

Memorandum

Florida Department of Environmental Protection

TO: Trina Vielhauer
THROUGH: Syed Arif SA
FROM: Cleve Holladay CHA
DATE: January 26, 2009
SUBJECT: CEMEX Brooksville Cement Plant
DEP File No. 0530021-016-AC (PSD-FL-091F)
South Brooksville Cement Plant – Kiln 1
Install Tire Injection Mechanism System (TIMS)

This project is subject to minor source preconstruction review. Attached for your review are the following items:

- Written Notice of Intent to Issue Air Permit Modification;
- Public Notice of Intent to Issue Air Permit Modification;
- Technical Evaluation and Preliminary Determination;
- Draft Permit (letter) Modification; and
- P.E. Certification.

The Draft Permit Modification authorizes installation of a tire injection mechanism system (TIMS) on Kiln 1. The proposed work will be conducted at CEMEX South Brooksville Cement Plant, which is located in Hernando County, Florida. The Technical Evaluation and Preliminary Determination document provides a detailed description of the project and the rationale for issuance. The P.E. certification briefly summarizes the proposed project. I recommend your approval of the attached Draft Permit.

Attachments

PROFESSIONAL ENGINEER CERTIFICATION STATEMENT

PERMITTEE

Florida Crushed Stone d.b.a. CEMEX, Inc.
10311 Cement Plant Road
Brooksville, Florida 32669

DEP File No. 0530021-016-AC (PSD-FL-091F)
South Brooksville Cement Plant, Kiln 1
Tire Injection Mechanism System (TIMS)
Hernando County, Florida

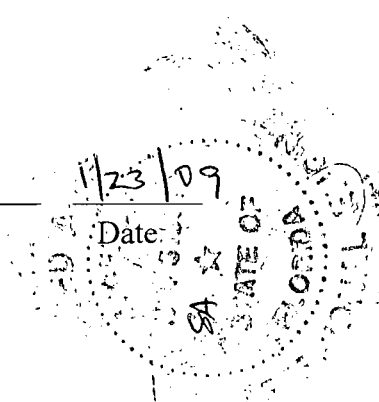
CEMEX submitted a permit modification application requesting authorization to install a TIMS on Kiln 1. Tires were already permitted to be used as fuel for Kiln 1 by introduction near the feed end (cold side) of the kiln. The TIMS project will provide for introduction of tires near the product end of the kiln (hot side) without changing the permitted emission, production or fuel use limits.

Kiln 1 was permitted in 1984 and was subject to the rules for the prevention of significant deterioration (PSD) and a determination of best available control technology (BACT). The net change in emissions is less than the PSD significant emission rate. Therefore, PSD does not apply to this project. The installation and operation of TIMS can be accomplished while meeting the requirements of the previously conducted PSD review and BACT determination.

I HEREBY CERTIFY that the air pollution control engineering features described in the above referenced application and subject to the proposed permit conditions provide reasonable assurance of compliance with applicable provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 62-4 and 62-204 through 62-297. However, I have not evaluated and I do not certify aspects of the proposal outside of my area of expertise (including, but not limited to, the electrical, mechanical, structural, hydrological, geological, and meteorological features).



Syed Arif, P.E.
Registration Number: 51861





Florida Department of Environmental Protection

Bob Martinez Center
2600 Blairstone Road
Tallahassee, Florida 32399-2400

Charlie Crist
Governor
Jeff Kottkamp
Lt. Governor
Michael W. Sole
Secretary

January 26, 2009

Electronically sent – Received Receipt requested.

jdaniel@cemexusa.com

James S. Daniel, Plant Manager
South Brooksville Cement Plant
Florida Crushed Stone, d.b.a. CEMEX, Inc.
10311 Cement Plant Road
Brooksville, Florida 32669

Re: DEP File No. 0530021-016-AC (PSD-FL-091F)
South Brooksville Cement Plant – Kiln 1
Install Tire Injection Mechanism System (TIMS)

Dear Mr. Daniel:

On August 7, 2008, you submitted an application for an air construction permit modification to install a TIMS on Kiln 1 at the facility identified above. Enclosed are the following documents:

- Written Notice of Intent to Issue Air Permit Modification;
- Public Notice of Intent to Issue Air Permit Modification;
- Technical Evaluation and Preliminary Determination; and
- Draft Permit (letter) Modification.

The Public Notice of Intent to Issue Air Permit Modification is the actual notice that you must have published in the legal advertisement section of a newspaper of general circulation in the area affected by this project.

If you have any questions, please contact the Project Engineer, Cleve Holladay, at (850) 921-8986 or Syed Arif at (850) 921-9528.

Sincerely,

Trina Vielhauer, Chief
Bureau of Air Regulation

TLV/sa/ch

Enclosures

WRITTEN NOTICE OF INTENT TO ISSUE AIR PERMIT MODIFICATION

In the Matter of an
Application for Air Permit by:

Mr. James S. Daniel, Plant Manager
South Brooksville Cement Plant
Florida Crushed Stone d.b.a. CEMEX, Inc.
10311 Cement Plant Road
Brooksville, Florida 32669

DEP File No. 0530021-016-AC (PSD-FL-091F)
South Brooksville Cement Plant
Portland Cement Kiln 1
Tire Injection Mechanism System (TIMS)
Hernando County, Florida

Facility Location: The applicant, CEMEX, operates the existing South Brooksville Cement Plant, which is located in Hernando County at 10311 Cement Plant Road in Brooksville, Florida.

Project: On August 7, 2008, CEMEX submitted a permit modification application to install a TIMS on Kiln 1. Tires were already permitted to be used as fuel for Kiln 1 by introduction near the feed end (cold side) of the kiln. The TIMS project will provide for introduction of tires near the product end of the kiln (hot side) without changing the permitted emission, production or fuel use limits.

Permitting Authority: Applications for air construction permits are subject to review in accordance with the provisions of Chapter 403, Florida Statutes (F.S.) and Chapters 62-4, 62-210 and 62-212 of the Florida Administrative Code (F.A.C.). The proposed project is not exempt from air permitting requirements and an air permit is required to perform the proposed work. The Bureau of Air Regulation is the Permitting Authority responsible for making a permit determination for this project. The Permitting Authority's physical address is: 111 South Magnolia Drive, Suite 4, Tallahassee, Florida. The Permitting Authority's mailing address is: 2600 Blair Stone Road, Mail Station (MS) 5505, Tallahassee, Florida 32399-2400. The Permitting Authority's telephone number is 850/488-0114.

Project File: A complete project file is available for public inspection during the normal business hours of 8:00 a.m. to 5:00 p.m., Monday through Friday (except legal holidays), at address indicated above for the Permitting Authority. The complete project file includes the Draft Permit, the Technical Evaluation and Preliminary Determination, the applications, and the information submitted by the applicant, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Permitting Authority's project review engineer for additional information at the address or phone number listed above.

Notice of Intent to Issue Permit: The Permitting Authority gives notice of its intent to issue an air permit to the applicant for the project described above. The applicant has provided reasonable assurance that operation of the proposed equipment will not adversely impact air quality and that the project will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297, F.A.C. The Permitting Authority will issue a Final Permit in accordance with the conditions of the proposed Draft Permit unless a timely petition for an administrative hearing is filed under Sections 120.569 and 120.57, F.S. or unless public comment received in accordance with this notice results in a different decision or a significant change of terms or conditions.

Public Notice: Pursuant to Section 403.815, F.S. and Rules 62-110.106 and 62-210.350, F.A.C., you (the applicant) are required to publish at your own expense the enclosed Public Notice of Intent to Issue Air Permit (Public Notice). The Public Notice shall be published one time only as soon as possible in the legal advertisement section of a newspaper of general circulation in the area affected by this project. The newspaper used must meet the requirements of Sections 50.011 and 50.031, F.S. in the county where the activity is to take place. If you are uncertain that a newspaper meets these requirements, please contact the Permitting Authority at above address or phone number. Pursuant to Rule 62-110.106(5) and (9), F.A.C., the applicant shall provide proof of publication to the Permitting Authority

WRITTEN NOTICE OF INTENT TO ISSUE AIR PERMIT MODIFICATION

at the above address within 7 days of publication. Failure to publish the notice and provide proof of publication may result in the denial of the permit pursuant to Rule 62-110.106(11), F.A.C.

Comments: The Permitting Authority will accept written comments concerning the proposed Draft Permit for a period of 14 days from the date of publication of the Public Notice. Written comments must be postmarked by the Permitting Authority by close of business (5:00 p.m.) on or before the end of this 14-day period. If written comments received result in a significant change to the Draft Permit, the Permitting Authority shall revise the Draft Permit and require, if applicable, another Public Notice. All comments filed will be made available for public inspection.

Petitions: A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed with (received by) the Department's Agency Clerk in the Office of General Counsel of the Department of Environmental Protection, 3900 Commonwealth Boulevard, MS 35, Tallahassee, Florida 32399-3000. Petitions filed by the applicant or any of the parties listed below must be filed within 14 days of receipt of this Written Notice of Intent to Issue Air Permit. Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), F.S., must be filed within 14 days of publication of the attached Public Notice or within 14 days of receipt of this Written Notice of Intent to Issue Air Permit, whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the Permitting Authority for notice of agency action may file a petition within 14 days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the Permitting Authority's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner; the name, address and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of when and how each petitioner received notice of the agency action or proposed decision; (d) A statement of all disputed issues of material fact. If there are none, the petition must so state; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action including an explanation of how the alleged facts relate to the specific rules or statutes; and, (g) A statement of the relief sought by the petitioner, stating precisely the action the petitioner wishes the agency to take with respect to the agency's proposed action. A petition that does not dispute the material facts upon which the Permitting Authority's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

WRITTEN NOTICE OF INTENT TO ISSUE AIR PERMIT MODIFICATION

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Permitting Authority's final action may be different from the position taken by it in this Written Notice of Intent to Issue Air Permit. Persons whose substantial interests will be affected by any such final decision of the Permitting Authority on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

Mediation: Mediation is not available in this proceeding.

Executed in Tallahassee, Florida.

Trina Vielhauer, Chief
Bureau of Air Regulation

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Notice of Intent to Issue Air Permit package (including the Written Notice of Intent to Issue Air Permit, the Public Notice of Intent to Issue Air Permit, the Technical Evaluation and Preliminary Determination, and the Draft Permit) 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 1/26/09 to the persons listed below.

- James S. Daniel, CEMEX: jdaniel@cemexusa.com
- Mara Nasca, DEP SWD: mara.nasca@dep.state.fl.us
- Fawn Bergen, P.E., K&A: fbergen@kooglerassociates.com
- Administrator, Hernando County: gkuhl@hernandocounty.us
- Kathy Forney, EPA Region 4: forney.kathleen@epamail.epa.gov
- Victoria Gibson, DEP/DARM: victoria.gibson@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.

(Clerk)

1/26/09
(Date)

PUBLIC NOTICE OF INTENT TO ISSUE AIR PERMIT MODIFICATION

Florida Department of Environmental Protection
Division of Air Resource Management, Bureau of Air Regulation
Draft Air Permit No. 0530021-016-AC (PSD-FL-091F)
CEMEX, Inc., South Brooksville Cement Plant Kiln 1
Hernando County

Applicant: The applicant for this project is Florida Crushed Stone Company d.b.a. as CEMEX, Inc. The applicant's authorized representative and mailing address is: Mr. James S. Daniel, Plant Manager, Cemex South Brooksville Cement Plant, 10311 Cement Plant Road, Brooksville, Florida 32669.

Facility Location: The applicant, CEMEX, operates the existing South Brooksville Cement Plant, which is located in Hernando County at 10311 Cement Plant Road in Brooksville, Florida.

Project: CEMEX submitted a permit modification application to install a tire injection mechanism system (TIMS) on Kiln 1. Tires were already permitted to be used as fuel for Kiln 1 by introduction near the feed end (cold side) of the kiln. The TIMS project will provide for introduction of tires near the product end of the kiln (hot side) without changing the permitted emission, production or fuel use limits. The permitted heat input rate for burning tires is 15 % of the total heat input rate to the kiln. However, the plant has operated only up to 8.5 % of the total heat input rate to the kiln due to burning tires.

Stack tests from CEMEX Kiln 1 and Brooksville North Kiln 2 in addition to tests at several other facilities show that nitrogen oxides (NO_x) emissions decrease as the percent of tire derived fuel (TDF) increases toward 15 %. In addition, stack tests from a similar cement kiln show that carbon monoxide (CO) emissions increase approximately 24 % as TDF firing increases to 15 %. Stack tests and continuous emissions monitoring data demonstrate that the other pollutant emissions stay relatively the same as TDF firing increases. The projected actual increase in CO emissions is 80.66 tons per year (TPY), which is less than the 100 TPY CO significant emission rate; for all other pollutants the projected actual increases is zero. Therefore, the net changes in all pollutant emissions are less than the Prevention of Significant Deterioration (PSD) significant emission rates and PSD does not apply to this project. An air quality impact analysis was not required. Emissions from this project will not significantly contribute to or cause a violation of any state or federal ambient air quality standards.

Permitting Authority: Applications for air construction permits are subject to review in accordance with the provisions of Chapter 403, Florida Statutes (F.S.) and Chapters 62-4, 62-210 and 62-212 of the Florida Administrative Code (F.A.C.). The proposed project is not exempt from air permitting requirements and an air permit is required to perform the proposed work. The Bureau of Air Regulation is the Permitting Authority responsible for making a permit determination for this project. The Permitting Authority's physical address is: 111 South Magnolia Drive, Suite 4, Tallahassee, Florida. The Permitting Authority's mailing address is: 2600 Blair Stone Road, Mail Station (MS) 5505, Tallahassee, Florida 32399-2400. The Permitting Authority's telephone number is 850/488-0114.

Project File: A complete project file is available for public inspection during the normal business hours of 8:00 a.m. to 5:00 p.m., Monday through Friday (except legal holidays), at address indicated above for the Permitting Authority. The complete project file includes the Draft Permit, the Technical Evaluation and Preliminary Determination, the application, and the information submitted

by the applicant, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Permitting Authority's project review engineer for additional information at the address or phone number listed above. In addition, electronic copies of these documents are available by entering the file number provided above where indicated on the following web site:

<http://www.dep.state.fl.us/air/eproducts/apds/default.asp> .

Notice of Intent to Issue Permit: The Permitting Authority gives notice of its intent to issue an air permit to the applicant for the project described above. The applicant has provided reasonable assurance that operation of the proposed equipment will not adversely impact air quality and that the project will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297, F.A.C. The Permitting Authority will issue a Final Permit in accordance with the conditions of the proposed Draft Permit unless a timely petition for an administrative hearing is filed under Sections 120.569 and 120.57, F.S. or unless public comment received in accordance with this notice results in a different decision or a significant change of terms or conditions.

Comments: The Permitting Authority will accept written comments concerning the proposed Draft Permit for a period of 14 days from the date of publication of the Public Notice. Written comments must be postmarked by the Permitting Authority by close of business (5:00 p.m.) on or before the end of this 14-day period. If written comments received result in a significant change to the Draft Permit, the Permitting Authority shall revise the Draft Permit and require, if applicable, another Public Notice. All comments filed will be made available for public inspection.

Petitions: A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed with (received by) the Department's Agency Clerk in the Office of General Counsel of the Department of Environmental Protection at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000. Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), F.S. must be filed within 14 days of publication of this Public Notice or receipt of a written notice, whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the Permitting Authority for notice of agency action may file a petition within 14 days of receipt of that notice, regardless of the date of publication.

A petitioner shall mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the Permitting Authority's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner; the name, address and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of when and how each petitioner received notice of the agency action or proposed decision; (d) A statement of all disputed issues of material fact. If there are none, the petition must so state; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement

of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action including an explanation of how the alleged facts relate to the specific rules or statutes; and, (g) A statement of the relief sought by the petitioner, stating precisely the action the petitioner wishes the agency to take with respect to the agency's proposed action. A petition that does not dispute the material facts upon which the Permitting Authority's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Permitting Authority's final action may be different from the position taken by it in this Public Notice. Persons whose substantial interests will be affected by any such final decision of the Permitting Authority on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

Mediation: Mediation is not available in this proceeding.

TECHNICAL EVALUATION
AND
PRELIMINARY DETERMINATION

Florida Crushed Stone Company (d.b.a. CEMEX, Inc.)
Installation of a Tire Injection Mechanism System (TIMS) on Kiln No.1
South Brooksville Facility
Portland Cement Plant
Hernando County

DEP File No. 0530021-016-AC
PSD-FL-091F

Department of Environmental Protection
Division of Air Resource Management
Bureau of Air Regulation

January 26, 2009

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

1. GENERAL PROJECT INFORMATION

Facility Description and Location

The facility is a portland cement plant, which is categorized under Standard Industrial Classification (SIC) Code No. 3241. The UTM coordinates are Zone 17; 360.00 km East and 3162.5 km North. This site 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 following map indicates the location of the existing CEMEX South Brooksville Cement Plant that consists of a portland cement line (Kiln 1) and a co-located power plant called Central Power and Lime. The picture is of the existing main baghouse and stack, which are shared by Kiln 1 and the power plant. A second line (Kiln 2) is presently under construction.



CEMEX South Brooksville Cement Plant. Baghouse and Stack for Kiln 1 and Power Plant Facility Regulatory Categories

Title III: The existing facility is identified as a potential major source of hazardous air pollutants (HAP).

Title IV: The existing facility has no units subject to the acid rain provisions of the Clean Air Act. A co-located coal-fueled power plant considered part of the facility applied to become a Title IV source.

Title V: The existing facility is a Title V major source of air pollution in accordance with Chapter 213, Florida Administrative Code (F.A.C.)

Prevention of Significant Deterioration (PSD): The existing facility is a PSD-major source of air pollution in accordance with Rule 62-212.400, F.A.C.

Project Description

CEMEX Cement submitted an application for an air construction permit modification for Kiln 1 subject to the preconstruction review requirements of Rule 62-212.300, F.A.C. Following is the description of the affected emissions unit. The application is available at:

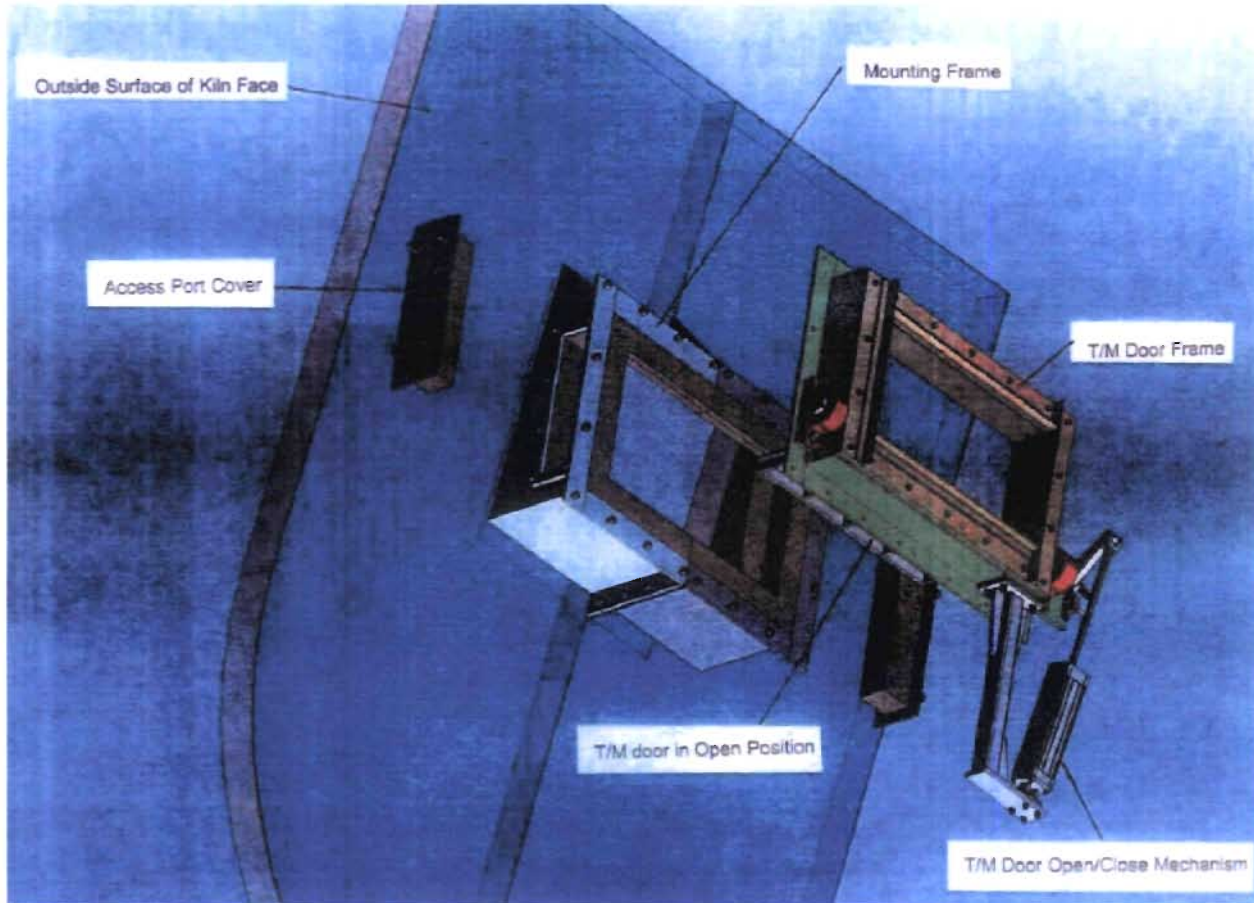
<http://arm-permit2k.dep.state.fl.us/psd/0530021/00003535.pdf>

The present description of the affected emissions unit given in the existing construction permit is given in the following table:

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

ID No.	EMISSIONS UNIT DESCRIPTION
020	Kiln No. 1, In-line Kiln/Raw Mill and Clinker Cooler 1 with baghouse

The project consists of the installation of a tire injection mechanism system (TIMS) near the product end (hot side) of Kiln 1. The TIMS will consist of a door located near the product end (hot side) of the kiln, a tire belt and roller apparatus, and a tire injection mechanism. The door is shown in the following diagram.



Components of the TIMS that will be physically attached to Kiln 1

The TIMS will use an automated “pitching” device (not shown) located outside of the kiln to shoot tires, one at a time, into the kiln. A single gate valve on the kiln will open for a few seconds every time a tire is shot into the hot side of the kiln. A video of the pitching mechanism can be accessed at the following link:

www.dep.state.fl.us/Air/permitting/construction/rinker/CEMEXTIMMovie.wmv

There will not be any other changes to the existing system to accommodate the TIMS. The project involves no changes in the previously permitted emission, production and fuel use limitations compared with those in the existing permit that was subject to the preconstruction review requirements of Rule 62-212.400, F.A.C. (PSD permit).

The original PSD permit for Kiln 1 authorized introduction of tires into the feed end (cold side) of the kiln amounting to 15 percent (%) of the allowable heat input. With the TIMS, the

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

authorized limit of 15% will still apply but there will be two injection points (feed end and product end) instead of one.

Processing Schedule

August 7, 2008	Received the application for a minor source air pollution construction permit
September 2, 2008	Request for Additional Information (RAI) letter issued
November 3, 2008	Received response to RAI letter; after several e-mails clarifying RAI letter, deemed complete

2. APPLICABLE REGULATIONS

State Regulations

This project is subject to the applicable environmental laws specified in Section 403 of the Florida Statutes (F.S.). The Florida Statutes authorize the Department of Environmental Protection to establish rules and regulations regarding air quality as part of the F.A.C. The original Kiln 1 project was subject to the applicable rules and regulations defined in the following Chapters of the F.A.C.

<u>Chapter</u>	<u>Description</u>
62-4	Permitting Requirements
62-204	Ambient Air Quality Requirements, PSD Increments, and Federal Regulations Adopted by Reference
62-210	Permits Required, Public Notice, Reports, Stack Height Policy, Circumvention, Excess Emissions, and Forms
62-212	Preconstruction Review, PSD Review and BACT, and Non-attainment Area Review and LAER
62-213	Title V Air Operation Permits for Major Sources of Air Pollution
62-296	Emission Limiting Standards
62-297	Test Methods and Procedures, Continuous Monitoring Specifications, and Alternate Sampling Procedures

Federal Regulations

The original project was also subject to the applicable federal provisions regarding air quality as established by the Environmental Protection Agency (EPA) in the following sections of the Code of Federal Regulations (CFR).

<u>Title 40, CFR</u>	<u>Description</u>
Part 60	Subpart A - General Provisions for NSPS Sources
	NSPS Subpart F - Standards of Performance for Portland Cement Plants.
	NSPS Subpart Y - Standards of Performance for Coal Preparation Plants.
	NSPS Subpart OOO - New Source Performance Standards For Nonmetallic Mineral Processing Plants.
	Applicable Appendices

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

<u>Title 40, CFR</u>	<u>Description</u>
Part 63	NESHAP Subpart A - National Emission Standards for Hazardous Air Pollutants – General Provisions. NESHAP Subpart LLL - National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry.

General PSD Applicability

The Department regulates major air pollution sources in accordance with Florida's PSD program, as approved by the EPA in Florida's State Implementation Plan and defined in Rule 62-212.400, F.A.C. A PSD review is required in areas currently in attainment with the state and federal Ambient Air Quality Standards (AAQS) or areas designated as "unclassifiable" for a given pollutant. A new facility is considered "major" with respect to PSD if it emits or has the potential to emit:

- 250 tons per year (TPY) or more of any regulated air pollutant, or
- 100 TPY or more of any regulated air pollutant and the facility belongs to one of the 28 PSD Major Facility Categories [Rule 62-210.200 (Major Stationary Source), F.A.C.], or
- 5 TPY of lead.

For new projects at PSD-major sources, each regulated pollutant is reviewed for PSD applicability based on emissions thresholds known as the "Significant Emission Rates" listed in definitions at Rule 62-210.200, F.A.C. Pollutant emissions from the project exceeding these rates are considered "significant" and the applicant must employ the Best Available Control Technology (BACT) to minimize emissions of each such pollutant and evaluate the air quality impacts. Although a facility may be "major" with respect to PSD for only one regulated pollutant, it may be required to install BACT controls for several "significant" regulated pollutants.

PSD Applicability for the TIMS Project on Kiln 1

A PSD permit (PSD-FL-091C) was issued in 1992 for the Kiln 1 to burn whole tires. The original permit (PSD-FL-091) to construct Kiln 1 was issued in 1984. No changes in permitted emissions, production or fuel use limitations are requested as authorized in PSD-FL-091C.

The existing plant emits or has the potential to emit 250 tons per year or more of at least one PSD pollutant. Therefore, the facility is a major stationary source. The average heat input due to firing tires currently is 8.5 % of the total kiln heat input. Since this is less than the maximum permitted firing rate of 15 % of the total heat input, a PSD baseline actual to future actual applicability analysis was performed

Stack tests from CEMEX Kiln 1 and Kiln 2 in addition to tests at several other facilities show that nitrogen oxide (NO_x) emissions decrease as the percent of tire derived fuel (TDF) increases toward 15 %. In addition stack tests from a similar cement kiln show that CO emissions increase approximately 24 % as TDF firing increases to 15 %. Stack tests and continuous emissions (CEM) data demonstrate that the other pollutant emissions stay relatively the same as TDF firing increases. The table below summarizes the results of this analysis. The net change in NO_x, particulate matter/particulate matter with a mean diameter equal to or less than 10 microns/ and particulate matter with a mean diameter equal to or less than 2.5 microns (PM/PM₁₀/PM_{2.5}), sulfur dioxide (SO₂), carbon monoxide (CO), volatile organic compounds (VOC) and mercury (Hg) emissions are

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

less than the Prevention of Significant Deterioration (PSD) significant emission rates. Therefore, PSD review does not apply to this project. No air quality analysis was required for this project.

Pollutant	Baseline Actual Emissions ^a (TPY)	Future Actual Emissions ^b (TPY)	Net Change in Emissions (TPY)	PSD Threshold (TPY)	PSD Applies ?
PM	20.5	20.5	0	25	No
PM ₁₀	18.05	18.05	0	15	No
PM _{2.5}	18.05	18.05	0	15	No
SO ₂	36.0	36.0	0	40	No
CO	336.10	416.76	80.66	100	No
NO _x	1205.50	1205.50	0	40	No
VOC	43.65	43.65	0	40	No
Hg	0.10	0.16	0.06 ^c	0.10	No

a. Based on annual operating reports (AOR) data 2003-2007.

b. Based on a 24 % increase in CO emissions going from 8.5 % TDF to 15 % TDF burning. Stack tests from CEMEX Kiln 1 and Kiln 2 in addition to tests at several other facilities show that NO_x emissions decrease as the percent of TDF increases toward 15 %. To be conservative, though, baseline emissions were set equal to future actual NO_x emissions. PM, PM₁₀, SO₂, Hg and VOC emissions are expected to be relatively the same (has been demonstrated through stack tests and CEM data at numerous cement plants). Therefore, future actual is equal to the baseline actual.

c. Net change in Hg emissions due to Kiln 2 PSD construction permit (0530021-009-AC, PSD-FL-351)

3. EMISSIONS STANDARDS

Brief Discussion of Emissions

Emissions from Kiln 1 are from the handling, drying and grinding of raw materials, calcination using fossil fuels and tires, and sintering to make product clinker. With the exception of CO emissions, emissions are not projected to increase due to this project. Hg emissions show a net increase due to the projected contemporaneous emissions associated with the Kiln 2 PSD construction permit. In order to provide reasonable assurance to the Department that Hg will not increase for Kiln 1 and that the Kiln's Hg emission limit of 0.03 pounds per hour will be met, the Department is requiring two stack compliance tests--one with the power plant, Kiln 1 and the raw mill on, and one with the power plant on, the kiln on and the raw mill off. A review by an expert in the Department suggests that significant amount of Hg removed from Florida coal fueled power plants, such as the CEMEX power plant can be re-emitted from an existing cement kiln that uses high loss on ignition (LOI) fly ash from these power plants. The use of unremediated fly ash as a raw material and fuel component has been in practice for several years and there may tend to be more Hg in this material than in the past. Hg enters primarily with the raw materials, including LOI flyash, via the raw mill. If the raw mill is turned off and the kiln continues operating using raw meal from the feed silo, a large portion of Hg trapped in the the process of operating with the raw mill on could be released until the raw mill is restarted.

Draft Permit Requirements

Because the manner by which tires are to be introduced into Kiln 1 is specifically described in the existing PSD permit, it is necessary to revise that permit to accommodate the TIMS description.

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

The only permit requirement for the TIMS involves language changes regarding the manner by which tires are introduced into Kiln 1. The following change will be made to Specific Condition 7 of Permit AC 27222095 (PSD-FL-091C). The changes are shown in double-underline form.

From:

Specific Condition 7.

Tire-derived fuel (TDF) may be introduced into the cement kiln only at a point at the base of the preheater (i.e., kiln inlet)

To:

Specific Condition 7.

Tire-derived fuel (TDF) may be introduced into the cement kiln only at a point at the base of the preheater (i.e., kiln inlet) or at the front-end of the kiln.

Test Methods and Monitoring

The test methods, monitoring and recordkeeping described in AC 27222095 (PSD-FL-091C) remain applicable and are adequate for the purposes of the TIMS project. An additional test for Hg emissions is being specified with this permit. In PSD-FL-090 and 091, Specific Condition A.2.h. specifies an Hg emission limitation of 0.03 lb/hr. Specific Condition B.12 specifies the compliance method for determining compliance with this emission limit. The following change will be made to Specific Condition B.12. The changes are shown in double-underline form, with omissions indicated by strikethrough.

From:

Specific Condition B. 12.

Compliance with the mercury limits in Specific Condition A.2.h shall be demonstrated, if required by EPA, in accordance with EPA Method 101A, and 40 CFR 60.8.

To:

Specific Condition B. 12.

Compliance with the mercury limits in Specific Condition A.2.h shall be demonstrated, ~~if required by EPA,~~ with two sets of test runs in accordance with EPA method 29, and 40 CFR 60.8. The first test set will be with the power plant, Kiln 1 and the raw mill turned on. There shall be three test runs of at least two hours in length. The second test set will be with the power plant on, Kiln 1 on, and the raw mill off. There shall be three test runs of at least two hours duration, with the first test run commencing 15 minutes after the raw mill is shut down. All three test runs should be completed within ten hours of commencing the first test run.

Initial testing shall be done within 60 calendar days of achieving permitted capacity, or within 180 operating days after the modification. Thereafter, testing shall be done on annual basis in accordance with Rule 62-297.310(7), F.A.C.

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

4. PRELIMINARY DETERMINATION

The Department makes a preliminary determination that the proposed project will comply with all applicable state and federal air pollution regulations as conditioned by the draft permit. This determination is based on a technical review of the complete application, reasonable assurances

TECHNICAL EVALUATION AND PRELIMINARY DETERMINATION

provided by the applicant, and the conditions specified in the draft permit. No air quality modeling analysis is required because the project does not result in a significant increase in emissions. Cleve Holladay is the project engineer responsible for reviewing the application and drafting the permit. Additional details of this analysis may be obtained by contacting the project engineer at the Department's Bureau of Air Regulation at Mail Station #5505, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400.

DRAFT PERMIT

Month Day, Year

Electronically Sent – Received Receipt Requested

jdaniel@cemexusa.com

Mr. James S. Daniel, Plant Manager
South Brooksville Cement Plant
Florida Crushed Stone Company
d.b.a. CEMEX, Inc.
10311 Cement Plant Road
Brooksville, Florida 32669

Re: DEP File 0530021-016-AC (PSD-FL-091F)
Installation of a Tire Injection Mechanism System (TIMS) on Kiln 1

Dear Mr. Daniel:

On August 7, 2008, CEMEX submitted a permit modification application to install a TIMS on Kiln 1. The Department evaluated the request in the Technical Evaluation and Preliminary Determination issued on January 14, 2009.

The only permit requirement for the TIMS involves language changes regarding the manner by which tires are introduced into Kiln 1. The following language was suggested by CEMEX to modify Specific Condition 7 of Permit AC 27222095 (PSD-FL-091C). The changes are shown in double-underline form.

From:

Specific Condition 7.

Tire-derived fuel (TDF) may be introduced into the cement kiln only at a point at the base of the preheater (i.e., kiln inlet)

To:

Specific Condition 7.

Tire-derived fuel (TDF) may be introduced into the cement kiln only at a point at the base of the preheater (i.e., kiln inlet) or at the front-end of the kiln.

A copy of this permit modification shall be filed with the Permit AC 27222095 (PSD-FL-091C) and shall become part of that permit. This permitting decision is issued pursuant to Chapter 403, Florida Statutes (F.S.).

With the exception of the following language pertaining to Hg emissions, The test methods, monitoring and recordkeeping described in AC 27222095 (PSD-FL-091C) remain applicable

and are adequate for the purposes of the TIMS project. An additional test for Hg emissions is being specified with this permit. In the original permits for this source, PSD-FL-090 and 091, Specific Condition A.2.h. specifies an Hg emission limitation of 0.03 lb/hr. Specific Condition B.12 specifies the compliance method for determining compliance with this emission limit. The following change will be made to Specific Condition B.12. The changes are shown in double-underline form with omissions indicated by strikethrough.

From:

Specific Condition B. 12.

Compliance with the mercury limits in Specific Condition A.2.h shall be demonstrated, if required by EPA, in accordance with EPA Method 101A, and 40 CFR 60.8.

To:

Specific Condition B. 12.

Compliance with the mercury limits in Specific Condition A.2.h shall be demonstrated, ~~if required by EPA,~~ with two sets of test runs in accordance with EPA method 29, and 40 CFR 60.8. The first test set will be with the power plant, Kiln 1 and the raw mill turned on. There shall be three test runs of at least two hours in length. The second test set will be with the power plant on, Kiln 1 on, and the raw mill off. There shall be three test runs of at least two hours duration, with the first test run commencing 15 minutes after the raw mill is shut down. All three test runs should be completed within ten hours of commencing the first test run.

Initial testing shall be done within 60 calendar days of achieving permitted capacity, or within 180 operating days after the modification. Thereafter, testing shall be done on annual basis in accordance with Rule 62-297.310(7), F.A.C.

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

Any party to this permit modification (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 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 thirty days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida.

Joseph Kahn, Director
Division of Air Resource Management

(Date)

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this letter modification was sent by electronic mail (or a link to this document made available electronically on a publicly accessible server) with received receipt requested before the close of business on _____ to the persons listed below.

James S. Daniel, CEMEX: jdaniel@cemexusa.com

Mara Nasca, DEP SWD: mara.nasca@dep.state.fl.us

Fawn Bergen, P.E., Koogler and Associates: fbergen@kooglerassociates.com

Administrator, Hernando County: gkuhl@hernandocounty.us

Kathy Forney, EPA Region 4: forney.kathleen@epamail.epa.gov

Victoria Gibson, DEP/DARM: victoria.gibson@dep.state.fl.us

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED,
on this date, pursuant to §120.52, Florida Statutes,
with the designated Department Clerk, receipt of
which is hereby acknowledged.

(Clerk)

(Date)

Livingston, Sylvia

From: Livingston, Sylvia
Sent: Monday, January 26, 2009 5:15 PM
To: jdaniel@cemexusa.com
Cc: Nasca, Mara; fbergen@kooglerassociates.com; gkuhl@hernandocounty.us; forney.kathleen@epamail.epa.gov; Gibson, Victoria; Holladay, Cleve (Cleve.Holladay@dep.state.fl.us); Walker, Elizabeth (AIR); Arif, Syed
Subject: CEMEX - BROOKSVILLE CEMENT AND POWER PLANTS; 0530021-016-AC
Attachments: 0530021-016-AC_Intent.pdf

Dear Sir/ Madam:

Attached is the official **Notice of Draft Permit** for the project referenced below. Click on the link displayed below to access the permit project documents and send a "reply" message verifying receipt of the document(s) provided in the link; this may be done by selecting "Reply" on the menu bar of your e-mail software, noting that you can view the documents, and then selecting "Send". We must receive verification that you are able to access the documents. Your immediate reply will preclude subsequent e-mail transmissions to verify accessibility of the document(s).

Click on the following link to access the permit project documents:

http://ARM-PERMIT2K.dep.state.fl.us/adh/prod/pdf_permit_zip_files/0530021.016.AC.D_pdf.zip

Owner/Company Name: FLORIDA CRUSHED STONE CO., INC.
Facility Name: BROOKSVILLE CEMENT AND POWER PLANTS
Project Number: 0530021-016-AC
Permit Status: DRAFT
Permit Activity: CONSTRUCTION
Facility County: HERNANDO
Processor: Cleve Holladay

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Sylvia Livingston
Bureau of Air Regulation
Division of Air Resource Management (DARM)
850/921-9506
sylvia.livingston@dep.state.fl.us

Note: The attached document is in Adobe Portable Document Format (pdf). Adobe Acrobat Reader can be downloaded for free at the following internet site: <http://www.adobe.com/products/acrobat/readstcp.html>.

Recipient	Delivery	Read
jdaniel@cemexusa.com Nasca, Mara fbergen@kooglerassociates.com gkuhl@hernandocounty.us forney.kathleen@epamail.epa.gov	Delivered: 1/26/2009 5:15 PM	
Gibson, Victoria	Delivered: 1/26/2009 5:15 PM	Read: 1/27/2009 9:15 AM
Holladay, Cleve (Cleve.Holladay@dep.state.fl.us)	Delivered: 1/26/2009 5:15 PM	
Walker, Elizabeth (AIR)	Delivered: 1/26/2009 5:15 PM	
Arif, Syed	Delivered: 1/26/2009 5:15 PM	

Livingston, Sylvia

From: Daniel, James S. (Jim) [JDaniel@cemexusa.com]
Sent: Monday, January 26, 2009 5:19 PM
To: Livingston, Sylvia
Cc: Townsend, George
Subject: RE: CEMEX - BROOKSVILLE CEMENT AND POWER PLANTS; 0530021-016-AC

Documents viewed.

From: Livingston, Sylvia [mailto:Sylvia.Livingston@dep.state.fl.us]
Sent: Monday, January 26, 2009 5:15 PM
To: Daniel, James S. (Jim)
Cc: Nasca, Mara; fbergen@kooglerassociates.com; gkuhl@hernandocounty.us; forney.kathleen@epamail.epa.gov; Gibson, Victoria; Cleve.Holladay@dep.state.fl.us; Walker, Elizabeth (AIR); Arif, Syed
Subject: CEMEX - BROOKSVILLE CEMENT AND POWER PLANTS; 0530021-016-AC

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Sylvia Livingston
Bureau of Air Regulation

Livingston, Sylvia

From: Nasca, Mara
Sent: Monday, January 26, 2009 5:31 PM
To: Livingston, Sylvia
Subject: RE: CEMEX - BROOKSVILLE CEMENT AND POWER PLANTS; 0530021-016-AC

Thanks Sylvia

From: Livingston, Sylvia
Sent: Monday, January 26, 2009 5:15 PM
To: jdaniel@cemexusa.com
Cc: Nasca, Mara; fbergen@kooglerassociates.com; gkuhl@hernandocounty.us; forney.kathleen@epamail.epa.gov; Gibson, Victoria; Holladay, Cleve; Walker, Elizabeth (AIR); Arif, Syed
Subject: CEMEX - BROOKSVILLE CEMENT AND POWER PLANTS; 0530021-016-AC

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Sylvia Livingston
Bureau of Air Regulation
Division of Air Resource Management (DARM)

Livingston, Sylvania

From: Livingston, Sylvania
Sent: Thursday, January 29, 2009 4:20 PM
To: 'countyadministrator@hernandocounty.us'
Subject: FW: CEMEX - BROOKSVILLE CEMENT AND POWER PLANTS; 0530021-016-AC
Attachments: 0530021-016-AC_Intent.pdf

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Sylvia Livingston
Bureau of Air Regulation
Division of Air Resource Management (DARM)
850/921-9506
sylvia.livingston@dep.state.fl.us

Note: The attached document is in Adobe Portable Document Format (pdf). Adobe Acrobat Reader can be downloaded for free at the following internet site: <<http://www.adobe.com/products/acrobat/readstep.html>> .