

21. **Coal Utilization:** Instruments shall be installed, calibrated, and maintained to continuously measure the amounts of coal used in the kiln No. 1 and materials fed to the kiln No. 1.

[Rules 62-210.200(PTE), and 62-212.400 (PSD), F.A.C]

22. **Tire Derived Fuel (TDF):** The utilization/firing rate of TDF shall be quantified (weighed) continuously and recorded. [Rules 62-210.200(PTE), and 62-212.400 (PSD), F.A.C]

#### NOTIFICATIONS, RECORDS AND REPORTS

23. **Notification Requirements:** The notification provisions of 40 CFR 63, Subpart A (See Appendix GP) are applicable. If any State requires a notice that contains all of the information required in a notification listed in 40 CFR 63.1353, the owner or operator may send the Administrator a copy of the notice sent to the State to satisfy the requirements of 40 CFR 63.1353 for that notification. Each owner or operator subject to the requirements of 40 CFR 63, Subpart LLL shall comply with the notification requirements in 40 CFR 63.9. The owner or operator shall notify the Compliance Authority in writing prior to any required tests in accordance with this permit, 40 CFR 63 Subpart LLL, and any applicable Department consent order in effect for this emission unit.

[Rules 62-204.800, and 62-4.070(3), F.A.C. Reasonable Assurance; and, 40 CFR 63.1353(a) and (b)(1), (2), (3) & (5)]

24. **Fuel Usage Records:** The records of fuel usage with the fuel analysis and the daily production rates (including clinker production rate) and kiln feed rates shall be recorded. The quantity of all deliveries of TDF shall be documented and kept on record/file. [62-4.070(3), F.A.C. Reasonable Assurance]

25. **On-specification Used Oil:** The results of each sample analysis shall be submitted to the Compliance Authority with the quarterly report. The dates and quantities of both on-specification used oil and purchased fuel oil transferred to the cement kilns storage tank shall be reported quarterly (i.e., Jan.-Mar., April-June, July-Sept., and Oct.-Dec.) during the month following the ending quarter. [62-4.070(3), F.A.C. Reasonable Assurance]

26. **Reporting Requirements:** The reporting provisions of 40 CFR 63, Subpart A, are contained in

## SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

### C. Cement Kiln No. 1, In-Line Kiln/Raw Mill and Clinker Cooler No. 1 (EU 020)

Appendix 40 CFR 63, Subpart A (see Appendix GP), and are applicable. If any State requires a report that contains all of the information required in a report listed in 40 CFR 63.1354, the owner or operator may send the Administrator a copy of the report sent to the State to satisfy the requirements of 40 CFR 63.1354 for that report. The owner or operator of an affected source shall comply with the reporting requirements specified in 40 CFR 63.10 of the general provisions of 40 CFR Part 63, Subpart A. [Rule 62-204.800, F.A.C.; and, 40 CFR 63.1354(a) and (b)(1) thru (5)]

27. **Recordkeeping Requirements:** The owner or operator shall maintain files of all information (including all reports and notifications) required by 40 CFR 63.1355 recorded in a form suitable and readily available for inspection and review as required by 40 CFR 63.10(b)(1). The files shall be retained for at least five years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent **five** years of data shall be retained on site. The files may be maintained on microfilm, on a computer, on floppy disks, on magnetic tape, or on microfiche. The owner or operator shall maintain records for each affected source as required by 40 CFR 63.10(b)(2) and (b)(3). In addition: (1) all documentation supporting initial notifications and notifications of compliance status under 40 CFR 63.9; (2) all records of applicability determination, including supporting analyses; and (3) if the owner or operator has been granted a waiver under 40 CFR 63.8(f)(6), any information demonstrating whether a source is meeting the requirements for a waiver of recordkeeping or reporting requirements. [Rules 62-204.800 and 62-213.440, F.A.C.; and, 40 CFR 63.1355(a) and (b)]
28. **Test Reports:** The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Appendix CTR (Common Testing Requirements) of this permit. [Rule 62-297.310(8), F.A.C.]
29. **Annual Operating Reports (AOR):** An Annual Operation Report (AOR) shall be submitted to the Department's Southwest District office by April 1. [62-4.070(3), F.A.C. Reasonable Assurance]

### SPECIAL DIOXIN AND FURAN EMISSIONS COMPLIANCE REQUIREMENTS

*{Permitting Note: The water spray/injection system, through the use of micro-droplet water sprays, provides sufficient cooling to rapidly quench/cool the temperature of the gas leaving the preheater below the D/F formation temperature zone, thereby minimizing the formation of D/F. The installed Turbosonic system currently consists of 3 spray lances, each equipped with micro-droplet spray nozzles. (Based on operation of the system, additional spray nozzles may need to be added to enhance the performance of the system to adequately cool the gases). The system is only required to be used during periods of operation of Kiln No. 1 when the raw mill is out of service.}*

### 30. Kiln No. 1 Water Injection/Spray Tower Operation Requirements:

- a. **Required Periods of Operation.** The Kiln No. 1 Water Injection/Spray Tower shall be in service at all times that Kiln No. 1 is operating (including startup defined as a minimum kiln feed rate of 80 TPH) with the raw mill down (i.e., not operating) raw mill down (RMD).
- b. **Maximum Downcomer Exit/Fan Inlet Gas Temperature.** The Kiln No. 1 Downcomer Water Spray/Injection System shall be operated such that the maximum gas temperature at the downcomer exit/kiln fan inlet thermocouple (at the new K13 thermocouple - ID T1207A) shall not exceed 395° F on a 60 minute rolling average basis (as soon as feasible, but no later than within 2 hours of commencing water injection) unless otherwise established by D/F compliance testing and approved by the Department in writing.
- c. **Maintenance of Proper Operation.** Permittee will maintain proper operation of the water spray/injection system by removal, as needed, of any solids buildup in the downcomer resulting from the water sprays. If necessary, the buildup removal will be accomplished by kiln shutdown, installation of a drop-out chamber or other suitable method.

[Rule 62-4.070(3) and 62-210.650, F.A.C.; and, Permit Nos. 0530021-022-AC and 0530021-026-

### SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

#### C. Cement Kiln No. 1, In-Line Kiln/Raw Mill and Clinker Cooler No. 1 (EU 020)

AC]

31. D/F Testing Requirements: D/F compliance testing in the RMD and raw mill up (RMU) modes of operation shall be conducted once every 30-months in frequency as required by NESHAP Subpart LLL 40 CFR 63.1349(d), and any applicable Department consent order in effect for this emission unit. Required D/F tests shall be performed in accordance with the reference method(s) specified in this permit and NESHAP 40 CFR 63 Subpart LLL, and any applicable Department consent order in effect for this emission unit. [Rules 62-204.800(11)(b) and 62-297.100, F.A.C.; Appendix A of 40 CFR 63; and, Permit Nos. 0530021-022-AC and 0530021-026-AC]
32. Downcomer and Water Spray/Injection System Monitoring Requirements: The owner or operator shall continuously monitor temperature at the downcomer exit/K13 ID kiln fan inlet area (at the new K13 thermocouple – Thermocouple ID T1207A), during all periods of operation of Kiln No. 1 during the RMD mode of operation. The monitoring system shall also determine and show rolling 60-minute average temperature. The owner or operator shall continuously monitor the rate of water flow through the Kiln No. 1 spray system nozzles (gallons/minute or gallons/hour) during all periods of operation of Kiln No. 1 during the RMD mode of operation. [Permit Nos. 0530021-022-AC and 0530021-026-AC]
33. Kiln No. 1 Operational Data. The owner or operator shall keep records of all periods of operation of Kiln No. 1. The records shall show each time that the raw mill was taken out of service or put back in service. For all periods of Kiln No. 1 operation in the RMD mode, the records shall show the operating status of the Kiln No. 1 Downcomer Water Spray/Injection System (in or out of service). [Permit Nos. 0530021-022-AC and 0530021-026-AC]
34. Kiln No. 1 Downcomer Water Spray/Injection System Operational Data: The owner or operator shall keep continuous records of the following Kiln No. 1 Downcomer Water Spray/Injection System operational data during all periods of operation of Kiln No. 1 in the RMD mode:
  - a. *Gas Temperature*. The gas temperature (°F) at the downcomer exit/fan inlet (at the new K13 thermocouple – Thermocouple ID T1207A) (the monitoring system shall also determine and show rolling 60-minute rolling average temperatures); and
  - b. *Water Flow Rate*. The Kiln No. 1 Downcomer Water Spray/Injection System water flow rate (gallons/minute) (the monitoring system shall also determine and record rolling 60 minute rolling average gallon/minute flow rate).[Permit Nos. 0530021-022-AC and 0530021-026-AC]
35. Additional Test Report Requirements Reports: In addition to other applicable test report requirements, the owner or operator shall include the following Kiln No. 1 Downcomer Water Spray/Injection System operation information with all test reports for testing conducted during operation of Kiln No. 1 in the RMD mode:
  - a. *Operating Status*. Operating status of the Kiln No. 1 Downcomer Water Spray/Injection System (see **Specific Condition 36** of this subsection).
  - b. *Water Flow Rate Average*. Average Kiln No. 1 Downcomer Water Spray/Injection System water flow rate (hourly average gallons/minute) for each run of the test (see **Specific Condition 37.b** of this subsection); and
  - c. *Inlet Gas Temperature Average*. Average downcomer exit/ID fan inlet gas temperature as measured by Thermocouple ID T1207A for each run of the test (see **Specific Condition Specific Condition 37.a** of this subsection).[Rule 62-297.310(8), F.A.C.; and, Permit Nos. 0530021-022-AC and 0530021-026-AC]
36. Maintenance of Proper Operation:
  - a. *Manufacturer Specifications*. The permittee shall maintain the Downcomer Water Spray System

### SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

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#### C. Cement Kiln No. 1, In-Line Kiln/Raw Mill and Clinker Cooler No. 1 (EU 020)

nozzles, valves, piping and other associated equipment in accordance with the manufacturer's specification and recommendations; and,

- b. *Solid Removal.* The permittee shall maintain proper operation of the water spray/injection system by removal, as needed, of any solids buildup in the downcomer resulting from the water sprays. If necessary, the buildup removal will be accomplished by kiln shutdown, installation of a drop-out chamber or other suitable method.

[Rules 62-4.070(3) and 62-210.650, F.A.C.; and, Permit Nos. 0530021-022-AC and 0530021-026-AC]

37. Facility Startup, Shutdown and Malfunction (SSM) Plan: The owner or operator shall maintain at the affected source a current startup, shutdown, and malfunction plan as required by NESHAP Subpart A 40 CFR 63.6(e)(3) and must make the plan available upon request for inspection and copying by the Department.

[Rule 62-204.800(11)(d), F.A.C; NESHAP Subpart A 40 CFR 63.6(e)(3); and, Permit Nos. 0530021-022-AC and 0530021-026-AC]

**SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS**

**D. Coal Receiving, Handling and Transfer Activities (fugitives) (EU 042)**

The following specific conditions apply to the following emission unit.

EU ID No.	Brief Description
-042	<p><u>Coal Receiving, Handling and Transfer Activities (fugitives)</u>: This emissions unit is an activity of receiving, storage, and transferring/conveying up to 300,000 tons per year of coal to cement plants 1 and 2. The coal will be received in unit trains and will be bottom-dumped from moving rail cars through an open elevated trestle to a coal receiving area. From this area, the coal will be moved to a storage area by a bulldozer with the storage pile being shaped and compacted during the transfer. The resulting coal storage area will cover approximately 7.8 acres and will be approximately 10 feet high. The coal storage area will have a capacity of approximately 55,000 tons. The coal will be recovered from the coal storage pile by a rubber tired front-end loader and transferred to a receiving hopper. The maximum daily coal transfer rate from the storage pile to the cement plants' receiving system will be about 1200 tons per day. From the receiving hopper, the coal will be transferred by covered conveyor belt to a screening system and then to coal bins that will supply the cement plants.</p>

*{Permitting Note: This emissions unit/activity is regulated under Rule 62-210.300, F.A.C., Permits Required; and shared by Cement Lines No. 1 and No. 2 at the CEMEX Brooksville South facility.}*

**NSPS APPLICABILITY**

1. NSPS Subpart Y: These emissions units are subject to the Provisions of NSPS Subpart Y - NSPS for Coal Preparation Plants and Processing Plants. NSPS Subpart Y is contained in Appendix Y of this permit. [40 CFR 60, NSPS Subpart Y]

**PERFORMANCE RESTRICTIONS**

2. Hours of Operation: The emissions unit/activity is allowed to operate continuously, i.e., 8,760 hours/year. [Rules 62-210.200(PTE); and 62-212.400 (PSD), F.A.C]
3. Method of Operation: This emissions unit is an activity of receiving, storage, and transferring/conveying coal to the cement plants. [Rules 62-213.410; 62-210.200(PTE); and 62-212.400 (PSD), F.A.C]

**EMISSIONS STANDARDS**

4. Visible Emissions: Visible emissions shall not exceed 10 percent opacity from the receiving, handling or transferring of coal. [Rules 62-210.200(PTE); and 62-212.400 (PSD), F.A.C]  
*{Permitting Note: The estimated emissions of PM from this emission unit from the receiving, handling and transferring of coal are 2.74 lb/hr and 1.77 TPY. Compliance with these PM emission projections are presumed if the 10 percent visible emissions limit is met and the work practices described in this subsection are followed.}*

**TESTING AND MONITORING REQUIREMENTS**

5. VE Testing: The permittee shall annually during each federal fiscal year conduct VE tests from the receiving, handling or transferring of coal. [Rules 62-210.200(PTE); and 62-212.400 (PSD), F.A.C]
6. Test Methods: Required tests shall be performed in accordance with the following reference method.

Method	Description of Method and Comments
9	Visual Determination of the Opacity of Emissions from Stationary Sources

The above method is described in Appendix A of 40 CFR 60 which is included as Appendix GP of this permit and as adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used

### SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

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#### D. Coal Receiving, Handling and Transfer Activities (fugitives) (EU 042)

unless prior written approval is received from the Department.  
[Rules 62-204.800 and 62-297.100, F.A.C.; and Appendix A of 40 CFR 60]

#### WORK PRACTICES

7. Water Sprays: Water sprays or chemical wetting agents and stabilizers shall be applied to the storage piles, handling equipment, etc. during dry periods and as necessary to all coal handling facilities to minimize visible emissions. A water spray system shall be installed and used as necessary to control fugitive dust emissions during coal unloading operation from train cars to the receiving area. [Rules 62-210.200(PTE); and 62-212.400 (PSD), F.A.C]
8. Coal Processing: Water sprays or chemical wetting agents and stabilizers will be used at the coal receiving area, the coal storage area, and the coal transfer system to control fugitive particulate matter emissions. The inactive coal storage piles will be shaped, compacted and oriented to minimize wind erosion. [Rules 62-210.200(PTE); 62-212.400 (PSD); 62-296.320(4)(c)3, F.A.C]
9. Conveyors: All conveyors and conveyor transport points will be enclosed to preclude particulate matter emissions (except those directly associated with the coal stacker/reclaimer or emergency stackout stacker/reclaimer or emergency stackout). [Rules 62-210.200(PTE); 62-212.400 (PSD); 62-296.320(4)(c)3, F.A.C]

#### NOTIFICATIONS, RECORDS AND REPORTS

10. Test Reports: The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Appendix CTR (Common Testing Requirements) of this permit. [Rule 62-297.310(8), F.A.C.]