



KA 521-06-20  
September 15, 2006

Via Email and USPS

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Ms. Trina Vielhauer  
Florida Department of Environmental Protection  
Bureau of Air Regulation  
2600 Blair Stone Road MS 5500  
Tallahassee, FL 32399-2400

RECEIVED  
SEP 20 2006

BUREAU OF AIR REGULATION

**RE: *Cemex Cement, Inc.***  
***Brooksville Cement Plant***  
***FDEP File No.: 0530010-026- AC - Indirect Firing Systems for***  
***Kiln No. 1 and Kiln No. 2***  
***Additional Information***

Dear Trina,

On behalf of Cemex Cement, Inc. (Cemex), I would like to express our appreciation for you, Al Linero, Cindy Mulkey and the staff of the Department's Southwest District Office meeting with us at the Brooksville Cement Plant on September 12, 2006 to tour the plant and to discuss the various permitting projects that are currently under review by the Department. The purpose of this letter is to confirm the discussion we had regarding alternative burners for the indirect firing systems proposed for Kiln No. 1 and Kiln No. 2.

In the original air construction permit application, we stated that the indirect firing systems proposed for Kiln No. 1 and Kiln No. 2 would incorporate the Pillard Rotoflam® burners installed in or around April 2005 as part of the semi-direct firing systems. Since that application was submitted, Cemex has discussed the indirect firing systems in more detail with Pillard and has also requested a proposal from F.L. Smidth. As a result of these discussions, Cemex would like to amend the above-captioned application to allow for potential modifications to the existing Pillard burners and to allow for the alternative of replacing the Pillard burners with F.L. Smidth (FLS) burners.

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The potential modifications to the Pillard burners are shown in Attachment 1. These modifications may include, but are not necessarily limited to, new controls on the radial and axial air supplies, new solid fuel (coal and/or petroleum coke) feed to the burners, and new burner tips. None of these modifications will affect the principle of operation of the Pillard burners as described in the original application nor will the modifications adversely affect the performance of the burners or the potential air pollutant emissions from the two kiln systems.

The indirect firing system conceptually proposed by FLS is the same as that described in the original permit application. The conceptual proposal from FLS is included as Attachment 2 and shows the same indirect firing system as originally described with only the burners and the air/fuel controls associated with the burner being replaced. It is expected that if the FLS proposal is accepted, the Pillard burners will be replaced with FLS Duoflex® burner systems. The general operating principles of the FLS Duoflex® burner is the same as that described for the Pillard Rotoflam® burner. Hence, the choice of either of these burners will not change the principles of operation described in the original application, the expected performance nor emissions from the pyroprocessing system.

The Duoflex® burner as described by FLS is a multi-channel burner. The burner features a central duct for gaseous and liquid fuel firing mounted inside of an annular coal channel. The coal channel is surrounded by the radial and axial air channels. The air and fuel from the three channels are mixed into a single stream before being discharged through a conical air nozzle at the burner tip.

The primary air, which comprises approximate 6-8 percent of the stoichiometric combustion air, is supplied by a high pressure fan. When coupled with a variable area discharge nozzle, this allows the adjustment of burner exit momentum (and therefore

flame shape) independent of the primary air flow rate. The advantages cited by FLS for the Duoflex® burner system are similar to those described in the original permit application or the Pillard Rotoflam® burner system.

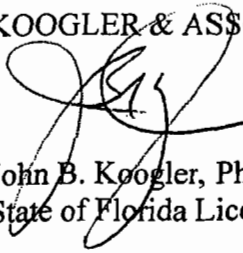
In summary, Cemex will use the existing Pillard Rotoflam® burner systems, those same systems with some modification, FLS Duoflex® burner systems or the equivalent in the proposed indirect firing systems. Whichever burner systems are decided upon, the principles of operation, the performance, and the expected emissions will be as described in the original permit application. Cemex will provide the Department with the final burner system description once a final decision has been made.

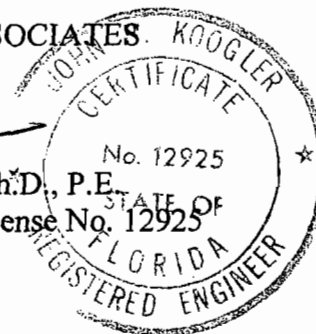
Again, I would like to express our appreciation for the meeting we had in Brooksville and for the effort you and your staff have put into reviewing the application and supplemental information for the indirect firing systems and the other air construction permit applications submitted by Cemex.

If there are any questions regarding information that I've provided herein or if there are any other questions related to the indirect firing systems, please contact me as soon as possible.

Very truly yours,

KOOGLER & ASSOCIATES

  
John B. Koogler, Ph.D., P.E.  
State of Florida License No. 12925



JBK/lt

Attachment



Ms. Trina Vielhauer  
September 15, 2006

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cc: Al Linero  
Cindy Mulkey  
Mara Nasca, SWD  
Jeet Gill, Cemex  
Mike Gonzales, Cemex  
Charlie Walz, Cemex



**Attachment 1**  
**Pillard Burner Modifications**

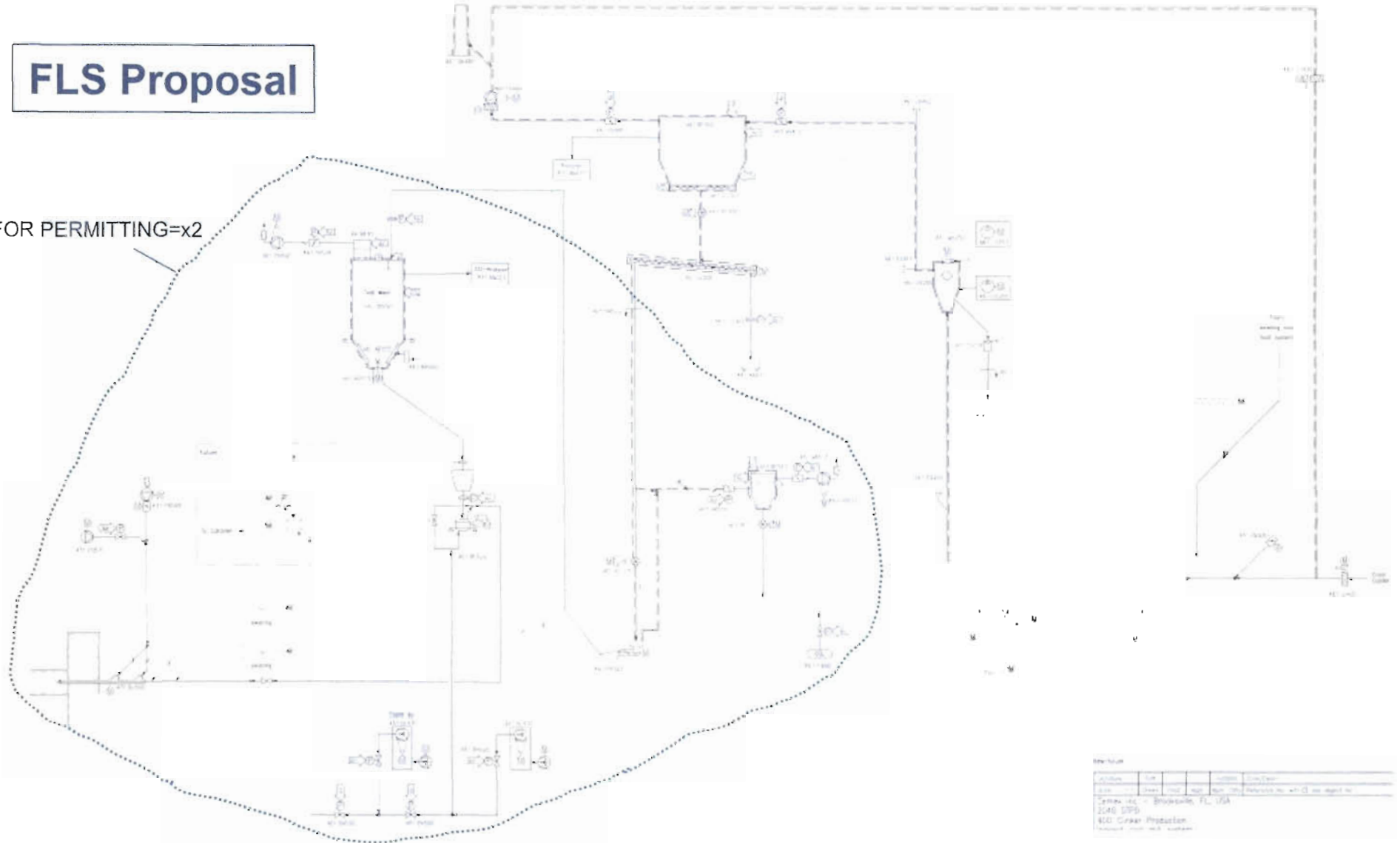


Attachment 2  
Conceptual FL Smidth Burner Proposal

# Brooksville: Fuel Firing Upgrade Proposal

## FLS Proposal

FOR PERMITTING=x2



NO.	DATE	BY	CHKD.	APP'D.	DESCRIPTION
1	11/11/11	J. J. ...	J. J. ...	J. J. ...	Issue for review
2	11/11/11	J. J. ...	J. J. ...	J. J. ...	Issue for review
3	11/11/11	J. J. ...	J. J. ...	J. J. ...	Issue for review

CEMEX, INC. - Brooksville, FL, USA  
 2010-2011  
 S.D. Crane Production  
 Project No. 1111-1111



# Brooksville: Fuel Firing Upgrade Proposal- FLS Burner

## FLS Proposal Burner Detail

