UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IV
345 COURTLAND STREET
ATLANTA, GEORGIA 30365

MAR 27 1984

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

REF: 4AW-AM

Mr. Richard C. Entorf
Senior Vice-President
Florida Crushed Stone Company
P. O. Box 317
Leesburg, Florida 32748

RE: PSD-FL-90 and 91

Dear Mr. Entorf:

Review of your March 30, 1983, application to construct a 600,000 ton per year cement plant and cogeneration facility near Brooksville, Hernando County, Florida, has been completed. The construction is subject to rules for the Prevention of Significant Deterioration (PSD) of air quality contained in 40 CFR §52.21. The Florida Department of Environmental Regulation (FDER) performed the preliminary determination concerning the proposed construction and published a request for public comment on May 27, 1983. In response to a request from Florida Mining and Materials, a hearing was held on November 30, 1983. On January 25, 1984, FDER performed a final determination recommending issuance of the PSD permit by EPA. The final determination contains responses to issues raised during the hearing and the public comment period.

The Environmental Protection Agency (EPA) has determined that the construction as described in the application meets all the applicable requirements of 40 CFR §52.21. Accordingly, pursuant to 40 CFR §124.15, the Regional Administrator has made a final decision to issue the enclosed Permit to Construct-Part I Specific Conditions and Part II General Conditions. This authority to construct, granted as of the effective date of the permit, is based solely on the requirements of 40 CFR §52.21, the federal regulations governing significant deterioration of air quality. It does not apply to other permits issued by this Agency or by other agencies. Please be advised that a violation of any permit condition, as well as any construction which proceeds in material variance with information submitted in your application, will be subject to enforcement action.

This final permit decision is subject to appeal under 40 CFR §124.19 by petitioning the Administrator of the EPA within thirty (30) days after receipt thereof. The petitioner must submit a statement of reasons for the appeal and the Administrator must decide on the petition within a reasonable time period. If the petition is denied, the permit shall become effective upon notice of such action to the parties to the appeal. If the petition is granted, any applicable effective date shall be determined by the results of the appeal proceedings. If no appeal is filed with the Administrator, the permit shall become effective thirty (30) days after receipt of this letter. Upon the expiration of the thirty (30) day period, EPA will notify you of the status of the permit's effective date.

Receipt of this letter does not constitute authority to construct. Approval to construct this facility shall be granted as of the effective date of the permit. The complete analysis which justifies this approval has been fully documented for future reference, if necessary. Any questions concerning this approval may be directed to Mr. Jesse Baskerville, Acting Chief, Air Engineering Section, Air and Waste Management Division at 404/881-4253.

Sincerely yours,

George L. Harlow

for Thomas W. Devine, Director
Air and Waste Management Division

Enclosure

cc: Mr. Steve Smallwood, P.E., Chief
Bureau of Air Quality Management
Florida Department of Environmental Regulation

PERMIT TO CONSTRUCT UNDER THE RULES FOR THE
PREVENTION OF SIGNIFICANT DETERIORATION OF AIR QUALITY

Pursuant to and in accordance with the provisions of Part C, Subpart I of the Clean Air Act, as amended, 42 U.S.C. §7470 et seq., and the regulations promulgated thereunder at 40 CFR §52.21 (1983),

Florida Crushed Stone Company
Leesburg, Florida

is, as of the effective date of this permit (PSD-FL-90 and 91) authorized to modify a stationary source at the following location:

Intersection of Cobb Road and Yontz Rd.
3.5 Miles Northwest of Brooksville, Florida

UTM Coordinates: 360.0-360.1 km East, 3162.1-3162.5 km North

Upon completion of authorized construction and commencement of operation/production, this stationary source shall be operated in accordance with the emission limitations, sampling requirements, monitoring requirements and other conditions set forth in the attached Specific Conditions (Part I) and General Conditions (Part II).

This permit is hereby issued on MAR 27 1984 and shall become effective thirty (30) days after receipt thereof unless a petition for administrative review is filed with the Administrator during that time. If a petition is filed any applicable effective date shall be determined in accordance with 40 CFR §124.19(f)(1).

If construction does not commence within 18 months after the effective date of this permit, or if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable time, this permit shall expire and authorization to construct shall become invalid.

This authorization to construct/modify shall not relieve the owner or operator of the responsibility to comply fully with all applicable provisions of Federal, State, and local law.

March 27, 1984
Date Signed

Regional Administrator

PART I

Specific Conditions

The construction and operation of the Florida Crushed Stone Company (FCS) steam electric power plant and cement plant shall be in accordance with the attached general conditions and all applicable provisions of 40 CFR 52.21. In addition to the foregoing, the permittee shall comply with the following specific conditions of approval:

A. Emission Limitations

1. Stack emissions from the power plant boiler only shall not exceed the following site specific limitations when burning coal:

   a. $SO_2$ - 0.9 lb. per million Btu heat input, maximum three-hour average (not to exceed 915 lb. per hour, maximum three-hour average). 750 ← Gov't & CABINET DECISION PA 82-17 772 NOT 750

   b. $NO_x$ - 0.7 lb. per million Btu heat input, averaging time per 40 CFR 60.46.

   c. Particulates - 0.03 lb. per million Btu heat input, averaging time per 40 CFR 60.46.

   d. Visible emissions - 20% opacity, 6-minute average, except for one 6-minute period per hour of not more than 27% opacity.

2. Stack emissions from the combined cement plant/lime plant and power plant boiler shall not exceed the following site specific limits:

   1.2 lb/10⁶ Btu max 2-hr avg

   a. $SO_2$ - 50 lb. per hour plus 0.74 lb. per million Btu boiler heat input, maximum three-hour average (not to exceed ~~965~~ 781 lb/hr maximum three-hour average).

   b. $NO_x$ - 0.7 lb. per million Btu heat input plus 2.9 lb. per ton of kiln feed (dry basis), averaging time per 40 CFR 60.46.

   c. Particulates - 0.03 lb. per million Btu heat input plus 0.3 lb. from the cement kiln and 0.1 lb from the clinker cooler per ton of kiln feed (dry basis), averaging time per 40 CFR 60.46.

d. Visible emissions - less than 10 percent opacity, 6-minute average, except for one 6-minute period per hour of not more than 17% opacity.

e. Total Fluorides: 0.7 lb/hr.

f. Sulfuric Acid Mist: 1.7 lb/hr.

g. Beryllium: 0.0005 lb/hr.

h. Mercury: 0.03 lb/hr.

3. The emission rates from the main baghouse when only the cement plant is operating shall not exceed the emission limits and maximum allowable emissions listed below:

| Pollutant | Emission Limits lb/ton of kiln feed | Maximum Allowable Emissions lb/hr | tons/yr |
|---|---|---|---|
| PM | 0.4 | 49.5 | 216 |
| $SO_2$ | 0.6 | 50.0 | 325 |
| $NO_x$ | 2.9 | 359.0 | 1572 |

4. Visible emissions from the kiln, cooler, dryer and raw mill shall be less than 10 percent opacity.

5. Particulate emissions from the coal and fly ash handling facilities.

a. All conveyors and conveyor transfer points will be enclosed to preclude particulate emissions (except those directly associated with the coal stacker/reclaimer, emergency stockout stacker/reclaimer, emergency stockout, and deep bucket conveyor).

b. Inactive coal storage piles will be shaped, compacted and oriented to minimize wind erosion.

c. Water sprays or chemical wetting coal agents and stabilizers will be applied to coal storage piles, handling equipment, etc. during dry periods and as necessary to all coal handling facilities to maintain an opacity of less than or equal to 5 percent, except when adding, moving or removing coal from the coal pile, during which the opacity shall be no more than 20%.

d. The fly ash handling system (including transfer and silo storage) will be totally enclosed and vented (including pneumatic system exhaust) through fabric filters.

6. Particulate emissions from bag filter exhausts from the coal and fly ash handling systems (excluding those facilities covered by Specific Condition A.5.c.) shall be limited to 0.02 gr/acf. A visible emission reading of 5% opacity or less may be used to establish compliance with this emission limit. A visible emission reading greater than 5% opacity will not create a presumption that the 0.02 gr/acf emission limit is being violated. However, a visible emission reading greater than 5% opacity will require the permittee to perform a stack test, as set forth in Specific Condition B.

7. Emissions of particulate matter from all other baghouse-equipped sources associated with the cement plant shall not exceed the maximum allowable emission limits listed below:

BAGHOUSE INVENTORY

| Florida Permit No. (AC 27-) | | Source Name | Allowable PM Emissions lb/hr | TPY |
|---|---|---|---|---|
| 61019 | 118676 | Raw Materials Bin | 0.8 | 3.5 |
| 61012 | 118672 | Pre Mix Bin | 0.6 | 2.6 |
| 61013 | 118673 | Fly Ash Bin | 0.6 | 2.6 |
| 61017 | 118675 | Raw Meal Transfer | 0.3 | 1.3 |
| 61020 | 118677 | Blending Silo | 3.3 | 14.5 |
| 61021 | 118678 | Kiln Feed | 0.8 | 3.5 |
| 61030 | 118685 | Clinker Silo | 0.6 | 2.6 |
| 61032 | 118686 | Clinker Silo | 0.6 | 2.6 |
| 61027 | 118684 | Cooler Discharge | 0.8 | 3.5 |
| 61033 | 118687 | Silo Discharges | 1.8 | 7.9 |
| 61037 | 118688 | Finish Mill | 6.4 | 28.0 |
| 61038 | 118689 | Cement Silo Discharge | 0.6 | 2.6 |
| 61040 | 118690 | Cement Silo | 0.6 | 2.6 |
| 61041 | 118681 | Cement Silo | 0.6 | 2.6 |
| 61042 | 118683 | Cement Silo | 0.6 | 2.6 |
| 61026 | 118680 | Coal Handling | 0.8 | 3.5 |

8. Visible emissions from all sources listed in Specific Condition 7 shall not be greater than 5 percent opacity.

9. Compliance with the opacity limits of Specific Conditions A.1.d., A.2.d., A.4., A.5.c., A.6., and A.8. will be determined by EPA reference method 9 (including alternate method 1, Appendix A, 40 CFR Part 60).

B. Stack Testing

1. Within 60 calendar days after achieving the maximum capacity at which each unit will be operated (but no later than 180 operating days after initial startup) and annually thereafter, the permittee shall conduct: (a) performance tests on the main stack for particulates, $SO_2$, $NO_x$, and visible emissions (1) during normal operations near (± 3%) 1,234 million Btu per hour heat input when the power plant and cement plant are operating in combination, (2) at or near 1,000 million Btu per hour when the power plant is operating alone, and (3) at or near maximum production when the cement plant is operating alone; and (b) visible emissions tests on all baghouses. The Department shall be furnished a written report of the results of such performance tests within 45 days of completion of the test.

2. Performance tests shall be conducted under such conditions as the Department shall specify based on representative performance of the facility. The permittee shall make available to the Department such records as may be necessary to determine the conditions of the performance tests.

3. The permittee shall provide 30 days notice of the performance tests or 10 working days for stack tests in order to afford the Department the opportunity to have an observer present.

4. Stack tests for particulates, $NO_x$, and $SO_2$ and visible emissions tests shall be performed annually from the date of the first performance test(s) in accordance with Specific Conditions B.2. and 3. above.

5. Performance tests for Specific Condition B.1.(a)(1) and (2) shall be conducted in accordance with the provisions of 40 CFR Part 60 including Appendix A and 40 CFR 60.46.

6. Performance tests for particulate for Specific Condition B.1.(a)(3) shall be conducted in accordance with 40 CFR Part 60, including Appendix A and 40 CFR 60.64.

7. Compliance with the $SO_2$ and $NO_x$ emission limits in Specific Condition A.3. shall be demonstrated in accordance with EPA Methods 6 and 7, respectively, in 40 CFR 60, Appendix A.

8. Compliance with the particulate emission limits for all sources listed in Specific Condition Nos. A.6. and A.7. shall be demonstrated by EPA Method 5 or 17 (Appendix A, 40 CFR 60).

9. Compliance with total fluoride emission limits in Specific Condition A.2.e. shall be demonstrated, if required by EPA, in accordance with EPA Method 13A or 13B, and 40 CFR 60.8.

10. Compliance with sulfuric acid mist limits in Specific Condition A.2.f. shall be demonstrated, if required by EPA, in accordance with EPA Method 8, and 40 CFR 60.8.

11. Compliance with beryllium limits in Specific Condition A.2.g. shall be demonstrated, if required by EPA, in accordance with EPA Method 104, and 40 CFR 60.8.

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

13. EPA Methods 1 and 2 shall be used for determining stack gas velocity when required in Specific Conditions B.7., B.8., B.9., B.10., B.11., and B.12.

C. Monitoring Program

1. A flue gas oxygen meter shall be installed for the unit to continuously monitor a representative sample of the boiler flue gas. The oxygen monitor shall be used with automatic feedback or manual controls to continuously maintain air/fuel ratio parameters at an optimum. Performance tests shall be conducted and operating procedures established. The document "Use of Flue Gas Oxygen Meter as BACT for Combustion Controls" may be used as a guide. The permittee shall install and operate a continuous opacity monitoring device for the baghouse exhaust. The monitoring devices shall meet the applicable requirements of 40 CFR 60.45 and 40 CFR 60.13 including certification of each device. The Department shall be provided 30 days notice on each certification.

2. The permittee shall operate two ambient monitoring devices for suspended particulates in accordance with EPA quality assurance procedures and reference methods in 40 CFR 53. The monitoring devices shall be operated at a location approved by the Department of Environmental Regulation. The frequency of operation of the particulate monitors shall be every six days commencing as specified by the Department. In addition, the permittee shall operate a meteorological station, which includes wind measuring equipment, at a location approved by the Department. These data will be reported with the ambient data.

3. The ambient monitoring program shall begin at least one year prior to initial start up of the boiler and shall continue for at least one year of commercial operation. The Department and the permittee shall review the results of the monitoring program annually and determine the necessity for the continuation of or modifications to the monitoring program.

4. Samples of all fuel oil and coal fired shall be taken and an ultimate analysis obtained including the heating value on a moisture free basis. Accordingly, samples shall be taken of each fuel shipment received. Coal sulfur content shall be determined and recorded on a daily basis. Records of all the analyses shall be kept for public inspection for a minimum of two years after the data are recorded.

5. Prior to operation of the source, the permittee shall submit to the Department a plan or procedure that will allow the permittee to monitor emission control equipment efficiency and enable the permittee to return malfunctioning equipment to proper operation as expeditiously as possible.

6. Instruments shall be installed, calibrated, and maintained to continuously measure the amounts of coal used, material fed to the kiln, and clinker produced. The records of fuel usage with the fuel analysis, daily kiln feed and clinker produced shall be reported quarterly to the Florida Department of Environmental Regulation Southwest District office.

D. Reporting

1. Stack monitoring, fuel usage and fuel analysis data shall be reported to the Department's Southwest District Office and to the Hernando County Health Department on a quarterly basis commencing with the start of commercial operation in accordance with 40 CFR 60.7.

2. Utilizing the SAROAD or other format approved in writing by the Department, ambient air monitoring data shall be reported to the Bureau of Air Quality Management of the Department quarterly. Commencing on the date of certification, such reports shall be due within 45 days following the quarterly reporting period. Reporting and monitoring shall be in conformance with 40 CFR, Parts 53 and 58.

3. Beginning one month after approval, the permittee shall submit to the Department a monthly status report briefly outlining progress made on engineering design and purchase of major pieces of air pollution control equipment. All reports and information required to be submitted under this condition shall be submitted to the Administrator of Power Plant Siting, Department of Environmental Regulation, 2600 Blair Stone Road, Tallahassee, Florida, 32301.

E. Coal Characteristics and Contracts

Before approval can be granted by EPA for use of control devices, characteristics of the coal to be fired must be known. Therefore, before these approvals are granted, the permittee must submit to the Department of Environmental Regulation copies of coal contracts which should include the expected sulfur content, ash content, and heat content of the coal to be fired. These data will be used by the Department and EPA in evaluating the adequacy of the control devices. Also, the applicant must demonstrate the ability to acquire a low sulfur coal supply of sufficient length to enable the installation of sulfur removal equipment if the supplies of low sulfur coal should not become available or be discontinued. Therefore, the coal contracts must be for a period of at least five (5) years from the date of start-up of the boiler.

F. Coal Information

As an alternative to the submittal of contracts for purchase of coal under Specific Condition E above, the permittee may submit the following information:

1. The name of the coal supplier;

2. The sulfur content, ash content, and heat content of the coal as specified in the purchase contracts;

3. The location of the coal deposits covered by the contract (including mine name and seam);

4. The date by which the first delivery of coal will be made;

5. The duration of the contract; and

6. An opinion of counsel for the permittee that the contracts are legally binding.

G. Additional Conditions

1. When the power plant boiler is operating alone and the cement plant is not in operation, the maximum heat input rate of the boiler shall not exceed the site specific limit of 1,000 million Btu per hour, maximum three-hour average.

2. The maximum coal consumption in the kiln shall not exceed 10.3 tons per hour.

3. Construction shall reasonably conform to the plans and schedule given in the application.

4. The permittee shall report any delays in construction and completion of the project which would delay commercial operation by more than 90 days to EPA.

5. Reasonable precautions to prevent fugitive particulate emissions during construction and operation, such as coating or paving of roads and construction sites, wetting roads, and regrassing or watering areas of disturbed soils and storage areas, will be taken by the permittee. In addition, the main access road(s) within FCS's property will be paved.

6. Any fuel oil to be fired in the boiler shall be "new oil", which means an oil which has been refined from crude oil and has not been used. The quality of the fuel oil used by the boiler shall not cause the allowable emission limits listed in the table below to be exceeded. Such emissions may be calculated in accordance with AP-42, third edition.

Allowable Emission Limits

| Pollutant | lb/MMBtu |
|---|---|
| PM | 0.015 |
| $SO_2$ | 0.31 |
| $NO_x$ | 0.16 |
| Visible emissions | Maximum 20% Opacity |

Fuel oil limits

7. The height of the boiler exhaust stack for the plant shall not be less than 320 ft. above grade.

8. Particulate emissions from the following sources of Chemical Lime Company (wholly owned subsidiary of Florida Crushed Stone Company) shall not exceed the following limits:

| Source | DER Permit No. | Emissions (lb/hr) |
|---|---|---|
| Kiln | AO 27-55581 | 16.0 |
| Hydrator | AO 27-25269 | 12.5 |
| Dryer | AO 27-50400 | 14.5 |
| Bagging | AO 27-17352 | 5.0 |

9. The permittee must submit to the Florida Department of Environmental Regulation within thirty (30) days after it becomes available a copy of the technical data pertaining to the selected particulate and $SO_2$ emissions controls. These data should include, but not be limited to, projected or guaranteed efficiency and emission rates, and major design parameters such as injection rates, injection points, air/cloth ratio and flow rate. EPA may, upon review of these data, disapprove the use of any such device if it determines the selected control device to be inadequate to meet the required emission limits. Such disapproval shall be issued within 30 days of receipt of the technical data.

PART II

GENERAL CONDITIONS

1. The permittee shall notify the permitting authority in writing of the beginning of construction of the permitted source within 30 days of such action and the estimated date of startup of operation.

2. The permittee shall notify the permitting authority in writing of the actual start-up of the permitted source within 30 days of such action and the estimated date of demonstration of compliance as required in the specific conditions.

3. Each emission point for which an emission test method is established in this permit shall be tested in order to determine compliance with the emission limitations contained herein within sixty (60) days of achieving the maximum production rate, but in no event later than 180 days after initial start-up of the permitting source. The permittee shall notify the permitting authority of the scheduled date of compliance testing at least thirty (30) days in advance of such test. Compliance test results shall be submitted to the permitting authority within forty-five (45) days after the compliance testing. The permittee shall provide (1) sampling ports adequate for test methods applicable to such facility, (2) safe sampling platforms, (3) safe access to sampling platforms, and (4) utilities for sampling and testing equipment.

4. The permittee shall retain records of all information resulting from monitoring activities and information indicating operating parameters as specified in the specific conditions of this permit for a minimum of two (2) years for the date of recording.

5. If, for any reason, the permittee does not comply with or will not be able to comply with the emission limitations specified in this permit, the permittee shall provide the permitting authority with the following information in writing within five (5) days of such conditions:

   (a) description of noncomplying emission(s),
   (b) cause of noncompliance,
   (c) anticipated time the noncompliance is expected to continue or, if corrected, the duration of the period of noncompliance,
   (d) steps taken by the permittee to reduce and eliminate the noncomplying emission, and

(e) steps taken by the permittee to prevent recurrence of the noncomplying emission.

Failure to provide the above information when appropriate shall constitute a violation of the terms and conditions of this permit. Submittal of this report does not constitute a waiver of the emission limitations contained within this permit.

6. Any change in the information submitted in the application regarding facility emissions or changes in the quantity or quality of materials processed that will result in new or increased emissions must be reported to the permitting authority. If appropriate, modifications to the permit may then be made by the permitting authority to reflect any necessary changes in the permit conditions. In no case are any new or increased emissions allowed that will cause violation of the emission limitations specified herein.

7. In the event of any change in control or ownership of the source described in the permit, the permittee shall notify the succeeding owner of the existence of this permit and the permitting authority.

8. The permittee shall allow representatives of the state environmental control agency or representatives of the Environmental Protection Agency upon the presentation of credentials:

   (a) to enter upon the permittee's premises, or other premises under the control of the permittee, where an air pollutant source is located or in which any records are required to be kept under the terms and conditions of the permit;

   (b) to have access to and copy at reasonable times any records required to be kept under the terms and conditions of this permit, or the Act;

   (c) to inspect at reasonable times any monitoring equipment or monitoring method required in this permit;

   (d) to sample at reasonable times any emission of pollutants; and

   (e) to perform at reasonable times an operation and maintenance inspection of the permitted source.

9. All correspondence required to be submitted by this permit to the permitting agency shall be mailed to the:

Chief, Air Management Branch
Air and Waste Management Division
U.S. Environmental Protection Agency
Region IV
345 Courtland Street
Atlanta, Georgia 30365

10. The conditions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby.

The emission of any pollutant more frequently or at a level in excess of that authorized by this permit shall constitute a violation of the terms and conditions of this permit.