PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT MODIFICATION

Florida Department of Environmental Protection
Suwannee American Cement LLC
Suwannee American Cement Plant - Branford
Suwannee County
DEP File No.: 1210465-011-AC (PSD-FL-259F)

The Florida Department of Environmental Protection (Department) gives notice of its intent to issue an Air Construction Permit Modification to Suwannee American Cement LLC (SAC) to increase production, inject fly ash into the calciner, and install additional nitrogen oxides controls at the cement plant located on U.S. Highway 27, in Suwannee County. A new Best Available Control Technology (BACT) determination was not required. The permittee's name and address are: Suwannee American Cement LLC (SAC), Post Office Box 410, Branford, Florida 32008.

The plant started up in February 2003, is presently operating at or near full capacity under the provisions of its active construction permit, and has demonstrated compliance with the current BACT limitations. The company submitted an application for a Title V Operation Permit that is being processed by the Department.

Raw materials include sources of calcium, silica, aluminum, and iron such as limestone, sand, bauxite, clay, fly ash, iron ore, and mill scale. Allowable fuels are natural gas for startup, coal, tires, and petroleum coke. Tires and petroleum coke have not yet been burned at the facility. At the present time, the plant production capacity is limited to 105 tons per hour (TPH) of clinker.

SAC requests an increase in its hourly clinker production limit from 105 to 120 TPH and in annual production from 839,500 tons per year (TPY) to 965,425 TPY. SAC also proposes to inject fly ash directly into the calciner instead of introducing all of it with other raw materials at the preheater. This will make it possible to increase the amount of total raw materials entering the process, thus producing more clinker. The fuel use limit will be increased from 364 to 458 million BTU per hour.

Pollution control equipment consists of a fabric filter system (baghouse) for particulate emissions from the kiln; an electrostatic precipitator on the clinker cooler; absorption of sulfur compounds and metals into the product; raw materials selection and combustion controls for volatile organic compounds (VOC) and carbon monoxide (CO); indirect firing, multiple burn points and a staged combustion calciner for nitrogen oxides (NOX); and baghouses for particulate emissions from other process emission units. SAC will add an SNCR system to inject ammonia solutions into the calciner exhaust gases to provide additional NOX control flexibility.

The Department previously issued permits to SAC to conduct clinker production, fly ash injection and SNCR tests. The tests were conducted during the last quarter of 2004. The results of the test programs were submitted to the Department in support of the present request.

The Department is already required by the previous construction permit to set final emission limits for sulfur dioxide (SO2) and NOX. The final limit proposed for NOX of 2.4 lb/ton of clinker (30 day basis) is one of the lowest in the country. The 24-hour NOX limit of 2.9 lb/ton of clinker will be maintained. The 3-hour SO2 limit of 0.20 lb/ton of clinker is also one of the lowest limits issued to-date in the country. It reflects the use of raw materials that are inherently low in sulfur, very efficient scrubbing of combustion gases by finely divided lime in the calciner, and injection, as needed, of hydrated lime into the preheater.

The company proposes to reduce the CO emission limit from 3.6 to 3.34 lb/ton clinker; however the annual emission limit will increase by 99 tons. There may be small increases in PM/PM10 emissions due to increased production. Actual test data indicate that emissions are much less than presently allowed and SAC has proposed decreases in the PM/PM10 limits from 0.13/0.11 to 0.11/0.09 lb/ton of feed to the preheater. The PM/PM10 emission limits from the clinker cooler will also be reduced from 0.07/0.06 to 0.06/0.05 lb/ton of feed. The proposed production increase will not result in significant net emissions increases and a new evaluation under the rules for the Prevention of Significant Deterioration (PSD) is not required.

SAC has continuous emission monitoring systems (CEMS) for NOX, SO2, visible emissions, control equipment temperature, and total hydrocarbons with real-time transmission to the Department. Key data are available at: "http://www.suwanneecement.com".

Following are the net annual emission limit increases and decreases from the kiln and cooler compared with the original permit. Pollutant Permitted Emissions (TPY) Proposed Emissions (TPY) Net Emission Increases (Decreases) (TPY) PSD Significant Emission Rate (TPY) PM (kiln) 93 93 0 25 PM10 (kiln) 78 78 0 15 PM (cooler) 50 50 0 25 PM10 (cooler) 43 43 0 15 SO2 114 97 (17) 40 NOX 1218 1159 (59) 40 CO 1511 1610 99 100 VOC 50 58 8 40

The Department will issue the Final Permit Modification with the attached conditions unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions. The Department will accept written comments concerning the proposed permit action for a period of fourteen (14) days from the date of publication of this Public Notice of Intent to Issue Air Construction Permit Modification. Written comments should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit and require, if applicable, another Public Notice.

The Department will issue the Permit Modification with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to Sections 120.569 and 120.57, F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below. Mediation is not available in this proceeding.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions must be filed within fourteen (14) days of publication of this Public Notice of Intent to Issue Air Construction Permit Modification. Under Section 120.60(3), F.S., however, petitions submitted by person(s) who asked the Department for notice of agency action must be filed within fourteen (14) days of receipt of that notice or the date of publication of the public notice, whichever occurs first. 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 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 Department'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 how and when petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (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; and (g) A statement of the relief sought by the petitioner, stating precisely the action 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 Department'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 Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

A complete project file is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Department of Environmental Protection, Bureau of Air Regulation, 111 S. Magnolia Drive, Suite 4, Tallahassee, Florida, 32301, Telephone: (850) 921-9523, Fax: (850) 922-6979

Department of Environmental Protection, Northeast District Office, 7825 Baymeadows Way, Suite 200B, Jacksonville, Florida, 32256-7590 Telephone: (904) 807-3233, Fax: (904) 448-4363

The complete project file includes the Draft Air Construction Permit Modification, Technical Evaluation and the information submitted by the responsible official, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Program Administrator for the South Permitting Section, Bureau of Air Regulation, at 111 South Magnolia Drive, Suite 4, Tallahassee, Florida 32301, or call 850/921-8968 for additional information. The draft permit modification as well as original permit and BACT determination and any other permitting actions to-date can be viewed at www.dep.state.fl.us/air/permitting/construction/suwannee.htm

02/18

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Mr. Tom Messer, Plant Manager
Suwannee American Cement, LLC
Post Office Box 410
Branford, Florida 32008

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1 Article Addressed to:

Mr. Tom Messer, Plant Manager
Suwannee American Cement, LLC
Post Office Box 410
Branford, Florida 32008

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X [signature] ☒ Agent ☐ Addressee

B. Received by *(Printed Name)* T. Foster — C. Date of Delivery 3/18/05

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☒ No

3. Service Type
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2600 Blair Stone Rd., MS 5505
Tallahassee, FL 32399-2400

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Mr. Dan Fritz
Suwannee American Cement, LLC
Post Office Box 410
Branford, Florida 32008

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1 Article Addressed to:

Mr. Dan Fritz
Suwannee American Cement, LLC
Post Office Box 410
Branford, Florida 32008

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X P. Foster ☒ Agent ☐ Addressee

B. ~~Received by (Printed Name)~~ P. Foster

C. Date of Delivery 3/18/05

D. Is delivery address different from item 1? ☐ Yes
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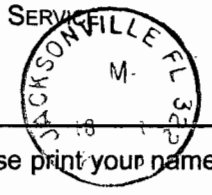

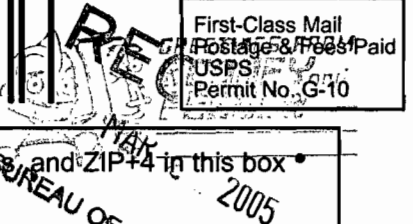

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Division of Air Resources Mgt.
Bureau of Air Regulation, NSR
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Tallahassee, FL 32399-2400

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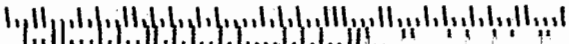

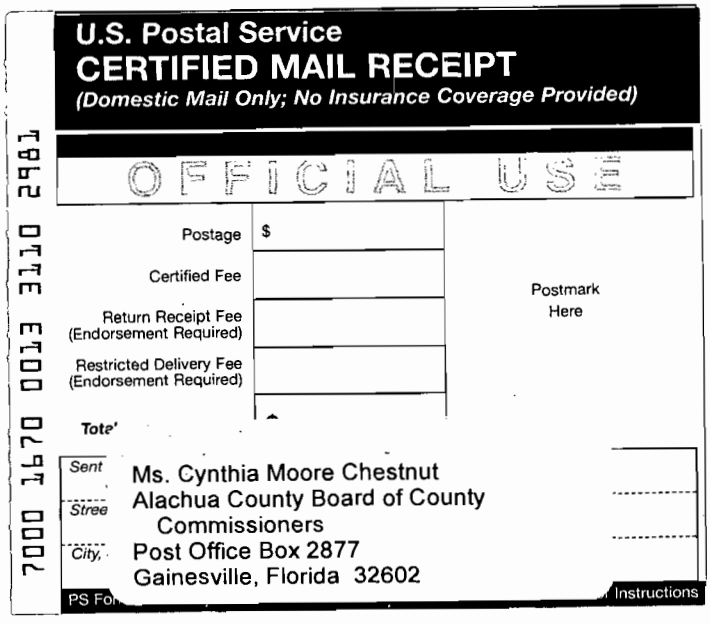

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Stree
City,

Ms. Cynthia Moore Chestnut
Alachua County Board of County Commissioners
Post Office Box 2877
Gainesville, Florida 32602

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1 Article Addressed to:

Ms. Cynthia Moore Chestnut
Alachua County Board of County Commissioners
Post Office Box 2877
Gainesville, Florida 32602

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X J Crew ☒ Agent ☐ Addressee

B. Received by (Printed Name) J. Crew
C. Date of Delivery 3-17-05

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

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4. Restricted Delivery? (Extra Fee) ☐ Yes

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Bureau of Air Regulation, NSR
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Tallahassee, FL 32399-2400

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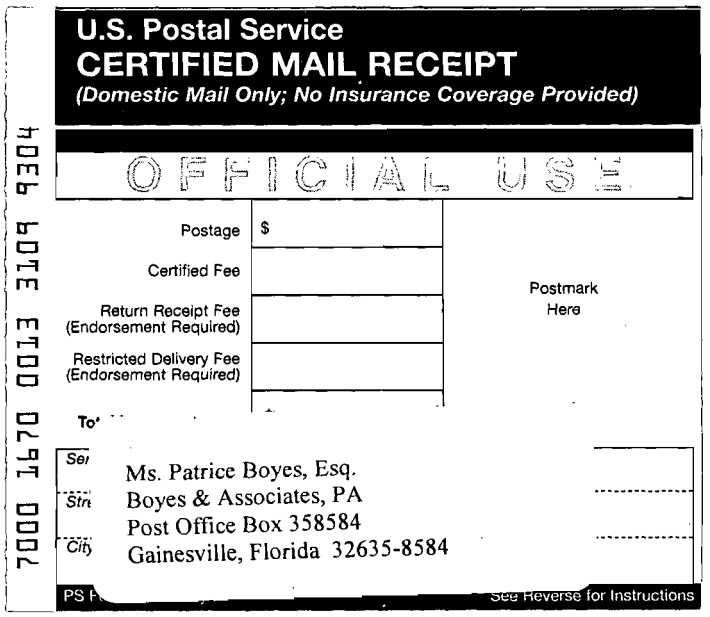

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Ser
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City

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Ms. Patrice Boyes, Esq.
Boyes & Associates, PA
Post Office Box 358584
Gainesville, Florida 32635-8584

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1 Article Addressed to:

Ms. Patrice Boyes, Esq.
Boyes & Associates, PA
Post Office Box 358584
Gainesville, Florida 32635-8584

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A. Signature
x [signature] ☐ Agent ☐ Addressee

B. Received by (Printed Name) NADIA LEA
C. Date of Delivery 3/17/05

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☒ No

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4. Restricted Delivery? *(Extra Fee)* ☐ Yes

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Tallahassee, FL 32399-2400

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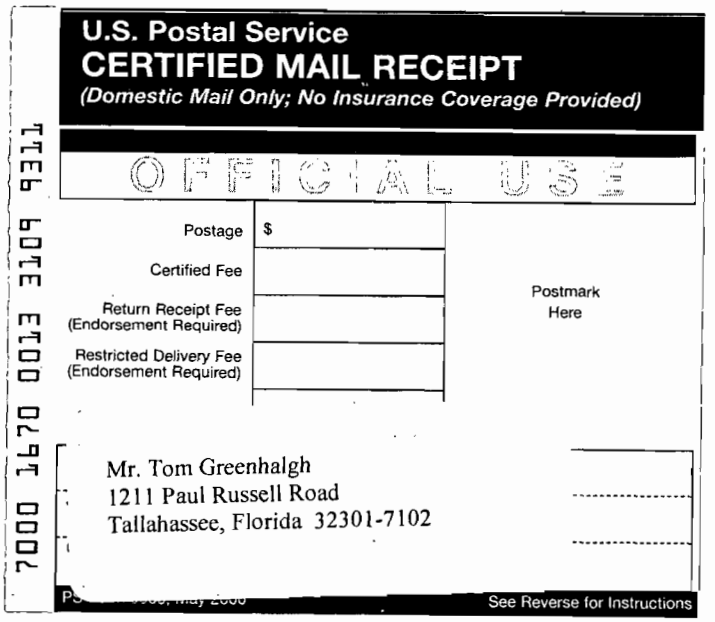

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Mr. Tom Greenhalgh
1211 Paul Russell Road
Tallahassee, Florida 32301-7102

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1 Article Addressed to:

Mr. Tom Greenhalgh
1211 Paul Russell Road
Tallahassee, Florida 32301-7102

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A. Signature
X [signature] ☐ Agent ☒ Addressee

B. Received by *(Printed Name)* JOANN GREENHALGH C. Date of Delivery 4/21/05

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☒ No

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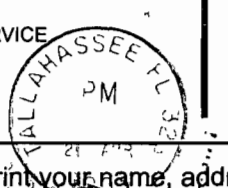

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Bureau of Air Regulation, NSR
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Tallahassee, FL 32399-2400

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Mr. Charles W. Yagel, President
Suwannee Industrial Solution, LLC
26841 CR 49
Branford, Florida 32008

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1 Article Addressed to:

Mr. Charles W. Yagel, President
Suwannee Industrial Solution, LLC
26841 CR 49
Branford, Florida 32008

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X Beryla Adams ☒ Agent ☐ Addressee

B. Received by (Printed Name) Beryla Adams
C. Date of Delivery 3/18/05

D. Is delivery address different from item 1? ☒ Yes
If YES, enter delivery address below: ☐ No
P.O. BOX 120
Branford, FL 32008

3. Service Type
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4. Restricted Delivery? *(Extra Fee)* ☐ Yes

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Bureau of Air Regulation, NSR
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Tallahassee, FL 32399-2400

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Mr. Larry Sellers, Jr., Esq.
Holland and Knight, LLP
Post Office Drawer 810
Tallahassee, Florida 32301

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1 Article Addressed to:

Mr. Larry Sellers, Jr., Esq.
Holland and Knight, LLP
Post Office Drawer 810
Tallahassee, Florida 32301

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X [signature] ☐ Agent ☐ Addressee

B. Received by (Printed Name) Chip Madden — C. Date of Delivery 3/22/05

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
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Division of Air Resources Mgt.
Bureau of Air Regulation, NSR
2600 Blair Stone Rd., MS 5505
Tallahassee, FL 32399-2400

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Restricted Delivery Fee (Endorsement Required)	

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Mr. Tom Greenhalgh
1211 Paul Russell Road
Tallahassee, Florida 32301-7102

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1 Article Addressed to:

Mr. Tom Greenhalgh
1211 Paul Russell Road
Tallahassee, Florida 32301-7102

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X Thomas H. Greenhalgh ☑ Agent ☑ Addressee

B. Received by *(Printed Name)* THOMAS H. GREENHALGH C. Date of Delivery 3/4/05

D. Is delivery address different from item 1? ☑ Yes
If YES, enter delivery address below: ☐ No

TALLAHASSEE FL MPO MAR 4 2005

3. Service Type
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☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

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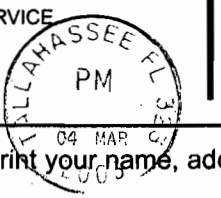

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Dept. of Environmental Protection
Division of Air Resources Mgt.
Bureau of Air Regulation, NSR
2600 Blair Stone Rd., MS 5505
Tallahassee, FL 32399-2400

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Mr. Larry Sellers, Jr., Esq.
Holland and Knight, LLP
Post Office Drawer 810
Tallahassee, Florida 32301

See Reverse for Instructions

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1 Article Addressed to:

Mr. Larry Sellers, Jr., Esq.
Holland and Knight, LLP
Post Office Drawer 810
Tallahassee, Florida 32301

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X Chip Madden ☐ Agent ☐ Addressee

B. Received by *(Printed Name)* Chip Madden
C. Date of Delivery 2/23/15

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
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4. Restricted Delivery? *(Extra Fee)* ☐ Yes

2 9120

PS 102595-02-M-1540

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2005

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Division of Air Resources Mgt.
Bureau of Air Regulation, NSR
2600 Blair Stone Rd., MS 5505
Tallahassee, FL 32399-2400

32399+2400

U.S. Postal Service
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7000 1670 0013 3110 2363

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To
Sen
Stre
City

Ms. Cynthia Moore Chestnut
Alachua County Board of County Commissioners
Post Office Box 2877
Gainesville, Florida 32602

PS Form 3800, May 2000 — See Reverse for Instructions

SENDER: ***COMPLETE THIS SECTION***

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1 Article Addressed to:

Ms. Cynthia Moore Chestnut
Alachua County Board of County Commissioners
Post Office Box 2877
Gainesville, Florida 32602

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X J. Crow ☐ Agent ☐ Addressee

B. Received by *(Printed Name)* J. Crow
C. Date of Deliv 2-22-00

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

2 Article Number
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MAR 01 2005
BUREAU OF AIR REGULATION

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Division of Air Resources Mgt.
Bureau of Air Regulation, NSR
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Tallahassee, FL 32399-2400

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7000 1670 0013 3110 2370

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Restricted Delivery Fee (Endorsement Required)	

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Mr. Charles W. Yagel, President
Suwannee Industrial Solution, LLC
26841 CR 49
Branford, Florida 32008

PS Form 3800, May 2000 — See Reverse for Instructions

SENDER: *COMPLETE THIS SECTION*

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- Attach this card to the back of the mailpiece, or on the front if space permits.

1 Article Addressed to:

Mr. Charles W. Yagel, President
Suwannee Industrial Solution, LLC
26841 CR 49
Branford, Florida 32008

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X [signature] ☐ Agent ☐ Addressee

B. Received by *(Printed Name)* CHARLES N. YAGER — C. Date of Delivery 2-25-05

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

2 Article Number *(Transfer from service label)* 7000 1670 0013 3110 2370

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Division of Air Resources Mgt
Bureau of Air Regulation, NSR
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Tallahassee, FL 32399-2400

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CERTIFIED MAIL RECEIPT
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Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	

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Cli

Ms. Patrice Boyes, Esq.
Boyes & Associates, PA
Post Office Box 358584
Gainesville, Florida 32635-8584

PS Form 3800, May 2000 — See Reverse for Instructions

SENDER: *COMPLETE THIS SECTION*

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1 Article Addressed to:

Ms. Patrice Boyes, Esq.
Boyes & Associates, PA
Post Office Box 358584
Gainesville, Florida 32635-8584

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X Gail Kluck ☐ Agent ☐ Addressee

B. Received by *(Printed Name)* GAIL KLUCK
C. Date of Delivery 2/22/05

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

U.S. POSTAL SERVICE GAINESVILLE FL 326
FEB 22 2005

3. Service Type USPS
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

2 Article Number *(Transfer from service label)* 7000 1670 0013 3109 8659

PS Form 3811, August 2001 Domestic Return Receipt 102595-02-M-1540

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Division of Air Resources Mgt
Bureau of Air Regulation, NSR
2600 Blair Stone Rd , MS 5505
Tallahassee, FL 32399-2400

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MAR 01 2005
BUREAU OF AIR REGULATION

01

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1. Article Addressed to:

Mr. Tom Messer, Plant Manager
Suwannee American Cement, LLC
Post Office Box 410
Branford, Florida 32008

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X Susan Vaughan ☐ Agent ☐ Addressee

B. Received by *(Printed Name)* Susan Vaughan | C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

2. Article Number
(Transfer from service label) 7000 1670 0013 3109 9137

PS Form 3811, August 2001 Domestic Return Receipt 102595-02-M-1540

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Certified Fee	
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7000 1670 0013 3109 9137

T

Se Mr. Tom Messer, Plant Manager
Str Suwannee American Cement, LLC
Cit Post Office Box 410
Branford, Florida 32008

PS Form 3800, May 2000 See Reverse for Instructions

SENDER: *COMPLETE THIS SECTION*

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- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mr. Celso Martini
Suwannee American Cement, LLC
Post Office Box 410
Branford, Florida 32008

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X P. Foster ☒ Agent ☐ Addressee

B. Received by (Printed Name) P. Foster | C. Date of Delivery 3/18/05

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☒ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

2. Article Number
(Transfer from service label) 7000 1670 0013 3110 2431

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Return Receipt Fee (Endorsement Required)	
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7000 1670 0013 3110 2431

Mr. Celso Martini
Suwannee American Cement, LLC
Post Office Box 410
Branford, Florida 32008

PS Form 3800, May 2000 ...erse for Instructions

Environmental Quality Management, Inc.
Cedar Terrace Office Park • Suite 250
3325 Durham-Chapel Hill Boulevard
Durham, North Carolina 27707
(919) 489-5299
FAX (919) 489-5552
www.eqm.com

September 21, 2005

Mr. Cleve Holladay
Air Dispersion Modeler
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Re: Revised Maps for the Proposed Suwannee American Cement Expansion
in Branford, Florida
PN 050430.0002

Dear Mr. Holladay:

As requested enclosed are the revised facility layout drawings for Suwannee American Cement (SAC) as revised on September 20, 2005.

If you have any questions concerning the drawings, please give me a call at (919) 489-5299.

Sincerely,

ENVIRONMENTAL QUALITY MANAGEMENT, INC.

Kent Berry DEO
Kent Berry
Clean Air Act Program Manager

JDD/drd

Enclosures

cc: J. Horton (SAC) – w/o enclosures
J. Koerner (DEP) – w/o enclosures

Florida Department of Environmental Protection
Cash Receiving Application (CRA)
Transmittal Sheet
Printed: 3/4/2005 5:11:13 PM - Page 1

Transmittal Number: **31715** Collection Point: **3755**
Total: **$7,500.00**
Number of Items: **1**
Date Created: **04-MAR-2005**
Deposit/Verified Date:

ADAMS_P	ADAMS_P	
Lister	Witness	Received By Accounting & Budgeting

DEPOSITED

Remittance Number	Received Date	PNR/ DEP DDN	Receipt Number	Check Number	Name	Remittance Amount	Payment Number	Payment Amount
609137	04-MAR-2005		491131	006384	SUWANNEE AMERICAN CEMENT	$7,500.00	668072	$7,500.0
Total To Be Deposited:						$7,500.00		

NOT DEPOSITED

Remittance Number	Received Date	PNR/ DEP DDN	Receipt Number	Check Number	Name	Remittance Amount	Payment Number	Payment Amount
Total Not Deposited						$0.00		

THE FACE OF THIS DOCUMENT HAS A COLORED BACKGROUND ON WHITE PAPER. THIS DOCUMENT HAS AN ORIGINAL WATERMARK VISIBLE WHEN HELD AT 45 DEGREE ANGLE.

445286 FEB 4 2005
006384

Wachovia
225 Jacksonville, FL.
32231

63-2/630

Suwannee American Cement, LLC.
PO BOX 410, BRANFORD, FL, 32008

DATE	U.S. FUNDS AMOUNT
02/01/2005	US$7,500.00

Seven Thousand Five Hundred Dollars and 00 Cents

Pay to the Order of:

Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400

[redacted]

FINAL DETERMINATION

Suwannee American Cement Plant

Modification to Increase Production, Inject Fly Ash into Calciner and Install a Selective Non-Catalytic Reduction System

DEP File No. 1210465-011-AC (PSD-FL-259F)

On February 17, 2005 the Florida Department of Environmental Protection (Department) distributed an "Intent to Issue Air Construction Permit Modification" to increase production, inject fly ash into the calciner, and install additional nitrogen oxides controls for the Suwannee American Cement Plant located on U.S. Highway 27, in Suwannee County.

The package included the Department's Draft Air Construction Permit Modification, the "Intent to Issue Air Construction Permit Modification," the "Technical Evaluation and Preliminary Determination," and the "Public Notice of Intent to Issue Air Construction Permit Modification." The Department sent copies of the package to various persons, agencies, and municipalities including those who had asked that they be informed of any Department permitting activities related to the subject facility. Suwannee American Cement, LLC published the Public Notice in The Suwannee Democrat on February 18, 2005 and provided to the Department the required proof of publication.

The Department received no comments from agencies or the public regarding the Draft Air Construction Permit. Suwannee American submitted comments by electronic mail dated March 1, 2005. Their comments are recited in italics and followed by the Department's response.

- *As requested in the Construction Permit Application submitted by SAC dated January 6, 2005 please include the increase in production for the Primary Crusher (Emission Unit 001) as it is related to the overall increase in process operations granted in Permit 1210465-011-AC.*

  The Department agrees that this request was part of the original application and will have minimal effects on ambient air emissions. It is a necessary element to accomplish the requested production increase. The raw materials at the Suwannee American operation are wet and do not tend to emit significant fugitive particulate matter. The affected specific condition in Section III, Subsection A is modified as follows:

  STATE REQUIREMENTS

  OPERATIONAL REQUIREMENTS

  2. Process Rate Limitation: The crusher shall not process more than ~~139,917~~ 165,155 tons of raw material in any month. [Rule 62-210.200, F.A.C., Definitions -- potential to emit (PTE)]

     [Note: This process rate is based on an estimated moisture content of raw material of 15% and includes the weight of this moisture. This monthly limit corresponds to an annual limit of ~~1,679,000~~ 1,981,860 tons per year. The applicant has estimated that the potential to emit from crushing, transfer and unloading operations is: PM 0.8, and PM_{10} 0.7 tons per year.]

- *In Section III, Operational Requirements 14 the Emissions Points for Emission Unit 002 are listed with the addition of Emission Units H-08A-01 (Dust collector for hydrated lime silo) and U-02-01 (Dust collector for fly ash silos). However, the Note at the bottom of the Table does not reflect the updated emission limit for the two new Emission Points. Please include the following information as included in the construction permit application submitted by SAC dated April 21, 2004.*

  The Department agrees that the request was in the original permit application for the fly ash injection project received on April 27, 2004. The corrected note is added to Specific Condition 14 in Section III, Subsection B as follows:

  [Note: These emission limits effectively limit annual emissions of PM for all emission points in this emission unit to ~~6.3~~ 8.3 tons per year. PM_{10} emissions are estimated to equal 85% of PM emissions, or ~~5.3~~ 7.3 tons per year. The particulate weight emission standards and the visible emissions limit of 5% opacity are BACT.]

The final action is to issue the Air Construction Permit Modification as drafted with the changes noted above.

Department of
Environmental Protection

Jeb Bush
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Colleen M. Castille
Secretary

March 7, 2005

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Tom Messer, Plant Manager
Suwannee American Cement
Post Office Box 410
Branford, Florida 32008

Re: DEP File No. 1210465-011-AC (PSD-FL-259F)
Production Increase, Fly Ash Injection, SNCR
Cement Plant – Branford, Suwannee County, Florida

Dear Mr. Messer:

The Florida Department of Environmental Protection ("the Department") reviewed your applications and subsequent submittals requesting a modification of the original air construction permit. The requests are to increase production capacity, inject fly ash into the calciner, and install a selective non-catalytic reduction (SNCR) system. The details of our review are discussed in the Technical Evaluation and Preliminary Determination issued on February 11, 2005.

This facility was originally authorized and constructed pursuant to Permit No. PSD-FL-259 issued on June 1, 2000. This permit action supplements Permit No. PSD-FL-259 and the changes dated November 8, 2002, January 16, 2003, May 6, 2003, October 18, 2004, and December 23, 2004 to that permit. Unless otherwise specified, this permit action does not alter any requirements of the original permit or its subsequent modification.

Additions are underlined; deletions are strikethrough.

SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

SUBSECTION A.

STATE REQUIREMENTS

OPERATIONAL REQUIREMENTS

2. Process Rate Limitation: The crusher shall not process more than ~~139,917~~ 165,155 tons of raw material in any month. [Rule 62-210.200, F.A.C., Definitions -- potential to emit (PTE)]

[Note: This process rate is based on an estimated moisture content of raw material of 15% and includes the weight of this moisture. This monthly limit corresponds to an annual limit of ~~1,679,000~~ 1,981,860 tons per year. The applicant has estimated that the potential to emit from crushing, transfer and unloading operations is: PM 0.8, and PM_{10} 0.7 tons per year.]

SUBSECTION B.

STATE REQUIREMENTS

OPERATIONAL REQUIREMENTS

1. Fuels: Fuels fired in the pyroprocessing system (kiln and calciner) shall not exceed a total maximum heat input of ~~364~~ 458 million Btu per hour (mmBtu/hr) and shall consist only of natural gas, coal, petroleum coke, whole tires and tire derived fuel. Usage of tires and tire derived fuel shall be in compliance with the following limits and conditions:

   The remainder of Condition 1 is unchanged.

4. Process Rate Limitations: The kiln shall not process more than ~~178~~ 210 tons per hour of dry preheater feed and dry fly ash fed directly to the calciner ~~per hour~~ and shall not produce more than ~~105~~ 120 tons of clinker per hour. The facility shall not produce more than 150 tons of cement per hour. Process and production rates shall be further limited to ~~1,427,880~~ 1,684,578 tons of dry preheater feed and dry fly ash in any consecutive 12-month period, ~~839,500~~ 965,425 tons of clinker in any consecutive 12-month period, and 1,191,360 tons of portland cement in any consecutive 12-month period.

   The clinker production rate identified in the above paragraph shall be determined by the following equation:

   Clinker Production = [(Feed) (Kiln Feed LOI Factor) + (Fly Ash Injection) (Fly Ash LOI Factor)]

   Where:

   • Kiln feed is determined by the Poldos control system.

   • Fly ash is determined from the rotary feed system or equivalent.

   • LOI for the kiln feed and fly ash is based on a 30 operating-day block average of daily measurements. For purposes of this requirement, an operating day is any day that the kiln produces clinker or fires fuel.

   [Rule 62-210.200, F.A.C., Definitions - potential to emit (PTE)]

COMBUSTION AND PROCESS CONTROL TECHNOLOGY

11. Combustion and Process Control Technology: The owner or operator shall install and operate - multistage combustion, with a separate line combustion chamber at the precalciner, for control of NOx emissions. The owner or operator shall control emissions of CO and VOC through control of the combustion process. The owner or operator shall control emissions of SO_2 through design and control of the clinker production process.

    The owner or operator may install and operate a selective non-catalytic reduction (SNCR) system, including a tank, pumps, piping, and metering equipment to inject ammonia solutions (including ammonia < 19 percent strength, urea, etc.) between the lowest cyclone and the calciner to control NOx emissions. The ammonia injection rate shall not exceed 450 liters per hour (1-hour block for a solution containing 19% ammonia) in order to minimize ammonia emissions (slip). To demonstrate compliance, the owner or operator shall continuously monitor and record the ammonia injection rate.

    {Note: the maximum ammonia injection rate is equivalent to an NH_3/NO_x molar ratio of 1.0 presuming baseline uncontrolled NO_x emissions of 4 lb/ton of clinker.}

    [Rules 62-4.070(3) and 62-212.400, F.A.C., and BACT]

14. Emissions Unit 002: Emissions unit 002 shall have the following emission points:

EMISSION POINT	DESCRIPTION
E-28	Dust collector – Aeropol at the homogenizing silo
E-34	Dust collector for off-spec feed handling
G-07	Dust collector for homogenizing silo inlet
H-08	Dust collector for homogenizing silo outlet
H-08A-01	Dust collector for hydrated lime silo E-30-01
U-02-01	Dust collector for fly ash silos U-01-01

This permit modification allows the use on a permanent basis of the following equipment for the injection of fly ash into the calciner: fly ash silos, baghouse, control system and associated ductwork. Fly ash may be injected into the calciner in addition to previously permitted introduction via the top of the preheater. The remainder of Condition 14, with the exception of the changes to the existing following note, is unchanged

[Note: These emission limits effectively limit annual emissions of PM for all emission points in this emission unit to ~~6.3~~ 8.3 tons per year. PM_{10} emissions are estimated to equal 85% of PM emissions, or ~~5.3~~ 7.3 tons per year. The particulate weight emission standards and the visible emissions limit of 5% opacity are BACT.]

EMISSION LIMITATIONS AND PERFORMANCE STANDARDS

15. Emissions Unit 004: Emissions unit 004 shall have one emission point, the stack of the in-line kiln/raw mill, designated by the applicant as E-21. Particulate matter emissions from this emissions unit shall be controlled by a baghouse.

Emissions from emissions unit 004, the in-line kiln/raw mill, shall not exceed the following limits for the following pollutants: [Emissions from the natural gas fired air heater are included in the limits below]

POLLUTANT	EMISSION LIMIT		AVERAGING TIME	BASIS
PM	~~0.13~~ 0.11 lb/ton of dry preheater feed	23.1 lb/hour	3 hours [3]	BACT
PM_{10}	~~0.11~~ 0.093 lb/ton of dry preheater feed	19.6 lb/hour	3 hours [3]	BACT
SO_2	~~0.27~~ 0.20 lb/ton of clinker	~~28.4~~ 24.0 lb/hour	3 hours [4]	BACT
NO_X	2.9 lb/ton of clinker [1]	304.5 lb/hour [1]	24 hours [4]	BACT
	2.4 lb/ton of clinker [1]	288 lb/hour [1]	30 days [4]	
CO	~~3.6~~ 3.34 lb/ton of clinker	~~378.0 lb/hour~~ 400.3 lb/hour	3 hours [5]	BACT
VOC	0.12 lb/ton of clinker [2]	~~12.6 lb/hour~~ [2] 14.4 lb/hour [2]	30 days [6]	BACT
VE	10% opacity		6 minutes [7]	BACT

[1] NOx emissions shall not exceed 3.8 lb/ton of clinker and 399.0 lb/hour during the first 12 months after initial startup. After 12 months after initial plant startup, emissions of NOx shall not exceed the limits shown in the table. Emissions of NOx up to 600 lb/hr for up to one hour in duration shall be allowed for each startup of the pyroprocessing system which occurs when there is no material in the kiln.

Malfunction of the SNCR system is defined as any unavoidable mechanical and/or electrical failure that prevents introduction of ammonia-based solutions into the kiln system. In accordance with the following limits, the exclusion of NOx data collected during periods of malfunction and/or repair of the SNCR system is allowed when demonstrating compliance with the 24-hour NOx standard: no more than 6 hours per calendar day and no more than 30 hours in any 30 operating-day block. Within one working day of occurrence, the permittee shall notify the Department's Northeast District office of any malfunction of the SNCR system.

If SNCR is added, a permanent tank for the storage of ammonia-based solutions shall be installed. During construction of the permanent tank, temporary storage tanks may be used. An additional 4 hours of NOx data exclusion is allowed for each switch between temporary storage tanks. This 4-hour data exclusion is in addition to the data exclusion allowed above for each calendar day and for each 30 operating-day block. No more than 12 hours of NOx data in any 30 operating-day block shall be excluded due to switching between temporary tanks. Within one working day of occurrence, the permittee shall notify the Department's Northeast District office of each switch between temporary storage tanks. Once the permanent ammonia storage is complete, no NOx data shall be excluded due to switching between temporary tanks.

All valid NOx hourly averages shall be included into the 30 operating-day block average.

No changes in Note 2

[4] The averaging time for the short-term NOx limit shall be a 24-hour rolling average computed in accordance with specific condition 18 of this subsection. The averaging time for the long-term NOx limit shall be a 30 operating-day block average computed in accordance with specific condition 18 of this subsection. The averaging time for SO_2 shall be a 3-hour rolling average computed in accordance with specific condition 18 of this subsection.

No changes in Notes 5-7

[Note: These emission limits, along with annual production limits, effectively limit annual emissions to: PM, 92.8; PM10, 78.4; SO2, ~~113.4~~ 96.5; NOx, ~~1217.5~~ 1158.5; CO, ~~1511.1~~ 1610.1; and VOC, ~~50.4~~ 58.0 tons per year. First year NOx emissions are effectively limited to 1595.4 tons per year. NOx emissions are estimated assuming that two startups as specified occur per year, each resulting in maximum allowable excess emissions. Mercury introduced into the pyroprocessing system is limited pursuant to specific condition 13 of this subsection of this permit; annual emissions of mercury are effectively limited by this condition to 97 pounds per year.]

[Rules 62-4.070(3) and 62-212.400, F.A.C., and BACT]

The remainder of Condition 15 is unchanged

16. Emissions Unit 005: Emissions unit 005 shall have one emission point, the stack of the clinker cooler, designated by the applicant as K-15. Particulate matter emissions from this emissions unit shall be controlled by an electrostatic precipitator.

Emissions from emissions unit 005, the clinker cooler, shall not exceed the following limits for the following pollutants:

POLLUTANT	EMISSION LIMIT		AVERAGING TIME	BASIS
PM	~~0.07~~ 0.06 lb/ton of dry preheater feed	12.5 lb/hour	3 hours [1]	BACT
PM_{10}	~~0.06~~ 0.051 lb/ton of dry preheater feed	10.7 lb/hour	3 hours [1]	BACT
VE	10% opacity		6 minutes [2]	BACT

The notes and remainder of Condition 16 is unchanged

COMPLIANCE MONITORING AND TESTING REQUIREMENTS

18. **Continuous Emission Monitoring Systems**: The owner or operator shall install, calibrate, maintain, and operate a continuous emission monitoring (CEM) system in the in-line kiln/raw mill stack to measure and record the emissions of NO_X, SO_2, and VOC from the in-line kiln/raw mill, in a manner sufficient to demonstrate compliance with the emission limits of this permit. The CEM system shall express the results in units of pounds per ton of clinker produced, and pounds per hour.

    a. *Compliance Demonstration*: Compliance with the short-term emission limit for NO_X shall be based on a 24-hour rolling average that shall be recomputed after every valid hour as the arithmetic average of that hourly average and the preceding 23 valid hourly averages. Compliance with the emission limit for SO_2 shall be based on a rolling 3-hour average that shall be recomputed after every valid hour as the arithmetic average of that hourly average and the preceding two valid hourly averages. Compliance with the emission limits for VOC and long-term NOx shall be based on a 30 operating-day block average that shall be computed as the arithmetic average of all valid hourly averages occurring within each 30 operating-day block. For purposes of the VOC and long-term NOx limits, an operating day is any day that the kiln produces clinker and/or fires fuel.

Conditions 18b through 18g remain unchanged.

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

[Note: Continuous opacity monitor (COM) systems shall be installed, operated, and maintained at the kiln/raw mill baghouse stack and the outlet of the clinker cooler ESP pursuant to 40 CFR 60.63. A continuous emission monitor for emissions of total hydrocarbon is required pursuant to 40 CFR 63.1349 and 63.1350 ~~63.1450~~. A continuous monitor for the temperature at the inlet to the in-line kiln/raw mill baghouse is required pursuant to 40 CFR 63.1349 and 63.1350 ~~63.1450~~.]

SUBSECTION C.

OPERATIONAL REQUIREMENTS

2. Process Rate Limitation: The coal mill shall not crush more than ~~10,658~~ 13,360 tons of coal and petroleum coke in any month.
   [Rule 62-210.200, F.A.C., Definitions -- potential to emit (PTE)]
   [Note: This monthly limit corresponds to an annual limit of ~~127,896~~ 160,300 tons per year.]

A copy of this letter shall be filed with the referenced permit and shall become part of the permit.

Any party to this permitting decision (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

Michael G. Cooke, Director
Division of Air Resource Management

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this PERMIT MODIFICATION was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 3/15/05 to the person(s) listed:

Tom Messer, SAC*
Celso Martini, SAC*
Dan Fritz, SAC*
Joe Horton, SAC
Larry Sellers, Esq.*
Steve Cullen, P.E.
John Koogler, P.E.
Chris Kirts, DEP NED
Jim Little, EPA
John Bunyak, NPS
Frank Darabi, P.E
Jim Stevenson
Tom Workman, DEP
Mark Latch, DEP
December McSherry
Svenn Lindskold
Tom Greenhalgh*
Dave Bruderly
Chris Bird, Alachua Co. DER
Chair, Alachua Co. BCC*
J. Calvin Gaddy
Patrice Boyes, Esq.*
Kathy Cantwell
Ralph Ashodian
Virginia Seacrist
Bob and Lynn Milner
Linda Pollini
Helen Beaty
Bessie Robinson
Craig Pittman, St. Pete Times
Chuck Yagel*

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.

Mary F. Harry 3/15/05
(Clerk) (Date)

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mr. Celso Martini
Suwannee American Cement, LLC
Post Office Box 410
Branford, Florida 32008

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X P. Foster ☒ Agent ☐ Addressee

B. Received by (Printed Name) P. Foster
C. Date of Delivery 3/18/05

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☒ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Transfer from service label) 7000 1670 0013 3110 2431

PS Form 3811, August 2001 Domestic Return Receipt 102595-02-M-1540

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

Postage	$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	

Postmark Here

7000 1670 0013 3110 2431

Mr. Celso Martini
Suwannee American Cement, LLC
Post Office Box 410
Branford, Florida 32008

PS Form 3800, May 2000 ... Reverse for Instructions

The Suwannee Democrat

Published Weekly
Post Office Box 370- Phone 362-1734
Live Oak, Suwannee County, Florida 32064

STATE OF FLORIDA
COUNTY OF SUWANNEE:

Before the undersigned authority personally appeared

Louise Sheddan

who on oath says that she is
Legal Secretary

of The Suwannee Democrat, a weekly newspaper published at Live Oak in Suwannee County, Florida; that the attached copy of advertisement, being a

PUBLIC NOTICE

in the matter of

AIR CONSTRUCTION PERMIT MODIFICATION

was published in said newspaper in the issues of

FEBRUARY 18, 2005

Affiant further says that the said , The Suwannee Democrat is a newspaper published at Live Oak in said Suwannee County, Florida, and that the said newspaper has heretofore been continuously published in said Suwannee County, Florida, each week and has been entered as second class mail matter at the post office in Live Oak, in said Suwannee County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that he has neither paid nor promised any person, firm or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in said newspaper.

Louise Sheddan

Sworn to and subscribed before me this 22nd day of February, 2005.

(SEAL) Notary Public

Personally known X or produced identification_____

Type of identification produced_____,

MONJA ROBINSON
Notary Public, State of Florida
My comm. exp. Dec. 13, 2008
Comm. No. DD 378886

Received Feb. 25, 2005

PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT MODIFICATION

Florida Department of Environmental Protection
Suwannee American Cement LLC
Suwannee American Cement Plant - Branford
Suwannee County
DEP File No.: 1210465-011-AC (PSD-FL-259F)

The Florida Department of Environmental Protection (Department) gives notice of its intent to issue an Air Construction Permit Modification to Suwannee American Cement LLC (SAC) to increase production, inject fly ash into the calciner, and install additional nitrogen oxides controls at the cement plant located on U.S. Highway 27, in Suwannee County. A new Best Available Control Technology (BACT) determination was not required. The permittee's name and address are: Suwannee American Cement LLC (SAC), Post Office Box 410, Branford, Florida 32008.

The plant started up in February 2003, is presently operating at or near full capacity under the provisions of its active construction permit, and has demonstrated compliance with the current BACT limitations. The company submitted an application for a Title V Operation Permit that is being processed by the Department.

Raw materials include sources of calcium, silica, aluminum, and iron such as limestone, sand, bauxite, clay, fly ash, iron ore, and mill scale. Allowable fuels are natural gas for startup, coal, tires, and petroleum coke. Tires and petroleum coke have not yet been burned at the facility. At the present time, the plant production capacity is limited to 105 tons per hour (TPH) of clinker.

SAC requests an increase in its hourly clinker production limit from 105 to 120 TPH and in annual production from 839,500 tons per year (TPY) to 965,425 TPY. SAC also proposes to inject fly ash directly into the calciner instead of introducing all of it with other raw materials at the preheater. This will make it possible to increase the amount of total raw materials entering the process, thus producing more clinker. The fuel use limit will be increased from 364 to 458 million BTU per hour.

Pollution control equipment consists of a fabric filter system (baghouse) for particulate emissions from the kiln; an electrostatic precipitator on the clinker cooler; absorption of sulfur compounds and metals into the product; raw materials selection and combustion controls for volatile organic compounds (VOC) and carbon monoxide (CO); indirect firing, multiple burn points and a staged combustion calciner for nitrogen oxides (NOX); and baghouses for particulate emissions from other process emission units. SAC will add an SNCR system to inject ammonia solutions into the calciner exhaust gases to provide additional NOX control flexibility.

The Department previously issued permits to SAC to conduct clinker production, fly ash injection and SNCR tests. The tests were conducted during the last quarter of 2004. The results of the test programs were submitted to the Department in support of the present request.

The Department is already required by the previous construction permit to set final emission limits for sulfur dioxide (SO2) and NOX. The final limit proposed for NOX of 2.4 lb/ton of clinker (30 day basis) is one of the lowest in the country. The 24-hour NOX limit of 2.9 lb/ton of clinker will be maintained. The 3-hour SO2 limit of 0.20 lb/ton of clinker is also one of the lowest limits issued to-date in the country. It reflects the use of raw materials that are inherently low in sulfur, very efficient scrubbing of combustion gases by finely divided lime in the calciner, and injection, as needed, of hydrated lime into the preheater.

The company proposes to reduce the CO emission limit from 3.6 to 3.34 lb/ton clinker; however the annual emission limit will increase by 99 tons. There may be small increases in PM/PM10 emissions due to increased production. Actual test data indicate that emissions are much less than presently allowed and SAC has proposed decreases in the PM/PM10 limits from 0.13/0.11 to 0.11/0.09 lb/ton of feed to the preheater. The PM/PM10 emission limits from the clinker cooler will also be reduced from 0.07/0.06 to 0.06/0.05 lb/ton of feed. The proposed production increase will not result in significant net emissions increases and a new evaluation under the rules for the Prevention of Significant Deterioration (PSD) is not required.

SAC has continuous emission monitoring systems (CEMS) for NOX, SO2, visible emissions, control equipment temperature, and total hydrocarbons with real-time transmission to the Department. Key data are available at: "http://www.suwanneecement.com".

Following are the net annual emission limit increases and decreases from the kiln and cooler compared with the original permit. Pollutant Permitted Emissions (TPY) Proposed Emissions (TPY) Net Emission Increases (Decreases) (TPY) PSD Significant Emission Rate (TPY) PM (kiln) 93 93 0 25 PM10 (kiln) 78 78 0 15 PM (cooler) 50 50 0 25 PM10 (cooler) 43 43 0 15 SO2 114 97 (17) 40 NOX 1218 1159 (59) 40 CO 1511 1610 99 100 VOC 50 58 8 40

The Department will issue the Final Permit Modification with the attached conditions unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions. The Department will accept written comments concerning the proposed permit action for a period of fourteen (14) days from the date of publication of this Public Notice of Intent to Issue Air Construction Permit Modification. Written comments should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit and require, if applicable, another Public Notice.

The Department will issue the Permit Modification with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to Sections 120.569 and 120.57, F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below. Mediation is not available in this proceeding.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions must be filed within fourteen (14) days of publication of this Public Notice of Intent to Issue Air Construction Permit Modification. Under Section 120.60(3), F.S., however, petitions submitted by person(s) who asked the Department for notice of agency action must be filed within fourteen (14) days of receipt of that notice or the date of publication of the public notice whichever occurs first. 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 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 Department'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 how and when petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (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; and (g) A statement of the relief sought by the petitioner, stating precisely the action 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 Department'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 Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

A complete project file is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Department of Environmental Protection, Bureau of Air Regulation, 111 S. Magnolia Drive, Suite 4, Tallahassee, Florida, 32301, Telephone: (850) 921-9523, Fax: (850) 922-6979

Department of Environmental Protection, Northeast District Office, 7825 Baymeadows Way, Suite 200B, Jacksonville, Florida, 32256-7590 Telephone: (904) 807-3233, Fax: (904) 448-4363

The complete project file includes the Draft Air Construction Permit Modification, Technical Evaluation and the information submitted by the responsible official, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Program Administrator for the South Permitting Section, Bureau of Air Regulation, at 111 South Magnolia Drive, Suite 4, Tallahassee, Florida 32301, or call 850/921-8968 for additional information. The draft permit modification as well as original permit and BACT determination and any other permitting actions to-date can be viewed at www.dep.state.fl.us/air/permitting/construction/suwannee.htm

02/18

Department of Environmental Protection

Jeb Bush
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Colleen M. Castille
Secretary

PERMITTEE

Suwannee American Cement, LLC
Post Office Box 410
Branford, Florida 32008

SAC Branford Cement Plant
DEP File No. 1210465-011-AC
Permit No. PSD-FL-259F

PROJECT DESCRIPTION

This is a portland cement manufacturing facility that uses raw materials such as limestone, clay, iron ore, bauxite, mill scale, fly ash, etc. in a coal-fueled pyroprocessing system to make clinker. The clinker is subsequently cooled, milled, combined with gypsum and shipped in bulk or bags as cement. The applicant proposes to: inject some of the fly ash directly into the calciner; install a selective non-catalytic reduction system (SNCR); increase production from 105 to 120 tons per hour; increase CO emissions by 99 tons per year; take a 30-day NO_X limit of 2.4 lb/ton of clinker; and take a 3-hour SO_2 limit of 0.20 lb/ton of clinker.

The manufacturer, Polysius submitted a letter attesting to structural integrity of the system; inherent overdesign, and to the possibility of increased production by operational changes. Based on tests conducted under temporary permits allowing temporary production increase, SNCR, and fly ash injection, SAC demonstrated they can achieve a production rate of at least 115 TPH while meeting their permitted emission factors (BACT limits). The information provided, including the planned projects, provides reasonable assurance that they can achieve the emission limits at the requested production rate.

Overall pollution equipment includes or will include: a baghouse on the kiln and an electrostatic precipitator on the clinker cooler for particulate control; inherent scrubbing augmented by hydrated lime injection for sulfur dioxide control; staged combustion under reducing conditions in the calciner or SNCR for NO_X control; and raw materials selection, tertiary air injection, and injection of fly ash into the calciner for carbon monoxide and volatile organic compounds control.

SAC submitted a report summarizing the results of the test program with the application.

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, and geological features).*

Alvaro A. Linero, P.E.
Registration Number: 26032

(Date)

ALVARO A. LINERO
CERTIFICATE
NO. 26032
STATE OF FLORIDA
PROFESSIONAL ENGINEER

Department of
Environmental Protection

Best Available Copy

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Jeb Bush
Governor

Colleen M. Castille
Secretary

February 16, 2005

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Tom Messer, Plant Manager
Suwannee American Cement, LLC
Post Office Box 410
Branford, Florida 32008

Re: DEP File No. 1210465-011-AC (PSD-FL-259F)
Production Increase, Fly Ash Injection, SNCR Installation
Suwannee American Cement Plant – Branford, Suwannee County

Enclosed is one copy of the Draft Air Construction Permit Modification for the Suwannee American Cement Plant on Highway U.S. 27, Branford, Suwannee County. The Department's Intent to Issue Air Construction Permit Modification, the Technical Evaluation and Preliminary Determination, and the "Public Notice of Intent to Issue Air Construction Permit" are also included.

The "Public Notice" must be published one time only as soon as possible in a newspaper of general circulation in the area affected, pursuant to the requirements of Chapter 50, Florida Statutes. Proof of publication, such as a newspaper affidavit, must be provided to the Department's Bureau of Air Regulation office within seven days of publication. Failure to publish the notice and provide proof of publication within the allotted time may result in denial of the permit modification.

Please submit any written comments you wish to have considered concerning the Department's proposed action to A.A. Linero, Program Administrator, at the letterhead address. If you have any questions regarding this matter, please contact Mr. Linero at (850)921-9523.

Sincerely,

Trina L Vielhauer

Trina Vielhauer, Chief
Bureau of Air Regulation

TLV/aal

Enclosures

In the matter of:

Suwannee American Cement, LLC
Post Office Box 410
Branford, Florida 32008

DEP File No. 1210465-011-AC (PSD-FL-259F)
Production Increase, Fly Ash Injection, SNCR
Suwannee American Cement Plant
Suwannee County

INTENT TO ISSUE AIR CONSTRUCTION PERMIT MODIFICATION

The Department of Environmental Protection (Department) gives notice of its intent to issue an air construction permit modification (copy of DRAFT Permit Modification attached) for the proposed action, detailed in the Technical Evaluation and Preliminary Determination, for the reasons stated below.

The permittee, Suwannee American Cement LLC (SAC), applied on April 26, 2004 to install a fly ash injection system. SAC applied on July 28, 2004 to increase clinker production. SAC modified the previous requests and added a request to install a selective non-catalytic reduction system in a consolidated application received by the Department on January 10, 2005.

The Department has permitting jurisdiction under 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 changes are not exempt from permitting procedures. The Department has determined that a modification of the original air construction permit is necessary for the described permit changes requested by SAC.

The Department intends to issue this air construction permit modification based on the belief that the permittee has provided reasonable assurances to indicate that operation of these emission units as indicated herein will not adversely impact air quality, and the emission units will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296, and 62-297, F.A.C.

Pursuant to Section 403.815, F.S., and Rule 62-110.106(7)(a)1, F.A.C, you (the permittee) are required to publish at your own expense the enclosed Public Notice of Intent to Issue Air Construction Permit Modification. The notice shall be published as soon as possible one time only in the legal advertisement section of a newspaper of general circulation in the area affected. Rule 62-110.106(7)(b), F.A.C., requires that the permittee cause the notice to be published as soon as possible after notification by the Department of its intended action. For the purpose of these rules, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting 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 Department at the address or telephone number listed below. The permittee shall provide proof of publication to the Department's Bureau of Air Regulation, at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, Florida 32399-2400 (Telephone: 850/488-0114; Fax 850/922-6979). You must provide proof of publication within seven days of publication, pursuant to Rule 62-110.106(5), F.A.C. No permitting action for which published notice is required shall be granted until proof of publication of notice is made by furnishing a uniform affidavit in substantially the form prescribed in Section 50.051, F.S. to the office of the Department issuing the permit. Failure to publish the notice and provide proof of publication may result in denial of the permit pursuant to Rules 62-110.106(9) & (11), F.A.C.

The Department will issue the final permit modification with the attached conditions unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

The Department will accept written comments concerning the proposed permit action for a period of 14 (fourteen) days from the date of publication of Public Notice. Written comments should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit modification and require, if applicable, another Public Notice.

The Department will issue the permit modification with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to sections 120.569 and 120.57, F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permittee or any of the parties listed below must be filed within fourteen days of receipt of this notice of intent. Petitions filed by any persons other than those entitled to written notice under section 120.60(3), F.S., must be filed within fourteen days of publication of the public notice or within fourteen days of receipt of this notice of intent, whichever occurs first. Under section 120.60(3), F.S., however, any person who asked the Department for notice of agency action may file a petition within fourteen days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the permittee 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 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 Department'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 how and when petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (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; and (g) A statement of the relief sought by the petitioner, stating precisely the action 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 Department'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 Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

In addition to the above, a person subject to regulation has a right to apply for a variance from or waiver of the requirements of particular rules, on certain conditions, under Section 120.542, F.S. The relief provided by this state statute applies only to state rules, not statutes, and not to any federal regulatory requirements. Mediation is not available in this proceeding. Applying for a variance or waiver does not substitute or extend the time for filing a petition for an administrative hearing or exercising any other right that a person may have in relation to the action proposed in this notice of intent.

The application for a variance or waiver is made by filing a petition with the Office of General Counsel of the Department, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000. The petition must specify the following information: (a) The name, address, and telephone number of the petitioner; (b) The name, address, and telephone number of the attorney or qualified representative of the petitioner, if any; (c) Each rule or portion of a rule from which a variance or waiver is requested; (d) The citation to the statute underlying

(implemented by) the rule identified in (c) above; (e) The type of action requested; (f) The specific facts that would justify a variance or waiver for the petitioner; (g) The reason why the variance or waiver would serve the purposes of the underlying statute (implemented by the rule); and (h) A statement whether the variance or waiver is permanent or temporary and, if temporary, a statement of the dates showing the duration of the variance or waiver requested.

The Department will grant a variance or waiver when the petition demonstrates both that the application of the rule would create a substantial hardship or violate principles of fairness, as each of those terms is defined in Section 120.542(2) F.S., and that the purpose of the underlying statute will be or has been achieved by other means by the petitioner.

Persons subject to regulation pursuant to any federally delegated or approved air program should be aware that Florida is specifically not authorized to issue variances or waivers from any requirements of any such federally delegated or approved program. The requirements of the program remain fully enforceable by the Administrator of the EPA and by any person under the Clean Air Act unless and until the Administrator separately approves any variance or waiver in accordance with the procedures of the federal program.

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 Intent to Issue Air Construction permit Modification (including the Public Notice, Technical Evaluation and Preliminary Determination, and the Draft Permit Modification) was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 2/17/05 to the person(s) listed:

Tom Messer*	Jim Stevenson	Patrice Boyes, Esq.*
Celso Martini, SAC	Tom Workman, DEP	Kathy Cantwell
Dan Fritz, SAC	Mark Latch, DEP	Ralph Ashodian
Joe Horton, SAC	December McSherry	Virginia Seacrist
Larry Sellers, Esq.*	Svenn Lindskold	Bob and Lynn Milner
John Koogler, P.E.	Tom Greenhalgh*	Linda Pollini
Frank Darabi, P.E.	Dave Bruderly	Helen Beaty
Chris Kirts, DEP NED	Chris Bird, Alachua Co. DER	Bessie Robinson
Jim Little, EPA	Chair, Alachua Co. BCC*	Craig Pittman, St. Pete Times
John Bunyak, NPS	I. Calvin Gaddy	Chuck Yagel*

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.

Mary L. Harvey (Clerk) 2/17/05 (Date)

PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT MODIFICATION

Florida Department of Environmental Protection

Suwannee American Cement LLC
Suwannee American Cement Plant - Branford
Suwannee County

DEP File No.: 1210465-011-AC (PSD-FL-259F)

The Florida Department of Environmental Protection (Department) gives notice of its intent to issue an Air Construction Permit Modification to Suwannee American Cement LLC (SAC) to increase production, inject fly ash into the calciner, and install additional nitrogen oxides controls at the cement plant located on U.S. Highway 27, in Suwannee County. A new Best Available Control Technology (BACT) determination was not required. The permittee's name and address are: Suwannee American Cement LLC (SAC), Post Office Box 410, Branford, Florida 32206.

The plant started up in February 2003, is presently operating at or near full capacity under the provisions of its active construction permit, and has demonstrated compliance with the current BACT limitations. The company submitted an application for a Title V Operation Permit that is being processed by the Department.

Raw materials include sources of calcium, silica, aluminum, and iron such as limestone, sand, bauxite, clay, fly ash, iron ore, and mill scale. Allowable fuels are natural gas for startup, coal, tires, and petroleum coke. Tires and petroleum coke have not yet been burned at the facility. At the present time, the plant production capacity is limited to 105 tons per hour (TPH) of clinker.

SAC requests an increase in its hourly clinker production limit from 105 to 120 TPH and in annual production from 839,500 tons per year (TPY) to 965,425 TPY. SAC also proposes to inject fly ash directly into the calciner instead of introducing all of it with other raw materials at the preheater. This will make it possible to increase the amount of total raw materials entering the process, thus producing more clinker. The fuel use limit will be increased from 364 to 458 million Btu per hour.

Pollution control equipment consists of a fabric filter system (baghouse) for particulate emissions from the kiln; an electrostatic precipitator on the clinker cooler; absorption of sulfur compounds and metals into the product; raw materials selection and combustion controls for volatile organic compounds (VOC) and carbon monoxide (CO); indirect firing, multiple burn points and a staged combustion calciner for nitrogen oxides (NO_X); and baghouses for particulate emissions from other process emission units. SAC will add an SNCR system to inject ammonia solutions into the calciner exhaust gases to provide additional NO_X control flexibility.

The Department previously issued permits to SAC to conduct clinker production, fly ash injection and SNCR tests. The tests were conducted during the last quarter of 2004. The results of the test programs were submitted to the Department in support of the present request.

The Department is already required by the previous construction permit to set final emission limits for sulfur dioxide (SO_2) and NO_X. The final limit proposed for NO_X of 2.4 lb/ton of clinker (30-day basis) is one of the lowest in the country. The 24-hour NO_X limit of 2.9 lb/ton of clinker will be maintained. The 3-hour SO_2 limit of 0.20 lb/ton of clinker is also one of the lowest limits issued to-date in the country. It reflects the use of raw materials that are inherently low in sulfur, very efficient scrubbing of combustion gases by finely divided lime in the calciner, and injection, as needed, of hydrated lime into the preheater.

The company proposes to reduce the CO emission limit from 3.6 to 3.34 lb/ton clinker; however the annual emission limit will increase by 99 tons. There may be small increases in PM/PM_{10} emissions due to increased production. Actual test data indicate that emissions are much less than presently allowed and SAC has proposed decreases in the PM/PM_{10} limits from 0.13/0.11 to 0.11/0.09 lb/ton of feed to the preheater. The PM/PM_{10} emission limits from the clinker cooler will also be reduced from 0.07/0.06 to 0.06/0.05 lb/ton of feed. The proposed production increase will not result in significant net emissions increases and a new evaluation under the rules for the Prevention of Significant Deterioration (PSD) is not required.

SAC has continuous emission monitoring systems (CEMS) for NO_X, SO_2, visible emissions, control equipment temperature, and total hydrocarbons with real-time transmission to the Department. Key data are available at: www.suwanneecement.com

Following are the net annual emission limit increases and decreases from the kiln and cooler compared with the original permit.

Pollutant	Permitted Emissions (TPY)	Proposed Emissions (TPY)	Net Emission Increases (Decreases) (TPY)	PSD Significant Emission Rate (TPY)
PM (kiln)	93	93	0	25
PM_{10} (kiln)	78	78	0	15
PM (cooler)	50	50	0	25
PM_{10} (cooler)	43	43	0	15
SO_2	114	97	(17)	40
NO_X	1218	1159	(59)	40
CO	1511	1610	99	100
VOC	50	58	8	40

The Department will issue the Final Permit Modification with the attached conditions unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions. The Department will accept written comments concerning the proposed permit action for a period of fourteen (14) days from the date of publication of this Public Notice of Intent to Issue Air Construction Permit Modification. Written comments should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit and require, if applicable, another Public Notice.

The Department will issue the Permit Modification with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to Sections 120.569 and 120.57, F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below. Mediation is not available in this proceeding.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions must be filed within fourteen (14) days of publication of this Public Notice of Intent to Issue Air Construction Permit Modification. Under Section 120.60(3), F.S., however, petitions submitted by person(s) who asked the Department for notice of agency action must be filed within fourteen (14) days of receipt of that notice or the date of publication of the public notice whichever occurs first. 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 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 Department'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 how and when petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (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; and (g) A statement of the relief sought by the petitioner, stating precisely the action 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 Department'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 Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

A complete project file is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Department of Environmental Protection
Bureau of Air Regulation
111 S. Magnolia Drive, Suite 4
Tallahassee, Florida, 32301
Telephone: (850) 921-9523
Fax: (850) 922-6979

Department of Environmental Protection
Northeast District Office
7825 Baymeadows Way, Suite 200B
Jacksonville, Florida 32256-7590
Telephone: (904) 807-3233
Fax: (904) 448-4363

The complete project file includes the Draft Air Construction Permit Modification, Technical Evaluation and the information submitted by the responsible official, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the Program Administrator for the South Permitting Section, Bureau of Air Regulation, at 111 South Magnolia Drive, Suite 4, Tallahassee, Florida 32301, or call 850/921-8968 for additional information. The draft permit modification as well as original permit and BACT determination and any other permitting actions to-date can be viewed at www.dep.state.fl.us/air/permitting/construction/suwannee.htm

Month day, 2005

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Tom Messer, Plant Manager
Suwannee American Cement
Post Office Box 410
Branford, Florida 32008

Re: DEP File No. 1210465-011-AC (PSD-FL-259F)
Production Increase, Fly Ash Injection, SNCR
Cement Plant – Branford, Suwannee County, Florida

Dear Mr. Messer:

The Florida Department of Environmental Protection ("the Department") reviewed your applications and subsequent submittals requesting a modification of the original air construction permit. The requests are to increase production capacity, inject fly ash into the calciner, and install a selective non-catalytic reduction (SNCR) system. The details of our review are discussed in the Technical Evaluation and Preliminary Determination issued on February 11, 2005.

This facility was originally authorized and constructed pursuant to Permit No. PSD-FL-259 issued on June 1, 2000. This permit action supplements Permit No. PSD-FL-259 and the changes dated November 8, 2002, January 16, 2003, May 6, 2003, October 18, 2004, and December 23, 2004 to that permit. Unless otherwise specified, this permit action does not alter any requirements of the original permit or its subsequent modification.

Additions are underlined; deletions are strikethrough.

SECTION III. EMISSIONS UNITS SPECIFIC CONDITIONS

SUBSECTION B.

STATE REQUIREMENTS

OPERATIONAL REQUIREMENTS

1. Fuels: Fuels fired in the pyroprocessing system (kiln and calciner) shall not exceed a total maximum heat input of ~~364~~ 458 million Btu per hour (mmBtu/hr) and shall consist only of natural gas, coal, petroleum coke, whole tires and tire derived fuel. Usage of tires and tire derived fuel shall be in compliance with the following limits and conditions:

   The remainder of Condition 1 is unchanged.

4. Process Rate Limitations: The kiln shall not process more than ~~178~~ 210 tons per hour of dry preheater feed and dry fly ash fed directly to the calciner ~~per hour~~ and shall not produce more than ~~105~~ 120 tons of clinker per hour. The facility shall not produce more than 150 tons of cement per hour. Process and production rates shall be further limited to ~~1,427,880~~ 1,684,578 tons of dry preheater feed and dry fly ash in any consecutive 12-month period, ~~839,500~~ 965,425 tons of clinker in any consecutive 12-month period, and 1,191,360 tons of portland cement in any consecutive 12-month period.

   The clinker production rate identified in the above paragraph shall be determined by the following equation:

   Clinker Production = [(Feed) (Kiln Feed LOI Factor) + (Fly Ash Injection) (Fly Ash LOI Factor)]

   Where:

   • Kiln feed is determined by the Poldos control system.

   • Fly ash is determined from the rotary feed system or equivalent.

   • LOI for the kiln feed and fly ash is based on a 30 operating-day block average of daily measurements. For purposes of this requirement, an operating day is any day that the kiln produces clinker or fires fuel.

   [Rule 62-210.200, F.A.C., Definitions - potential to emit (PTE)]

COMBUSTION AND PROCESS CONTROL TECHNOLOGY

11. Combustion and Process Control Technology: The owner or operator shall install and operate - multistage combustion, with a separate line combustion chamber at the precalciner, for control of NOx emissions. The owner or operator shall control emissions of CO and VOC through control of the combustion process. The owner or operator shall control emissions of SO_2 through design and control of the clinker production process.

    The owner or operator may install and operate a selective non-catalytic reduction (SNCR) system, including a tank, pumps, piping, and metering equipment to inject ammonia solutions (including ammonia < 19 percent strength, urea, etc.) between the lowest cyclone and the calciner to control NOx emissions. The ammonia injection rate shall not exceed 450 liters per hour (1-hour block for a solution containing 19% ammonia) in order to minimize ammonia emissions (slip). To demonstrate compliance, the owner or operator shall continuously monitor and record the ammonia injection rate.

    {Note: the maximum ammonia injection rate is equivalent to an NH_3/NO_x molar ratio of 1.0 presuming baseline uncontrolled NO_x emissions of 4 lb/ton of clinker.}

    [Rules 62-4.070(3) and 62-212.400, F.A.C., and BACT]

14. Emissions Unit 002: Emissions unit 002 shall have the following emission points:

EMISSION POINT	DESCRIPTION
E-28	Dust collector – Aeropol at the homogenizing silo
E-34	Dust collector for off-spec feed handling
G-07	Dust collector for homogenizing silo inlet
H-08	Dust collector for homogenizing silo outlet
H-08A-01	Dust collector for hydrated lime silo E-30-01
U-02-01	Dust collector for fly ash silos U-01-01

This permit modification allows the use on a permanent basis of the following equipment for the injection of fly ash into the calciner: fly ash silos, baghouse, control system and associated ductwork. Fly ash may be injected into the calciner in addition to previously permitted introduction via the top of the preheater. The remainder of Condition 14 is unchanged

EMISSION LIMITATIONS AND PERFORMANCE STANDARDS

15. Emissions Unit 004: Emissions unit 004 shall have one emission point, the stack of the in-line kiln/raw mill, designated by the applicant as E-21. Particulate matter emissions from this emissions unit shall be controlled by a baghouse.

Emissions from emissions unit 004, the in-line kiln/raw mill, shall not exceed the following limits for the following pollutants: [Emissions from the natural gas fired air heater are included in the limits below]

POLLUTANT	EMISSION LIMIT		AVERAGING TIME	BASIS
PM	~~0.13~~ 0.11 lb/ton of dry preheater feed	23.1 lb/hour	3 hours [3]	BACT
PM_{10}	~~0.11~~ 0.093 lb/ton of dry preheater feed	19.6 lb/hour	3 hours [3]	BACT
SO_2	~~0.27~~ 0.20 lb/ton of clinker	~~28.4~~ 24.0 lb/hour	3 hours [4]	BACT
NO_X	2.9 lb/ton of clinker [1]	304.5 lb/hour [1]	24 hours [4]	BACT
	2.4 lb/ton of clinker [1]	288 lb/hour [1]	30 days [4]	
CO	~~3.6~~ 3.34 lb/ton of clinker	~~378.0 lb/hour~~ 400.3 lb/hour	3 hours [5]	BACT
VOC	0.12 lb/ton of clinker [2]	~~12.6 lb/hour~~ [2] 14.4 lb/hour [2]	30 days [6]	BACT
VE	10% opacity		6 minutes [7]	BACT

[1] NOx emissions shall not exceed 3.8 lb/ton of clinker and 399.0 lb/hour during the first 12 months after initial startup. After 12 months after initial plant startup, emissions of NOx shall not exceed the limits shown in the table. Emissions of NOx up to 600 lb/hr for up to one hour in duration shall be allowed for each startup of the pyroprocessing system which occurs when there is no material in the kiln.

Malfunction of the SNCR system is defined as any unavoidable mechanical and/or electrical failure that prevents introduction of ammonia-based solutions into the kiln system. In accordance with the following limits, the exclusion of NOx data collected during periods of malfunction and/or repair of the SNCR system is allowed when demonstrating compliance with the 24-hour NOx standard: no more than 6 hours per calendar day and no more than 30 hours in any 30 operating-day block. Within one working day of occurrence, the permittee shall notify the Department's Northeast District office of any malfunction of the SNCR system.

If SNCR is added, a permanent tank for the storage of ammonia-based solutions shall be installed. During construction of the permanent tank, temporary storage tanks may be used. An additional 4 hours of NOx data exclusion is allowed for each switch between temporary storage tanks. This 4-hour data exclusion is in addition to the data exclusion allowed above for each calendar day and for each 30 operating-day block. No more than 12 hours of NOx data in any 30

operating-day block shall be excluded due to switching between temporary tanks. Within one working day of occurrence, the permittee shall notify the Department's Northeast District office of each switch between temporary storage tanks. Once the permanent ammonia storage is complete, no NOx data shall be excluded due to switching between temporary tanks.

All valid NOx hourly averages shall be included into the 30 operating-day block average.

No changes in Note 2

[4] The averaging time for the short-term NOx limit shall be a 24-hour rolling average computed in accordance with specific condition 18 of this subsection. The averaging time for the long-term NOx limit shall be a 30 operating-day block average computed in accordance with specific condition 18 of this subsection. The averaging time for SO_2 shall be a 3-hour rolling average computed in accordance with specific condition 18 of this subsection.

No changes in Notes 5-7

[Note: These emission limits, along with annual production limits, effectively limit annual emissions to: PM, 92.8; PM10, 78.4; SO2, ~~113.4~~ 96.5; NOx, ~~1217.5~~ 1158.5; CO, ~~1511.1~~ 1610.1; and VOC, ~~50.4~~ 58.0 tons per year. First year NOx emissions are effectively limited to 1595.4 tons per year. NOx emissions are estimated assuming that two startups as specified occur per year, each resulting in maximum allowable excess emissions. Mercury introduced into the pyroprocessing system is limited pursuant to specific condition 13 of this subsection of this permit; annual emissions of mercury are effectively limited by this condition to 97 pounds per year.]

[Rules 62-4.070(3) and 62-212.400, F.A.C., and BACT]

The remainder of Condition 15 is unchanged

16. Emissions Unit 005: Emissions unit 005 shall have one emission point, the stack of the clinker cooler, designated by the applicant as K-15. Particulate matter emissions from this emissions unit shall be controlled by an electrostatic precipitator.

Emissions from emissions unit 005, the clinker cooler, shall not exceed the following limits for the following pollutants:

POLLUTANT	EMISSION LIMIT		AVERAGING TIME	BASIS
PM	~~0.07~~ 0.06 lb/ton of dry preheater feed	12.5 lb/hour	3 hours [1]	BACT
PM_{10}	~~0.06~~ 0.051 lb/ton of dry preheater feed	10.7 lb/hour	3 hours [1]	BACT
VE	10% opacity		6 minutes [2]	BACT

The notes and remainder of Condition 16 is unchanged

COMPLIANCE MONITORING AND TESTING REQUIREMENTS

18. **Continuous Emission Monitoring Systems**: The owner or operator shall install, calibrate, maintain, and operate a continuous emission monitoring (CEM) system in the in-line kiln/raw mill stack to measure and record the emissions of NO_X, SO_2, and VOC from the in-line kiln/raw mill, in a manner sufficient to demonstrate compliance with the emission limits of this permit. The CEM system shall express the results in units of pounds per ton of clinker produced, and pounds per hour.

    a. *Compliance Demonstration*: Compliance with the short-term emission limit for NO_X shall be based on a 24-hour rolling average that shall be recomputed after every valid hour as the arithmetic average of that hourly average and the preceding 23 valid hourly averages. Compliance with the emission limit for SO_2 shall be based on a rolling 3-hour average that shall be recomputed after every valid hour as the arithmetic average of that hourly average and the preceding two valid hourly averages. Compliance with the emission limits for VOC and long-term NOx shall be based on a 30 operating-day block average that shall be computed as the arithmetic average of all valid hourly averages occurring within each 30 operating-day block. For purposes of the VOC and long-term NOx limits, an operating day is any day that the kiln produces clinker and/or fires fuel.

    Conditions 18b through 18g remain unchanged.

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

    [Note: Continuous opacity monitor (COM) systems shall be installed, operated, and maintained at the kiln/raw mill baghouse stack and the outlet of the clinker cooler ESP pursuant to 40 CFR 60.63. A continuous emission monitor for emissions of total hydrocarbon is required pursuant to 40 CFR 63.1349 and 63.1350 ~~63.1450~~. A continuous monitor for the temperature at the inlet to the in-line kiln/raw mill baghouse is required pursuant to 40 CFR 63.1349 and 63.1350 ~~63.1450~~.]

SUBSECTION C.

OPERATIONAL REQUIREMENTS

2. Process Rate Limitation: The coal mill shall not crush more than ~~10,658~~ 13,360 tons of coal and petroleum coke in any month.
   [Rule 62-210.200, F.A.C., Definitions - potential to emit (PTE)]
   [Note: This monthly limit corresponds to an annual limit of ~~127,896~~ 160,300 tons per year.]

A copy of this letter shall be filed with the referenced permit and shall become part of the permit.

Any party to this permitting decision (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

Michael G. Cooke, Director
Division of Air Resource Management

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this PERMIT MODIFICATION was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on _____ to the person(s) listed:

Tom Messer, SAC*
Celso Martini, SAC*
Dan Fritz, SAC*
Joe Horton, SAC
Larry Sellers, Esq.*
Steve Cullen, P.E.
John Koogler, P.E.
Chris Kirts, DEP NED
Jim Little, EPA
John Bunyak, NPS
Frank Darabi, P.E

Jim Stevenson, DEP
Tom Workman, DEP
Mark Latch, DEP
December McSherry
Svenn Lindskold
Tom Greenhalgh*
Dave Bruderly
Chris Bird, Alachua Co. DER
Chair, Alachua Co. BCC*
J. Calvin Gaddy

Patrice Boyes, Esq.*
Kathy Cantwell
Ralph Ashodian
Virginia Seacrist
Bob and Lynn Milner
Linda Pollini
Helen Beaty
Bessie Robinson
Craig Pittman, St. Pete Times
Chuck Yagel*

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)

TECHNICAL EVALUATION

AND

PRELIMINARY DETERMINATION

SUWANNEE AMERICAN CEMENT, LLC
BRANFORD, SUWANNEE COUNTY

Portland Cement Manufacturing Facility
Permit Modification to Increase Production, Inject Fly Ash into Calciner
Install a Selective Non-Catalytic Reduction System

DEP File Nos. 1210465-011-AC (PSD-FL-259F)

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

February 16, 2005

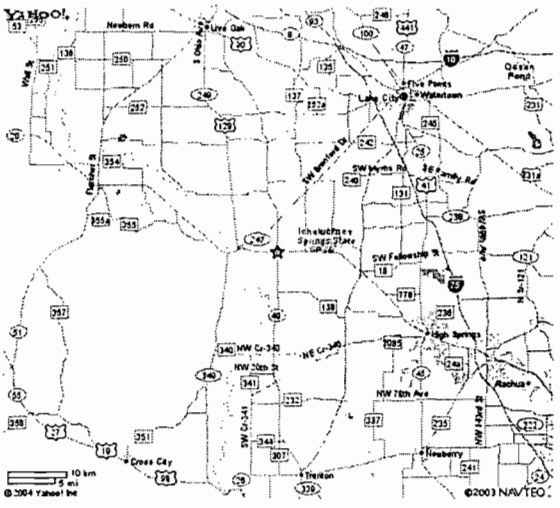
I. APPLICANT NAME AND ADDRESS

Suwannee American Cement LLC
Post Office Box 410
Branford, Florida 32008
Authorized Representative: Mr. Celso Martini, Plant Manager

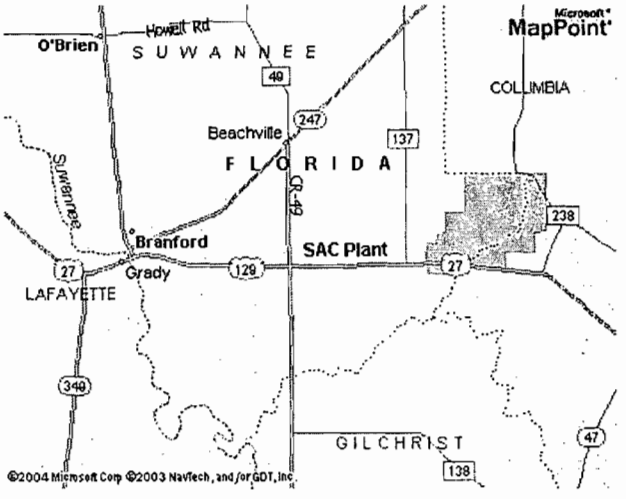
II. FACILITY INFORMATION

A. FACILITY LOCATION

Suwannee American Cement, LLC (SAC), owns and operates the cement plant located at U.S. Highway 27 and County Road 49 in Branford, Suwannee County. The UTM coordinates of the facility are Zone 17; 321.4 km East and 3315.9 km North.



Regional Map Showing Branford Area



Suwannee American Cement Plant Location

B. FACILITY CLASSIFICATION CODE (SIC)

Major Group No. 32, Clay, Glass, and Concrete Products
Industry Group No. 324 Cement, Hydraulic
Industry No. 3241 Cement, Hydraulic

C. FACILITY CATEGORY

SAC's Cement Plant emits more than 100 tons per year (TPY) of several regulated air pollutants and is, therefore, classified as a "Major Source of Air Pollution" or "Title V Source," per the definitions in Rule 62-212.200, Florida Administrative Code (F.A.C.).

This industry is listed in Table 212.400-1, "Major Facilities Categories", Section 62-212.400, F.A.C. Therefore, stack and fugitive emissions of over 100 TPY of carbon monoxide (CO), volatile organic compounds (VOC), sulfur dioxide (SO_2), nitrogen oxides (NO_X), or particulate matter (PM/PM_{10}) characterize the existing installation as a Major Facility per the definitions in Rule 62-210.200, F.A.C. and subject it to applicability review for the requirements of Prevention of Significant Deterioration (PSD) per Rule 62-212.400, F.A.C. Accordingly, the original SAC project was subject to New Source Review (NSR) including the PSD provisions and requirement to conduct a determination of Best Available Control Technology (BACT).

Per Table 212.400-2, "Regulated Air Pollutants – Significant Emission Rates", any further modifications at the facility resulting in emissions increases greater than 40 TPY of NO_X or SO_2, 7 TPY of sulfuric acid mist (SAM), 25/15 TPY of PM/PM_{10}, 3 TPY of fluorides, 1200 pounds per year (lb/yr) of lead or 200 lb/yr of mercury require review per the PSD rules and a determination for Best Available Control Technology (BACT) per Rule 62-212.400, F.A.C.

The facility is also subject to a number of industry-specific regulations and permit specific conditions. Among these is designation as a major source of hazardous air pollutants (HAPs) and applicability of the major source provisions of 40 CFR 63, Subpart LLL – National Emission Standards for Hazardous Air Pollutants From the Portland Cement Manufacturing Industry.

III. ORIGINAL PROJECT

The Florida Department of Environmental Protection ("Department") issued a permit to SAC in June 2000 to construct the existing facility. The plant employs the modern dry process technology including a preheater and calciner (PH/C kiln) along with indirect firing.

The major equipment at the plant includes the PH/C kiln, a clinker cooler, raw mill, finish mill, silos, conveyers, and particulate control/dust collection and recycling equipment. The cement product is stored in silos and is shipped by truck.

The following diagram is of a PH/C kiln that approximates the one installed at SAC.

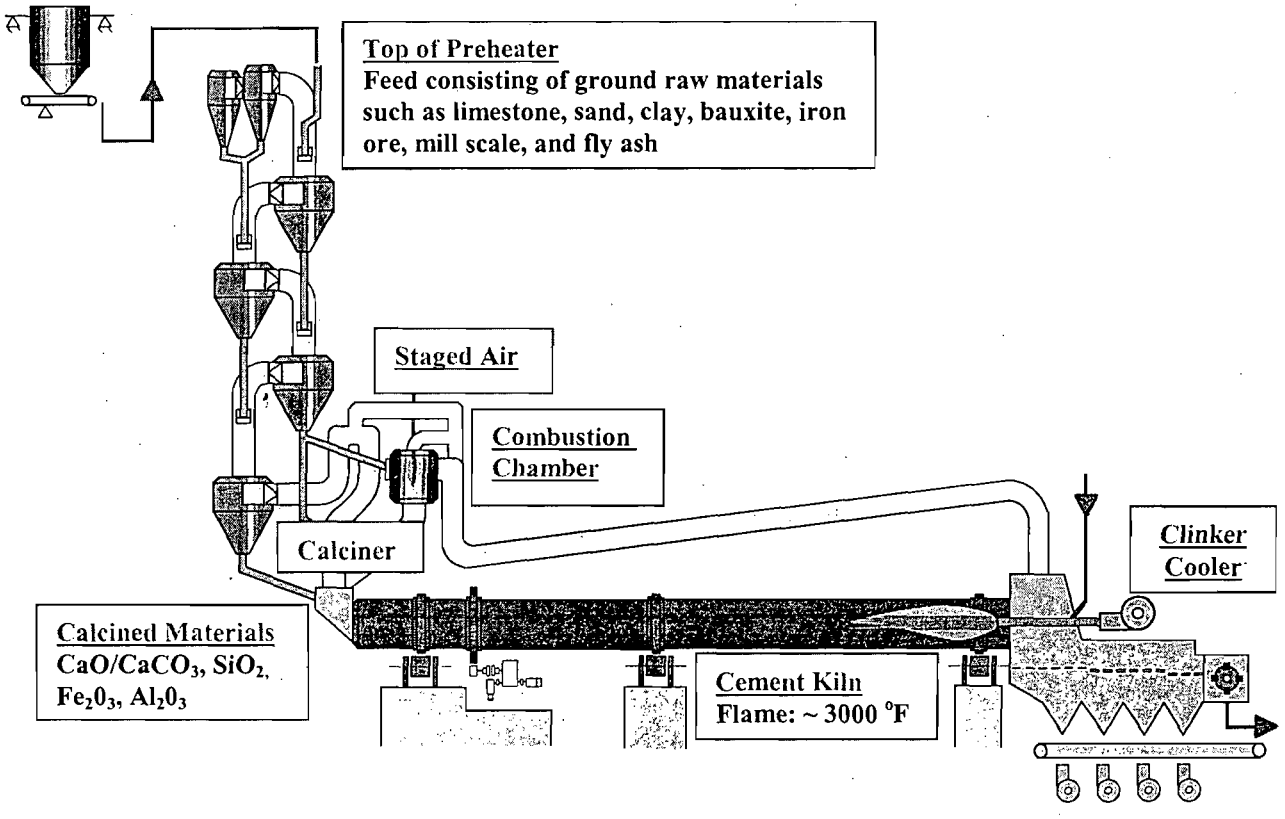


Figure 1. Diagram of Dry Process Cement Kiln with Preheater and Staged Air Calciner

Raw meal is finely divided dried material that includes sources of calcium, silica, iron and aluminum. These sources can include limestone, sand, clay, bauxite, iron ore, mill scale, and fly ash. It is continuously weighed on feed scales and introduced at the top of the preheater tower as shown in the diagram. As it falls through the preheater it is contacted and progressively heated by exhaust gases from the calciner and kiln.

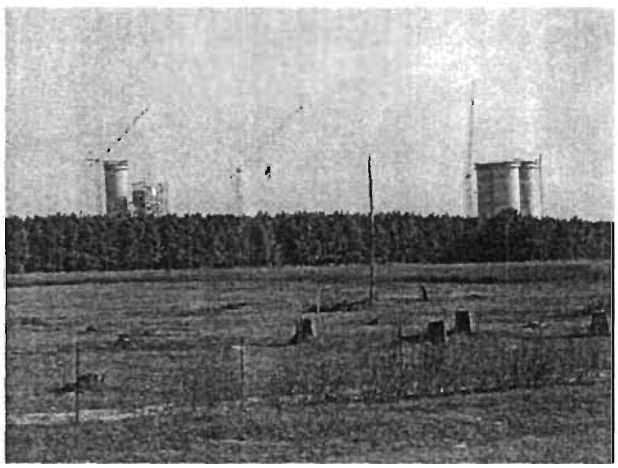
The calciner has a burner in a separate combustion chamber that provides the necessary heat to drive off carbon dioxide from the limestone converting it to free lime ($CaCO_3 = CaO + CO_2$). The calciner operates at a temperature of approximately 2000 degrees F and burns coal.

The calcined materials enter the kiln where they are further heated and transformed into nodules of clinker. These exit the kiln near the main kiln coal burner that operates at approximately 3000 °F. The clinker falls into the cooler where it is cooled by ambient air.

The heated air from the clinker cooler is used as secondary air to support combustion at the kiln burner and is also conveyed along a tertiary air duct to support combustion in and near the calciner combustion chamber.

Cooled exhaust gases leaving the preheater go through the raw mill (not shown) where the remaining heat is used to dry incoming coarse raw materials. As the raw materials are ground they are lifted by the exhaust gas flow and conveyed to the main baghouse (not shown) that also serves the purpose of a particulate control device. The finely divided dry material in the baghouse is conveyed to storage silos and then weighed and introduced into the process at the top of the preheater as discussed above.

The facility has been constructed and began operation in February 2003. Several photographs of the plant are shown below. SAC has conducted compliance tests and applied for a Title V Operation Permit. At this time, it is operating at or near its full capacity.



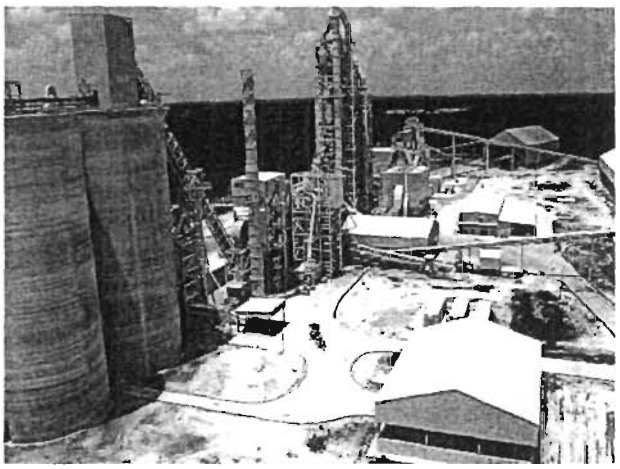


Figure 2. Photographs of Cement Plant Under Construction and Completed Cement Plant

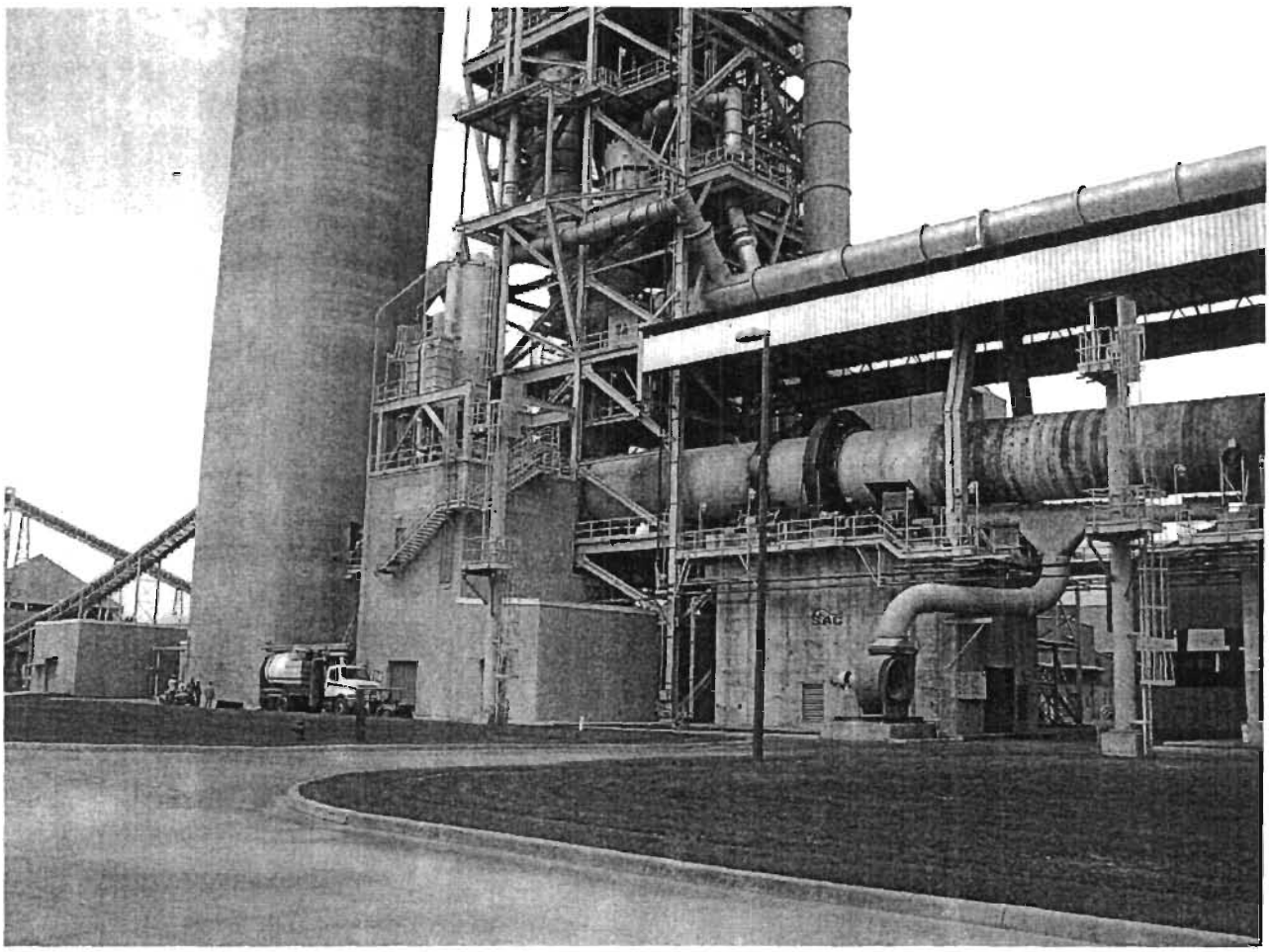


Figure 3. Kiln Inlet, Main Stack, Lower Preheater, Calciner, and Tertiary Air Ducts

IV. ADDITIONAL PROJECTS

SAC requested an air construction permit to:

- Add capability to introduce fly ash directly to the calciner in addition to the top of the preheater; and
- Increase clinker production.

The Department advised SAC that it will be necessary to conduct tests to demonstrate the efficacy of fly ash introduction to the calciner and higher production while meeting the Department's emission limitations. The Department issued a permit to SAC on September 24, 2004 to conduct production testing during 120 operating days over a six month period.

Subsequently, SAC requested to test ammonia injection for the purpose of additional flexibility to control nitrogen oxides (NO_X). The Department issued a permit to SAC on October 5, 2004 to temporarily install a selective non-catalytic reduction system (SNCR) to conduct tests in conjunction with the production capacity tests.

V. FLY ASH INJECTION

Fly ash is the finely divided residue from the combustion of ground or powdered coal and is usually obtained from electric power plants. Typical fly ash contains silica, aluminum, and iron compounds and even some calcium. High quality fly ash (for example low in ammonia and carbon) can be substituted for cement in certain types of concrete. Fly ash can also be used as a raw material in lieu of other potential sources such as clay, sand, bauxite, iron ore, etc.

Fly ash is currently mixed with the other raw materials prior to being dried and ground to form the feed. The fly ash constitutes approximately 8-10 percent of the material mix and helps to provide the chemical composition of kiln feed required to produce clinker.

SAC presently introduces fly ash with the rest of the feed at the top of the preheater tower where the temperature is in the range of 750-800°F. From that point, the feed travels downward through the preheater tower, increasing in temperature until it reaches the calciner where the temperature is in the range of 1500 to 1700 °F. During the progression of the feed down through the preheater, carbonaceous material in the fly ash can volatilize and cause the release of organic compounds (THC/VOC) and carbon monoxide (CO) to the atmosphere.

SAC proposes to inject fly ash directly into the calciner where the carbonaceous material can be completely combusted along with the fuel fired to the calciner. SAC believes that more complete combustion of the carbonaceous material will occur while still contributing the mineral components of the fly ash. Therefore less THC, VOC, and CO will be produced, and the emission of these gases to the atmosphere will be minimized.

Additional silos are required to store and introduce fly ash into the calciner. Following is the layout and a picture of work in progress that was authorized during the test program.

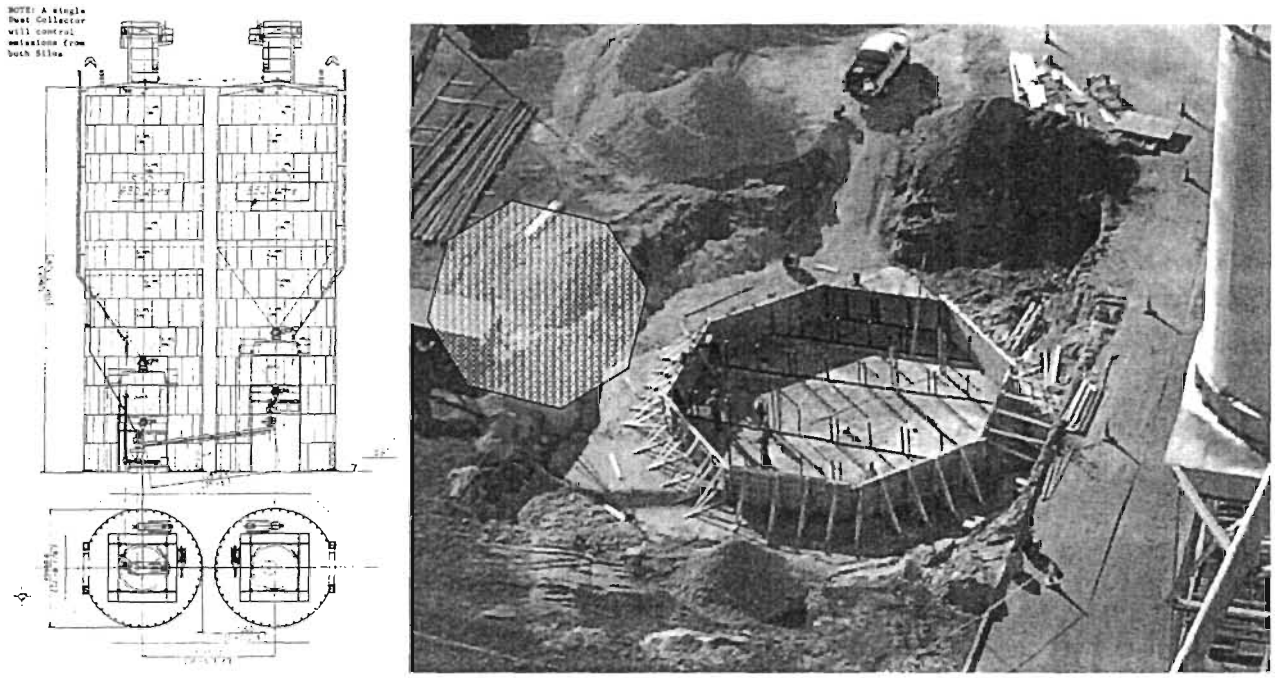


Figure 4. Diagram of Fly Ash Silos. Sites of Approved and Proposed Additional Silo

VI. PRODUCTION INCREASE

The existing permit limits the introduction of feed at the preheater to 178 tons per hour (TPH), clinker production to 105 TPH, and fuel use to 364 million Btu heat input per hour (mmBtu/hr). SAC requests to increase the feed rate to 210 TPH (including fly ash feed to the calciner), increase clinker production to 120 TPH of clinker and fuel use to 458 mmBtu/hr.

Increasing clinker production requires various physical projects or operational improvements. The increases can be facilitated by inherent manufacturer overdesign of equipment such as burners, fans, the kiln, cooler, etc. Otherwise such equipment must be upgraded. The issue of inherent overdesign was addressed by Mr. Mark Terry, the president of Polysius USA; the company that supplied the pyroprocessing system to SAC. Mr. Terry's letter dated December 12, 2004 states: [1]

> "As you are well aware, our plant engineers are generally quite conservative in our design and are so to enable us to quickly achieve our guaranteed figures. It is quite normal, as plant operators become more familiar with the equipment and raw materials, that they find ways to operate their new plants at capacities up to 20% in excess of the normal capacity rating. Indeed, your plant could be safely operated to achieve capacities up to 2,850 by refining your mix and your operating procedures. In fact, I believe you have even demonstrated and sustained this capacity here recently (under DEP approved capacity testing program)*. For throughput increases beyond the 2,850 stpd clinker, I can assure you that the pyro system is designed to *mechanically* withstand higher throughput rates. In specific terms, the tower structure is designed for catastrophic process conditions whereby the normal cyclone loads are considered plus the possible plugging of the largest cyclone. Your system of course is protected by the gamma detector levels in the lower cyclone stages. *(parenthetical note added by DEP)
>
> "The kiln itself is stout enough to mechanically handle up to a 10% fill level in the inlet zone and up to 15% in the hotter sections. This is of course a function of material density and kiln speed. You have ample flexibility in the design of the drive system to achieve kiln speeds in excess of 4.0 rpm. The clinker cooler will also mechanically support and convey clinker beyond the 2,850 stpd, but at increased outlet temperatures since the specific grate loading is quite high.
>
> "In summary, the system you have at your Branford facility can indeed safely handle capacity increases up to 20% above the nominal rating and even beyond; however I cannot speak to the quality of the product. I leave that to you and your proven skills at mix optimization and plant operation."

By injecting fly ash directly into the calciner instead of introducing it into the raw mill and ultimately at the top of the preheater, it is possible to increase the amount of limestone and other raw materials entering the process. That is the key to the proposed production increases at SAC. The second relates to changes in the NO_X control strategies that presently make it difficult to sustain even the present production rate without operational difficulties.

VII. SELECTIVE NON-CATALYTIC REDUCTION

The selective non-catalytic reduction (SNCR) project is for the purpose of NO_X control. This technology is already in use at numerous power plants and waste-to-energy facilities in the United States. Although there is a lot of recent experience with application of SNCR to cement plants in

Europe, there is little experience with this technology in the United States. Prior to reviewing the technology, it is useful to describe the original NO_X control strategy at SAC.

Present Staged Combustion NO_X Technology at Suwannee American Cement

The process design shown in Figure 1 is an example of *staged air* combustion practiced as practiced at SAC. The calciner burner is vertically oriented in a separate combustion chamber of the type typically used to burn difficult fuels such as petroleum coke. In this case it is used to burn calciner fuel in a reducing atmosphere to destroy NO_X contained in the kiln exhaust.

Exhaust gas leaving the kiln is characterized by excess air and high temperature that is less than required to sinter cement but greater than required to calcine raw meal.

Equation 1. Calcination of limestone occurs at approximately 900 degrees Celsius (°C) and liberates carbon dioxide to produce lime according to the following endothermic reaction:

$$CaCO_3 \rightarrow CaO + CO_2$$

This reaction tends to rapidly cool the kiln exhaust gas. The additional heat supplied by the calciner burner(s) and tertiary air sustains the reaction. This tends to limit the temperature of exhaust gases in and leaving the calciner to temperatures less than 900 °C. Combustion in the calciner proceeds as follows.

Equation 2. Fuel, such as a volatile coal, is heated and pyrolyzed releasing hydrocarbon radicals. These, in turn, *catalytically* react with NO to form hydrogen cyanide according to:[2]

$$CHi^* + NO \rightarrow HCN + ...$$

Where:

$i = 1, 2, 3$

Equation 3. Ammonia-like radicals are also released during pyrolysis and, under reducing conditions in the presence of raw meal, destroy NO according to:[3]

$$NHi^* + NO \rightarrow N_2 + ...$$

This reaction suppresses formation of NO by the pyrolyzed fuel nitrogen and reduces NO_X in a manner that looks similar to the mechanisms of SNCR and SCR.

Other reactions involving carbon monoxide (CO) or hydrogen (H_2) are also *catalytically* driven and destroy NO_X in this reducing atmosphere. In the subsequent burning of soot and char, the NO_X reducing reactions proceed much more slowly and some of the remaining fuel nitrogen can form additional NO_X.

The source cited for Equation 2 states, "the temperature is kept between 925-1050 °C or as high as possible without getting any encrustations in the kiln riser and the reduction zone". The source of Equation 3 states, "to maximize the reduction potential, the temperature is maintained as high as possible in the reducing zones ..... the reducing atmosphere is initiated in the kiln inlet housing where the temperature is 1150 °C, or more". Thus it is not enough to specify Staged Combustion in the Calciner (SCC) or MSC, or Low NO_X Calciner. What is actually sought is SCC with high temperature raw meal catalysis in a reducing atmosphere. Therefore SCC for NO_X reduction must specify or qualify the conditions under which it will operate.

Interactions Between SCC and the Internal Sulfur Cycle

Sulfur dioxide (SO_2) formed by burning fuel in the main kiln burner can be efficiently scrubbed out by reactions with alkali species (Na and K) or with CaO in the kiln to form stable sulfate compounds that are incorporated into the clinker.

Equation 4. Kiln SO_2 reaching the calciner and all SO_2 from burning fuel in the calciner are completely scrubbed out at the temperatures prevailing in the calciner as follows: [4]

$$CaO + SO_2 \leftrightarrow CaSO_3 \text{ or } CaO + SO_2 + 0.5O_2 \leftrightarrow CaSO_4$$

At 1,045°C, the formation and decomposition reactions for $CaSO_4$ are at equilibrium at normal oxygen levels. At higher temperatures, $CaSO_4$ will tend to decompose. As raw materials move through the high temperature regime in the kiln, the $CaSO_4$ can break down per the above reaction releasing the SO_2 or it can fuse/react with the alkali sulfates and other species to form stable compounds that depart with the clinker.

The concentrations and flows of SO_2 build up within the internal cycle of the kiln and calciner. One of the key design and operational objectives is to manage this cycle so that solid sulfur containing compounds do not form coatings and blockages. According to one author, "NO_X abatement rates of up to 50 percent can generally be achieved with staged combustion. However the processes are critical with high circulating sulfur and alkali systems in conjunction with the reducing mode of operation and the operation can be seriously affected by the formation of coating".[5]

If there is already insufficient alkali to balance the sulfur in the system, the recirculating flow of SO_2 is greater. The graphic and the microscopic photo in Figure 5 are from a Taiyeho Cement presentation, and depict the formation of coating that might result under such circumstances whether or not reducing conditions are not encountered in the calciner.[6] The last photo is from the kiln inlet at SAC. Reducing conditions do not necessarily increase SO_2 emissions but can create considerable process problems due to sulfate deposits at the kiln inlet, in the riser duct, and cyclones.[7] Creating a higher temperature near the kiln inlet to promote NO_X reduction would tend to release SO_2 per the above reactions or could cause sintering of the coatings. Also it could cause or aggravate coating tendencies in the riser and lower cyclones.

Figure 5. Coating Formation near Kiln Inlet and Microscope Photo. Nearly Choked Kiln Inlet.

Raw materials in Florida are low in alkali and sulfur. Because of sulfur in the coal, there can easily be an imbalance between the two species. SAC partially copes with coating problems by use of air cannon and cardox charges to free plugs and blockages caused by such coatings.

Mechanisms of Selective Non-Catalytic Reduction (SNCR)

Ammonia (NH_3) in the form of ammonia water or urea is injected at a point in the process characterized by a suitable temperature window between 850 and 1050 °C depending on residence time, turbulence, oxygen content, and a number of other factors specific to the given gas stream. SNCR destroys NO_X by a two-step process as follows:

Equation 5. Ammonia reacts with available hydroxyl radicals to form amine radicals and water per the following theoretical equation:

$$NH_3 + OH^* \rightarrow NH_2^* + H_2O$$

Equation 6. Amine radicals combine with nitrogen oxides to form nitrogen and water.

$$NH_2^* + NO \rightarrow N_2 + H_2O$$

Equation 7. The two steps are typically expressed as a single "global reaction".

$$4NO + 4NH_3 + O_2 \rightarrow 4N_2 + 6H_2O$$

The simplified equation does not convey the kinetics. But it suggests that, theoretically, SNCR will function best in an oxidizing atmosphere.

Equation 8. In a reducing atmosphere, CO competes with ammonia for available OH radicals

$$CO + OH^* \rightarrow CO_2 + H^*$$

Figure 6 shows that the necessary temperature window exists at least between the kiln inlet and the bottom cyclone that receives the exhaust from the calcination section. The physical extent of the window for oxidizing conditions depends on the damper positions for the tertiary air branches for the shown calciner design. In selecting a level (or levels) for ammonia injection there must be some optimization of temperature and oxygen.

Based on the foregoing, ammonia should be injected after introduction of tertiary. There may also be favorable injection points closer to the kiln inlet if oxidizing conditions exist in the calciner.

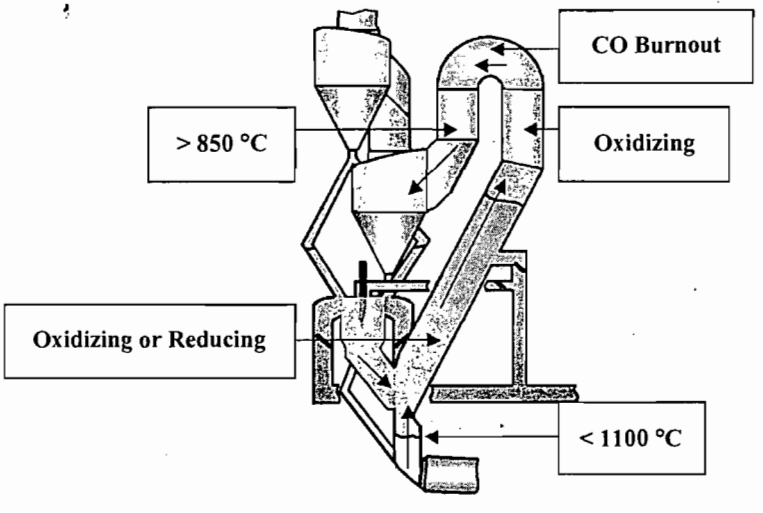


Figure 6. Temperature and Oxidizing Windows for SNCR in a Staged Combustion Calciner.

SNCR Testing at SAC

Following the experiences with plugging while achieving low NO_X limits by staged combustion, SAC obtained a permit from the Department to conduct SNCR tests. During part of the program ammonia injection was conducted while operating in conjunction with staged combustion in a reducing atmosphere. SAC also decided to test SNCR with the SCC calciner operating in an oxidizing atmosphere. The tests were conducted in November 2004. Some of the equipment used is shown in the following figure:

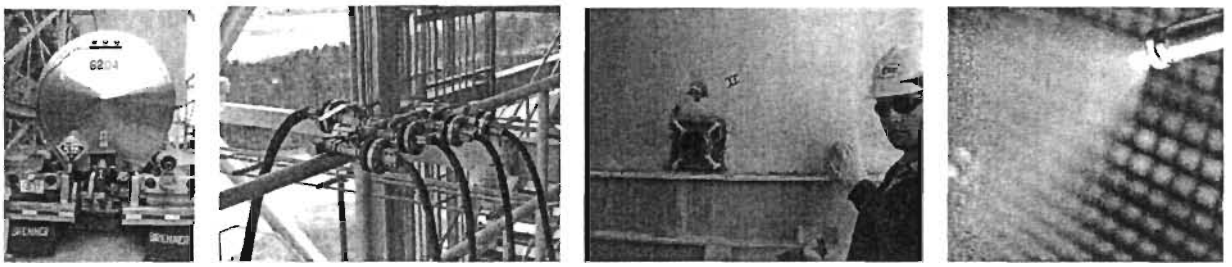


Figure 7. Ammonia, Compressed Air, One of Four Ports, Environmental Director, Injector(s)

Not shown is the metering system or the additional continuous emission monitoring equipment. Referring back to Figure 6, four ports were installed after the bend in the duct work following the top air injection branch for tertiary air.

Figure 8 is a graph of the clinker production time series. The series on the left hand side reflects operation of the kiln under staged combustion with a reducing atmosphere. The one on the right hand side reflects operation of staged combustion with an oxidizing atmosphere.

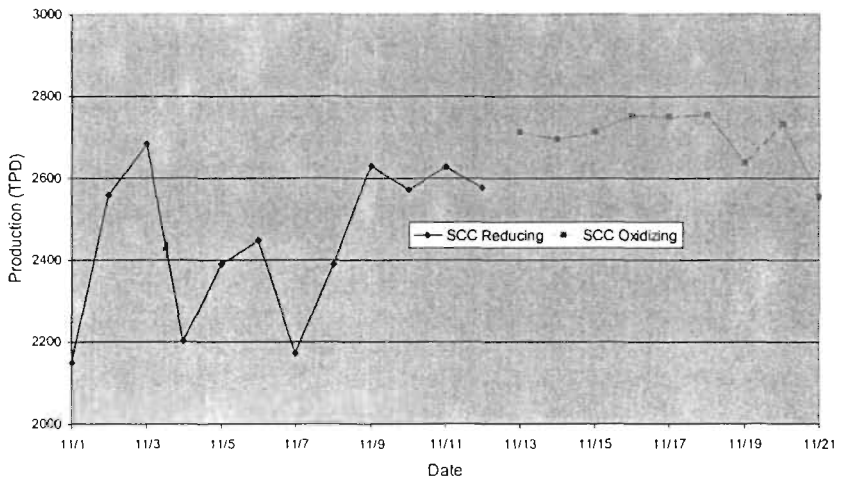


Figure 8. Production Time series During SNCR Tests at SAC. November 2004.

Operating the calciner in an oxidizing atmosphere rather than a reducing atmosphere caused less coating formation, plugging and stoppages. Daily production was sustained at a significantly higher level by operating the calciner in an oxidizing atmosphere. In fact SAC was able to sustain the 115 TPH clinker rate authorized by the test permit. It is clear that operating the calciner in an oxidizing rather than a reducing atmosphere and use of SNCR to maintain low NO_X values are two important measures demonstrated to increase production with the pyroprocessing equipment provided by the manufacturer.

SAC has proposed a long term NO_X limit of 2.4 lb/ton on a 30 day basis while maintaining the present limit of 2.9 lb/ton on a 24-hour basis. The present limit is already attained by staged combustion in a reducing atmosphere and was readily attained by SNCR whether or not the calciner was operated in an oxidizing or reducing atmosphere. The requested NO_X limit can also be achieved using staged combustion in a reducing atmosphere and without SNCR. However, the production problems previously discussed would make it difficult to achieve and maintain the present clinker production limit.

Use of the SNCR system can facilitate use of the combustion chamber to burn petroleum coke blends as already allowed while meeting permitted NO_X limits. SNCR without staged combustion in a reducing atmosphere and combined with the fly ash injection into the calciner will allow SAC to achieve greater production in a manner consistent with the manufacturer's statement.

VIII. MEASURED EMISSIONS DURING PRODUCTION TESTS

SAC monitored their emissions of NO_X, SO_2, VOC (THC), and CO continuously using their CEMS or process monitors. The following table is a summary of their emissions for various clinker production rates during the second half of October and early November 2004. For reference, the present clinker production rate is 105 TPH except for this testing program.

Table 1. Summary of Emissions for Different Production Ranges at Suwannee American Cement

	Clinker Production		
	75 to 105 Tons per Hour	**105 to 110 Tons per Hour**	**110 to 115 Tons per Hour**
Valid Operating Hours	194	173	98
NO_X Limit (lb/hr)	**304.5**	**304.5**	**304.5**
Avg. NOx (lb/hr)	243.1	232.8	240.6
NO_X Limit (lb/ton)	**2.9**	**2.9**	**2.9**
Avg. NOx (lb/ton)	2.47	2.17	2.13
SO_2 Limit (lb/hr)	**28.4**	**28.4**	**28.4**
Avg. SO_2 (lb/hr)	2.138	2.436	1.764
SO_2 Limit (lb/ton)	**0.27**	**0.27**	**0.27**
Avg. SO_2 (lb/ton)	0.022	0.023	0.016
THC Limit (lb/hr)	**12.6**	**12.6**	**12.6**
Average THC (lb/hr)	7.022	8.033	7.730
THC Limit (lb/ton)	**0.12**	**0.12**	**0.12**
Avg. THC (lb/ton)	0.072	0.075	0.069
Avg. CO (ppm)	460	545	368

The data show that SAC can comply with the present and the proposed permitted emission limits at production rates greater than permitted. There are no meaningful differences at the various production rates on a long term averaging basis with the exception of NO_X. It actually appears that emissions are reduced on the basis of lb/ton of clinker. This observation is consistent with recent tests conducted at Rinker Cement in Miami.

Based on Condition 12 of the facility construction permit, the Department may adjust NO_X and SO_2 values on the basis of CEMS data.

The data show that a NO_X lower value can be achieved in the long term. The Department will set a 30-day limit of 2.4 lb/ton to be achieved by the present staged combustion technology but will leave the present 24-hour limit of 2.9 lb/ton unchanged. SAC is allowed to install the SNCR system as an additional control option and to help provide more stable kiln operation and production.

The Department will lower the 3-hour SO_2 limit from 0.27 to 0.20 lb/ton. This is sufficient to make this kiln a minor source of SO_2.

IX. METHOD OF ESTIMATING EMISSION INCREASES AND DECREASES

As a major source, a physical modification or change in method of operation of this facility resulting in **no significant net emissions increases** is not subject to PSD review. It is clear that the production increase in conjunction with the fly ash project is a physical and operational change. It also involves relaxation of a federally enforceable production limit. Significant net emissions increase is defined in Rule 62-212.400, F.A.C as follows:

*Significant Net Emissions Increase – A significant net emissions increase of a pollutant regulated under the Act is a **net emissions increase** equal to or greater than the applicable significant emission rate listed in Table 212.400-2, Regulated Air Pollutants – Significant Emission Rates.*

The significant emission rates are included in Table 2. The meaning of a net emissions increase is given in Rule 62-212.400, F.A.C. as:

*Net Emissions Increase - A modification to a facility results in a net emissions increase when, for a pollutant regulated under the Act, the sum of all of the contemporaneous creditable increases and decreases in the **actual emissions** of the facility, including the increase in emissions of the modification itself and any increases and decreases in quantifiable fugitive emissions, is greater than zero.*

The definition of actual emissions is given in Rule 62-210.200, F.A.C. (definitions) as follows:

Actual Emissions - The actual rate of emission of a pollutant from an emissions unit as determined in accordance with the following provisions:

(a) In general, actual emissions as of a particular date shall equal the average rate, in tons per year, at which the emissions unit actually emitted the pollutant during a two year period which precedes the particular date and which is representative of the normal operation of the emissions unit. The Department may allow the use of a different time period upon a determination that it is more representative of the normal operation of the emissions unit. Actual emissions shall be calculated using the emissions unit's actual operating hours, production rates and types of materials processed, stored, or combusted during the selected time period.

(b) The Department may presume that unit-specific allowable emissions for an emissions unit are equivalent to the actual emissions of the emissions unit provided that, for any regulated air pollutant, such unit-specific allowable emissions limits are federally enforceable.

(c) For any emissions unit (other than an electric utility steam-generating unit specified in subparagraph (d) of this definition) which has not begun normal operations on a particular date, actual emissions shall equal the potential emissions of the emissions unit on that date.

The plant started up in February 2003, but only operated 2,458 hours that year due to low demand. Work on the pyroprocessing system to achieve the present NO_X limit of 2.9 lb/ton of clinker (previously 3.8 lb/ton of clinker) was completed in February 2004 when operation of the staged air combustion system under a reducing atmosphere was implemented. The Department does not consider the operation prior to February 2004 to represent "normal operation under the present configuration and emission limits." The subsequent 11 months are not considered by the Department as sufficient to establish normal operation for this project. Therefore the Department will not rely upon emissions that occurred during the two-year period since startup of the kiln as "representative of normal operations" described in paragraph (a) above.

The Department will rely on paragraph (b) above in estimating actual emissions and presumes that these are equal to the federally-enforceable emission limits allowed by the present permit. Future emissions will be calculated in accordance with part (c) above based on allowable emissions proposed by the Department for the facility in association with the requested production increase.

X. PROPOSED EMISSION LIMITS

The following table lists the proposed technology based limits and annual emission estimates for comparison with the previously listed limits and to determine PSD applicability.

Table 2. Proposed Emissions – Suwannee American Cement, Branford, Suwannee County

	Allowable Emissions (2003)		Allowable Emissions (2004)		Future Emissions (2005 beyond)		TPY Change from Allowable Emissions [1]		SER
Pollutant	lb/ton [2]	TPY	lb/ton [2]	TPY	lb/ton [2]	TPY	2003	2004	TPY
PM (kiln)	0.13	93	0.13	93	0.11	93	0	0	25
PM_{10} (kiln)	0.11	78	0.11	78	0.093	78	0	0	15
PM (cooler)	0.07	50	0.07	50	0.06	51	0	1	25
PM_{10} (cooler)	0.06	43	0.06	43	0.05	42	0	-1	15
SO_2 (kiln) [3]	0.27	114	0.28	114	0.20	97	0	-17	40
NO_X (kiln) [4]	3.80	1595	2.90	1218	2.9/2.4	1159	-436	-59	40
CO (kiln)	3.60	1511	3.60	1511	3.34	1610	0	+99	100
VOC (kiln)	0.12	50	0.12	50	0.12	58	0	+8	40

[1] Change compared to allowable annual emissions in place during 2003 and to the present allowable annual emissions (effective 2004) for comparison with Significant Emission Rates (SER) listed in Table 212.400-2, F.A.C.

[2] Figures represent lb/ton of preheater feed for PM/PM_{10} and lb/ton clinker for NO_X, VOC, SO_2 and CO.

[3] Represents revised SO_2 limit (3-hour rolling average) based on compliance tests and continuous monitoring data.

[4] Future annual NO_X emissions are based on a new limit of 2.4 lb/ton (30 operating-day block average) determined on continuous monitoring data covering the period February 2004 – January 2005. Present 24-hour limit is maintained as 2.9 lb/ton clinker.

XI. PSD AND BACT APPLICABILITY DETERMINATION

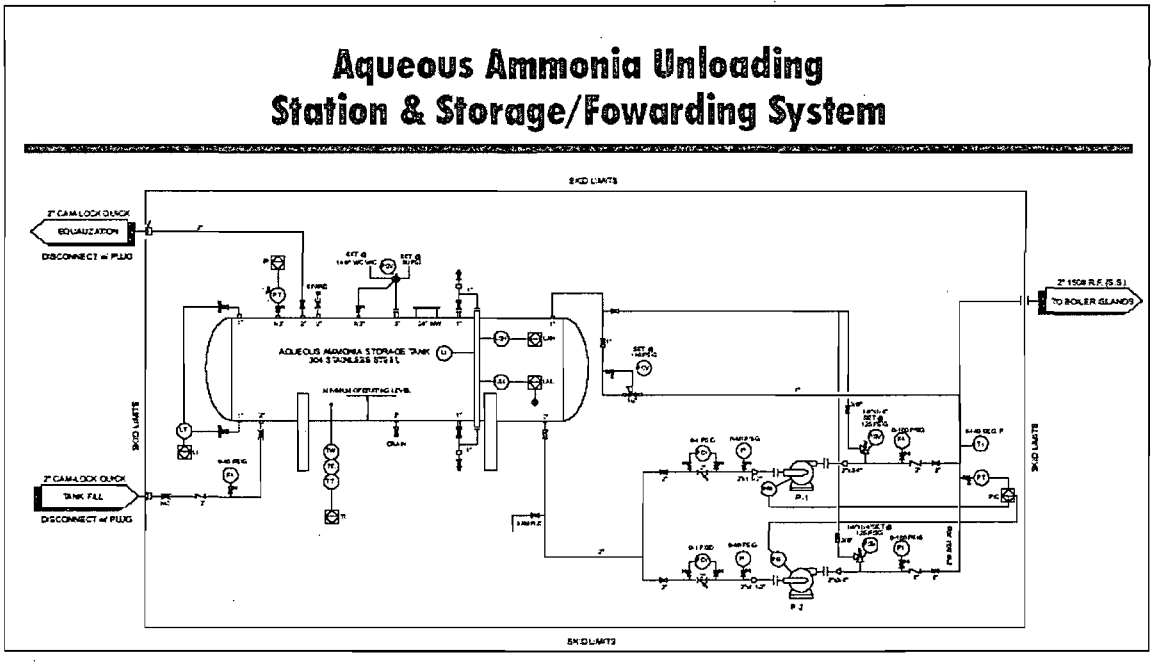
The Department concludes that there will not be a significant net emissions increase associated with the proposed production increase. Therefore PSD does not apply and another BACT determination is not required. Although a new BACT determination is not required, the revised limits proposed in conjunction with the production increase are all at least as stringent on a lb/ton basis as previous BACT determinations for the plant. Additionally, the values are more stringent than the determinations made throughout the country for new cement plants since the permitting of the SAC facility.

The Department notes this PSD applicability determination applies strictly to the facts and circumstances of this project. The Department makes these determinations on a case-by-case basis.

XII. SPECIAL CONDITIONS FOR SNCR

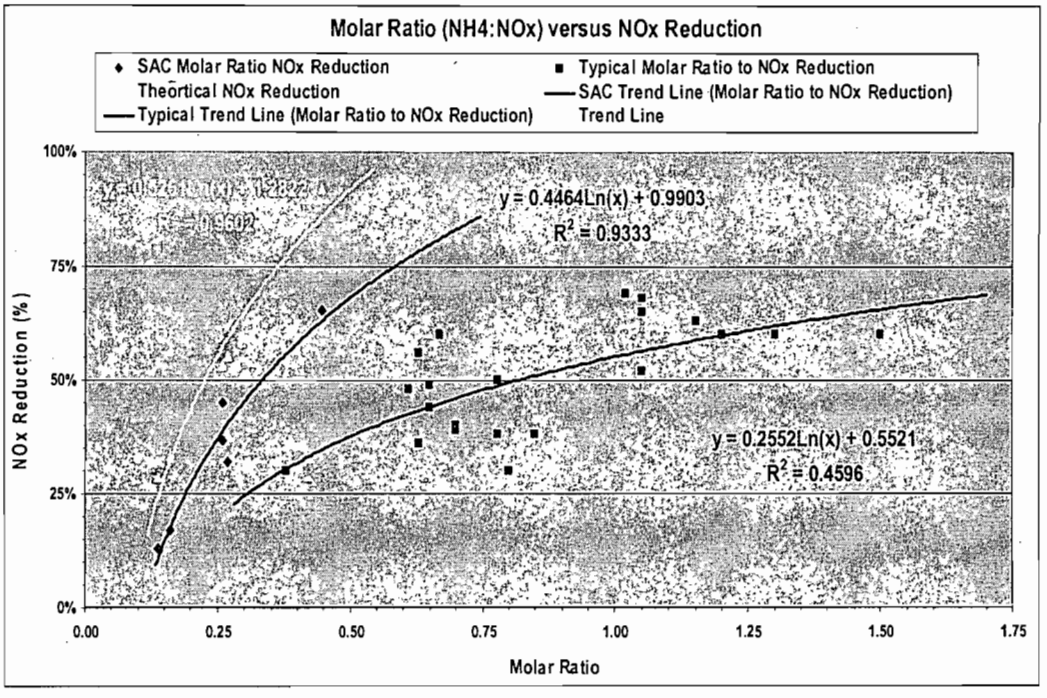
Use of SNCR to control NO_X can cause NH_3 emissions. NH_3 is not listed as a PSD pollutant or as a hazardous air pollutant (HAP). It is regulated under the Clean Air Act Section 112r when it is stored in concentrated form (20% or more by weight). NH_3 can contribute to formation of particulate emissions emitted from processes and to particulate formation in the environment. Therefore the Department typically limits emissions of NH_3 in PSD permits.

The following diagram shows the key pieces of gear needed for the permanent NH_3 solution storage and piping. Initially SAC will use tanker trucks for storage.



NH_3 emissions are normally low when used to control NO_X under the proper conditions (e.g. temperature, oxygen, CO, reaction time, etc.) as long as no more NH_3 is injected than the theoretical amount needed to react with all NO_X. The complete reaction is theoretically possible when one mole of ammonia is used for every mole of NO_X in the exhaust gas stream (molar ratio ($NH_3/NO_X = 1$).

The following figure was provided by SAC. It demonstrates that at SAC, there is excellent utilization of NH_3.



According to the curve for SAC, the molar ratio required to reduce uncontrolled NO_X emissions from 4 lb/ton to 2.4 lb/ton (40%) is roughly 0.25. SAC and the Department are evaluating the reasons why such a low molar ratio is required to achieve such a high reduction. There may be some synergistic effects related to CO increases when NH_3 solutions are used.

Because SO_2 emissions are minimal from cement kilns in Florida, very little particulate matter can be formed by reaction with excess NH_3 emissions (slip). Although there is no reason to inject as much NH_3 as it takes to react with all NO_X, the Department will limit the maximum NH_3 injection rate to that level. Therefore NH_3 use will be limited to a molar ratio of 1.0. This equates to 250 liters per hour of 19% ammonia solution.

SAC will use the SNCR at its option and is still required to retain the staged combustion calciner and the capability of operating in a reduced atmosphere in accordance with the original permit. SAC has requested data exclusion for malfunctions related to the SNCR system or when they switch NO_X control strategy from SNCR to staged combustion with a reducing atmosphere.

The following provision is proposed in Section III, Condition 15 of the accompanying draft permit modification:

Malfunction of the SNCR system is defined as any unavoidable mechanical and/or electrical failure that prevents introduction of ammonia-based solutions into the kiln system. In accordance with the following limits, the exclusion of NO_X data collected during periods of malfunction and/or repair of the SNCR system is allowed when demonstrating compliance with the 24-hour NO_X standard: no more than 6 hours per calendar day and no more than 30 hours in any 30 operating-day block. Within one working day of occurrence, the permittee shall notify the Department's Northeast District office of any malfunction of the SNCR system.

If SNCR is added, a permanent tank for the storage of ammonia-based solutions shall be installed. During construction of the permanent tank, temporary storage tanks may be used. An additional 4 hours of NO_X data exclusion is allowed for each switch between temporary storage tanks. This 4-hour data exclusion is in addition to the data exclusion allowed above for each calendar day and for each 30 operating-day block. No more than 12 hours of NO_X data in any 30 operating-day block shall be excluded due to switching between temporary tanks. Within one working day of occurrence, the permittee shall notify the Department's Northeast District office of each switch between temporary storage tanks. Once the permanent ammonia storage is complete, no NO_X data shall be excluded due to switching between temporary tanks.

All valid NO_X hourly averages shall be included into the 30 operating-day block average.

XIII. CONCLUSION

The Department concludes that the respective final limitations for SO_2 and NO_X are 0.20 and 2.40 lb/ton clinker respectively. These lower limits together with the reductions in lb/ton limits proposed by SAC for PM/PM_{10}, CO, and VOC insure that the project will not trigger new PSD and BACT requirements. The requested values are well within the ranges of the most recent BACT determinations made in the United States.

The Department has reasonable assurance that the proposed emission rates can be maintained at the increased operation levels and with the SNCR and fly ash projects proposed by SAC. Conditions incorporating the proposed changes and detailing compliance demonstration requirements are shown in the attached draft permit modification.

A. A. Linero P.E.
Program Administrator
South Permitting Section

References

[1] Letter. Terry, Mark S., President Polysius Corporation to Martini, Celso, Plant Manager, Suwannee American Cement. Operating SAC Branford Facility at an Increased Capacity. December 14, 2004.

[2] Thomsen, K.; Jensen, L.S.; Schomberg, F. "FLS-Fuller ILC-Low NO_X Calciner Commissioning and Operation at Lone Star in St. Cruz in California," *Zement Kalk Gips International,* 1998, 10, 542-550.

[3] Terry, Mark S. "BACT: What is available with Today's Technology," *Krupp Polysius Technical Seminar*. 1999.

[4] Miller, F. M.; Hawkins, G. J. "Formation and Emission of Sulfur Dioxide from the Portland Cement Industry" in *Proceedings of the 93rd Air and Waste Management Association Conference.* 2000. San Diego, CA.

[5] Xeller, H. "New Developments in NO_X Abatement in the Cement Industry, Part 2", *Zement Kalk Gips International,* 1998, 4, 208-218.

[6] Presentation. Waste Management Technologies in Japanese Cement Industry. Taiyeho Cement, Taiyeho Engineering, CTI/Industry Joint Seminar, February 2004.

[7] Reference 4.

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Mr. Tom Messer, Plant Manager
Suwannee American Cement, LLC
Post Office Box 410
Branford, Florida 32008

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Branford, FL

SUWANNEE AMERICAN CEMENT

January 6, 2005

To: **Trina Vielhauer**
Florida DEP
2600 Blair Stone Road
MS# 5500
Tallahassee, Florida 32399-2400

Ms Vielhauer,

Please find included in this package:

- Construction Permit Application Package
  - Suwannee American Cement Technical Review and Information
  - Technical Review and Application from Dr. John Koogler of Koogler & Associates
  - Check from SAC for $4,500 for Permit Application Fee
- Data Disk with Process and Emission Data related to the Permit Application Package

If you should have any questions please feel free to contact me at (386) 935-5039

Sincerely,

Joe Horton
Suwannee American Cement

Cc; Al Linero – DEP (w/o Disk)
Jim Pennington – DEP (w/o Disk)
Chris Kirts – DEP (w/o Disk)
Celso Martini – SAC
Dr. John Koogler – Koogler and Associates

Suwannee American Cement
SAC
Branford, Florida, USA

P.O. Box 410
Branford, Fl 32008

January 04, 2005

Trina Vielhauer
Division of Air Resources
Department of Environmental Protection
2600 Blair Stone Road, MS # 5500
Tallahassee, Florida 32399-2400

SUBJECT: **Fly Ash Injection and Production Capacity Permit Application Update**
DEP File No. 1210465-012-AC
Suwannee American Cement – Branford Plant
Facility ID No. 1210465
PSD-FL-259D

Ms. Vielhauer:

On July 28, 2004, Suwannee American Cement (SAC) submitted a Long Form Permit Application to the Department that included a request to install and operate a permanent Fly Ash Injection System including silos and transferring equipment for dry fly ash. As part of that application an additional 10% increase in production limits for clinker was also requested.

SAC received a Request for Additional (RAI) from the Department on September 3, 2004 and subsequently requested a Permit to test Fly Ash Injection to gather data and resolve questions from the RAI. On October 20, 2004, SAC received a Test Permit for Fly Ash Injection and begin testing production capacity.

SAC began testing on October 20, 2004 and has found the clinker capacity of the system to be at least 10% above the permitted limit of 105 tons per hour (or at least 115 tph) without Fly Ash Injection. SAC is confident that with Fly Ash Injection, the Kiln System clinker production limit will be as much as 15% above currently permitted limit; or as much as 120 tph.

Additionally, SAC requested and received permission to test a Selective Non-Catalytic Reduction (SNCR) system (Air Permit No. 1210465-013-AC). SAC observed the advantages of operating the Kiln System with this control method for NOx during the testing. Greater stability of the kiln is possible with SNCR, because the kiln can be operated with higher oxygen levels at the kiln exit.

SAC is requesting to update the July 28, 2004 permit application to include the installation of a permanent SNCR system to be used as needed by SAC and additionally, to increase the clinker production limit by 15% or to 120 tons of clinker per hour (tph). The July 28, 2004 permit application included a request for permission to construct and operate a permanent Fly Ash Injection system including two fly ash silos and associated equipment. SAC was authorized to construct and operate a Fly Ash Injection System for the Fly Ash Testing on October 20, 2004. By this application, SAC requests the permanent installation and operation of the fly ash silos and associated equipment proposed in the July

28, 2004 Application and the equipment authorized during the Fly Ash Injection Testing (Air Permit No. 1210465-012-AC).

Please find the following included in this package:

- Emission Data During Production Rate Testing,
- A CD with process and production data for the period of Production Rate Testing,
- Information from Polysius(Kiln System Supplier) on existing Capacity of Equipment
- SNCR System Information,
- Production and Emission Limits Revisions proposed in conjunction with Increased Production and SNCR Installation
- Permanent Fly Ash Injection System Information
- Technical Review and Permit Application from Dr. John Koogler of Koogler & Associates

If you have any questions or require any additional information, please feel free to contact me at (386) 935-5039 or by e-mail at jbhorton@suwanneecement.com.

Sincerely,

Joe Horton
Suwannee American Cement

CC: Jim Pennington – DEP
Al Linero – DEP
Chris Kirts – DEP
Celso Martini – SAC
Dr. John Koogler – Koogler and Associates

EMISSION DATA DURING PRODUCTION RATE TESTING

PRODUCTION INCREASE & EMISSION DATA

- On October 20, 2004, SAC received permission to Test Fly Ash Injection and to Test Production Capacity. From testing results and Manufacturer information SAC has found the rated clinker capacity of the system to be at least 10% above the permitted limit (or at least 115 tph) without Fly Ash Injection. SAC believes it can increase the production limit from 105 tph on a 24-hour basis to 120 tph on a 24-hour basis with Fly Ash Injection (a 15% increase). This results in an annual clinker limit of 965,425 tons per year of clinker.

- SAC measures Nitrogen Oxides (NOx), Sulfur Dioxide (SO2), and Volatile Organic Compounds measured as Total Hydrocarbons (THC) continuously at the stack to insure compliance with associated limits. Additionally, SAC measures CO with a process analyzer located upstream of the Main Baghouse and Stack. Using this analyzer, SAC can see relative changes in CO emissions and estimate emissions at the stack. During testing SAC was in compliance with all permitted limits as shown in Tables 1-4. SAC has observed a trend of slight increases in emissions in terms of pound per hour (lb/hr), but emissions are still well below permitted limits. Additionally emissions expressed in terms of pound per ton of clinker (lb/ton) have remained the same or actually decreased. This is due to the increased efficiency of the system and the incremental increase in clinker production being higher than the incremental increase in the associated pollutant.

Table 1 - Existing Limits

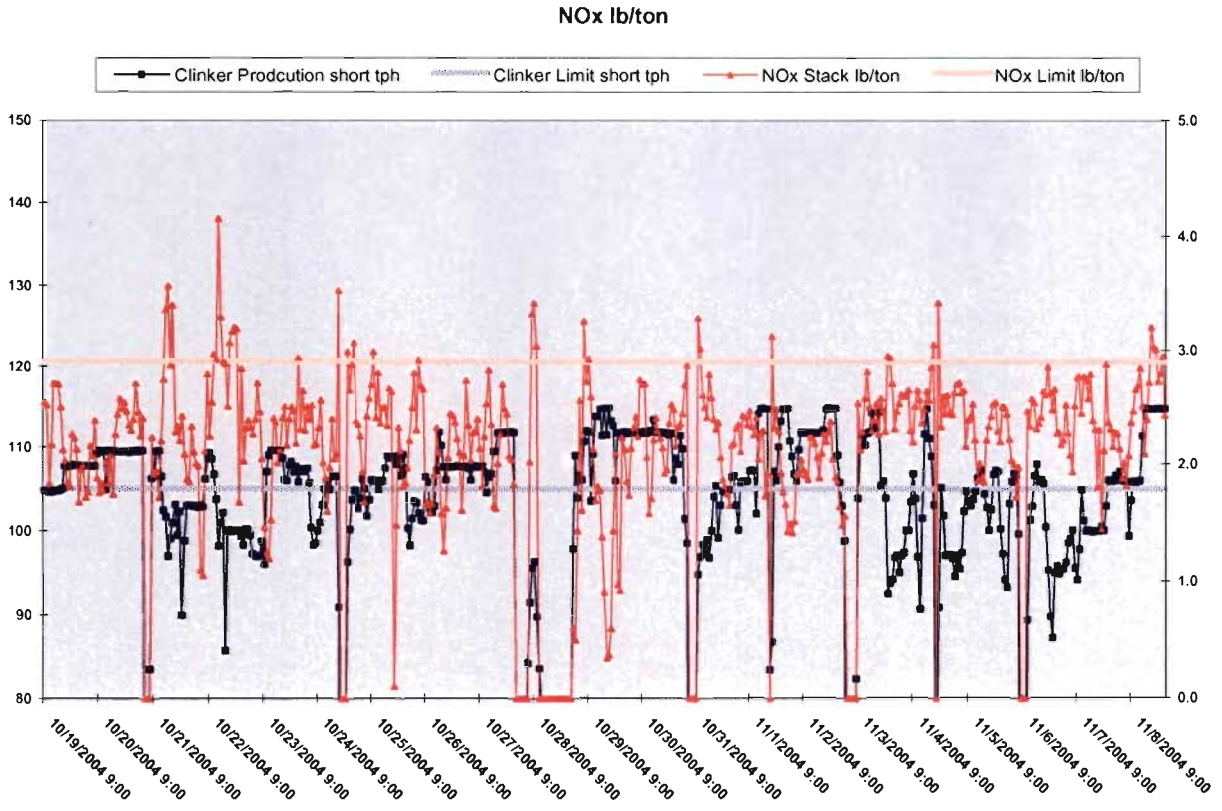
Pollutant	Annual Limit (ton/year)	Limit (lb/ton)	Limit (lb/hr)
Production	839,500	105 tph	
NOx	1217.5	2.9	304.5
SO2	113.4	0.27	28.4
VOC	50.4	0.12	12.6
CO	1511.1	3.6	378

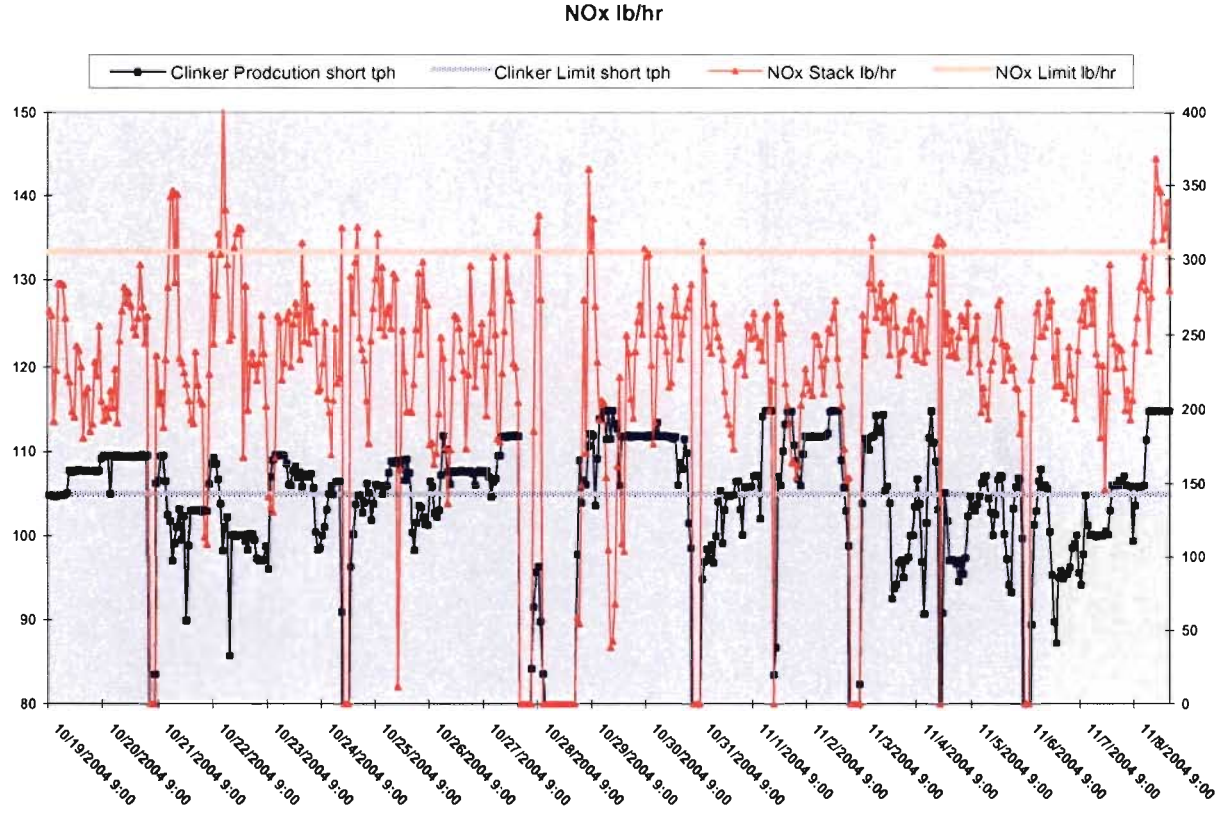
- Summaries for Nitrogen Oxides (NOx), Sulfur Dioxide (S02), Volatile Organic Compounds measured as Total Hydrocarbons (THC) and Carbon Monoxide are included for periods of the Production Capacity Test.

NOx SUMMARY

- Below In Figure 1, are emissions for NOx at the stack over the course of the production capacity testing expressed in lb/hr and lb/ton. Each graph shows the hourly lb/ton and lb/hr NOx emissions with the corresponding hourly production. Additionally, the current production limit is marked on the graph as well as the current NOx emission limit.

Figure 1: Overall NOx lb/ton & lb/hr Emissions





- From Figure 1 it can be observed that few hourly NOx averages went above the limit in terms of lb/hr and lb/ton. The 24-hour averages however, never exceeded the limit for either lb/hr or lb/ton.

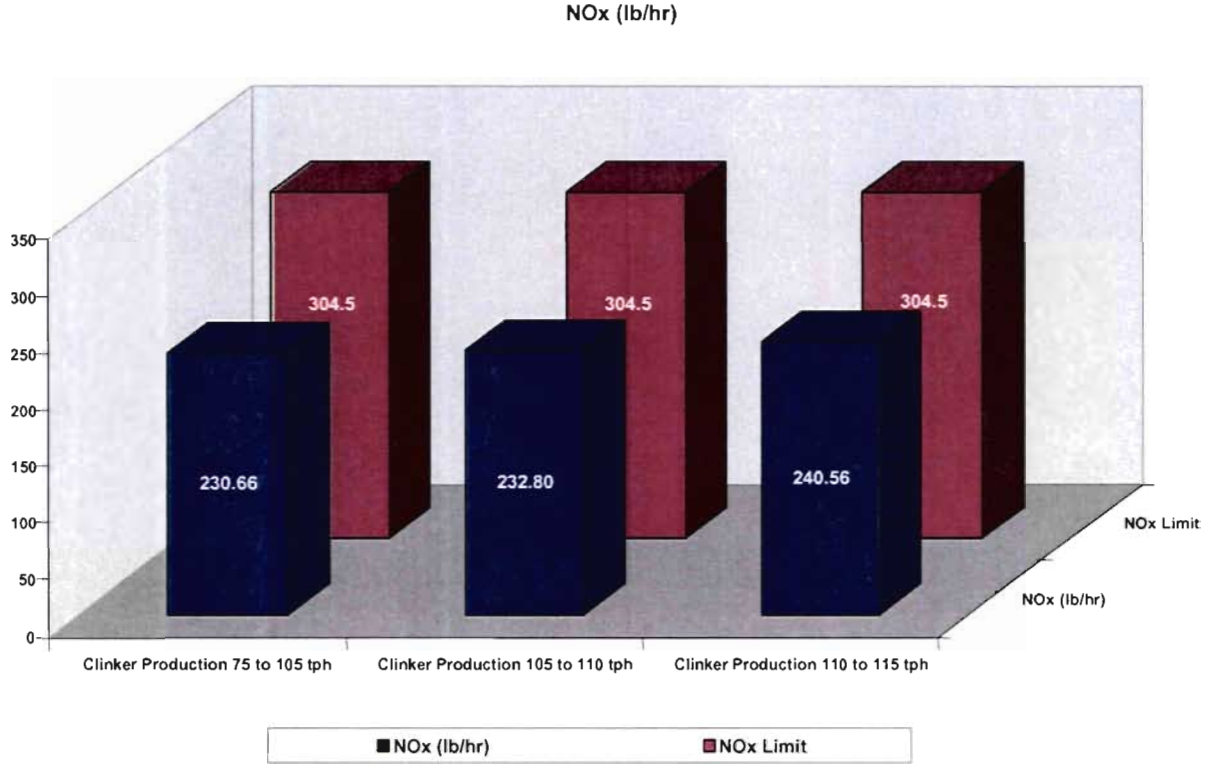
- In Table 2 the average NOx emissions over three different production rate ranges are displayed. The NOx emissions in lb/ton actually decrease with greater production while the lb/hr emissions remain fairly constant with a trend toward a slight increase during the periods with production above 110 tons per hour. The lb/hr emission rates for the three production rate ranges are statistically the same however (at the 95% C.L.).

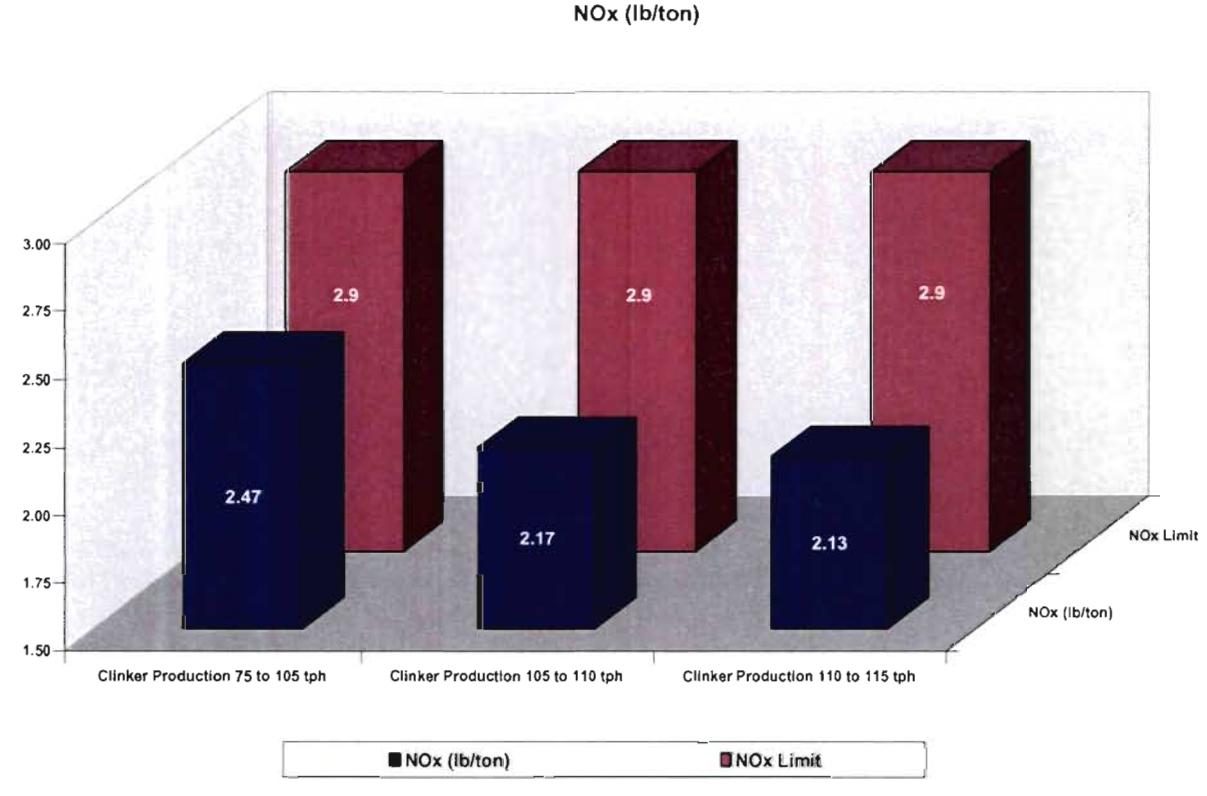
Table 2 – NOx Emission Summary

	Clinker Production		
	75 to 105 Tons per Hour	**105 to 110 Tons per Hour**	**110 to 115 Tons per Hour**
Valid Operating Hours for Production Period	194	173	98
NOx Limit (lb/hr)	304.5	304.5	304.5
Average NOx (lb/hr)	243.1	232.8	240.6
Standard Deviation of NOx (lb/hr)	45.9	43.4	61.2
Percent of Limit (%)	79.8%	76.5%	79.0%
NOx Limit (lb/ton)	2.9	2.9	2.9
Average NOx (lb/ton)	2.47	2.17	2.13
Standard Deviation of NOx (lb/ton)	0.50	0.41	0.54
Percent of Limit (%)	85.2%	74.7%	73.6%

- In Figure 2 the average NOx emissions expressed both as lb/hr and lb/ton are shown in a bar graph format with the corresponding limit. For all production ranges, the average NOx emissions were well below the permitted limit.

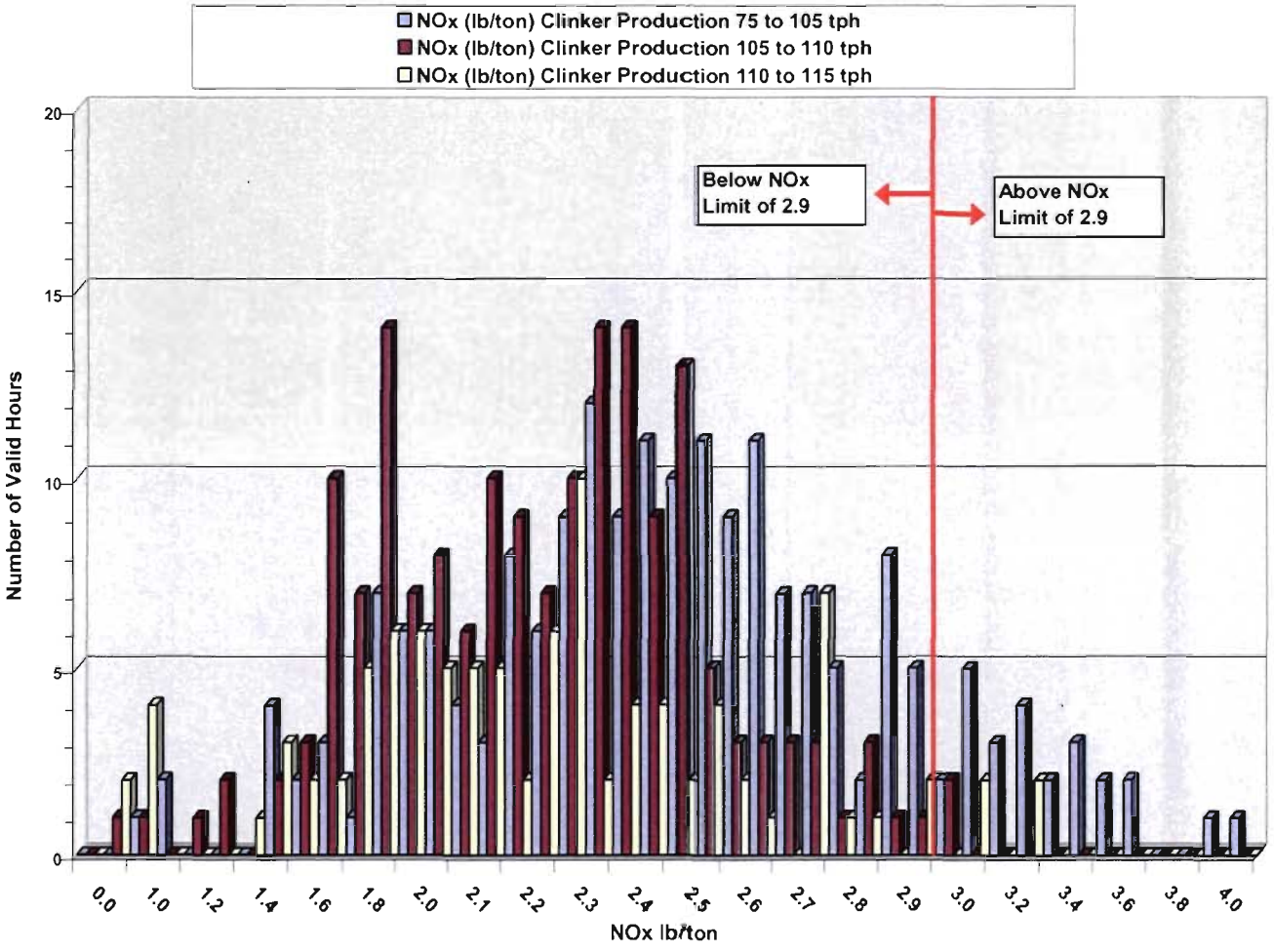
Figure 2 Average NOx Emissions and Limits





- Aside from being well below the NOx limits, the NOx emissions in terms of lb/ton show little statistical correspondence to the production rate. This can also be seen visually by the histogram in Figure 3. This histogram shows the number of NOx hourly emissions (lb/ton) in incremental ranges for the three production rate ranges. The majority of the data points fall in the 2.3 to 2.5 lb/ton range regardless of production rate. NOx emissions during the 110 to 115 tons per hour production rates show a decrease in the median with the majority of the data points falling in the 1.8 to 2.3 lb/ton range.

Figure 3 - Histogram of NOx lb/ton at Varying Production Rates



SO2 Summary

- In Table 3 the average SO2 emissions over three different production ranges are displayed. SO2 emissions are so low (usually close to zero) that production increase has no discernable effect. SO2 emissions were well below the permitted limits for all production rate ranges.

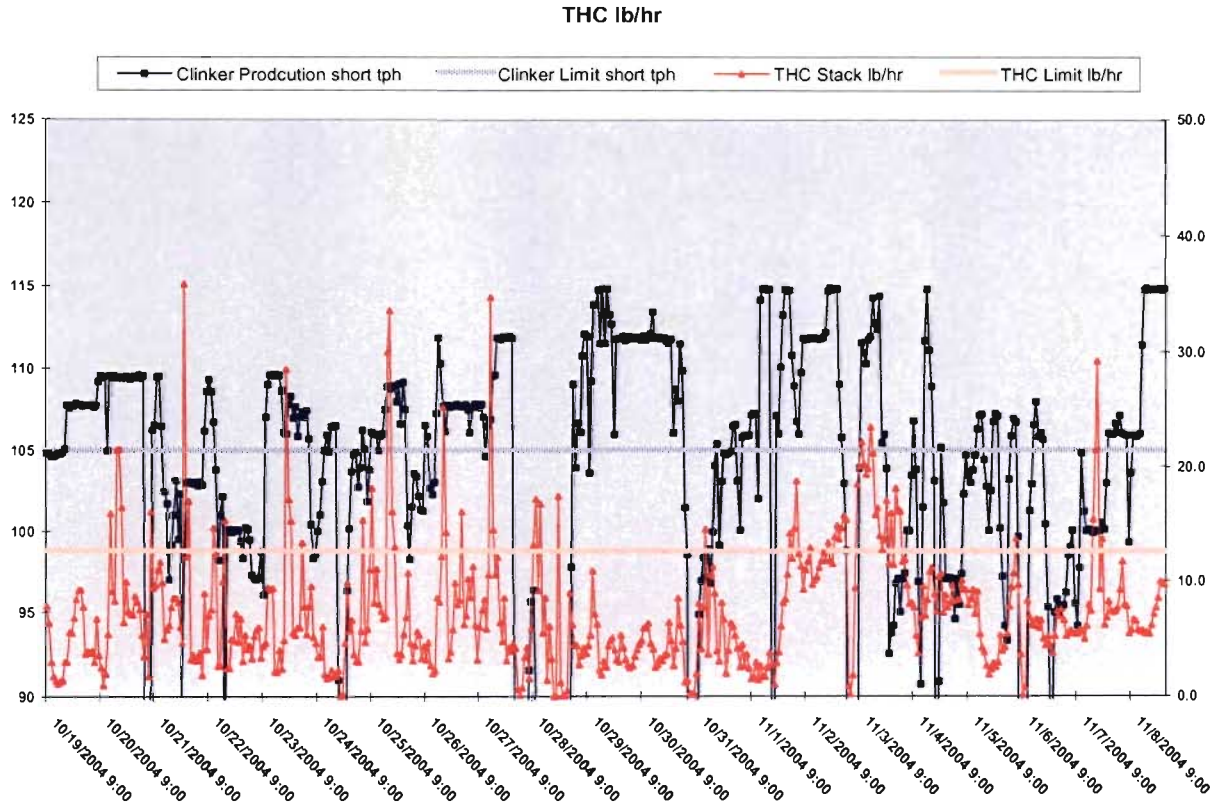
Table 3 – SO2 Emission Summary

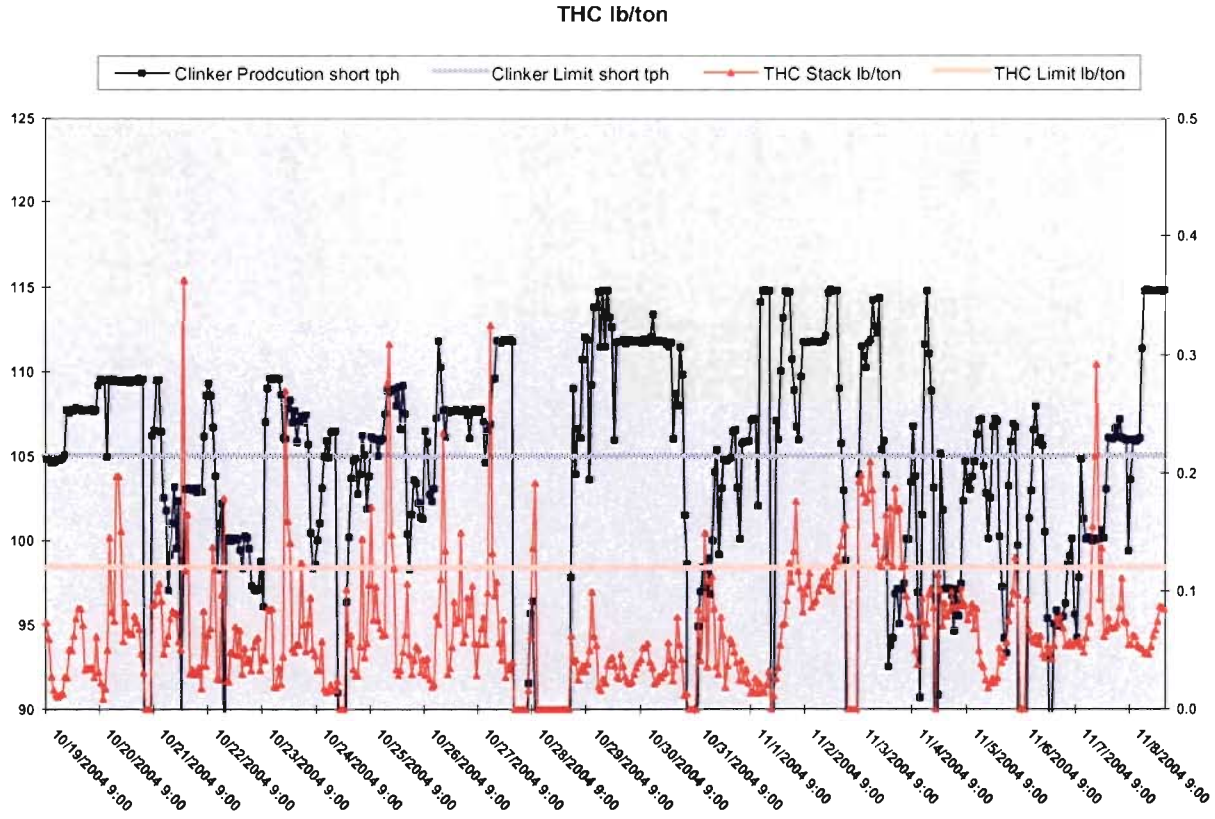
	Clinker Production		
	75 to 105 Tons per Hour	**105 to 110 Tons per Hour**	**110 to 115 Tons per Hour**
Valid Operating Hours for Production Period	194	173	98
SO2 Limit (lb/hr)	28.4	28.4	28.4
Average SO2 (lb/hr)	2.138	2.436	1.764
Percent of Limit (%)	7.5%	8.6%	6.2%
SO2 Limit (lb/ton)	0.27	0.27	0.27
Average SO2 (lb/ton)	0.022	0.023	0.016
Percent of Limit (%)	8.0%	8.4%	5.8%

THC Summary

- In Figure 4 the average THC emissions at the stack over the course of the production capacity testing are expressed in lb/hr and lb/ton. Each graph shows the hourly lb/ton and lb/hr THC emissions with the corresponding hourly production rate. Additionally, the current production limit is marked on the graph as well as the current THC emission limit.

Figure 4: Overall THC lb/ton & lb/hr Emissions





- From Figure 4 it can be observed that some hourly averages went above the 30-day block THC limit in terms of lb/hr and lb/ton but the 30-day block average limit was never exceeded for either lb/hr or lb/ton.

- In Table 4 the average THC emissions over three different production ranges are displayed. The THC emissions in lb/ton and the lb/hr emissions remain fairly constant and below the permitted limit during all periods.

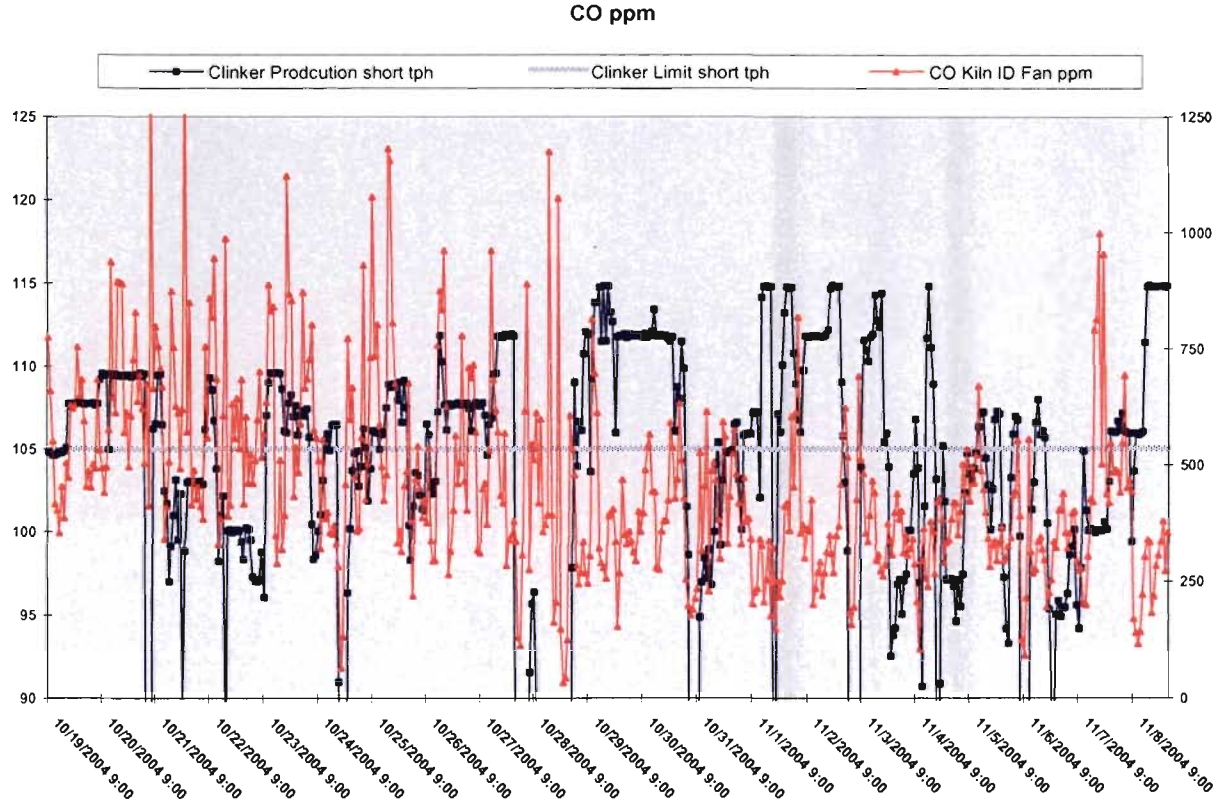
Table 4 – THC Emission Summary

	Clinker Production		
	75 to 105 Tons per Hour	**105 to 110 Tons per Hour**	**110 to 115 Tons per Hour**
Valid Operating Hours for Production Period	194	173	98
THC Limit (lb/hr)	**12.6**	**12.6**	**12.6**
Average THC (lb/hr)	7.022	8.033	7.730
Percent of Limit (%)	55.7%	63.8%	61.4%
THC Limit (lb/ton)	**0.12**	**0.12**	**0.12**
Average THC (lb/ton)	0.072	0.075	0.069
Percent of Limit (%)	59.8%	62.2%	57.2%

CO SUMMARY

- In Figure 5 the average CO emissions (expressed in ppm) as measure with the process analyzer at the Kiln ID Fan are plotted over the course of the production capacity testing.

Figure 5: Overall CO (ppm) Recordings



- In Table 5 the average CO emissions over the three different production ranges are displayed. The CO emissions are highly variable.

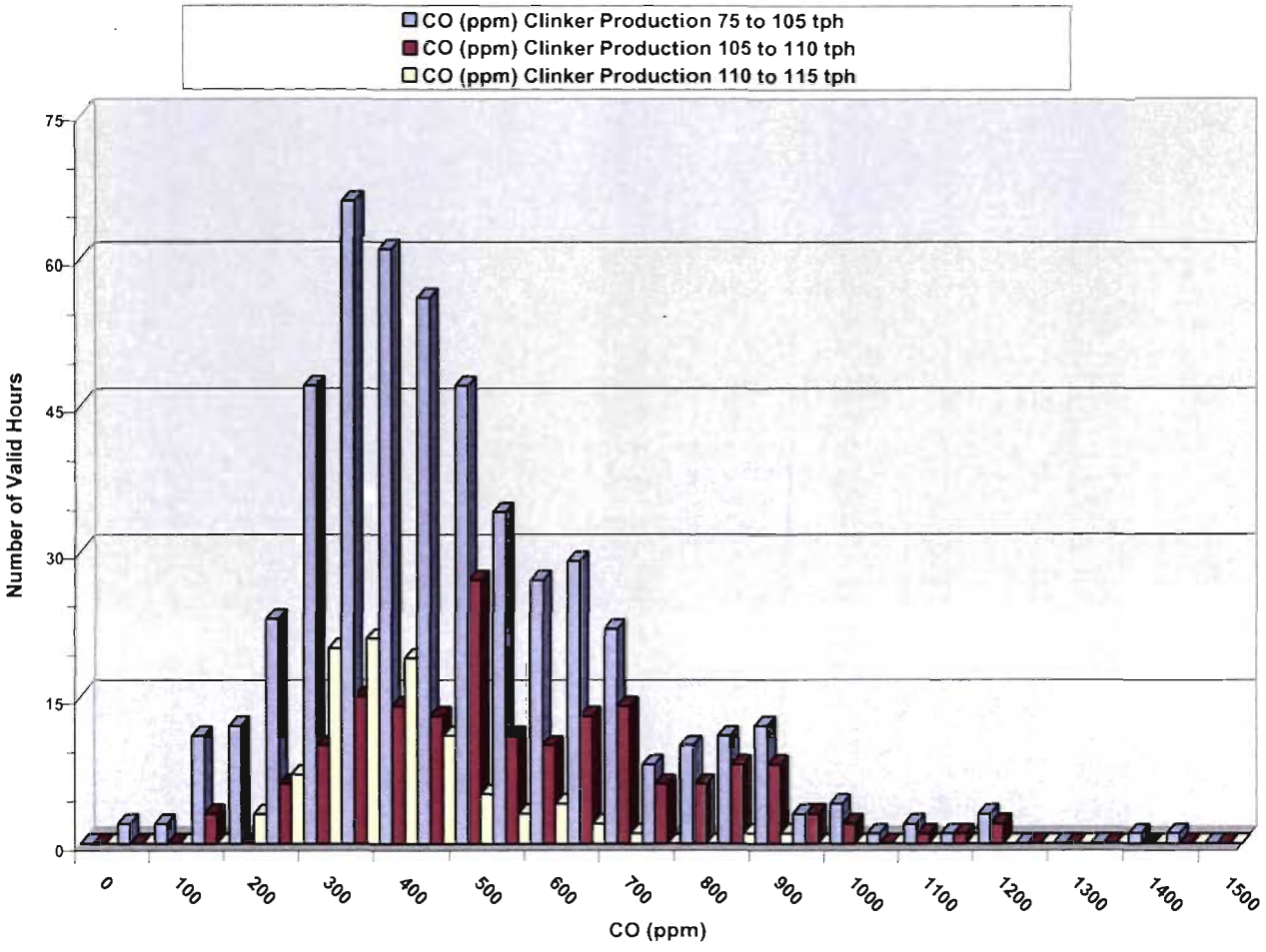
Table 5 – CO Emission Summary

	Clinker Production		
	75 to 105 Tons per Hour	**105 to 110 Tons per Hour**	**110 to 115 Tons per Hour**
Valid Operating Hours for Production Period	194	173	98
Average CO (ppm)	459.693	544.650	368.354

- In Figure 6 a histogram of the hourly average CO emission data (ppm) over the three different production rate ranges are displayed. At the currently permitted clinker production rates (105 tph), the CO emissions have a high degree of variability. This makes a correlation between production rate and the CO difficult to realize. What can be seen from the histogram is that while some CO increase is observed in the production range of 105 to 110 tph, a decrease is noted in the 110 to 115 tph range. One possible explanation could be that optimization of kiln process is need

to reach the higher ranges of production. With increased kiln optimization, process stabilization occurs, which results in lowered CO emissions in terms of ppm.

Figure 6 - Histogram CO ppm at Varying Production Rates



OTHER POLLUTANTS

- The other regulated pollutants Dioxin/Furan, Lead (Pb), Mercury (Hg), and Particulate Mater (PM) and Particulate Mater less then 10 microns (PM10) were tested during July 2003 and August through September 2004. All results were well below emission limits that where applicable. Emission testing will be performed during increased production rates to insure compliance.

EMISSION SUMMARY

During the increased production rate testing, emissions in terms of mass per time and mass per ton of clinker remained well below permitted levels. While there was a slight trend toward increases in lb/hr emissions changes were not statistically significant. The overall trend was for an improved efficiency in emissions per ton of clinker. An increase in production up to 115 tons of clinker per hour has shown to be no concern in meeting current emission limits, and emissions at an increase in production up to 120 tons of clinker per hour, if extrapolated from current data, would remain below current emission limits.

Proposed production limits and emission limits are presented in Attachment Production and Emission Limits Revisions due to Increase Production.

INFORMATION FROM POLYSIUS ON CAPACITY OF EXISTING KILN SYSTEM

Polysius Corp.
A **ThyssenKrupp** Technologies Company

180 Interstate North Parkway
Atlanta, Georgia 30339-2194
Phone: (770) 955-3660 Fax: (770) 955-8789

Mark S. Terry
President

December 14, 2004

Suwannee American Cement
P. O. Box 410
Branford, FL 32008

Attention: Mr. Celso Martini
Plant Manager

Dear Celso:

Pursuant to our discussions at the seminar in Charleston, I see no danger in operating the Branford facility at an increased capacity. As you are well aware, our plant engineers are generally quite conservative in our design and are so to enable us to quickly achieve our guaranteed figures. It is quite normal, as plant operators become more familiar with the equipment and raw materials, that they find ways to operate their new plants at capacities up to 20% in excess of the normal capacity rating. Indeed, your plant could be safely operated to achieve capacities up to 2,850 by refining your mix and your operating procedures. In fact, I believe you have even demonstrated and sustained this capacity here recently. For throughput increases beyond the 2,850 stpd clinker, I can assure you that the pyro system is designed to *mechanically* withstand higher throughput rates. In specific terms, the tower structure is designed for catastrophic process conditions whereby the normal cyclone loads are considered plus the possible plugging of the largest cyclone. Your system is, of course, protected by the gamma level detectors in the lower cyclone stages.

The kiln itself is stout enough to mechanically handle up to a 10% fill level in the inlet zone and up to 15% in the hotter sections. This is of course a function of material density and kiln speed. You have ample flexibility in the design of the drive system to achieve kiln speed rates in excess of 4.0 rpm.

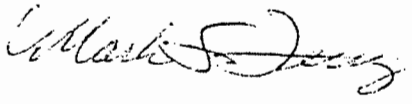
The clinker cooler will also mechanically support and convey clinker throughput beyond the 2,850 stpd, but at increased outlet temperatures since the specific grate loading is quite high.

In summary, the system you have at your Branford facility can indeed safely handle capacity increases up to 20% above the nominal rating of the system and even beyond; however, I cannot speak to the quality of the product. I leave that to you and your proven skills at mix optimization and plant operation.

Should you require further specifics or have any further concerns on this issue, please contact me or Oleg directly.

Sincerely,

POLYSIUS CORP.



Mark S. Terry
President

MT/pw

cc: Dan Fritz
John Koogler

January 4,2005

2760 stpd changed to 2850 per Oleg Geskin

SNCR System Information

SNCR SYSTEM INFORMATION

On November 2, 2004, SAC received permission form the Department to conduct testing of a SNCR system for control of NOx emissions (Air Permit No. 1210465-013-AC). SAC conducted testing during November 8th to the 29th. During testing several advantages of operating with SNCR were observed. These included the following:

- Greater Kiln Stability,
- Prolonged periods of increased production of around 115 tons of clinker per hour in conjunction with Production Capacity Testing (Air Permit No. 1210465-012-AC),
- Fewer Kiln Process Problems (Buildup in Riser Duct),
- Reduced NOx emissions, and
- Possibility for use of currently permitted Pet Coke with current NOx limits.

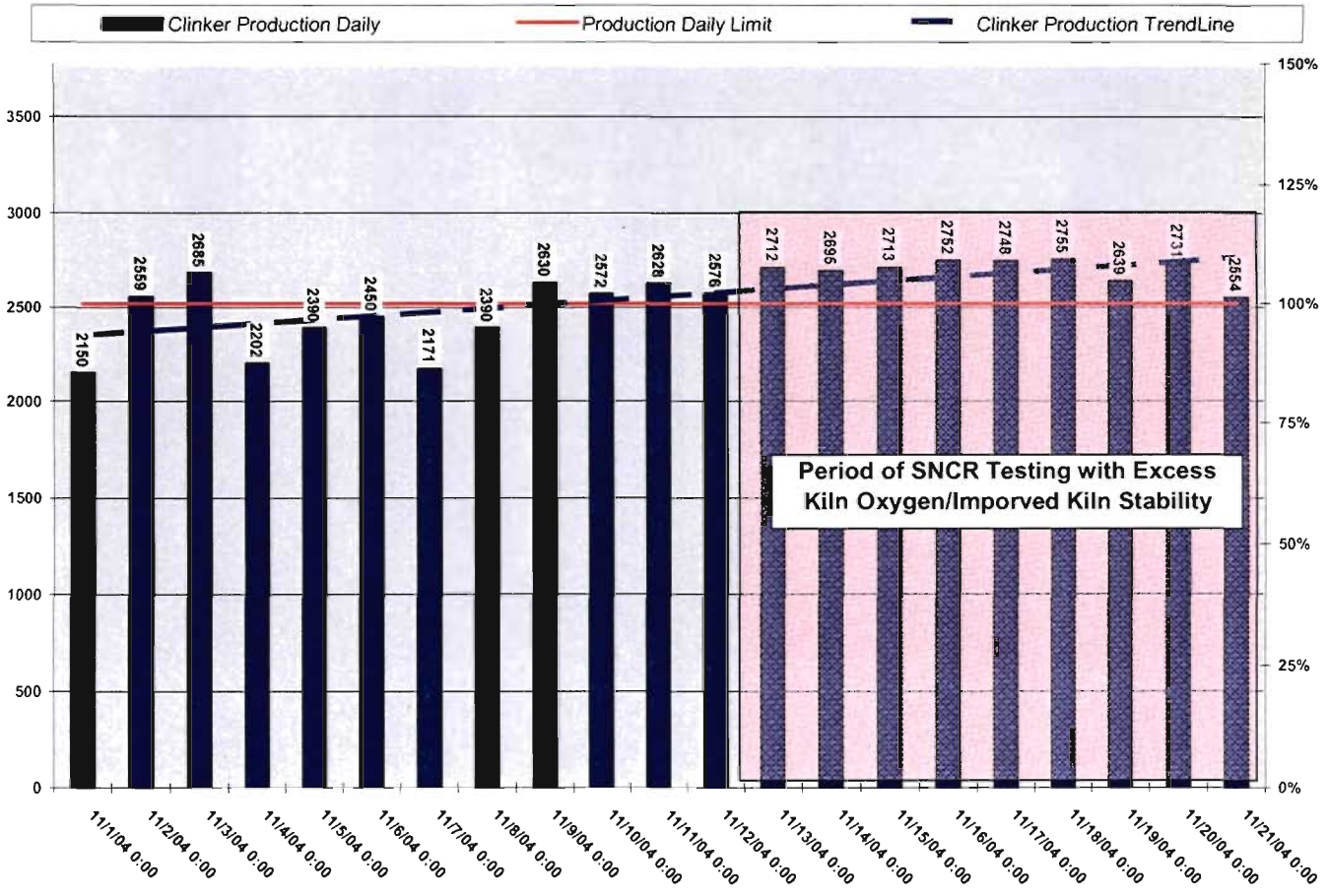
Additionally, the following disadvantages were noted during testing:

- Higher than average CO emissions were observed during testing,
- Ammonia emissions were observed during Raw Mill down periods (approximately 20 to 50 ppm). To insure NOx emissions at or below 2.5 lb/ton, some ammonia emissions may occur during Raw Mill down scenarios. Additionally, the ammonia injection testing was conducted over a period of only two weeks. Ammonia cycles within the Raw Mill may reach equilibrium over longer periods of time, resulting in Ammonia emissions with the Raw Mill on. Only prolonged operations of SNCR with optimization of ammonia use can determine ammonia emissions for the long-term,
- Failures of the ammonia injection equipment effecting injection rates can occur causing increased short-term NOx emissions. Short-term averaging of emissions at or below 2.5 lb/ton is not possible even with SNCR. Longer averaging times are needed to insure that problems with equipment can be averaged out.

SAC is confident that with improved efficiency in ammonia injection, ammonia emissions from ammonia slip can be minimized or even eliminated all together. NOx emissions can be maintained at or below 2.5 lb per ton clinker with SNCR even with the use of currently permitted Pet Coke, which has a higher potential for NOx generation than coal due to low volatiles and possible higher Nitrogen content.

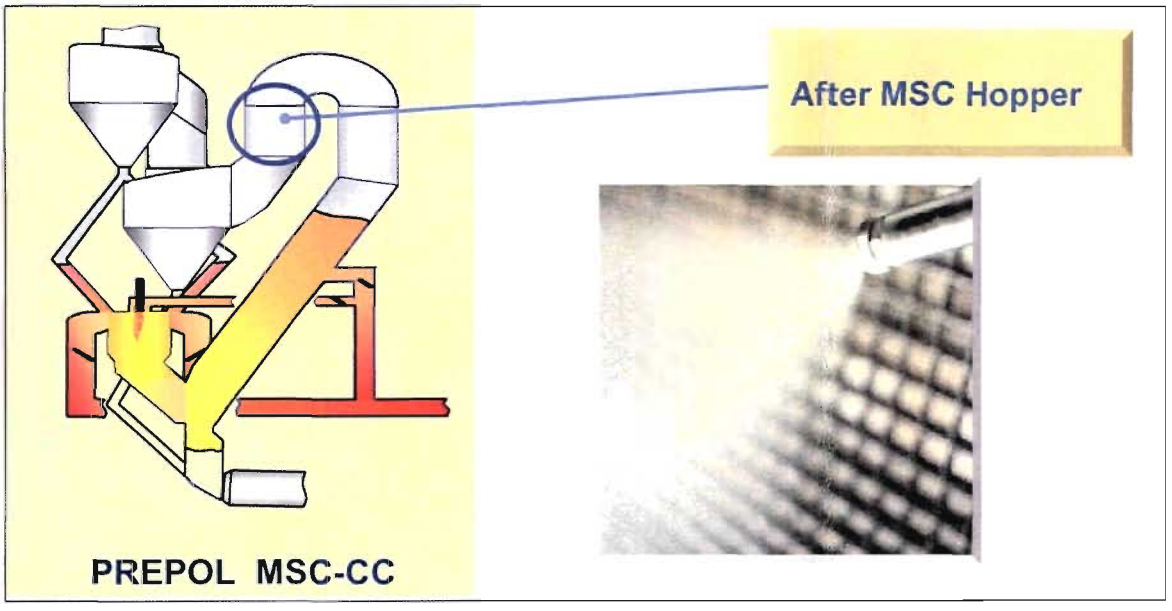
The overall findings of the SNCR testing have lead SAC to consider installation of SNCR on the existing Kiln System to be used as needed to help promote stable kiln operations with the use of various approved fuels and to allow an increase in production rate. In Figure 1, the increased production from Kiln Stability is shown during periods when SNCR was tested in conjunction with the scenario of operating the kiln with higher exit oxygen levels. Excess oxygen at the kiln exit results in increased thermal NOx from the kiln, which would typically lead to elevated NOx emissions at the stack. But, with SNCR the excess NOx generated in the kiln is reduced by the reaction with the ammonia. The SNCR system allowed emissions to remain around 2.0 pounds of NOx per ton of clinker while operating with approximately 3.0 to 3.5 lb of NOx per ton of clinker at the kiln exit.

Figure 1: Daily Production during SNCR Testing



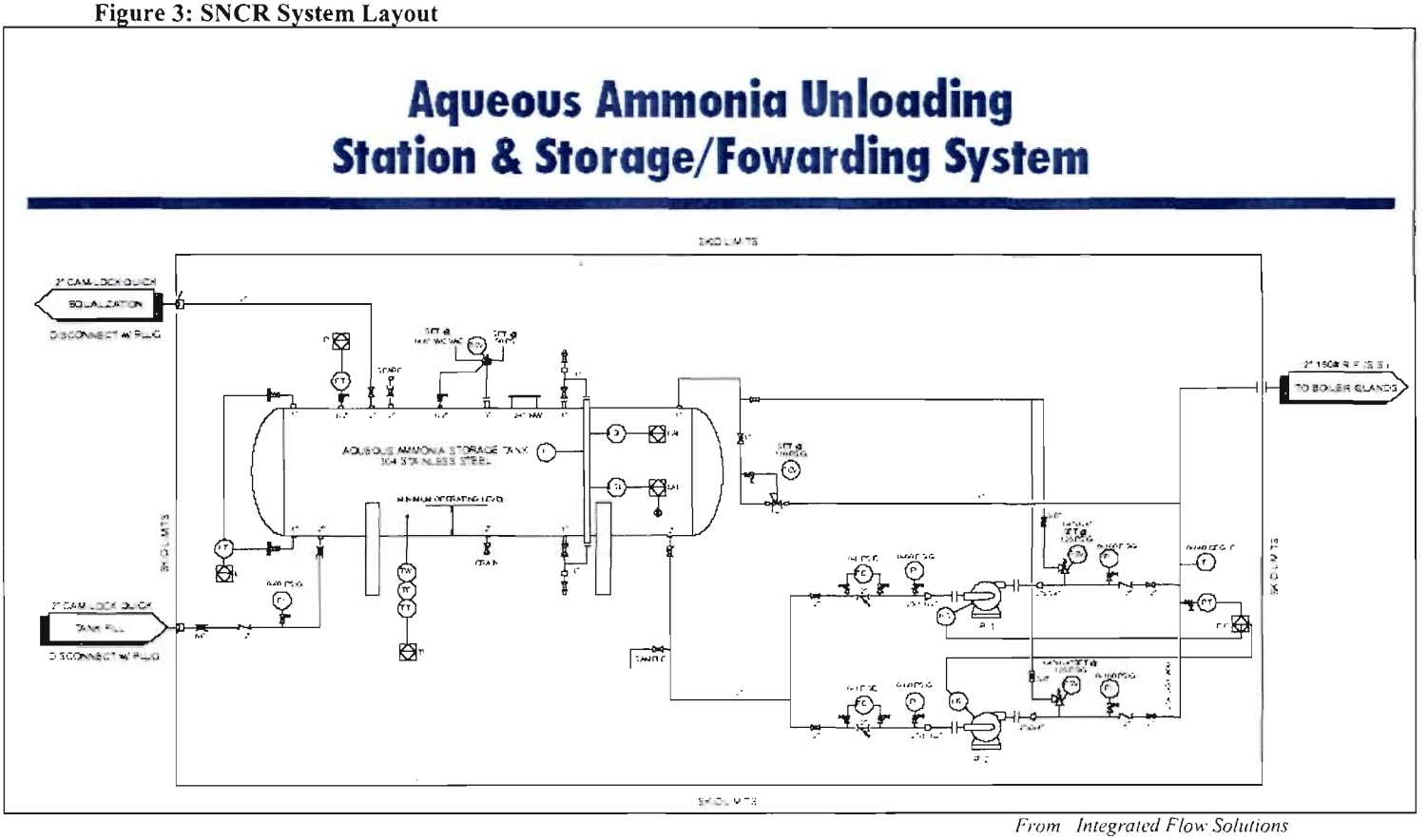
SAC injected ammonia in the Calciner just after the Multi-Staged Combustion (MSC) Hopper and just prior to the lowest stage cyclone (Stage 1) as shown in Figure 2. Optimal NOx reduction was expected to be achieved at this location based on Polysius experience with other plants. SAC would propose the injection of ammonia in this same location unless operations reveal a more optimal location for NOx reduction or process stability.

Figure 2: Ammonia Injection Location



The ammonia system will consist of a tank designed to handle up to 20% ammonia solution. The tank will be double walled or have containment to handle 110% of the tank volume. The tank capacity will be approximately 10,000 to 15,000 gallons. The tank will be equipped with overfill and leak alarms as well as level detection systems. The ammonia delivery to the SNCR system will by two pumps in parallel to insure delivery of ammonia even if one pump fails. The entire system will be automated and controlled by the control room operator and will have an interconnection with the NOx emissions as measured by the NOx Continuous Emission Monitor (CEM) in the main stack. An example layout is shown in Figure 3.

Figure 3: SNCR System Layout



From Integrated Flow Solutions

The tank and all associated equipment will be pressure rated or have means to insure vapors from ammonia solution are not freely vented to the atmosphere. The SNCR project will not result in any net increase in emissions and will only help to reduce NOx emissions despite increases in production, changes in kiln operations and/or the use of currently permitted Pet Coke as a fuel.

Federal Environmental Protection Agency (EPA) recognizes the installation of SNCR as a Pollution Control Project (PAP) in 40 CFR 52.21(b)(32). Even though Florida has yet to adopt this portion of the Federal Register in the Florida Administration Code, the environmental benefit of such a project is recognized by EPA. SAC seeks approval to install SNCR in conjunction with the other permit modifications as outlined in this package.

PRODUCTION AND EMISSION LIMIT REVISIONS DUE TO INCREASED PRODUCTION AND SNCR INSTALLATION

PRODUCTION AND EMISSION LIMIT REVISIONS DUE TO INCREASED PRODUCTION AND SNCR INSTALLATION

As discussed in attachments Emission Data During Production Rate Testing and SNCR System Information SAC wishes to increase clinker production by 15 percent on a ton per hour and ton per year bases as well install SNCR to control NOx emissions and promote stable kiln operations. Both of these projects will affect potential to emit for Prevention of Significant Deterioration (PSD) criteria pollutants. However due to the SNCR system and improved kiln operations, SAC will be able to reduce future potential emissions when compared with existing plant potential emissions for NOx, SO2, PM and PM10. Slight increases in annual emissions for VOC (expressed as THC) and CO will occur, but overall efficiency (pound per ton of clinker) will be reduced or remain the same.

Additional adjustments to the ancillary equipment will or may need to be made to support the kiln system at the elevated production capacity. These projects include the following:

- Adjustments to the Coal Mill motor and Drive to increase coal mill capacity up to 18.3 tph of ground coal and 16.4 tph of ground petroleum coke,
- Adjustments to Kiln I.D. Fan to increase rotation per minutes with the existing motor,
- Adjustments to Raw Mill I.D. Fan to increase rotations per minutes with the existing motor,
- An increase in the Cooler Fan capacity and/or Cooler capacity, and
- Other minor Adjustments to support increased production in the Kiln System.

None of the afore mentioned changes or the increase in production will result in an significant increase in emissions beyond the PSD threshold (Rule 62-212.400(2)(e)2., F.A.C.) for criteria pollutants. Furthermore, none of the changes will affect emissions from sources other than the Kiln/Raw Mill, with the exception of slightly reducing the production based (lb/ton clinker) PM/PM10 limits of the Cooler. The mass (lb/hr) and annual emission rates of PM and PM10 will remain the same and the production based emission rate (lb/ton clinker) will be reduced to the limits shown in the application for this project. Table 1 displays the current allowable potential emissions from the facility. Since SAC does not yet have two years of actual emission data, the potentials to emit shown in Table 1 are required to be used for PSD evaluation.

Table 1 - Existing Limits

Pollutant	Annual Limit (ton/year)	Limit (lb/ton)	Limit (lb/hr)
Production	839,500	105 tph	
NOx	1217.5	2.9	304.5
SO2	113.4	0.27	28.4
VOC	50.4	0.12	12.6
CO	1511.1	3.6	378

With the increase in production, no additional emissions of NOx, SO2, PM and PM10 will be generated and thus, annual limits and lb/hr limits will remain unchanged for these pollutants or even decrease. The increase in production does increase the overall system efficiency, resulting in a decrease in emissions of pollutant per ton of clinker. Thus, the existing hourly mass limits in terms of pound of pollutant per ton of clinker will have to be reduced to account for the increase in production. Table 2 expresses the existing limits as adjusted for an increase in production.

Table 2 – Limits Adjusted for Increased Production

Pollutant	Annual Limit (ton/year)	Limit (lb/ton)	Limit (lb/hr)
Production	965,425	120 tph	
NOx	1217.5	2.522	304.5
SO2	113.4	0.235	28.4
VOC	50.4	0.104	12.6
CO	1511.1	3.13	378

To insure the low NOx limits expressed in Table 2 and to be able to operate the Kiln System with oxidizing conditions, which have been shown to be favorable during testing, SAC proposes to install SNCR as a means of insuring compliance with the NOx limits. This has been discussed in detail in attachment SNCR System Information in this package. With the installation of SNCR and operating experience, SAC believes it can even further reduce the NOx emission and gain greater kiln stability.

However, several disadvantages of SNCR were observed during testing that were outlined in Attachment SNCR System Information. To summarize again, these included:

- Higher than average CO emissions were observed during testing. SAC would need to increase overall emissions of CO by some 99 tons a year to insure compliance with a pound per ton limit.
- Failures with ammonia equipment affecting injection flow rates can occur, causing increased short term NOx emissions.

CO emissions due to the use of SNCR would increase in terms of pound per hour and on an annual mass emission bases. Also averaging times for NOx would have to be revaluated due to concerns with short-term failures in the SNCR system as described in attachment SNCR System Information. If averaging times were extended, short-term interruptions in SNCR could be averaged out while annual NOx emissions would still be reduced.

Furthermore, VOC (expressed as THC) emissions remained constant in terms of pound per ton clinker during increased production testing and SNCR testing. Slight increases in annual emissions for VOC are expected although the overall pounds per ton of clinker will remain the same. This slight increase in annual emissions will result in approximately eight (8) tons of additional VOC per year but the production based emissions will remain constant at 0.12 pounds of VOC per ton of clinker.

Table 3 displays the proposed emission limits as adjusted for the changes in pollutant emission rates. NOx emissions have been further reduced based on experience gained during SNCR testing. In addition, the averaging times that SAC would propose to accompany each of the pollutants is accompanied in Table 3. PM emissions and Preheater feed have not been previously discussed, but PM emissions remain constant on an annual basis and Preheater feed is adjusted to accompany the increase in production. SAC would propose the following limits and averaging times as Final Limits for the Fly Ash Project, the Increase in Production Project and the SNCR Project.

Table 3 – Proposed Emission Limits

Pollutant	Annual Limit (ton/year)	Averaging Time	Limit (lb/ton)	Limit (lb/hr)
Production (Clinker)	965,425	24-Hour	120 tph	
Preheater Feed	1,684,578	24-Hour	210 tph	
NOx	1158.5	30-Day	2.4	288
SO2	96.5	24-Hour	0.20	24.0
VOC	58.0	30-Day Block	0.12	14.4
CO	1610.1	3-Hour Stack Test	3.34	400.3
PM	92.8	3-Hour Stack Test	0.110 lb/ton of dry preheater feed	23.1 lb/hour
PM10	78.4	3-Hour Stack Test	0.093 lb/ton of dry preheater feed	19.6 lb/hour

With the following limits SAC would achieve reductions or no change for all criteria pollutants with the exception of CO and VOC as previously discussed. Table 4 outlines the changes that would be achieved:

Table 4 – Pollutant Change

Pollutant	Current Annual Limit (ton/year)	Proposed New Annual Limit (ton/year)	Change +/- (ton/year)	PSD Significant Level (ton/year)	PSD Significance
NOx	1217.5	1158.5	- 59	40	No
SO2	113.4	96.5	- 16.9	40	No
VOC	50.4	58	+ 7.6	40	No
CO	1511.1	1610.1	+ 99	100	No
PM	92.8	92.8	0	25	No
PM10	78.4	78.4	0	15	No

The SNCR installation, as well as the increase in production in general, reduce overall emissions and increase efficiency of emissions in pounds per ton of clinker. Existing equipment plus the installation of SNCR and the proposed limits are proposed as Best Available Control Technology (BACT).

PERMANENT FLY ASH INJECTION SYSTEM INFORMATION

PERMANENT FLY ASH INJECTION SYSTEM INFORMATION

On July 28, 2004, SAC submitted a Long Form Permit Application to install and operate a permanent Fly Ash Injection System, including silos and transfer equipment for dry fly ash. On October 20, 2004, SAC received a Test Permit for Fly Ash Injection (Air Permit No. 1210465-012-AC). SAC received authorization to install silos and transfer equipment as part of the Fly Ash Test. SAC requested authority to permanently operate Fly Ash equipment as requested in the Long Form Permit Application dated July 28, 2004 and as allowed by the Department in Fly Ash Testing.

The July 28, 2004 Permit Application also included a permanent request to adjust the clinker production and kiln feed rates. Temporary authorization of these requests was part of the Test Permit received on October 20, 2004. In the attachment Emission Data During Production Rate Testing, the results of this testing were discussed. SAC would request the July 28, 2004 Application be updated to include the results of the testing and discussions included in this package on increased production. SAC requests the production increase be made permanent based on the results of testing approved by the Department from October 20, 2004, to date.

In the July 28, 2004 application additional information was provided on changes resulting form the increase in production and fly ash injection. The following are points form the original July 28, 2004 Application:

- Fuel requirement will need to be updated to reflect the additional heat capacity need for the additional kiln feed. SAC proposes to change the heat input limit from 364 to 458 million Btu per hour (mmBtu/hr).
- Coal Mill Process Rate Limitations increased to allow for increased ground fuel production for heating of the correspond increase in materials feed to the Kiln System. SAC requests to increase the monthly Process Rate Limitations for coal mill crushing from 10,658 tons of coal and petroleum coke in any month to 13,360 tons per month. This would require the annual limit change from 127,896 tons of coal and petroleum coke to 160,300 tons per year.
- Process Rate Limitations would need to be updated to reflect the new capacities as described above. Findings from Department approved testing and support for this request are included in attachment Emission Data During Production Rate Testing. Final production and emission limits are proposed in attachment Production and Emission Limits Revisions due to Increased Production and SNCR Installation.
- Means by which to calculate Process Rate Limitations. The separation of the fly ash from the preheater feed will now require SAC to combine the two inputs (preheater feed and fly ash) to determine the total kiln feed. The addition of the Fly Ash Project will change the existing LOI for the dry preheater feed and a LOI factor for Fly Ash will have to be developed. SAC proposes to develop and update LOI factors on a quarterly basis using industry proven test methods with corrections for dust return and other factors. This allows SAC greater accuracy as LOI factors may change based on variations in raw materials. The Department has clarified the means by which clinker production is calculated without Fly Ash injection. This application seeks to clarify how it shall be calculated with Fly Ash Injection.
- The means by which clinker production is determined needs to be clarified as a result of the addition of fly ash directly into the calciner. The preheater feed and the fly ash should be evaluated with separate LOI factors and summed together to determine the total clinker production. The equation should be as follows:

(Mass Input Preheater Feed * Preheater Feed LOI) + (Mass Input Fly Ash * Fly Ash LOI) = Mass Output Clinker

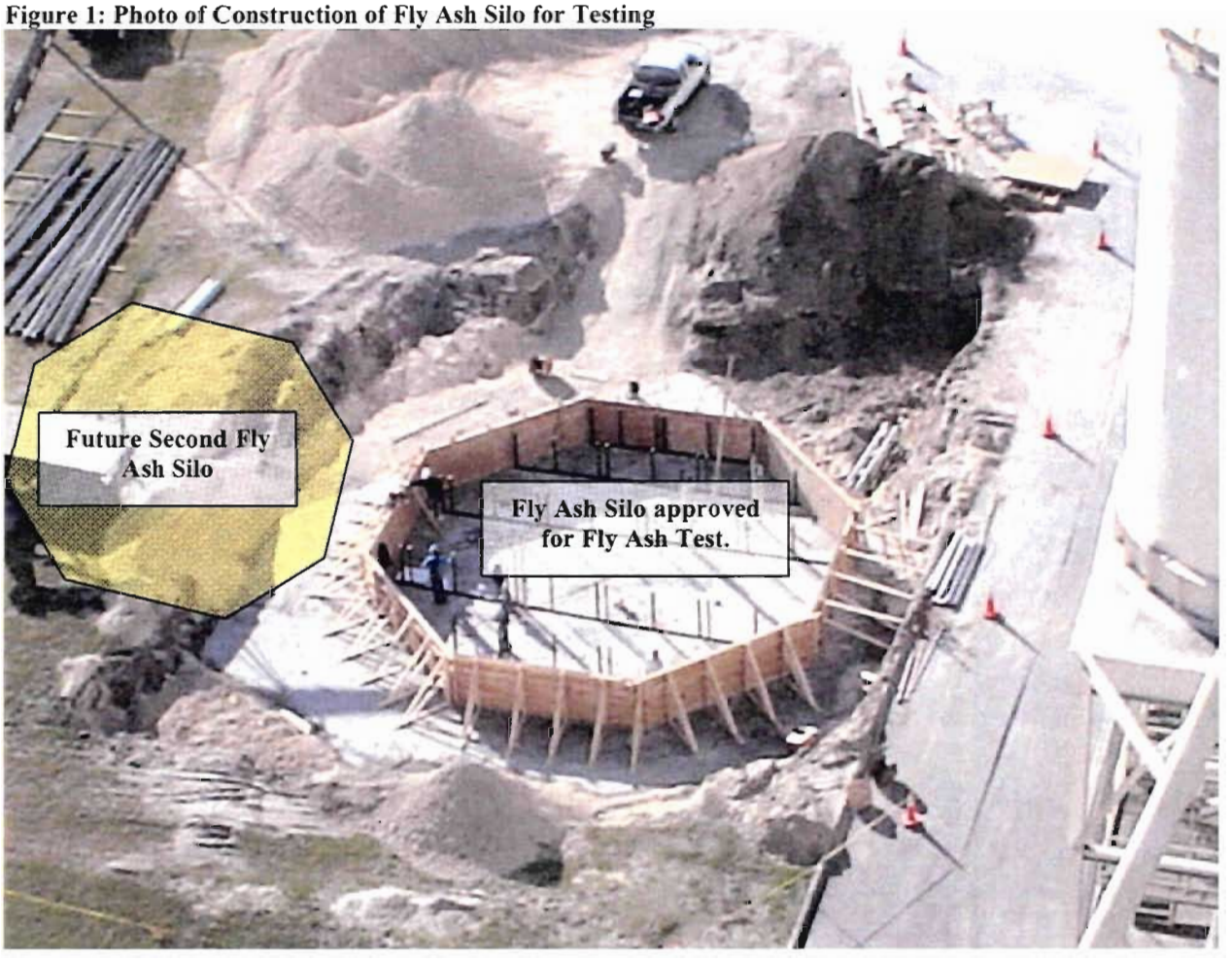
Also included in the July 28, 2004 Permit Application, SAC listed the environmental benefits of Fly Ash Injection. While testing of the system is still underway, the following benefits still apply and further

support the request to allow the injection of Fly Ash Permanently. The following recaps the benefits of the Fly Ash Project as outlined in the July 28, 2004 Permit Application:

- Reduction in CO and THC emissions due to reducing the fraction formed in preheater tower as a result of carbonaceous material in the fly ash being eliminated,
- More stable kiln operations due to the decrease in CO/THC generation in upper cyclones of the preheater,
- Increased flexibility in acceptance of varying types and quality of fly ash while still maintaining permitted emission limits, and
- Increased Thermal Efficiency of the Kiln System.

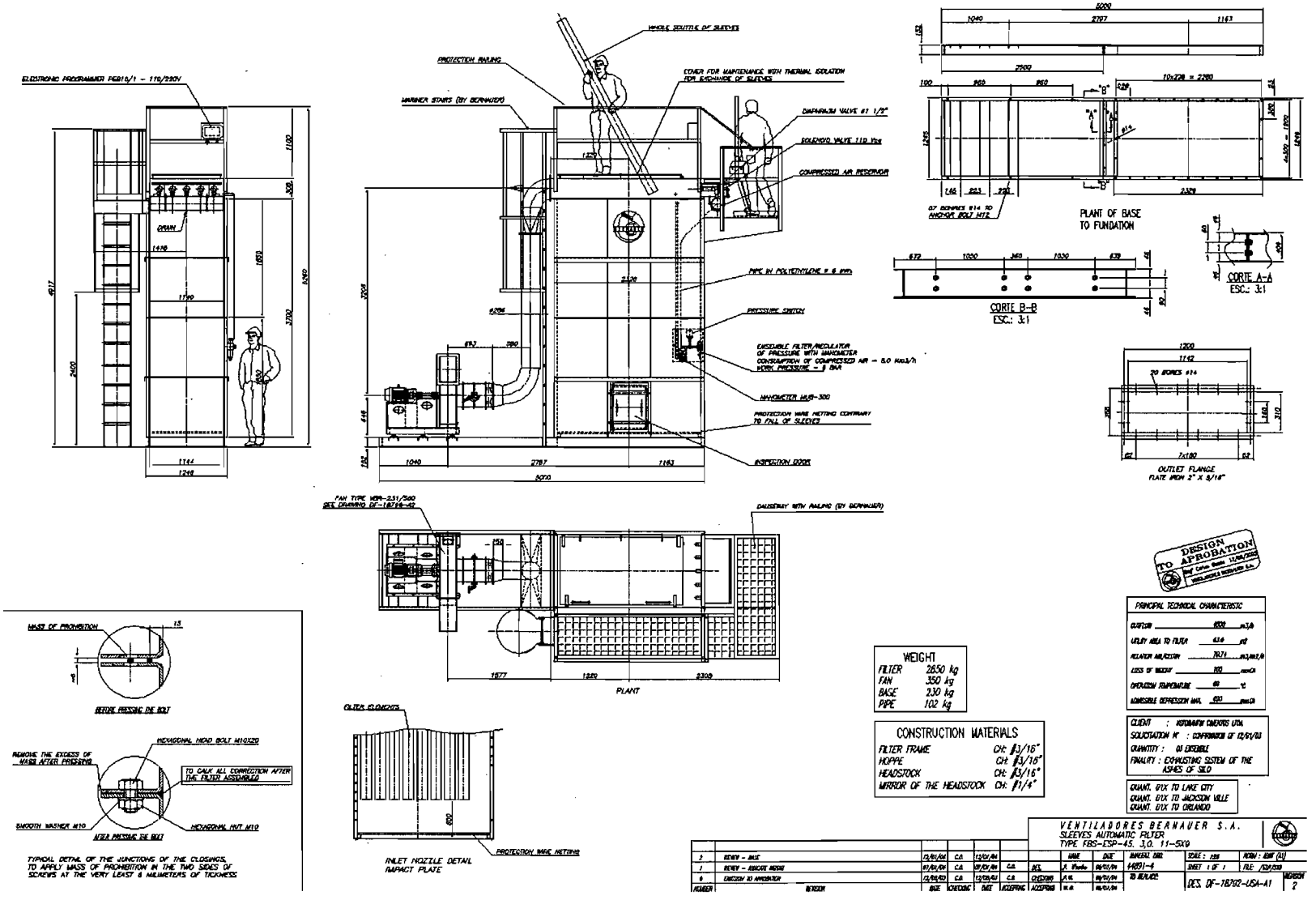
Included in the July 28, 2004 Permit Application were preliminary engineering and layout drawings. Please find included additional drawings and information for the Fly Ash System including information on construction necessary for the Fly Ash Testing.

Figure 1: Photo of Construction of Fly Ash Silo for Testing



Currently for testing only one silo is being constructed. Upon approval for permanent Fly Ash Injection a second Fly Ash silo, as originally proposed in the July 28, 2004 Application, will be constructed if needed. Both Silos are controlled by one baghouse. The details for the baghouse, as included in the July 28, 2004 application, and are in Figure 2.

Figure 2: Baghouse for Fly Ash Silo and Injection System



Details for the Baghouse are included in the Fly Ash Test Permit as well as the July 28, 2004 Permit Application. The layout and process flow of the Fly Ash System are included in Figures 3 and 4.

Figure 3: Permanent Fly Ash Silos Layout

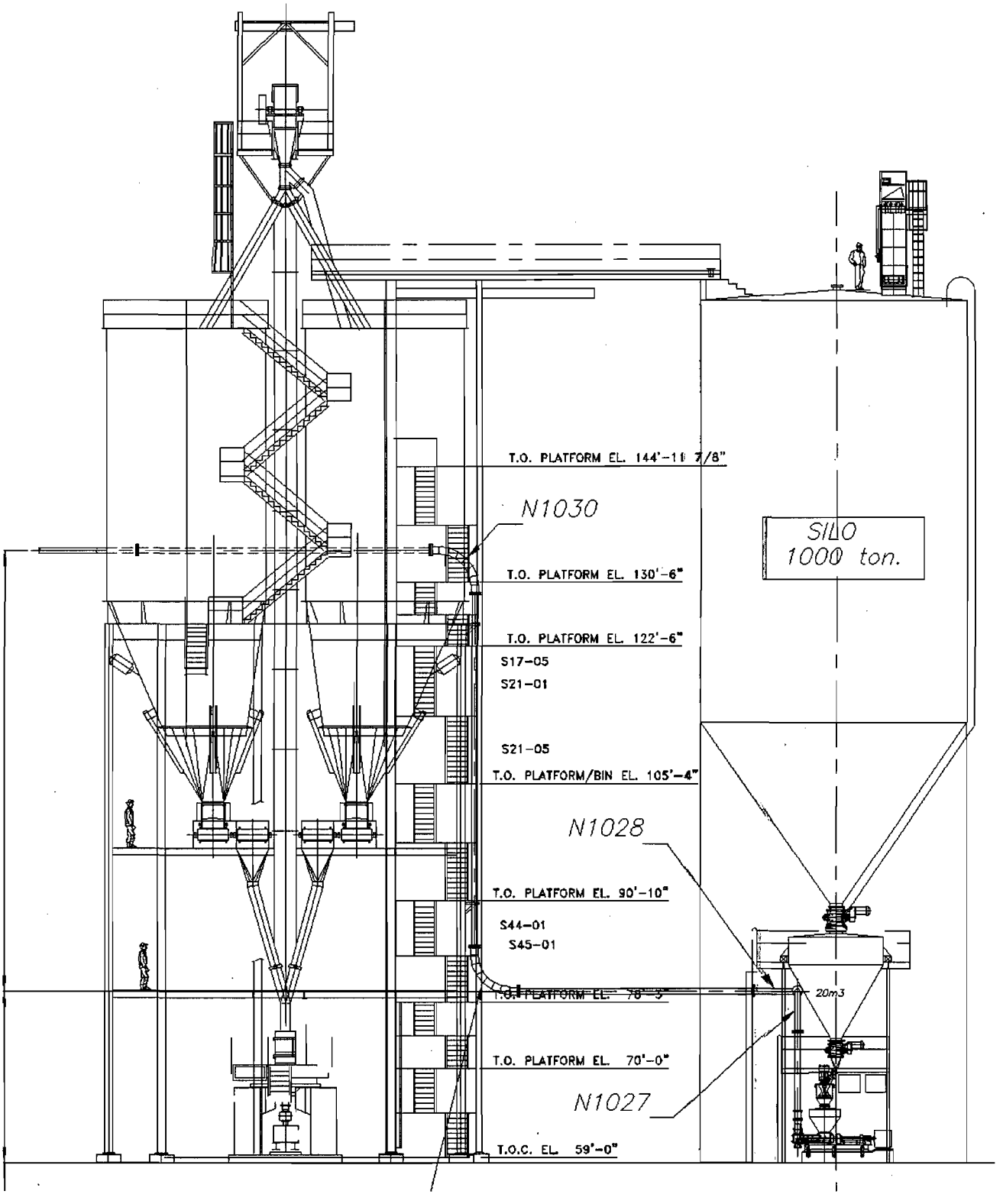
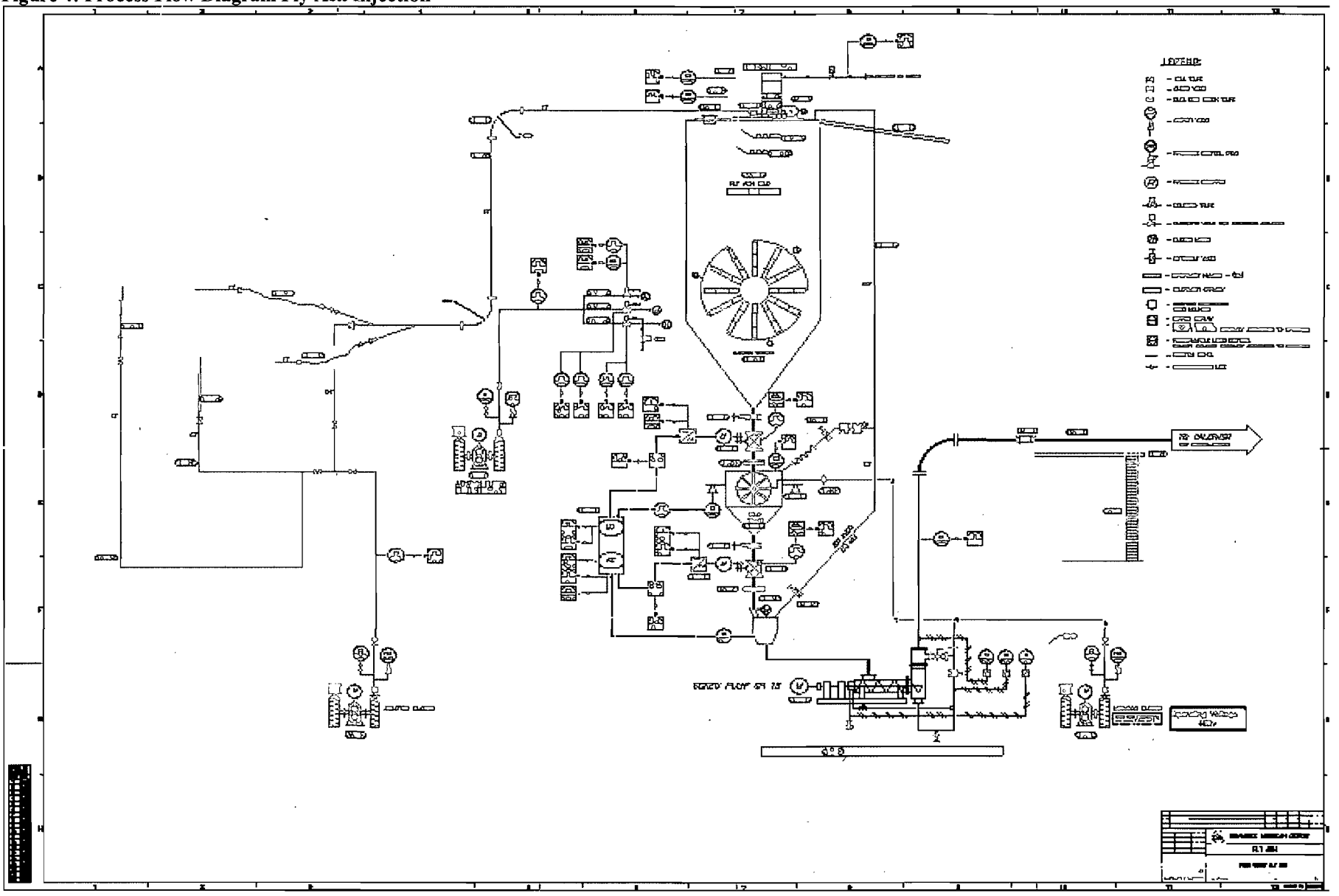


Figure 4: Process Flow Diagram Fly Ash Injection



TECHNICAL REVIEW AND PERMIT APPLICATION FROM DR. JOHN KOOGLER OF KOOGLER & ASSOCIATES

Technical Review of Projects

The following long-form Air Construction Permit Application addresses a request to increase the clinker production rate of the Suwannee American Cement (SAC) plant from 105 tons per hour to 120 tons per hour and to increase the annual clinker production rate from 839,500 tons per year to 965,425 tons per year. The corresponding increases in preheater feed rates will be from 178 tons per hour to 210 tons per hour and from 1,427,880 tons per year 1,684,578 tons per year. The hourly clinker production rate and preheater feed rate are based on 24-hour averages.

SAC conducted Department approved tests to evaluate kiln operations at increased production rates during the period October 19-November 8, 2004. The results were favorable and are reported in the Technical Report. The requested rate increases are set forth in the Application.

To accomplish this increase in production, the heat input rate to the pyroprocessing system will increase from 364 mmBTU per hour to 458 mmBTU per hour using currently permitted fuels.

In conjunction with the production rate increase, SAC is requesting authorization for two additional projects. These are addressed both in the Technical Report and Application.

First, SAC is providing additional information on the flyash injection project previously addressed by permit applications dated April 26, 2004 and July 28, 2004. This project involves the introduction of flyash (a raw material) directly into the calciner of the pyroprocessing system. Currently flyash is ground with other raw materials and introduced to the pyroprocessing system through the preheater. The proposed project will allow the introduction of the flyash into the calciner following the preheater, thus bypassing the preheater. This practice will reduce carbon monoxide (CO) and total hydrocarbon (THC) emissions caused by the formation of these compounds in the preheater. The practice will also give SAC the flexibility of accepting varying types and quality of flyash while continuing to operate within permitted emission limits. The practice will also increase the thermal efficiency of the kiln system. SAC is currently in the process of conducting Department approved tests to evaluate flyash injection. The results of these tests will be provided to the Department upon completion of the testing.

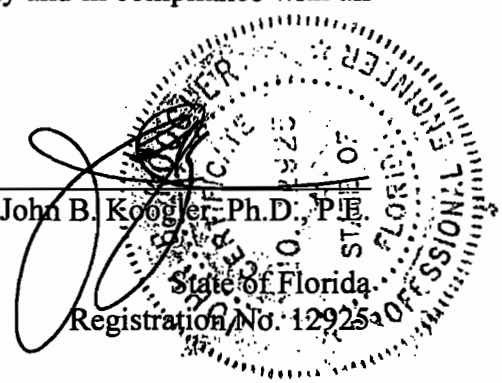
The second project for which SAC requests authorization is the permanent installation of a SNCR system for the control of NOx emissions. SAC obtained approval from the Department for short-term tests (November 8-29, 2004) to evaluate the efficacy of SNCR and found that the system offered several operating benefits. The results of these tests are being compiled and will be provided to the Department as soon as possible.

The benefits of the SNCR system, which are addressed in detail in the Technical Report, include greater kiln operating stability, fewer process problems (e.g., material build up in the kiln riser duct) as a result of being able to operate the kiln at higher oxygen levels at the kiln exit, and reduced NOx emissions. The ability to control NOx emissions will also give SAC more flexibility in using the currently permitted petroleum coke as a fuel for the pyroprocessing system.

The technical report submitted with this application includes an analysis of emission data recorded during Department approved production rate tests and an accompanying CD includes process data for this same period. The emission data demonstrates that the plant is capable of operating at increased production rates while still operating well within permitted emission limits. As a matter of fact, the production based emissions (pounds of pollutant per ton of clinker) actually decrease as the production rate increases due to increased kiln efficiency. After reviewing the emission data, and the benefits of the SNCR system, SAC is able to offer reductions in the annual emissions of NOx and SO_2 as a result of projects presented herein. Particulate matter emissions (both PM and PM10) will remain unchanged and VOC and CO emissions will increase less than significant amounts. The increase in CO emissions is primarily the result of the SNCR system while the VOC emission increase is related to the production increase; the pounds of VOC per ton of clinker remain unchanged. The emission limits proposed in conjunction with the flyash injection and SNCR projects and the production rate increase are discussed in the Technical Report and documented in the Application.

The technical report also includes a statement from the Polysius Corporation assuring that the plant can safely operate at the requested clinker production rate of 2880 tons per day (120 tons per hour, 24-hour average).

Based upon the information provided in this Application and the accompanying Technical Report, the Department should have the necessary assurance that the projects can be completed and the plant will continue to operate safely and in compliance with all existing and proposed permitted limits, as applicable.



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

1/7/2015
Date

Department of Environmental Protection

Division of Air Resource Management

APPLICATION FOR AIR PERMIT - LONG FORM

I. APPLICATION INFORMATION

Air Construction Permit – Use this form to apply for an air construction permit for a proposed project:

- subject to prevention of significant deterioration (PSD) review, nonattainment area (NAA) new source review, or maximum achievable control technology (MACT) review; or
- where the applicant proposes to assume a restriction on the potential emissions of one or more pollutants to escape a federal program requirement such as PSD review, NAA new source review, Title V, or MACT; or
- at an existing federally enforceable state air operation permit (FESOP) or Title V permitted facility.

Air Operation Permit – Use this form to apply for:

- an initial federally enforceable state air operation permit (FESOP); or
- an initial/revised/renewal Title V air operation permit.

Air Construction Permit & Revised/Renewal Title V Air Operation Permit (Concurrent Processing Option) – Use this form to apply for both an air construction permit and a revised or renewal Title V air operation permit incorporating the proposed project.

To ensure accuracy, please see form instructions

Identification of Facility

1. Facility Owner/Company Name: Suwannee American Cement	
2. Site Name: Branford Cement Plant	
3. Facility Identification Number: 1210465	
4. Facility Location... Street Address or Other Locator: 5117 U.S. Hwy 27 City: Branford County: Suwannee Zip Code: 32008	
5. Relocatable Facility? ☐ Yes ☒ No	6. Existing Title V Permitted Facility? ☐ Yes ☒ No

Application Contact

1. Application Contact Name: John B. Koogler, Ph.D., P.E.
2. Application Contact Mailing Address... Organization/Firm: Koogler and Associates, Inc. Street Address: 4014 NW 13th Street City: Gainesville State: FL Zip Code: 32609
3. Application Contact Telephone Numbers... Telephone: (352) 377 - 5822 ext. Fax: (352) 377 - 7158
4. Application Contact Email Address: jkoogler@kooglerassociates.com

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	
2. Project Number(s):	
3. PSD Number (if applicable):	
4. Siting Number (if applicable):	

APPLICATION INFORMATION

Purpose of Application

This application for air permit is submitted to obtain: (Check one)

Air Construction Permit

[x] Air construction permit.

Air Operation Permit

[ ] Initial Title V air operation permit.
[ ] Title V air operation permit revision.
[ ] Title V air operation permit renewal.
[ ] Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is required.
[ ] Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is not required.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit (Concurrent Processing)

[ ] Air construction permit and Title V permit revision, incorporating the proposed project.
[ ] Air construction permit and Title V permit renewal, incorporating the proposed project.

Note: By checking one of the above two boxes, you, the applicant, are requesting concurrent processing pursuant to Rule 62-213.405, F.A.C. In such case, you must also check the following box:

[ ] I hereby request that the department waive the processing time requirements of the air construction permit to accommodate the processing time frames of the Title V air operation permit.

Application Comment

The purpose of this Air Construction Permit is threefold :

1. To provide additional information related to the flyash injection project initially addressed in an Air Construction Permit Applications dated April 26, 2004 and July 28, 2004 ;
2. To restate the request for a clinker production rate increase initially addressed in the July 28, 2004 application; and
3. To request approval to install an SNCR system for NOx control and kiln stabilization.

APPLICATION INFORMATION

Scope of Application

Emissions Unit ID Number	Description of Emissions Unit	Air Permit Type	Air Permit Proc. Fee
004	In-line Kiln/Raw Mill controlled by Baghouse	AC1C	$4500.00
005	Clinker Cooler controlled by ESP	ACM1	$50.00 *
008	Coal/Coke Mill	ACM1	$50.00**
	* Paid with 7/28/2004 Application		
	* Paid with 7/28/2004 Application for minor Kiln/Raw Mill modification never implemented.		

Application Processing Fee

Check one: [x] Attached - Amount: $ 4500.00 ☐ Not Applicable

APPLICATION INFORMATION

Owner/Authorized Representative Statement

Complete if applying for an air construction permit or an initial FESOP.

1. Owner/Authorized Representative Name : **Celso Martini**

2. Owner/Authorized Representative Mailing Address...
   Organization/Firm: **Suwannee American Cement**
   Street Address: **P.O. Box 410**
   5117 US Hwy 27
   City: **Branford** State: **Florida** Zip Code: **32008**

3. Owner/Authorized Representative Telephone Numbers...
   Telephone: **(386) 935-5000** ext. Fax: **(386) 935-5080**

4. Owner/Authorized Representative Email Address: **celsom@suwanneecement.com**

5. Owner/Authorized Representative Statement:

   I, the undersigned, am the owner or authorized representative of the facility addressed in this air permit application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof and all other requirements identified in this application to which the facility is subject. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department, and I will promptly notify the department upon sale or legal transfer of the facility or any permitted emissions unit.

Signature

1-3-05
Date

APPLICATION INFORMATION

Professional Engineer Certification

1. Professional Engineer Name: John B. Koogler, Ph.D., P.E.
   Registration Number: 12925
2. Professional Engineer Mailing Address...
   Organization/Firm: Koogler and Associates, Inc.
   Street Address: 4014 NW 13th Street
   City: Gainesville State: FL Zip Code: 32609
3. Professional Engineer Telephone Numbers...
   Telephone: (352) 377 - 5822 ext. Fax: (352) 377 - 7158
4. Professional Engineer Email Address: jkoogler@kooglerassociates.com
5. Professional Engineer Statement:

I, the undersigned, hereby certify, except as particularly noted herein, that:*

(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this application for air permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and

(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.

(3) If the purpose of this application is to obtain a Title V air operation permit (check here ☐, if so), I further certify that each emissions unit described in this application for air permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance plan and schedule is submitted with this application.

(4) If the purpose of this application is to obtain an air construction permit (check here ☒, if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here , if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.

(5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here ☐, if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.

Signature 1/7/05 Date

(seal)

* Attach any exception to certification statement.

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates... Zone 17 East (km) 321.4 km North (km) 3315.9 km		2. Facility Latitude/Longitude... Latitude (DD/MM/SS) 29/57/45 Longitude (DD/MM/SS) 82/51/03	
3. Governmental Facility Code: 0	4. Facility Status Code: A	5. Facility Major Group SIC Code: 32	6. Facility SIC(s): 3241
7. Facility Comment : None			

Facility Contact

1. Facility Contact Name: Joe B. Horton, Environmental Manager
2. Facility Contact Mailing Address... Organization/Firm: Suwannee American Cement Street Address: 5117 US Hwy 27 City: Branford State: FL Zip Code: 32008
3. Facility Contact Telephone Numbers: Telephone: (386) 935 - 5039 ext. Fax:(386) 935 - 5080
4. Facility Contact Email Address: jbhorton@suwanneecement.com

Facility Primary Responsible Official

Complete if an "application responsible official" is identified in Section I. that is not the facility "primary responsible official."

1. Facility Primary Responsible Official Name: Celso A. Martini – Plant Manager
2. Facility Primary Responsible Official Mailing Address... Organization/Firm: Suwannee American Cement Street Address: Post Office Box 410 City: Branford State: FL Zip Code: 32008
3. Facility Primary Responsible Official Telephone Numbers... Telephone: (386) 935 - 5000 ext. 2516 Fax:(386) 935 - 5080
4. Facility Primary Responsible Official Email Address: celsom@suwanneecement.com

FACILITY INFORMATION

Facility Regulatory Classifications

Check all that would apply *following* completion of all projects and implementation of all other changes proposed in this application for air permit. Refer to instructions to distinguish between a "major source" and a "synthetic minor source."

1. ☐ Small Business Stationary Source	☒ Unknown
2. ☐ Synthetic Non-Title V Source	
3. ☒ Title V Source	
4. ☒ Major Source of Air Pollutants, Other than Hazardous Air Pollutants (HAPs)	
5. ☐ Synthetic Minor Source of Air Pollutants, Other than HAPs	
6. ☒ Major Source of Hazardous Air Pollutants (HAPs)	
7. ☐ Synthetic Minor Source of HAPs	
8. ☒ One or More Emissions Units Subject to NSPS (40 CFR Part 60)	
9. ☐ One or More Emissions Units Subject to Emission Guidelines (40 CFR Part 60)	
10. ☒ One or More Emissions Units Subject to NESHAP (40 CFR Part 61 or Part 63)	
11. ☐ Title V Source Solely by EPA Designation (40 CFR 70.3(a)(5))	
12. Facility Regulatory Classifications Comment: **Item 6: Presumed Major for HAPs**	

FACILITY INFORMATION

List of Pollutants Emitted by Facility

1. Pollutant Emitted	2. Pollutant Classification	3. Emissions Cap [Y or N]?
PM	A	N
PM10	A	N
SO_2	A	N
NOx	A	N
CO	A	N
VOC	B	N
DIOX	B	N
H114	B	N

B. EMISSIONS CAPS N/A

Facility-Wide or Multi-Unit Emissions Caps

1. Pollutant Subject to Emissions Cap	2. Facility Wide Cap [Y or N]? (all units)	3. Emissions Unit ID No.s Under Cap (if not all units)	4. Hourly Cap (lb/hr)	5. Annual Cap (ton/yr)	6. Basis for Emissions Cap

7. Facility-Wide or Multi-Unit Emissions Cap Comment:
NONE

C. FACILITY ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Facility Plot Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID:_____ [x] Previously Submitted, Date: (1)
2. Process Flow Diagram(s): (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   [x] Attached, Document ID: (2) ☐ Previously Submitted, Date:_____
3. Precautions to Prevent Emissions of Unconfined Particulate Matter: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   ☐ Attached, Document ID:_____ [x] Previously Submitted, Date: (1)

Additional Requirements for Air Construction Permit Applications

1. Area Map Showing Facility Location:
   ☐ Attached, Document ID:_____ [x] Not Applicable (existing permitted Facility)
2. Description of Proposed Construction or Modification:
   [x] Attached, Document ID: **001-003**
3. Rule Applicability Analysis:
   ☐ Attached, Document ID: (1)
4. List of Exempt Emissions Units (Rule 62-210.300(3)(a) or (b)1., F.A.C.):
   ☐ Attached, Document ID: (1) ☐ Not Applicable (no exempt units at facility)
5. Fugitive Emissions Identification (Rule 62-212.400(2), F.A.C.):
   ☐ Attached, Document ID: (1) ☐ Not Applicable
6. Preconstruction Air Quality Monitoring and Analysis (Rule 62-212.400(5)(f), F.A.C.):
   ☐ Attached, Document ID:_____ [x] Not Applicable
7. Ambient Impact Analysis (Rule 62-212.400(5)(d), F.A.C.):
   ☐ Attached, Document ID:_____ [x] Not Applicable
8. Air Quality Impact since 1977 (Rule 62-212.400(5)(h)5., F.A.C.):
   ☐ Attached, Document ID:_____ [x] Not Applicable
9. Additional Impact Analyses (Rules 62-212.400(5)(e)1. and 62-212.500(4)(e), F.A.C.):
   ☐ Attached, Document ID:_____ [x] Not Applicable
10. Alternative Analysis Requirement (Rule 62-212.500(4)(g), F.A.C.):
    ☐ Attached, Document ID:_____ [x] Not Applicable

FACILITY INFORMATION

Additional Requirements for FESOP Applications

1. List of Exempt Emissions Units (Rule 62-210.300(3)(a) or (b)1., F.A.C.):
   ☐ Attached, Document ID:_____ ☒ Not Applicable (no exempt units at facility)

Additional Requirements for Title V Air Operation Permit Applications

1. List of Insignificant Activities (Required for initial/renewal applications only):
   ☐ Attached, Document ID:_____ ☒ Not Applicable (revision application)

2. Identification of Applicable Requirements (Required for initial/renewal applications, and for revision applications if this information would be changed as a result of the revision being sought):
   ☐ Attached, Document ID:_____
   ☒ Not Applicable (revision application with no change in applicable requirements)

3. Compliance Report and Plan (Required for all initial/revision/renewal applications):
   ☐ Attached, Document ID: N/A
   Note: A compliance plan must be submitted for each emissions unit that is not in compliance with all applicable requirements at the time of application and/or at any time during application processing. The department must be notified of any changes in compliance status during application processing.

4. List of Equipment/Activities Regulated under Title VI (If applicable, required for initial/renewal applications only):
   ☐ Attached, Document ID:_____
   ☐ Equipment/Activities On site but Not Required to be Individually Listed
   ☒ Not Applicable

5. Verification of Risk Management Plan Submission to EPA (If applicable, required for initial/renewal applications only) :
   ☐ Attached, Document ID:_____ ☒ Not Applicable

6. Requested Changes to Current Title V Air Operation Permit:
   ☐ Attached, Document ID:_____ ☒ Not Applicable

Additional Requirements Comment

(1) Submitted with original AC application
(2) Supporting information for the following requests are in the Attached Report.

III. EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Application - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application for air permit. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

Air Construction Permit or FESOP Application - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an "unregulated emissions unit" does not apply. If this is an application for air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application – Where this application is used to apply for both an air construction permit and a revised/renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. **The air construction permitting classification must be used to complete the Emissions Unit Information Section of this application for air permit.** A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air construction permitting and insignificant emissions units are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

   [x] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

   [ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

   [x] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

   [ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

   [ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section: Kiln/Raw Mill; EU-004

3. Emissions Unit Identification Number: 002

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A	NA	2/03	32	[ ] Yes [x] No

9. Package Unit:
   Manufacturer: NA Model Number:

10. Generator Nameplate Rating: MW NA

11. Emissions Unit Comment: This emission unit covers the pyroprocessing system from the raw mill (including auxillary air heater) to the point of clinker discharge from the kiln.

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:
   Fabric Filter – High Temperature Kiln/Raw Mill Baghouse – 016
   SNCR – Ammonia Injection – 032
   Low NOx Burner – 205

2. Control Device or Method Code(s): 016 / 032 / 205

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: 5040 ton/day feed (210 tph, 24-hr avg)
2. Maximum Production Rate: 2880 ton/day clinker (120 tph, 24-hr avg)
3. Maximum Heat Input Rate: 458 mmBTU/hr
4. Maximum Incineration Rate: pounds/hr NA tons/day
5. Requested Maximum Operating Schedule: hours/day 24 days/week 7 weeks/year 52 hours/year 8760
6. Operating Capacity/Schedule Comment: Kiln/Raw Mill will operate up to 8760 hours/yr with an annual production factor of approximately 0.92. Annual clinker production will be limited to 965,425 tons.

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: Attachment 002	2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: Baghouse discharge for Kiln/Raw Mill – E-21 Stack		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: NA		
5. Discharge Type Code: V	6. Stack Height: feet 315	7. Exit Diameter: feet 9.42
8. Exit Temperature: °F 230/375	9. Actual Volumetric Flow Rate: acfm 189,500/207,000	10. Water Vapor: % 15/11
11. Maximum Dry Standard Flow Rate: dscfm 123,250/116,500	12. Nonstack Emission Point Height: feet NA	
13. Emission Point UTM Coordinates...NA Zone: East (km): North (km):	14. Emission Point Latitude/Longitude...NA Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: 3. Existing Kiln/Raw Mill Baghouse 8-11. Compound Operation (~90%)/Direct Operation (~10%)		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 6

1. Segment Description (Process/Fuel Type): Mineral Products: Cement Mfg: Dry Process: Preheater/Precalciner Kiln		
2. Source Classification Code (SCC): 3-05-006-23	3. SCC Units: Ton Feed	
4. Maximum Rate: 5040 tpd	5. Maximum Annual Rate: 1,684,578 tpy	6. Estimated Annual Activity Factor: 0.92
7. Maximum % Sulfur: NA	8. Maximum % Ash: NA	9. Million Btu per SCC Unit: NA
10. Segment Comment: Preheater/Precalciner Feed at a nominal rate of 210 tph, 24-hr avg		

Segment Description and Rate: Segment 2 of 6

1. Segment Description (Process/Fuel Type): Mineral Products: Cement Mfg: Dry Process: Preheater/Precalciner Kiln		
2. Source Classification Code (SCC): 3-05-006-23	3. SCC Units: Ton clinker	
4. Maximum Rate: 2880 tpd	5. Maximum Annual Rate: 965,425	6. Estimated Annual Activity Factor: 0.92
7. Maximum % Sulfur: NA	8. Maximum % Ash: NA	9. Million Btu per SCC Unit: 3.96
10. Segment Comment: Clinker Production: 120 tph, 24-hr avg.		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 3 of 6

1. Segment Description (Process/Fuel Type): In-Process Fuel Use: Bituminous Coal: Cement Kiln		
2. Source Classification Code (SCC): 3-90-002-01	3. SCC Units: Tons Burned	
4. Maximum Hourly Rate: 18.3 tph	5. Maximum Annual Rate: 160,483 tpy	6. Estimated Annual Activity Factor: 0.92
7. Maximum % Sulfur: 1.5%	8. Maximum % Ash: 10.0%	9. Million Btu per SCC Unit: 25 mmBTU/ton
10. Segment Comment: Coal as primary fuel at 12,520 BTU/lb		

Segment Description and Rate: Segment 4 of 6

1. Segment Description (Process/Fuel Type): In-Process Fuel Use: Coke: Cement Kiln		
2. Source Classification Code (SCC): 3-90-008-99	3. SCC Units: Tons Burned	
4. Maximum Hourly Rate: 16.4 tph	5. Maximum Annual Rate: 143,664 tpy	6. Estimated Annual Activity Factor: 0.92
7. Maximum % Sulfur: 5%	8. Maximum % Ash: <1%	9. Million Btu per SCC Unit: 28 mmBTU/ton
10. Segment Comment: Petcoke at 14,000 BTU/lb		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 5 of 6

1. Segment Description (Process/Fuel Type): In-Process Fuel Use: Natural Gas: Cement Kiln		
2. Source Classification Code (SCC): 3-90-006-02	3. SCC Units: Million Cubic Feet Burned	
4. Maximum Hourly Rate: 0.44 mm/hr	5. Maximum Annual Rate: 3821 mm/yr	6. Estimated Annual Activity Factor: 0.92
7. Maximum % Sulfur: Nil	8. Maximum % Ash: Nil	9. Million Btu per SCC Unit: 1050
10. Segment Comment: Natural Gas at 1050 mmBTU/cu. ft.		

Segment Description and Rate: Segment 6 of 6

1. Segment Description (Process/Fuel Type): In-Process Fuel Use: Solid Waste: General		
2. Source Classification Code (SCC): 3-90-012-99	3. SCC Units: Tons Burned	
4. Maximum Hourly Rate: 1.9 tph	5. Maximum Annual Rate: 16,717 tpy	6. Estimated Annual Activity Factor: 0.092
7. Maximum % Sulfur: 1.5%	8. Maximum % Ash: 20%	9. Million Btu per SCC Unit: 24 mmBTU/ton
10. Segment Comment: Whole Tire Derived Fuel (WTDF) at 12,000 BTU/lb and 10% (45.8 mmBTU/hr) of system heat input.		

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	**016**	**None**	**EL**
PM10	**016**	**None**	**EL**
SO_2			**EL**
NOx	**032/205**		**EL**
CO			**EL**
VOC			**EL**
DIOX			**EL**
H106			**NS**
HAPS			**NS**

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control: 99+%
3. Potential Emissions: 23.1 lb/hour 92.8 tons/year	4. Synthetically Limited? ☐ Yes [x] No
5. Range of Estimated Fugitive Emissions (as applicable):NA to tons/year	
6. Emission Factor: 0.110 lb/ton feed, or 0.193 lb/ton Clinker, equivalent rates Reference: BACT (proposed)	7. Emissions Method Code: 0

8. Calculation of Emissions:

210 tph feed x 0.110 lb/ton = 23.1 lb/hr

120 tph clinker x 0.193 lb/ton = 23.1 lb/hr

965,425 tpy clinker x 0.193 lb/ton/2000 = 92.8 tpy

9. Pollutant Potential/Estimated Fugitive Emissions Comment:
NSPS and NESHAP limits are both 0.3 lb PM per ton of feed. SAC requests that the unitized emission rate be expressed as 0.193 lb/PM/ton clinker ; a rate equivalent to the feed rate limit of 0.110 lb/PM/ton feed.

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM10**	2. Total Percent Efficiency of Control: 99+%
3. Potential Emissions: 19.7 lb/hour 78.4 tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): NA to tons/year	
6. Emission Factor: 0.093 lb/ton feed, or 0.164 lb/ton clinker, equivalent rates Reference: BACT (proposed)	7. Emissions Method Code: 0

8. Calculation of Emissions:

210 tph feed x 0.093 lb/ton = 19.7 lb/hr

120 tph clinker x 0.164 lb/ton = 19.7 lb/hr

965,425 tpy clinker x 0.164 lb/ton/2000 = 78.9 tpy

9. Pollutant Potential/Estimated Fugitive Emissions Comment:
SAC requests that the unitized emission rate be expressed as 0.164 lb PM10/ton clinker ; a rate equivalent to the feed rate limit of 0.093 lb PM10/ton feed.

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **SO_2**	2. Total Percent Efficiency of Control: 99+%
3. Potential Emissions: 24.0 lb/hour 96.5 tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): NA to tons/year	
6. Emission Factor: 0.20 lb/ton Clinker Reference: BACT (proposed)	7. Emissions Method Code: 0
8. Calculation of Emissions: 120 tph Clinker x 0.20 lb/ton = 24.0 lb/hr 965,425 tpy Clinker x 0.20 lb/ton/2000 =96.5 tpy	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: NA	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **NOx**	2. Total Percent Efficiency of Control: 0 – 30% as required
3. Potential Emissions: 288.0 lb/hour 1158.5 tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): NA to tons/year	
6. Emission Factor: 2.40 lb/ton Clinker, 30-day avg. Reference:	7. Emissions Method Code: 0

8. Calculation of Emissions:

120 tph Clinker x 2.40 lb/ton = 288.0 lb/hr, 30-day avg.

965,425 tpy Clinker x 2.40 lb/ton/2000 = 1158.5 tpy

9. Pollutant Potential/Estimated Fugitive Emissions Comment:
SAC requests a 30-day NOx limit of 2.4 lb/ton clinker in conjunction with an SNCR System.

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **CO**	2. Total Percent Efficiency of Control: NA
3. Potential Emissions: 400.8 lb/hour 1610.1 tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable):NA to tons/year	
6. Emission Factor: 3.34 lb/ton Clinker Reference: BACT (proposed)	7. Emissions Method Code: 0
8. Calculation of Emissions: 120 tph Clinker x 3.34 lb/ton = 400.8 lb/hr 965,425 tpy Clinker x 3.34 lb/ton/2000 = 1610.1 tpy	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: CO increased PTE is 99.0 tpy	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **VOC**	2. Total Percent Efficiency of Control: NA
3. Potential Emissions: 14.4 lb/hour 58.0 tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): NA to tons/year	
6. Emission Factor: 0.12 lb/ton Clinker Reference: BACT (proposed)	7. Emissions Method Code: 0
8. Calculation of Emissions: 120 tpy Clinker x 0.12 lb/ton = 14.4 lb/hr 965,425 tpy Clinker x 0.12 lb/ton/2000 = 58.0 tpy	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: VOC increased PTE is 7.6 tpy	

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **DIOX**	2. Total Percent Efficiency of Control: NA
3. Potential Emissions: 1.8E-07 lb/hour 7.7E-07 tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): NA to tons/year	
6. Emission Factor: 0.4/0.2 ng/dscm @ 7% O_2 (1) Reference: NESHAP	7. Emissions Method Code: 0
8. Calculation of Emissions: 117,175 dscfm (avg @ 7% O_2) x 1/35.31 m^3/ft^3 x 60 min/hr x 0.4 ng/dscm x 1/454 E-09 lb/ng = 1.8E-07 lb/hr x 8760/2000 = 7.7E-07 tpy	
9. Pollutant Potential/Estimated Fugitive Emissions Comment: 0.4 ng/dscm when kiln baghouse inlet temperature is <400°F, and 0.2 ng/dscm when kiln baghouse inlet temperature is ≥400°F.	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 7; PM

1. Basis for Allowable Emissions Code: BACT	2. Future Effective Date of Allowable Emissions: NA
3. Allowable Emissions and Units: 0.193 lb/ton clinker	4. Equivalent Allowable Emissions: 23.1 lb/hour 92.8 tons/year
5. Method of Compliance: EPA Method 5	
6. Allowable Emissions Comment (Description of Operating Method): Emission limit more stringent than NSPS and NESHAP	

Allowable Emissions Allowable Emissions 2 of 7; PM10

1. Basis for Allowable Emissions Code: BACT	2. Future Effective Date of Allowable Emissions: NA
3. Allowable Emissions and Units: 0.164 lb/ton clinker	4. Equivalent Allowable Emissions: 19.7 lb/hour 78.4 tons/year
5. Method of Compliance: EPA Method 5, with all PM assumed to be PM10	
6. Allowable Emissions Comment (Description of Operating Method):	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 3 of 7; SO_2

1. Basis for Allowable Emissions Code: BACT	2. Future Effective Date of Allowable Emissions: NA
3. Allowable Emissions and Units: 0.20 lb/ton Clinker	4. Equivalent Allowable Emissions: 24.0 lb/hour 96.5 tons/year
5. Method of Compliance: SO_2 CEMS	
6. Allowable Emissions Comment (Description of Operating Method):	

Allowable Emissions Allowable Emissions 4 of 7; NOx

1. Basis for Allowable Emissions Code: BACT	2. Future Effective Date of Allowable Emissions: 1 yr following startup of flyash system
3. Allowable Emissions and Units: 2.40 lb/ton Clinker (30-day avg)	4. Equivalent Allowable Emissions: 288.0 lb/hour 1158.5 tons/year
5. Method of Compliance: NOx CEMS	
6. Allowable Emissions Comment (Description of Operating Method):	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 5 of 7; CO

1. Basis for Allowable Emissions Code: BACT	2. Future Effective Date of Allowable Emissions: NA
3. Allowable Emissions and Units: 3.34 lb/ton Clinker	4. Equivalent Allowable Emissions: 400.8 lb/hour 1610.1 tons/year
5. Method of Compliance: EPA Method 10	
6. Allowable Emissions Comment (Description of Operating Method): PTE increases 99.0 tpy because of SNCR	

Allowable Emissions Allowable Emissions 6 of 7; VOC

1. Basis for Allowable Emissions Code: BACT	2. Future Effective Date of Allowable Emissions: NA
3. Allowable Emissions and Units: 0.12 lb/ton Clinker	4. Equivalent Allowable Emissions: 14.4 lb/hour 58.0 tons/year
5. Method of Compliance: THC CEMS	
6. Allowable Emissions Comment (Description of Operating Method): PTE increases 7.6 tpy but emissions per ton of clinker are unchanged.	

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 7 of 7; DIOX

1. Basis for Allowable Emissions Code: NESHAP	2. Future Effective Date of Allowable Emissions: NA
3. Allowable Emissions and Units: 0.4/0.2 ng/dscm @ 7% O_2	4. Equivalent Allowable Emissions: 1.8E-07 lb/hour 7.7E-07tons/year
5. Method of Compliance: EPA Method 23	
6. Allowable Emissions Comment (Description of Operating Method):	

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: VE10	2. Basis for Allowable Opacity: [x] Rule-BACT [ ] Other
3. Allowable Opacity: 10% Normal Conditions: 0 % Exceptional Conditions: 10 % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: COM	
5. Visible Emissions Comment: NESHAP and NSPS limit is 20%	

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor 1 of 6; VE

1. Parameter Code: VE	2. Pollutant(s): NA
3. CMS Requirement:	☒ Rule-BACT ☐ Other
4. Monitor Information... Manufacturer: SICK Model Number: 0MD41-M321	Serial Number:
5. Installation Date: 2/03	6. Performance Specification Test Date: 7/03
7. Continuous Monitor Comment:	

Continuous Monitoring System: Continuous Monitor 2 of 6; SO_2

1. Parameter Code: EM	2. Pollutant(s): SO_2
3. CMS Requirement:	☒ rule-BACT ☐ Other
4. Monitor Information... Manufacturer: SICK Model Number: GM31	Serial Number: 8040-8003
5. Installation Date: 2/03	6. Performance Specification Test Date: 7/03
7. Continuous Monitor Comment: $SO_2/NO/NO_2$ Gas Analyzer	

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor 3 of 6; NOx

1. Parameter Code: EM	2. Pollutant(s): NOx
3. CMS Requirement:	[X] Rule-BACT [ ] Other
4. Monitor Information... Manufacturer: SICK Model Number: GM31	Serial Number: 8040-8003
5. Installation Date: 2/03	6. Performance Specification Test Date: 7/03
7. Continuous Monitor Comment: SO_2/NO/NOx Gas Analyzer	

Continuous Monitoring System: Continuous Monitor 4 of 6; THC/VOC

1. Parameter Code: EM	2. Pollutant(s): THC
3. CMS Requirement:	[X] Rule-BACT [ ] Other
4. Monitor Information... Manufacturer: SICK Model Number: EuroFID-3010	Serial Number: 005266-0300
5. Installation Date: 2/03	6. Performance Specification Test Date: 7/03
7. Continuous Monitor Comment: Required by NESHAP and BACT	

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor 5 of 6; TEMP

1. Parameter Code: TEMP	2. Pollutant(s): NA
3. CMS Requirement:	☐ Rule ☐ Other
4. Monitor Information... Manufacturer: Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

Continuous Monitoring System: Continuous Monitor 6 of 6; FLOW

1. Parameter Code: FLOW	2. Pollutant(s): NA
3. CMS Requirement:	☒ Rule-BACT ☐ Other
4. Monitor Information... Manufacturer: SICK Model Number: FLOWSIC - 100	Serial Number:
5. Installation Date: 2/03	6. Performance Specification Test Date: 7/03
7. Continuous Monitor Comment:	

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   [X] Attached, Document ID: _ [ ] Previously Submitted, Date _____

2. Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   [ ] Attached, Document ID: _ [X] Previously Submitted, Date Unknown

3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   [ ] Attached, Document ID: _____ [X] Previously Submitted, Date Unknown

4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   [ ] Attached, Document ID: _____ [ ] Previously Submitted, Date _____
   [X] Not Applicable (construction application)

5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   [ ] Attached, Document ID: _____ [X] Previously Submitted, Date Unknown
   [ ] Not Applicable

6. Compliance Demonstration Reports/Records
   [ ] Attached, Document ID: _____
   Test Date(s)/Pollutant(s) Tested: _____
   [X] Previously Submitted, Date: 11/2004
   Test Date(s)/Pollutant(s) Tested: 9/2004
   [ ] To be Submitted, Date (if known): _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   [ ] Not Applicable

   Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.

7. Other Information Required by Rule or Statute
   [ ] Attached, Document ID: _____ [X] Not Applicable

EMISSIONS UNIT INFORMATION
Section [1] of [3] [Kiln/Raw Mill – EU-004]

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e))
   ☐ Attached, Document ID: _____ ☒ Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.)
   ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only)
   ☐ Attached, Document ID: _____ ☒ Not Applicable

Additional Requirements for Title V Air Operation Permit Applications - NA

1. Identification of Applicable Requirements
   ☐ Attached, Document ID: _____
2. Compliance Assurance Monitoring
   ☐ Attached, Document ID: _____ ☐ Not Applicable
3. Alternative Methods of Operation
   ☐ Attached, Document ID: _____ ☐ Not Applicable
4. Alternative Modes of Operation (Emissions Trading)
   ☐ Attached, Document ID: _____ ☐ Not Applicable
5. Acid Rain Part Application
   ☐ Certificate of Representation (EPA Form No. 7610-1)
      ☐ Copy Attached, Document ID:
   ☐ Acid Rain Part (Form No. 62-210.900(1)(a))
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ New Unit Exemption (Form No. 62-210.900(1)(a)2.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Not Applicable

Additional Requirements Comment

None

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

   [x] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

   [ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

   [x] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

   [ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

   [ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section: Clinker Cooler; EU-005

3. Emissions Unit Identification Number: 002

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A	NA	2/03	32	[ ] Yes [x] No

9. Package Unit:
   Manufacturer: NA Model Number:

10. Generator Nameplate Rating: MW NA

11. Emissions Unit Comment: This permit application addresses only a change in the clinker throughput rate (from 105 tph to 120 tph, 24-hr avg) and a change in PM/PM10 emission factors (lb/ton) so there will be no increase in mass emission rates (lb/hr and tpy).

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:
   Clinker Cooler electrostatic precipitator (ESP).

2. Control Device or Method Code(s): 010

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: 2880 tons per day
2. Maximum Production Rate: NA
3. Maximum Heat Input Rate: NA
4. Maximum Incineration Rate: pounds/hr NA tons/day
5. Requested Maximum Operating Schedule: hours/day 24 days/week 7 weeks/year 52 hours/year 8760
6. Operating Capacity/Schedule Comment: Annual clinker production is limited to 965,425 tons per year.

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: K-15	2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: Clinker Cooler ESP stack (K-15) – Emission Unit 005		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: NA		
5. Discharge Type Code: V	6. Stack Height: 115 feet	7. Exit Diameter: 11.0 feet
8. Exit Temperature: 440°F	9. Actual Volumetric Flow Rate: 124,500 acfm	10. Water Vapor: 12 %
11. Maximum Dry Standard Flow Rate: 64,300 dscfm	12. Nonstack Emission Point Height: feet NA	
13. Emission Point UTM Coordinates...NA Zone: East (km): North (km):	14. Emission Point Latitude/Longitude...NA Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: None		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 1

1. Segment Description (Process/Fuel Type): Mineral Products: Cement Mfg: Dry Process: Clinker Cooler		
2. Source Classification Code (SCC): 3-05-006-14	3. SCC Units: Tons Clinker	
4. Maximum Rate: 2880 tpd	5. Maximum Annual Rate: 965,425 tpy	6. Estimated Annual Activity Factor: 0.92
7. Maximum % Sulfur: NA	8. Maximum % Ash: NA	9. Million Btu per SCC Unit: NA
10. Segment Comment: None		

E. EMISSIONS UNIT POLLUTANTS

List of Pollutants Emitted by Emissions Unit

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
PM	**010**	**NA**	**EL**
PM10	**010**	**NA**	**EL**

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM**	2. Total Percent Efficiency of Control: 99+%
3. Potential Emissions: 12.5 lb/hour 49.9 tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): NA to tons/year	
6. Emission Factor: 0.060 lb/ton feed, or 0.104 lb/ton clinker; equivalent rates Reference: BACT (proposed)	7. Emissions Method Code: 0

8. Calculation of Emissions:

210 tph feed x 0.060 lb/ton = 12.5 lb/hr

120 tph clinker x 0.104 lb/ton = 12.5 lb/hr

965,425 tpy clinker x 0.104 lb/ton/2000 = 49.9 tpy

9. Pollutant Potential/Estimated Fugitive Emissions Comment:
NSPS and NESHAP limits are both 0.1 lb PM per ton of feed. SAC requests that the unitized emission rate be expressed as 0.104 lb/PM/ton clinker; a rate equivalent to the feed rate limit of 0.060 lb/PM/ton feed.

F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION – POTENTIAL/ESTIMATED FUGITIVE EMISSIONS

(Optional for unregulated emissions units.)

Potential/Estimated Fugitive Emissions

Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

1. Pollutant Emitted: **PM10**	2. Total Percent Efficiency of Control: 99+%
3. Potential Emissions: 10.7 lb/hour 42.9 tons/year	4. Synthetically Limited? ☐ Yes ☒ No
5. Range of Estimated Fugitive Emissions (as applicable): NA to tons/year	
6. Emission Factor: 0.051 lb/ton feed, or 0.089 lb/ton clinker; equivalent rates Reference: BACT (proposed)	7. Emissions Method Code: 0

8. Calculation of Emissions:

210 tph feed x 0.051 lb/ton = 10.7 lb/hr

120 tph clinker x 0.089 lb/ton = 10.7 lb/hr

965,425 tpy clinker x 0.089 lb/ton/2000 = 42.9 tpy

9. Pollutant Potential/Estimated Fugitive Emissions Comment:

SAC requests that the unitized emission rate be expressed as 0.089 lb PM10/ton clinker; a rate equivalent to the feed rate limit of 0.051 lb PM10/ton feed.

F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION - ALLOWABLE EMISSIONS

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

Allowable Emissions Allowable Emissions 1 of 2; PM

1. Basis for Allowable Emissions Code: BACT	2. Future Effective Date of Allowable Emissions: NA
3. Allowable Emissions and Units: 0.104 lb/ton clinker	4. Equivalent Allowable Emissions: 12.5 lb/hour 49.9 tons/year
5. Method of Compliance: EPA Method 5	
6. Allowable Emissions Comment (Description of Operating Method): Emission limit more stringent than NSPS and NESHAP	

Allowable Emissions Allowable Emissions 2 of 2; PM10

1. Basis for Allowable Emissions Code: BACT	2. Future Effective Date of Allowable Emissions: NA
3. Allowable Emissions and Units: 0.089 lb/ton clinker	4. Equivalent Allowable Emissions: 10.7 lb/hour 42.9 tons/year
5. Method of Compliance: EPA Method 5, with all PM assumed to be PM10	
6. Allowable Emissions Comment (Description of Operating Method):	

G. VISIBLE EMISSIONS INFORMATION

Complete if this emissions unit is or would be subject to a unit-specific visible emissions limitation.

Visible Emissions Limitation: Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: VE10	2. Basis for Allowable Opacity: [X] Rule-BACT [ ] Other
3. Allowable Opacity: 10% Normal Conditions: 0 % Exceptional Conditions: 10 % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: COM	
5. Visible Emissions Comment:	

H. CONTINUOUS MONITOR INFORMATION

Complete if this emissions unit is or would be subject to continuous monitoring.

Continuous Monitoring System: Continuous Monitor 1 of 1

1. Parameter Code: VE	2. Pollutant(s): NA
3. CMS Requirement:	[X] Rule-BACT [ ] Other
4. Monitor Information... Manufacturer: SICK Model Number: 0MD41-M321	Serial Number:
5. Installation Date: 2/03	6. Performance Specification Test Date: 7/03
7. Continuous Monitor Comment:	

I. EMISSIONS UNIT ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1. Process Flow Diagram (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   [x] Attached, Document ID: _ [ ] Previously Submitted, Date _____

2. Fuel Analysis or Specification (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   [ ] Attached, Document ID: __ [x] Previously Submitted, Date Unknown

3. Detailed Description of Control Equipment (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   [ ] Attached, Document ID: _____ [x] Previously Submitted, Date Unknown

4. Procedures for Startup and Shutdown (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   [ ] Attached, Document ID: _____ [ ] Previously Submitted, Date _____
   [x] Not Applicable (construction application)

5. Operation and Maintenance Plan (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
   [ ] Attached, Document ID: _____ [x] Previously Submitted, Date Unknown
   [ ] Not Applicable

6. Compliance Demonstration Reports/Records
   [ ] Attached, Document ID: _____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   [x] Previously Submitted, Date: 11/2004
   Test Date(s)/Pollutant(s) Tested: 9/2004
   _____
   [ ] To be Submitted, Date (if known):_____
   Test Date(s)/Pollutant(s) Tested: _____
   _____
   [ ] Not Applicable

   Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.

7. Other Information Required by Rule or Statute
   [ ] Attached, Document ID: _____ [x] Not Applicable

EMISSIONS UNIT INFORMATION
Section [2] of [3] [Clinker Cooler – EU-005]

Additional Requirements for Air Construction Permit Applications

1. Control Technology Review and Analysis (Rules 62-212.400(6) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e))
   ☐ Attached, Document ID: _____ ☒ Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rule 62-212.400(5)(h)6., F.A.C., and Rule 62-212.500(4)(f), F.A.C.)
   ☐ Attached, Document ID: _____ ☒ Not Applicable
3. Description of Stack Sampling Facilities (Required for proposed new stack sampling facilities only)
   ☐ Attached, Document ID: _____ ☒ Not Applicable

Additional Requirements for Title V Air Operation Permit Applications NA

1. Identification of Applicable Requirements
   ☐ Attached, Document ID: _____
2. Compliance Assurance Monitoring
   ☐ Attached, Document ID: _____ ☐ Not Applicable
3. Alternative Methods of Operation
   ☐ Attached, Document ID: _____ ☐ Not Applicable
4. Alternative Modes of Operation (Emissions Trading)
   ☐ Attached, Document ID: _____ ☐ Not Applicable
5. Acid Rain Part Application
   ☐ Certificate of Representation (EPA Form No. 7610-1)
      ☐ Copy Attached, Document ID:
   ☐ Acid Rain Part (Form No. 62-210.900(1)(a))
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ New Unit Exemption (Form No. 62-210.900(1)(a)2.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Phase II NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
      ☐ Attached, Document ID: _____
      ☐ Previously Submitted, Date: _____
   ☐ Not Applicable

Additional Requirements Comment

None

EMISSIONS UNIT INFORMATION
Section [3] of [3] [EU-008 : Coal Mill and Transfer]

A. GENERAL EMISSIONS UNIT INFORMATION

Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

   [X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

   [ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)

   [X] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

   [ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

   [ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section:

3. Emissions Unit Identification Number:

4. Emissions Unit Status Code:	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A	NA	2/03	32	[ ] Yes [X] No

9. Package Unit:
   Manufacturer: NA Model Number:

10. Generator Nameplate Rating: NA

11. Emissions Unit Comment: Coal/coke grinding and handling

Emissions Unit Control Equipment

1. Control Equipment/Method(s) Description:
   Fabric Filters – Low Tempertures – 018

   - S-17 Coal/Coke Mill
   - S-21 Coal/Coke Bin

2. Control Device or Method Code(s): 018

B. EMISSIONS UNIT CAPACITY INFORMATION

(Optional for unregulated emissions units.)

Emissions Unit Operating Capacity and Schedule

1. Maximum Process or Throughput Rate: 18.3 tph coal / 16.4 tph coke
2. Maximum Production Rate: NA
3. Maximum Heat Input Rate: million Btu/hr NA
4. Maximum Incineration Rate: pounds/hr NA tons/day
5. Requested Maximum Operating Schedule: hours/day 24 days/week 7 weeks/year 52 hours/year 8760
6. Operating Capacity/Schedule Comment: Only the grinding capacity of the mill is affected by increasing the grinding rate of coal from 15.4 tph to 18.3 tph. The pet coke grinding rate will increase to 16.4 tph. No emissions will change, as emissions are a function of baghouse discharge PM/PM10 concentration and fan capacity; neither of which will change. **This section of the Application addresses only the requested change in coal/coke mill grinding rates. The information in the original application related to emissions and monitoring remains unchanged.**

C. EMISSION POINT (STACK/VENT) INFORMATION
(Optional for unregulated emissions units.)

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram: Previously submitted	2. Emission Point Type Code: 3	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking: • S-17 Coal/Coke Mill • S-21 Coal/Coke Bin		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: NA		
5. Discharge Type Code:	6. Stack Height: feet	7. Exit Diameter: feet
8. Exit Temperature: °F	9. Actual Volumetric Flow Rate: acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm	12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates...NA Zone: East (km): North (km):	14. Emission Point Latitude/Longitude...NA Latitude (DD/MM/SS) Longitude (DD/MM/SS)	
15. Emission Point Comment: **All information previously submitted and unchanged.**		

D. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment 1 of 2: Coal

1. Segment Description (Process/Fuel Type): Mineral Products : coal cleaning : material handling : crushing		
2. Source Classification Code (SCC): 3-05-010-10	3. SCC Units: Tons processed	
4. Maximum Hourly Rate: 18.3 tph; 30-day avg	5. Maximum Annual Rate: 160,300 tpy	6. Estimated Annual Activity Factor: 0.92
7. Maximum % Sulfur: NA	8. Maximum % Ash: NA	9. Million Btu per SCC Unit: 25.0
10. Segment Comment: Coal Grinding and Handling		

Segment Description and Rate: Segment 2 of 2: Petroleum Coke

1. Segment Description (Process/Fuel Type): Mineral Products : coal cleaning : material handling : crushing		
2. Source Classification Code (SCC): 3-05-010-10	3. SCC Units: Tons processed	
4. Maximum Hourly Rate: 16.4 tph; 30-day avg	5. Maximum Annual Rate: 143,660 tpy	6. Estimated Annual Activity Factor: 0.92
7. Maximum % Sulfur: NA	8. Maximum % Ash: NA	9. Million Btu per SCC Unit: 28.0
10. Segment Comment: Petroleum Coke Grinding and Handling		