



KOOGLER & ASSOCIATES, INC.  
ENVIRONMENTAL SERVICES  
4014 NW 13th STREET  
GAINESVILLE, FL 32609-1923  
352/377-5822 • FAX/377-7158

KA 521-06-20  
March 7, 2007

RECEIVED

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BUREAU OF AIR REGULATION

Mr. Al Linero  
Florida Department of Environmental Protection  
Division of Air Resource Management  
2600 Blair Stone Road MS 5500  
Tallahassee, Florida 32399-2400

**RE: *Permitting Projects 0530010-018-AC and -019-AC; Outstanding Questions  
CEMEX Cement, Inc., Brooksville Facility PSD-FL-362***

Dear Al:

Per several telephone conversations with Cindy Mulkey, there are a few remaining questions regarding the permitting projects 0530010-018-AC (increase process rates, thallium sampling removal, etc.) and 0530010-019-AC (bypass dampers replacement). The two remaining questions have been addressed below.

**Removal of Thallium Sampling from the Title V Permit**

Currently, the sampling of Kiln No. 1 baghouse dust for thallium concentrations is performed daily. In the last 5 years none of these tests have shown any thallium concentrations that would exceed the permit limit of 1.5%. The area currently being mined for limestone on the plant property has gradually turned toward the southwest over the last 6 years. The old mining area directly west of the plant was mined out and closed in the mid to late 1990's.

It seems as CEMEX has moved its' mining area toward the south/southwest of the plant area, the thallium levels have dropped in the limestone, therefore, the thallium concentrations in the baghouse dust have also dropped. Because of this, CEMEX is requesting removal of the sampling requirement, or a less frequent sampling schedule (e.g., quarterly sampling) for thallium concentrations in Kiln No. 1.

**Question Regarding CEMEX Violations from Previous RAI Letters**

**Question:** Has CEMEX or its affiliates had any violations (or warning letters) related to any Department or EPA regulations at any of their facilities in Florida and the United States? Have officers of CEMEX also been officers of other companies that have had violations (or warning letters) of Department regulations at any facilities? Please provide all documentation in relation to any such violations.

**Response:**

Regarding violations of Department regulations, CEMEX resolved outstanding compliance issues in July 7, 2006, in Consent Order No. 05-2192. CEMEX resolved earlier compliance issues in April of 2005 in Consent Order No. 04-0685. Currently, CEMEX is investigating recent test

results indicating a D/F exceedance in Kiln 2 in raw mill down condition at the company's Brooksville, Florida cement plant. No other matters have yet to be resolved.

Regarding violations of EPA regulations and officers of CEMEX that have been officers of other companies that had violations of Department regulations, these questions seek information outside of the scope of FDEP statutes and rules. Further, the permit application is for a facility that is not comparable in many respects, to other CEMEX facilities. Moreover, in contravention of Section 403.0875, Florida Statutes, the Department's request for additional information (RAI) does not cite any regulatory authority for the question. The information contained in the permit application, including the responses to the Department's previous RAIs provide sufficient reasonable assurances.

Hopefully these responses satisfy the remaining questions regarding projects -018-AC and -019-AC, and the Department can move forward with processing this combined construction permit. If you need any additional information or have any questions, please feel free to contact me at (352) 377-5822 or [FBergen@kooglerassociates.com](mailto:FBergen@kooglerassociates.com), or Charles Walz, CEMEX Cement Inc., at (352) 799-2011, if you have any questions regarding this submittal.

Very truly yours,

KOOGLER & ASSOCIATES, INC.



Fawn W. Bergen, P.E.  
Project Engineer

FB

c: T. Heron, FDEP  
J. Gill, CEMEX  
C. Walz, CEMEX



**KOOGLER & ASSOCIATES**  
**ENVIRONMENTAL SERVICES**

4014 NW THIRTEENTH STREET  
GAINESVILLE, FLORIDA 32609  
352/377-5822 • FAX/377-7158

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AUG 18 2006

KA 521-05-11  
August 15, 2006

BUREAU OF AIR REGULATION

Via Email and USPS

Ms. Trina Vielhauer  
FDEP-Bureau of Air Regulation  
2600 Blair Stone Road  
Tallahassee, FL 32399-2400

**RE: *Cemex Cement, Inc.***  
***Brooksville Cement Plant***  
***Expedited Permitting of Indirect Firing Systems for Kilns No. 1 and 2 and***  
***FDEP File Nos. 0530010-018 and 019-AC***

Dear Trina:

I'd like to express our appreciation to you, Al Linero, and Cindy Mulkey for meeting with us on such short notice on August 9, 2006 to discuss the above captioned matters. By this letter, I would like to state our understanding of matters we discussed related to the expedited permitting of indirect firing systems for Kiln No. 1 and Kiln No. 2 and related to pending air construction permit applications in FDEP Files 0530010-018 and 019-AC.

### **PERMITTING OF INDIRECT FIRING SYSTEMS**

It is our understanding that Cemex is to provide a new and separate air construction permit application for the indirect firing system project. It is our goal to have this application in your hands on or before August 18, 2006.

In this application, we understand that we are to address the following issues:

- A review of production records – Cemex is to review clinker production records for Kiln No. 1 and Kiln No. 2 for the past 10 years. The maximum production rates for consecutive 24-month periods will be used to establish a production rate

baseline for each of the two kilns. These baseline rates plus a demand increase will be used to establish production limits that demonstrate the indirect firing systems will not increase kiln production rates.

- Emission limits – The indirect firing systems are expected to reduce NOx emissions from the two kilns and are not expected to affect the emission rates of other pollutants. Documentation of this statement will be provided in the application. As a result of there being no change in emissions, the indirect firing system project will be a non-PSD project. The emission limits that will be proposed in the indirect firing systems application for the two kilns are those that are currently permitted. The limits that have been requested in the air construction permit application assigned FDEP File No. 0530010-018-AC will continue to be addressed in the review of that application.
- Fuel use – It is expected that the indirect firing system will reduce the specific heat of production (BTU per ton of clinker). As a result, the installation of the indirect firing system should result in a reduction in fuel consumption in each of the two kilns. This matter will be addressed in the permit application.
- Indirect firing system burners – The Pillard Rotoflam® burners that were installed in Kiln No. 1 and Kiln No. 2 as part of the semi-direct firing system addressed in the air construction permit application assigned FDEP File No. 0530010-018-AC will be used for the indirect firing system. These burners will not be changed to accommodate the indirect firing system; only the delivery of fuel and combustion air to the burners will change. Because of this, it is our understanding that the permitting of the burners themselves will be addressed in the indirect firing systems application review. In the following section of this letter, Cemex will request that the permitting of the semi-direct firing system, including the burners, be withdrawn from the 0530010-018-AC application when the new application is received.

- Indirect firing project description – The general concept of indirect firing will be described including the lowering of emissions (NOx), the improvement in fuel efficiency, and the overall improvement in combustion control.
- Time-line for permit application review – During the meeting we discussed the optimal time-line for the review of the application. It was stated that the Department would require 30 days for the initial review and the preparation of a Request for Additional Information; if necessary. Following this would be another 30-day period to review any additional information and prepare a draft permit. Following this would be a 14-day period for public comment and an additional seven days to prepare the final permit. The total time in this time-line, including a few days for slippage, is approximately 90 days. We greatly appreciate the Department's willingness to work toward such a time-line and we will certainly do our part to make this time-line a reality.

#### **FDEP FILES 0530010-018 AND 019-AC**

File 0530010-018-AC (referred to henceforth as File 018) included four major projects plus several record keeping, rate changes and operating time changes to existing permit conditions for several emission units at the Brooksville Cement Plant. File 0530010-019-AC (referred to henceforth as File 019) included an air construction permit application submitted to the Department's Southwest District Office in Tampa for the after-the-fact permitting for damper modifications made to the Kiln No. 1 system.

#### **File 018**

The four major projects included in this application were the use of petroleum coke on a continuing basis in Kiln No. 1 and Kiln No. 2, the use of Tire Derived Fuel on a continuing basis in Kiln No. 2, the after-the-fact permitting of SNCR systems on Kiln No. 1 and Kiln No. 2 and the after-the-fact permitting of semi-direct firing systems on Kiln No. 1 and Kiln No. 2.

By this letter, we are requesting that the use of Tire Derived Fuel on a continuing basis in Kiln No. 2 be withdrawn from this file. The Department is in the process of issuing an air construction permit 0530010-022-AC that will authorize a trial period for firing Tire Derived Fuel in Kiln No. 2. The purpose of the trial period is to evaluate the efficacy of using Tire Derived Fuel in Kiln No. 2 and to develop real-time emission data while this fuel is being fired. It is the intent of Cemex to file a separate and new air construction permit for the use of Tire Derived Fuel on a continuing basis in Kiln No. 2 at the end of the trial period. This application will most likely be submitted in September-October 2007.

By this letter, Cemex is also withdrawing the request to use petroleum coke in Kiln No. 1 and Kiln No. 2 on a continuing basis. Cemex previously notified the Department that it was withdrawing the request to evaluate petroleum coke during the trial period that will be authorized by Permit 0530010-022-AC. The use of petroleum coke at the Brooksville Cement Plant has been put on temporary hold. At such time that Cemex decides to move forward with the use of petroleum coke, the Department will be notified and a new and separate permit application will be filed.

It is the intent of Cemex that the Department continues with the permitting of the SNCR systems for Kiln No. 1 and Kiln No. 2 as addressed in File 018. No changes have been made that will affect the permitting of these systems.

File 018 also included the after-the-fact permitting of semi-direct firing systems on Kiln No. 1 and Kiln No. 2; including the installation of Pillard Rotoflam® burners on both kilns. As stated in the preceding section, Cemex will replace the semi-direct firing systems with indirect firing systems, to be addressed in a new and separate permit application. Therefore, Cemex requests that at the time the application for the indirect

firing systems is received, the review of the semi-direct firing system, including the burner installation, be discontinued as part of File 018.

The air construction permit application in File 018 included several changes to existing permit conditions for various emission units. These changes were related to testing and record keeping, loading rate changes for bins and silos, and a change in hours of operation for the cement bag load out system. Specifically, the changes requested were:

- Cement Kiln No. 1—remove the requirement to perform daily sampling and recording of thallium concentrations in the baghouse dust;
- Cement Kiln No. 1 and No. 2—Change the requirement for liquid fuel records to be based on analysis of a sample representative of the shipment to be based on supplier's records;
- Finish Mills No. 1 and No. 2—Increase the maximum transfer rate to 105 TPH and limit the PM emissions from each mill to 9.0 lb/hr each, rather than 36 lb/hr combined and limit annual PM emissions to 39.4 TPY each kiln, rather than 157.7 TPY combined;
- Clinker Storage Silo Nos. 1 and 2—Increase the maximum silo loading rate to 93 TPH;
- Clinker Silo No. 3—Increase the maximum silo loading rate to 93 TPH;
- Raw Material Storage Silos & Feed System—Increase the maximum transfer rate to 330 TPH daily average (dry basis);
- Raw Material Pre-Mix Bin— Increase the maximum transfer rate to 330 TPH daily average (dry basis);
- Additive Material Storage Bin—Increase the maximum material transfer rate to 36 TPH; and

- Cement Bag Loadout System—Increase the maximum operating hours to 7,400 hours per year.

Cemex requests that the Department continue to process these requested permit condition changes.

Regarding the changes in the Finish Mills No. 1 and No. 2 conditions, Cemex requested a change in the material transfer rates for Finish Mills No. 1 and No. 2 and also requested a change in the particulate matter emission limits for the mills. Cemex requests that the Department continue with the processing of the transfer rate change as addressed in the application.

Regarding the particulate matter emission limits for Finish Mills No. 1 and No. 2, Cemex is requesting that the current particulate matter emission limit for the finish mills of 36 pounds per hour and 157.7 tons per year, for the two mills combined, be changed as follows:

- Hourly - 9.0 pounds PM per hour, each mill; and
- Annual - 39.4 tons PM per year, each mill.

These changes are consistent with the information previously provided to the Department in File 018. The changes will result in a reduction in permitted PM emissions of 78.9 tons per year.

#### File 019

It is our understanding that the after-the-fact permitting of the damper changes in the Kiln No. 1 system will be incorporated in the air construction permit that will be issued pursuant to File 018. Cemex requests that the Department proceed with the combining of these projects as suggested by the Department.



Ms. Trina Vielhauer  
August 15, 2006

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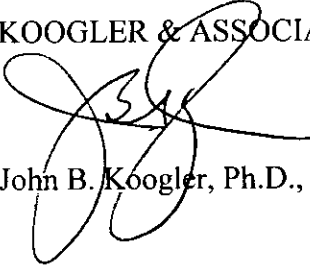
**SUMMARY**

This summarizes our understanding of matters related to the expedited permitting of the indirect firing systems and the changes to projects associated with Files 018 and 019. If any of our understandings are not consistent with the understandings of the Department, please let us know as soon as possible so that these matters can be resolved.

Again, we appreciate the time that you, Al Linero, and Cindy Mulkey spent with us and the time that you have already spent on the permitting of the pending projects addressed herein.

Very truly yours,

KOOGLER & ASSOCIATES, INC.



John B. Koogler, Ph.D., P.E.

JBK/lt

cc: Mr. Al Linero  
Ms. Cindy Mulkey  
Mr. Dan Merz  
Mr. Jeet Gill  
Mr. Mike Gonzales  
Mr. Charlie Walz

