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KA 521-06-06

January 4, 2008

Al Linero, FDEP
Division of Air Resource Management
2600 Blair Stone Road MS 5500
Tallahassee, Florida 32399-2400

SUBJECT: Response to Draft AC Permit issued December 17, 2007
DEP File No. 0530010-030-AC
Best Achievable Retrofit Technology (BART)
Cemex Brooksville Cement Plant - North

Dear Al,

This letter follows our review of the recently received draft AC permit pertaining to BART for the Cemex Cement, Inc., Brooksville Cement Plant. Enclosed are comments on the draft Technical Evaluation and AC Permit. Given the significance of the contested requirements and/or conditions in the drafts that we feel need to be addressed, an extension of time to petition for a hearing has been submitted. We appreciate your review and consideration of the issues and look forward to working with you to quickly resolve the issues addressed herein.

Please note that due to the recent acquisition of Rinker Materials by Cemex, this cement plant is referred to as Cemex Brooksville Cement Plant –North. This reference is to differentiate it from the Florida Crushed Stone (AIRS facility ID: 0530021), now referred to as Cemex Brooksville Cement Plant – South.

Sincerely,

Max Lee, Ph.D., P.E.

Cc: Amarjit Gill, Jimmy Rabon and Charles Walz, Cemex Cement, Inc.

Enc:

COMMENTS ON TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION And DRAFT PERMIT

1) Page 9 of 15 – SO_2 Control Technology Review for Kiln 1 - EU 003

The Technical Evaluation (TE) establishes that the current technology for SO2 emissions is adequate for BART. The preliminary determination continues,

> "Compliance shall be demonstrated by an SO_2 continuous emission monitoring system (SO_2-CEMS). The SO_2– CEMS shall be certified pursuant to 40 CFR 60, Appendix B, Performance Specification 2. Quality assurance procedures shall conform to the requirements of 40 CFR 60, Appendix F. The required RATA tests shall be performed using EPA Method 6C in Appendix A of 40 CFR 60. The SO_2 monitor span values shall be set appropriately, considering the expected range of emissions and corresponding emission standards."

This unit is the only source of SO2 emissions for the BART-subject sources and is currently allowed 65.7 tons per year of SO2 emissions. It should be noted that the BART de-minimis level for a source of SO2 emissions is 40 tons per year (62-296.340(3)(a)2.a., F.A.C.). SO2 emissions compliance is currently demonstrated for the unit by annual testing using Method 6C. This new requirement to continuously monitor SO2 emissions involves extensive and additional monitoring, recordkeeping and reporting. These additional requirements will not reduce emissions nor improve visibility in Class I areas - the goal of the Regional Haze Rule. Knowing that no change in current actual or potential SO2 emissions, of which allowed emissions are near the de minimis level for BART, are expected or required for BART compliance, we strongly disagree that SO2 CEM monitoring is justified to be implemented on the basis of the Regional Haze Rule. Accordingly and most significant, a cost evaluation for this proposed requirement can not be provided and compared to any BACT or similar evaluation because no reduction of SO2 emissions will result from this requirement.

Related Changes to Draft Permit:
Specific Condition 3.A.8:
We request that SO2 CEM monitoring (Spec. Cond. 8) be removed as a BART requirement and that compliance demonstration remain by EPA Method 6C. (see changes to draft permit attached).

Specific Condition 3.A.10:
We request that this condition include the applicable date for initiation of this BART standard, e.g. December 31, 2013. (see changes to draft permit attached).

Specific Condition 3.A.15.a and 3.A.17:

Accordingly to the request for condition to 3.A.8, we request that this condition be removed. (see changes to draft permit attached).

Specific Condition 3.A.21a:
Accordingly to the request for condition to 3.A.8, we request that this condition include SO2. (see changes to draft permit attached).

2) Page 10 of 15 – Preliminary NOx BART Determination

The Preliminary NOx BART Determination finds the current level of allowable emissions acceptable for BART.

> "The Department has determined that 2.0 lb/ton of clinker (equivalent to 1.21 lb NOx/ton of $kiln_{ph}$ feed) and 181.5 lb/hr on a 30-operating day basis is BART for the CEMEX Brooksville project."

We agree with the proposed BART limit.

It should be noted that FDEP guidance on BART states, "The BART analysis can be streamlined for sources that are already well controlled because they are subject to post-1990 MACT or BACT or MWC NSPS limits." As stated in the TE, the proposed level of allowable emissions was established long after 1990 (circa 2005) and is nearly equal (2.0 versus 1.95 lb/ton) to the most recent BACT determinations.

Application of SCR
The TE describes some possible benefits to application of Selective Catalytic Reduction (SCR) to reduce a variety of pollutants including mercury, VOCs, dioxin/furans and ammonia. Table 5 of the TE does not quantify reduction of emissions due to SCR, when applied to cement kiln NOx emissions. While Table 5 provides qualitative evaluation of the possible benefits of SCR, quantitative evaluation is extremely difficult to justify given the lack of application of such a proposed system. A thorough qualitative and quantitative evaluation of the two operating SCR systems on cement kilns was provided in our RAI response letter dated June 28, 2007 for this permit application. As such, there has not been a BACT determination for NOx emissions that prescribes SCR in the U.S. The Evaluation clearly demonstrates that SCR is not a proven and reliable retrofit technology. In summary, the Regional Haze Rule's BART review of NOx control should review current SNCR system for NOx control and not control of suspected visibility-impairing and non-visibility impairing pollutants.

We stress that while the possible but unverified benefits of SCR, as defined in Table 5 of the TE, may impact other pollutants, the regional Haze Rule addresses visibility impacts on Class I areas due to specific pollutants. In agreement with this assertion, FDEP Rule, 62-293.340(3)(a)2., F.A.C. states:

> "The pollutants for which a BART determination is required are those pollutants identified as visibility-impairing pollutants in 40 CFR 51, Appendix Y, excluding volatile organic compounds, ammonia, ammonia compounds,..."

The VISTAS consortium, of which FDEP is a contributing member, has provided extensive regional modeling and subsequent review to determine which visibility-impairing pollutants should be assessed and regulated by the Regional Haze Rule. In fact, the VISTAs modeling pointedly addressed VOC and ammonia emissions from the select stationary sources:

> "VISTAS has performed a weight of evidence analysis to demonstrate, using the CMAQ regional air quality model, that the combined VOC emissions from all point sources (BART-eligible and non-BART) in each State do not contribute to visibility impairment." (reference - pg 36)

> "Based on these analyses, the VISTAS States recommended that, except for these 13 facilities, NH_3 emissions not be included in BART modeling." (reference - pg 37)

Reference- http://www.vistas-sesarm.org/documents/BARTModelingProtocol_rev3.2_31Aug06.pdf

Thus, these subject stationary sources, including much larger stationary sources such as the FPC Crystal River power plant, are not required to evaluate ammonia or VOC or any other pollutant beyond, PM, SO2 and NOx. It is pertinent to observe that some of the largest subject emission units (e.g., FPC Crystal River Power Plant) need only address PM, and not NOx and SO2, because NOx and SO2 are addressed by the Clean Air Interstate Rule. Thus, regulators determined that these large units need not address for BART any and all visibility-impairing pollutants (e.g. mercury, VOC, Dioxin/Furan etc.) other than PM.

Having stated the above, we agree that emissions of NH3 may contribute to visibility impairment in Class I or other areas. Two points should be made regarding whether NH3 emissions should be addressed in this permitting activity. As stated above, VISTAS guidance does not recommend evaluation of ammonia in this BART permitting process. Thus, no modeling impacts of ammonia emissions have been determined. Likewise, EPA, VISTAS or FDEP have not provided verbal or written instruction to assess ammonia or other pollutants than PM, NOx or SO2 for these BART determinations. Thus, any potential benefit of emissions control cannot be evaluated, either qualitative or quantitative (based on the five assessment factors), for pollutants other than PM, NOx and SO2. Thus it is not reasonable for FDEP to impose additional restrictions on an emissions unit for unregulated pollutants that are merely suspected to impact Class I area visibility.

The current SNCR system was evaluated to determine the optimum efficiency. To date, the system is expected to meet the proposed BART limit using the existing SNCR system. Most important, a field evaluation of the SNCR system, showed that following several modifications of injection location and injection mode, SNCR meets the proposed BART limit without NH3 slip. This evaluation has been provided to FDEP.

Application of Indirect Firing

On the subject of indirect firing (IF) – In 2005, Cemex installed an indirect firing system on Kiln 1. The indirect firing system, counter to its purpose, increased NOx emissions due to the increased requirement of combustion air needed to calcify the variable composition of raw material in the existing kiln design using the retrofitted firing system. Subsequently, the IF system was removed and an SNCR system was installed. This information is well documented through FDEP permitting action of Permit No.0530010-026-AC. While, indirect firing would likely reduce NOx emissions when installed in a different configuration, the complexity such a system required to be retrofitted to this existing kiln is not justified. We argue that indirect firing is not warranted or justified to meet the proposed BART limit. The proposed BART limit can be meet by the current NOx control system as discussed above.

In summary, we agree with the proposed BART limit.
However, we disagree that Cemex should be required to install indirect firing (IF) given Cemex has shown that it can comply to the proposed limit using the existing NOx control system. Equally, we disagree that Cemex should be forced to optionally install an SCR system to meet the proposed limit for the reasons described above.

Related Changes to Draft Permit:

Specific Condition 3.A.3:
We request that NOx control strategy of BART shall be implementation of the existing SNCR system. (see changes to draft permit attached).

Specific Condition 3.A.9:
We request that this condition be modified to address only BART-applicable conditions. This condition should not include conditions of earlier AC permits. Also, the dates of application of these conditions, are far in advance of the expected dates for initiation of BART conditions, December 31, 2013. (see changes to draft permit attached). We note that the draft BART permit specifically confirms that all other air construction and operation permit conditions remain(Specific condition 3.A.1) and addressed separately in the respective permits.

Specific Condition 3.A.15:
We request clarification to the basis for the notification to the Compliance Authority:

> *The permittee shall notify the Compliance Authority within one working day of discovering any emissions inexcess of a CEMS standard subject to the specified averaging period. Within one working day of occurrence,the owner or operator shall notify the Compliance Authority of any malfunction resulting in the exclusion of CEMS data.*

This requirement does not compare to requirements of NSPS or NESHAP notification requirements. We do not agree to the stringency of the condition. Quarterly reporting is currently to be provided for CEM monitoring. This reporting provides the required notification to regulating agencies for the NSPS and NESHAP programs. We therefore

request the condition to reflect comparable conditions of CEM monitoring notification requirements of NSPS or NESHAP.

3) Page 14 OF 15 – EU 009 – Cement Storage Silos Dust Unit.

The TE preliminary evaluation proposes a 5.0 lb/hr limit for EU 009. The unit has been tested only once by Method 5. Thus, the variability of emissions data from the unit is not available. It should be noted that the single test value was conducted at the time when new bags were installed in the unit and do not reflect the operation of the bags over the course of a typical lifespan of several years.

The recent acquisition of Rinker by Cemex may alter the amount of different types of cement made at this facility. These changes should force increased usage of the silos to contain input from finish mills 1, 2 and 3. Thus, if the FDEP feels that a reduction of the emissions limit is warranted we request some leniency towards a reduction of 36 to 18 pounds per hour given the unit has only been stack tested once and the unit is likely to have increased operation capacity in the near future.

Related Changes to Draft Permit:
Specific Condition 3.B.6:
We request that the limit, as argued above, be changed to 18.0 lb/hr for EU006.
(see changes to draft permit attached).

Other Changes to Draft Permit:
Specific Condition 3.A.11:
We request that this condition include the applicable date for initiation of this BART standard, e.g. December 31, 2013. (see changes to draft permit attached).

REVISED DRAFT PERMIT

DRAFT PERMIT

PERMITTEE:

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

Authorized Representative:
Jimmy L. Rabon, Plant Manager

Air Permit No 0530010-030-AC
Brooksville Cement Plant
Facility ID No. 0530010
BART Project
Permit Expires: June 30, 2014

PLANT AND LOCATION

CEMEX Cement, Inc. operates the existing CEMEX Cement Brooksville Plant, which is located in Hernando County at 16301 Ponce De Leon Boulevard northwest of Brooksville, Florida. The facility is an existing cement plant, which is identified by Standard Industrial Classification code No. 3241.

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.). Pursuant to Rule 62-296.340, F.A.C., the permittee shall install the air pollution control equipment and/or implement the air pollution control measures that are specified by this permit as the Best Available Retrofit Technology (BART).

EFFECTIVE DATE

Unless otherwise specified by this permit, the BART-eligible sources shall comply with the conditions of this permit as expeditiously as practicable, but not later than December 31, 2013. [Rule 62-296.340(3)(b)2, F.A.C.]

Executed in Tallahassee, Florida

Joseph Kahn, Director
Division of Air Resource Management

(Date)

FACILITY DESCRIPTION

CEMEX Cement Company, Inc operates the Brooksville Cement Plant which is a portland cement facility (SIC 3241 Cement, Hydraulic). The plant currently consists of: two portland cement lines designated as Lines 1 and 2, including two Polysius GEPOL preheater kilns (Kilns 1 and 2); two clinker coolers; associated raw mills and finish mills; cement and clinker handling equipment; coal handling equipment; silos; air pollution control devices; raw material extraction and receiving facilities; and product shipping facilities.

FACILITY REGULATORY CLASSIFICATIONS

- The facility is a major source of hazardous air pollutants (HAP).
- The facility does not operate units subject to the acid rain provisions of the Clean Air Act (CAA).
- The facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C.
- The facility is a major stationary source pursuant to Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.

BART-ELIGIBLE EMISSIONS UNITS

This permitting action affects the following BART-eligible emissions units at the plant.

EU No.	Emission Unit Description
002	No.1 Kiln Feed System (Baghouse D-31) – Pyroprocessing/Raw Mill System
003	Cement Kiln No. 1 (Baghouse E-55) – Pyroprocessing/Raw Mill System
004	Cement Plant Clinker Cooler No. 1 (Baghouse F-18) – Clinker Handling System
005	Finish Mills No. 1 and No. 2 with two dust collectors (Baghouse G-23) – Finish Mill System
006	Clinker Storage Silo Nos. 1 & 2 (Baghouse F-31) – Clinker Handling System
008	Baghouse No. E-36 of Kiln No 1. Blending Silo No. 2 – Cement Products (is BART-eligible)
	Baghouse No. F-17 of Kiln No.1 Blending Silo No. 1 – Cement Products (is not BART-eligible)
009	Cement Plant STG Silos Dust Unit (Baghouse H-3) – Cement Products
011	Raw Material Storage Silos & Feed System (Baghouses C-11, C-11A)

CONTENTS

SECTION 2. ADMINISTRATIVE REQUIREMENTS

1. Permitting Authority: The Permitting Authority for this project is the Bureau of Air Regulation (BAR) in the Division of Air Resource Management (DARM) of the Florida Department of Environmental Protection (FDEP), i.e., Department. The mailing address for the Bureau of Air Regulation is 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400.

2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Air Resources Section of the FDEP Southwest District Office. The mailing address and phone number of the Southwest District Office are: 13051 N. Telecom Parkway, Temple Terrace, Florida 33637-0926 and (813) 632-7600.

3. Appendices: The following Appendices are attached as part of this permit: Appendix A (Citation Formats), Appendix B (General Conditions), Appendix C (Standard Testing Requirements), and Appendix D (Standard CEMS Requirements for SO_2 Monitoring).

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 the applicable provisions of: Chapter 403, F.S.; Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296, and 62-297, F.A.C.; and the applicable parts and subparts of Title 40, Code of Federal Regulations (CFR). Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations.

5. Title V Permit: This permit authorizes specific modifications and/or new construction on the affected emissions units as well as initial operation to determine compliance with conditions of this permit. A Title V operation permit is required for regular operation of the permitted emissions unit. The permittee shall apply for a revised Title V permit **on or before December 31, 2013**. 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 each Compliance Authority.
[Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]

6. 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 5 years following the date on which such measurements, records, or data are recorded. Records shall be made available to the Department upon request.
[Rule 62-213.440(1)(b)2, F.A.C.]

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

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

A. Emissions Units (EU-003 and 004)

This subsection addresses the following affected emissions units.

Emissions Units 003 and 004 (Kiln and Cooler No. 1)
Description: Dry preheater process kiln and clinker cooler systems employing the Polysius GEPOL preheater design. *Fuels*: The kiln is limited to a fuel heat input of 300 million British thermal units (MMBtu) per hour. Allowable fuels include: coal, Nos. 2, 4, 5, and 6 fuel oils, natural gas, and on-site generated non-hazardous waste used oil and grease. Kiln No. 1 is also permitted to fire whole tire derived fuel (WTDF). *Capacity*: The kiln is limited to 150 tons per hour (TPH) of preheater feed on a rolling 30-day average, with a maximum of 165 tons in any one hour, and a maximum annual limit of 1,300,000 tons per year (TPY). *Controls*: A baghouse (E-55) is used on the kiln (EU 003) for the control of PM emissions. A baghouse (F-18) is used to control the PM emissions from the cooler (EU 004). Raw material properties, chemical reactions in the kiln, absorption into the clinker, and combustion controls minimize emissions of nitrogen oxides (NO_X), sulfur dioxide (SO_2), carbon monoxide (CO), and volatile organic compounds (VOC). An aqueous ammonia (NH_3) injection system operating on the principle of selective non-catalytic reduction (SNCR) and a low NO_X burner (LNB) have been installed to augment NO_X control. *Monitors*: Emissions of CO, NO_X, and SO_2 are continuously monitored on the kiln. *Stack Parameters*: The stack for Kiln No. 1 has the following characteristics: stack height is 75 feet, exit diameter is 13 feet, exit temperature is 285 °F, and actual volumetric flow rate is approximately 315,000 acfm. There is a separate stack for Cooler No. 1 with the following characteristics: stack height is 50 feet, exit diameter is 10 feet, and exit temperature is 340°F.

1. Relation to Other Permits: The conditions of this permit subsection, unless otherwise noted, are in addition to those of any other air construction or operation permits.
   [Rules 62-296.340 (BART), 62-4.030, 62-4.210, and 62-210.300(1)(b), F.A.C.]

2. BART Determinations: A determination of the BART was made for NO_X, SO_2 and PM/PM_{10}. To satisfy the BART requirements for these units the visible emissions limits act as surrogate standards for PM.
   [Rule 62-296.340 (BART), F.A.C.].

CONTROL EQUIPMENT AND METHODS

3. NO_X Controls: To control emissions of nitrogen oxides (NO_X), the permittee shall implement ~~one of~~ the following strategies:

   a. Operate the installed SNCR system ~~and convert the kiln to indirect firing (IF) as previously authorized by Permits 0530010-026-AC and 0530010-34-AC.~~

   ~~b. In lieu of 1.a., the applicant is authroized to install a secelctive catalytic reduction (SCR) system between the preheater and the raw mill to augment or replace the existing SNCR system. In the event the applicant chooses to install the SCR, installation and compliance with limit of 1.2 lb/ton of kiln preheater feed must be completed by October 31, 2013. The SNCR system shall be used in the interim to meet the compliance dates and limits in Permits 0530010-026 and 0530010-34-AC. The injectors may be rearranged as needed to optimize the final configuration.~~

   [Rule 62-296.340 (BART), F.A.C.]

4. SO_2 Controls: The present SO_2 control system consisting of dry alkali and lime scrubbing in the kiln system and limestone scrubbing in the raw mill constitutes BART for EU 003. The permittee shall continue to operate and maintain Kiln No. 1 as indicated in Permit 0530010-003-AC (PSD-FL-233) and the current Title V permit and shall also comply with additional time-averaged limits and monitoring requirements discussed further below. [Rule 62-296.340 (BART), F.A.C.]

5. PM/PM_{10} Standards:
   a. To control emissions of PM from Kiln No. 1 the permittee shall continue to operate and maintain baghouse E-55 as required by Permit 0530010-003-AC (PSD-FL-233) and the current Title V permit.
   b. To control emissions of PM from Cooler No. 1 the permittee shall continue to operate and maintain baghouse F-18 as required by Permit 0530010-003-AC (PSD-FL-233) and the current Title V permit.

   [Rule 62-296.340 (BART), F.A.C.]

6. NO_X Continuous Emission Monitoring System (CEMS) Operation: In accordance with the requirements of Permit No. 0530010-026-AC, the permittee shall continue to properly calibrate, maintain, and operate a continuous emissions monitoring system (CEMS) to measure and record emissions of NO_X. The emissions data collected with the CEMS shall be used to demonstrate compliance with the corresponding emissions standards. [Rules 62-296.340 (BART) and 62-4.070(3), F.A.C.; Permit 0530010-026-AC]

7. Continuous Opacity Monitoring System (COMS) for Kiln and Cooler No. 1: A COMS shall be used to demonstrate continuous compliance with the opacity standards and limitations specified in this section.
   a. In accordance with the NSPS (40 CFR 60, Subpart F), NESHAP (MACT 40 CFR 63, Subpart LLL) and the PSD-FL-233 requirements for cement kilns, the permittee shall continue to properly calibrate, maintain, and operate a COMS to measure and record opacity emissions.
   b. The COMS shall comply with: 40 CFR 60, Appendix B, Performance Specification 1 (PS-1); 40 CFR 60 Subpart A, General Provisions; and, the requirements of MACT 40 CFR 63, Subpart LLL. Reports demonstrating compliance with PS-1 shall be submitted to the Department prior to January 1, 2014.
   c. Effective January 1, 2014, the emissions data collected with the certified COMS shall be used to demonstrate continuous compliance with the opacity standards and limitations specified in this section.
   d. Opacity shall be based on a 6-minute block average computed from at least one observation (measurement) every 15 seconds. An average value shall be computed and recorded at least every 60 seconds. For the COMS, the 6-minute block averages shall begin at the top of each hour.

   [Rules 62-296.340 (BART) and 62-4.070(3), F.A.C.]

~~8. SO_2 CEMS Installation: In accordance with the requirements in Appendix D (Standard CEMS Requirements for SO_2 Monitoring) of this permit, the permittee shall properly install, calibrate, maintain, and operate a CEMS to measure and record emissions of SO_2 from Kiln No. 1. Effective January 1, 2014 the emissions data collected with the CEMS shall be used to demonstrate compliance with the corresponding emissions standards. [Rules 62-296.340 (BART) and 62-4.070(3), F.A.C.]~~

BART EMISSIONS STANDARDS

9. NO_X Emissions Standard:
   ~~a. Beginning July 1, 2007 until 30 operating days after installation of the IF system or October 31, 2008, whichever is earlier, NO_X emissions from Kiln No. 1 shall exceed neither 1.50 lb/ton of dry preheater feed nor 225 lb/hour on a rolling 30-operating day average as measured by the required CEMS.~~

~~b.~~ NOx emissions from Kiln No. 1 shall not exceed the following emissions standard after December 31, 2013.

Pollutant	Emission Limit	Averaging Time	Compliance Method	Basis
NO_X	2.0 lb/ton clinker	30-operating day rolling	CEMS	Applicant Request, PSD Avoidance and BART
	181.5 lb/hr (as NO_2)			

[Applicant Request; Rule 62-296.340 (BART), F.A.C.; ~~Permits 0530010-026-AC and 0530010-34-AC~~]

10. SO_2 Emissions Standard: SO_2 emissions from Kiln No. 1 shall not exceed the following emissions standards after December 31, 2013.

Pollutant	Emission Limit	Averaging Time	Compliance Method	Basis
SO_2	0.17 lb/ton clinker	24-operating hour rolling	CEMS	BART
	15 lb/hr @ 150 TPH of feed 16.5 lb/hr @ 165 TPH of feed			

[Rule 62-296.340 (BART), F.A.C.; ~~Permits AC27-258571 and 0530010-002-AC (PSD-FL-233)~~]

11. PM/PM_{10} Standards: Particulate matter emissions shall not exceed the following emissions standards as determined by EPA Method 5 after December 31, 2013.

EU No.	Description	Emission Limit	lb/hr at 150 dry preheater feed	lb/hr at 165 TPH dry preheater feed
003	Kiln No. 1	0.31 lb/ton clinker	27.0	29.7
004	Cooler No. 1	0.15 lb/ton clinker	13.6	14.9

[Rule 62-296.340 (BART), F.A.C. ~~and Permit 0530010-003-AC (PSD-FL-233)~~]

12. Visible Emissions Standards:

a. Beginning January 1, 2014 and thereafter, visible emissions from Kiln No. 1 as measured by a COMS shall not exceed 10 % opacity based on a 6-minute average. Until that date, the opacity standards, including the monitoring and compliance requirements of presently applicable permits continue to apply to Kiln No. 1.

b. Beginning January 1, 2014 and thereafter, visible emissions from Cooler No. 1 as measured by a COMS shall not exceed 10% opacity based on a 6-minute average. Until that date, the opacity standards, including the monitoring and compliance requirements of presently applicable permits continue to apply to Cooler No. 1.

[Rule 62-296.340 (BART), F.A.C. and Permit AC27-258571]

EXCESS EMISSIONS

13. Excess Emissions Prohibited: Excess emissions caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure that may reasonably be prevented during startup, shutdown or malfunction shall be prohibited. [Rule 62-210.700(4), F.A.C.]

14. Excess Emissions Allowed: Unless specified by this permit or Title V Permit No. 0530010-015-AV, 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. [Rule 62-210.700(1), F.A.C.]

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

    ~~a. *SO_2 Data.* Refer to Appendix D, Standard CEMS Requirements for SO_2 Monitoring.~~

    b. *NO_X Data*: Refer to Permit No. 0530010-026-AC.

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

    [Rules 62-210.200, 62-212.400(BACT), 62-340 (BART) and 62-210.700, F.A.C.]

16. Excess Emissions Notification: In case of excess emissions resulting from malfunctions, the permittee shall notify the Compliance Authority in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department.
    [Rule 62-210.700(6), F.A.C.]

MONITORING REQUIREMENTS

17. CEMS Compliance Demonstration: ~~For the SO_2 CEMS required by this permit, the permittee shall comply with the monitoring provisions in Appendix D (Standard CEMS Requirements for SO_2 Monitoring), part of this permit.~~ The requirements related to NO_X CEMS compliance demonstration for this Kiln are stated in Permit 0530010-026-AC. This permit does not change or supersede any of those requirements.
    [Rules 62-296.340 (BART) and 62-4.070(3), F.A.C.]

18. COMS Compliance Demonstration: The requirements related to the opacity COMS compliance demonstration for Kiln and Cooler No.1 are stated in Specific Condition No. 8.
    [Rules 62-296.340 (BART) and 62-4.070(3), F.A.C.]

EMISSIONS PERFORMANCE TESTING

19. Test Methods: The following reference methods (or more recent versions) shall be used to conduct any required emissions tests.

Method	Description of Method and Comments
1 - 4	Traverse Points, Velocity and Flow Rate, Gas Analysis, and Moisture Content
5	Determination of PM Emissions from Stationary Sources
7E	Determination of NO_X Emissions from Stationary Sources
6C	Determination of SO_2 Emissions from Stationary Sources
9	Visual Determination of Opacity from Stationary Sources
19	Determination of SO_2 Removal Efficiency and PM, SO_2, and NO_X Emission Rates
201A	Determination of PM with a Mean Diameter of 10 Microns or Less (PM_{10})

EPA Methods 1, 2, 3, 4, and 19 shall be used as necessary to support the other test methods. The above methods are described in 40 CFR 60, Appendix A, which is adopted by reference in Rule 62-204.800, F.A.C. No other methods shall be used without prior written approval from the Permitting Authority. [Rules 62-204.800 and 62-297.100, F.A.C.; and 40 CFR 60, Appendix A]

20. Standard Testing Requirements: All required emissions tests shall be conducted in accordance with the requirements specified in Appendix D (Standard Testing Requirements) of this permit. [Rules 62-204.800 and 62-297.100, F.A.C.; and 40 CFR 60, Appendix A]

21. Compliance Test Schedule: In accordance with the following schedule, the permittee shall have stack tests conducted to demonstrate compliance with the emissions standards specified in this permit.

    a. *Initial Tests*: On or before January 1, 2014, initial tests shall be conducted for PM/PM_{10} and SO2 [Rules 62-296.340 (BART) and 62-297.310(7)(a)1, F.A.C.]

    b. *Annual Tests*: During each federal fiscal year (October 1st to September 30th), tests shall be conducted for PM/PM_{10}. [Rules 62-296.340 (BART) and 62-297.310(7)(a)4, F.A.C.]

    c. *Tests Prior to Renewal*: Within the 12-month period prior to renewing the Title V air operation permit, tests shall be conducted for PM/PM_{10}. [Rules 62-296.340 (BART) and 62-297.310(7)(a)3, F.A.C.]

    No initial or annual tests or tests prior to renewal of the Title V Permit are necessary for NO_X ~~and SO_2~~ since these pollutants are monitored by CEMS.

RECORDS AND REPORTS

22. Plant Operation - Problems: If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by fire, wind or other cause, the permittee shall notify each Compliance Authority as soon as possible, but at least within one working day, excluding weekends and holidays. The notification shall include: pertinent information as to the cause of the problem; steps being taken to correct the problem and prevent future 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 the conditions of this permit or the regulations. [Rule 62-4.130, F.A.C.]

23. Operation and Maintenance Requirements for BART Controls: The requirements related to operation and maintenance requirements are stated in Title V permit 0530010-015-AV. This permit does not change or supersede any of those requirements. [Rule 62-4.070(3) F.A.C]

24. Baghouse Operation and Maintenance Requirements: For the Kiln and Cooler baghouses the permittee shall have an operation and maintenance plan to address proper operation, parametric monitoring, and a schedule for conducting periodic inspections and preventive maintenance. Baghouse inspections and maintenance activities shall be recorded in a written log. The operation and maintenance logs shall be submitted to the Compliance Authority upon request. [Rule 62-4.070(3), and 40 CFR 63.1350, Subpart LLL]

25. Control Equipment Monitoring Recordkeeping and Reports: The requirements related to control equipment monitoring for NO_X are stated in Permit 0530010-026-AC. This permit does not change or supersede any of those requirements. The requirements related to control equipment monitoring for SO_2 are provided in Appendix D (Standard CEMS requirements for SO_2 Monitoring), part of this permit. [Rule 62-296.340(3)(b)2, F.A.C.]

26. Records: The permittee shall comply with the records requirements stated in Title V Permit 0530010-015-AV and all the issued construction permits not yet incorporated in this Title V permit. [Rule 62-4.070(3) F.A.C.]

B. Emissions Units (EU-002, 005, 006, 008, 009 and 011)

This permitting action affects the following BART-eligible emissions units at the plant.

EU No.	Emission Unit Description
002	No.1 Kiln Feed System (Baghouse D-31) – Pyroprocessing/Raw Mill System
005	Finish Mills #1 and #2 with two dust collectors (Baghouse G-23) – Finish Mill System
006	Clinker Storage Silo Nos. 1 & 2 (Baghouse F-31) – Clinker Handling System
008	Kiln No 1. Blending Silos [Baghouse Nos. (E-36)(silo 2)] – Cement Products
009	Cement Plant STG Silos Dust Unit (Baghouse H-3(silos 1-5)) – Cement Products
011	Raw Material Storage Silos (Baghouse C-11) – Raw Material Handling
011	Transfer Belt (Baghouse C-11A) – Raw Material Handling

1. Relation to Other Permits: The conditions of this permit subsection, unless otherwise noted, are in addition to those of any other air construction or operation permits.
[Rules 62-296.340 (BART), 62-4.030, 62-4.210, and 62-210.300(1)(b), F.A.C.]
2. BART Determinations: A determination of the BART was made for particulate matter (PM/PM_{10}). To satisfy the BART requirements for these units the visible emissions limits act as surrogate standards for PM.
[Rule 62-296.340 (BART), F.A.C.].

EQUIPMENT AND CONTROL TECHNOLOGY

3. Equipment Description: The permittee is authorized to operate, and maintain equipment needed for the handling, conveying and grinding of clinker from Line 1 storage silos together with gypsum, slag or limestone dust from their respective silos to make the final cement product. Equipment will include associated conveyors, and control equipment. [Rule 62-4.070(3) F.A.C.]
4. Baghouse Controls: Each emissions unit identified above shall be controlled by a baghouse system. Each required baghouse shall be operated, and maintained to achieve a PM design specification of 0.01 grain (gr) per dry standard cubic foot (dscf) and a PM_{10} design specification of 0.007 gr/dscf.
[Rules 62-4.070(3) and 62-212.400(BACT), F.A.C.]
5. Circumvention: The permittee shall not 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.]

EMISSIONS AND TESTING REQUIREMENTS

6. Particulate Matter (PM/PM_{10}) and Visible Emissions Standards (VE):

EU No.	Description	BART limit lb/hr (3-hr)	BART Opacity
002	No.1 Kiln Feed System (Baghouse D-31) Pyroprocessing / Raw Mill System	1.02	5%
005	Finish Mill No. 1 and No. 2 with two bag collectors (Baghouse G-23) – Finish Mill System	9.0 (for each mill)	5%
006	Clinker Storage Silo Nos. 1 & 2 (Baghouse F-31) Clinker Handling System	1.45	5%
008	Kiln No 1. Blending Silos [Baghouse No. (E-36)(silo 2)] Cement Products	1.02	5%
009	Cement Plant Storage Silos Dust Unit [Baghouse No. (H-3)(silos 1-5)] – Cement Products	18.0	5%
011	Raw Material Storage Silos (Baghouse C-11) – Raw Material Handling	1.29	5%
	Transfer Belt (Baghouse C-11A) – Raw Material Handling	0.86	5%

The presently applicable visible emissions standard of 5% opacity and testing requirements in lieu of stack testing in Title V permit continue to apply. Exceedance of the 5% opacity limit shall be deemed an exceedance of this permit condition and not necessarily an exceedance of the opacity limitations given in 40 CFR 63, Subpart LLL. [Rules 62-4.070(3); 62-297.620(4) F.A.C. and 40 CFR 63.1348]

7. Testing and Compliance Demonstrations: During each federal fiscal year (October 1st to September 30th), the permittee shall conduct visible emissions tests on each baghouse exhaust in accordance with EPA Method 9 to demonstrate compliance with the opacity standard. This method is described in 40 CFR 60, Appendix A, which is adopted by reference in Rule 62-204.800, F.A.C. Initial compliance tests shall be conducted during federal fiscal year 2012/2013 and a test report demonstrating compliance shall be submitted before October 1, 2013. [Rules 62-4.070(3), 62-204.800, 62-296.340(3)(b)2; 62-297.310(7)(a)4, F.A.C.; and 40 CFR 60, Appendix A, Method 9 and 40 CFR 63.1349(b)(2)]

8. Periodic Monitoring Requirements: Each affected unit subject to an opacity standard shall be periodically monitored using the procedures described in 40 CFR 63.1350(a) (4) (i) through (vii) to ensure compliance with the above emissions limits. [Rule 62-4.070(3) and 40 CFR, 63.1350, Subpart LLL]

9. Test Methods: Any required tests shall be performed in accordance with the following reference methods and the applicable requirements of Appendix C of this permit, and the applicable NESHAP provisions. [Rule 62-297.310(7)(a)9, F.A.C.]

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

REPORTING AND RECORD KEEPING

10. Baghouse Operation and Maintenance Requirements: For each baghouse the permittee shall have an operation and maintenance plan to address proper operation, parametric monitoring, and a schedule for conducting periodic inspections and preventive maintenance. Baghouse inspections and maintenance activities shall be recorded in a written log. The operation and maintenance logs shall be submitted to the Compliance Authority upon request. [Rule 62-4.070(3), and 40 CFR 63.1350, Subpart LLL]

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

12. Records: The permittee shall comply with the records requirements stated in Title V Permit 0530010-015-AV and all the issued construction permits not yet incorporated in this Title V permit. [Rule 62-4.070(3) F.A.C]