



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4  
ATLANTA FEDERAL CENTER  
100 ALABAMA STREET, S.W.  
ATLANTA, GEORGIA 30303-3104

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BUREAU OF  
AIR REGULATION

4APT-ARB

Mr. A. A. Linero, P.E.  
Administrator  
New Source Review Section  
Bureau of Air Regulation  
Florida Department of Environmental Protection  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

SUBJ: Florida Crushed Stone Company, Inc. (PSD-FL-227)

Dear Mr. Linero:

This is to acknowledge receipt of an application to modify the previously issued Prevention of Significant Deterioration (PSD) permit for the above referenced facility. As requested by your letter dated September 20, 1996, we have reviewed the application. The applicant proposes to switch the technology for kiln #2 from a direct-fired preheater kiln to an indirect-fired precalciner kiln. Production capability will also increase as a result of this modification. The control technology and emission rates proposed by the applicant are consistent with the most recently issued permits for similar sources. We have no adverse comments on this application.

Thank you for the opportunity to review and comment on this application. If you have any questions, please contact Mr. Gregg Worley of my staff at (404) 562-9141.

Sincerely yours,

R. Douglas Neeley  
Chief  
Air and Radiation  
Technology Branch

cc: NPS  
SWD  
Bernardo Co  
Buck Over, PPS  
Don Elias, RTP  
Tom Mountain, FCS  
Lawrence Curtin, HEK  
Jereda Nelson, BAR



# RTP ENVIRONMENTAL ASSOCIATES INC.®

AIR • WATER • SOLID WASTE CONSULTANTS

239 U.S. Highway 22 East  
Green Brook, New Jersey 08812-1909

(908) 968-9600  
Fax: (908) 968-9603

October 29, 1996

Ms. Teresa Heron  
Florida Dept. of Environmental Protection  
Bureau of Air Regulation  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, FL 32399-2400

**RECEIVED**

**NOV 4 1996**

**BUREAU OF  
AIR REGULATION**

RE: Completeness Review of Air Construction Permit Application to Modify the Approved Second Cement Kiln for Florida Crushed Stone (FCS)

Dear Ms. Heron:

In response to our recent telephone conversations, provided herein is information regarding fugitive particulate matter (PM) emissions for the proposed second cement kiln. Material processing, storage, and handling operations were discussed in Sections 1.0 and 3.0 of the air permit application. Most PM emissions are generated by the kiln, clinker cooler, and raw material processing, which are controlled by main and bypass baghouses. Most other material processing, storage, and handling operations will be controlled with fabric filter baghouses as shown on Table 1-3 of the air permit application. Fugitive emissions associated with on-site mobile sources were discussed in Section 3.3 of the air permit application. As discussed in our May 10, 1995 letter responding to the Department's comments, raw material storage piles are not considered to be major fugitive PM sources due to their high moisture content. Also, most raw material storage piles are housed under a roofed structure (other raw materials as well as the final cement are stored in silos with PM emissions controlled by baghouses). Since many potential sources of fugitive PM emissions are eliminated by the facility design (i.e., PM emissions from most material processing, storage, and handling operations controlled by baghouses), fugitive PM emissions are relatively minor.

Therefore, in response to your comment, annual fugitive PM emissions associated with the following activities are as follows:

Material Processing (Fugitive)	< 5 tons per year
Handling and Storage (Fugitive)	< 5 tons per year.

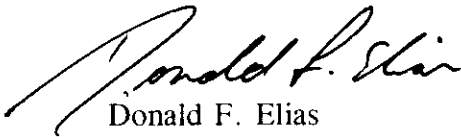
Material processing, handling, and storage activities would total 245 tons per hour. Also, please correct the coal throughput rate as shown on the bottom of Table 1 in our proposed revisions to the final permit (Appendix A to the air permit application) to 13.8 tph of coal.

- 2 -

Please contact us at 908-968-9600 if you have any additional questions or need any additional information.

Sincerely,

RTP ENVIRONMENTAL ASSOCIATES, INC.®



Donald F. Elias  
Principal

DFE/WEC/wec

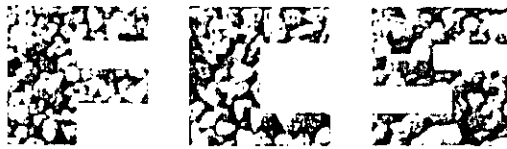
cc: C. Fancy, H. Oven, A. Linero, C. Holladay/FDEP  
T. Mountain, C. Allen/FCS  
L. Curtin, Esq./Holland & Knight  
M. Hober, W. Corbin, M. Lewis, FCS3 Project File/RTP

EPA

NPS

SWD

Hernando Co



FLORIDA CRUSHED STONE COMPANY  
CEMENT PLANT

RECEIVED  
NOV 04 1996  
BUREAU OF  
AIR REGULATION

October 28, 1996

Mr. Hamilton S. Oven, Jr., P.E.  
Administrator, Siting Coordination Office  
Florida Dept. of Environmental Protection  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Fl. 32399-2400

Re: October 17, 1996, letter from Don Elias, RTP- Professional P.E. Signature and Seal

Mr. Oven:

At the request of Teresa Heron, FDEP, a copy of the above referenced letter signed and sealed by Mr. Larry Roberts, P.E. is being provided for the record. Mr. Roberts is the Certified Professional Engineer identified in the FCS air permit application dated September 9, 1996. Ms. Heron informed FCS that the completeness review responses to the FDEP's comments required the signature and seal of the professional engineer identified in the air permit application.

Please call me at the number below if you have any questions.

Tom Mountain  
Environmental Manager

copy: C. Fancy, T. Heron, A. Linero, C. Holladay / FDEP  
C. Allen / FCS  
L. Curtain Esq. / H & K  
M. Hober, W. Corbin, M. Lewis / RTP



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Fax: (908) 968-9603

October 17, 1996

Mr. Hamilton S. Oven, Jr., P.E.  
Administrator, Siting Coordination Office  
Florida Dept. of Environmental Protection  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, FL 32399-2400

RE: Completeness Review of Air Construction Permit Application to Modify the Approved  
Second Cement Kiln for Florida Crushed Stone (FCS)

Dear Mr. Oven:

As requested in your letter to Mr. Tom Mountain dated October 2, 1996, please find enclosed a copy of the permit application submitted September 11<sup>th</sup> to the Bureau of Air Regulation. Our responses to your comments in the letter are as follows:

- (1) The main baghouse proposed for the kiln and clinker cooler is designed to an outlet particulate matter (PM) grain loading of 0.01 grains per actual cubic foot (gr/acf) of exhaust gas, which is equivalent to a 99.9% control efficiency. A separate baghouse similarly designed to 0.01 gr/acf is proposed for the kiln bypass system. Exhaust gases from both baghouses merge before exhausting through the main vent. Therefore, worst-case PM emissions will be the highest flow conditions from the main vent. This condition, as shown on Table 6-2 of the September air permit application, is 460,204 actual cubic feet per minute (acfm) when the shaft dryer is off, the bypass system is on, and the clinker cooler experiences upset conditions. For conservatism, a 20% safety factor is added to the design outlet grain loading to provide a margin of error to account for short-term fluctuations in baghouse performance and for upset conditions. Maximum PM emissions will therefore be given by:

$$\frac{0.012 \text{ gr}}{\text{acf}} \times \frac{460,204 \text{ acf}}{\text{min}} \times \frac{60 \text{ min}}{\text{hr}} \times \frac{\text{lb}}{7000 \text{ gr}} = \frac{47.335 \text{ lb}}{\text{hr}}$$

$$\frac{47.335 \text{ lb}}{\text{hr}} \times \frac{\text{hr}}{104\text{-}1/6 \text{ tons of clinker}} = \frac{0.454 \text{ lb}}{\text{ton}}$$

These baghouse design levels (with a 20% safety factor) are less than the proposed BACT emission levels of 47.813 lb/hour and 0.459 lb/ton of clinker for both kiln and clinker cooler. These preliminary design specifications therefore provide reasonable assurance that the baghouses will meet the proposed PM emission rates.

The existing FCS baghouse (similar to the proposed baghouse) had a worst-case PM emission rate of 24.20 lb/hour based on stack tests of the existing FCS kiln from 1990 through 1994 (see attachments to our July 11, 1995 letter to the Department). This is equivalent to 0.367 lb/ton of clinker at the clinker production rate of 66 tons/hour (tph) measured during this worst-case test. Thus, based on stack test measurements for the existing FCS baghouse and the preliminary design specifications for the proposed FCS baghouse systems, there is reasonable assurance that the proposed BACT emission levels for particulates are achievable.

- (2) Whole tires and tire derived fuel (TDF, i.e., shredded tires) are fed to the kiln at the raw material inlet side of the kiln at the base of the preheater/precalciner through an airlock. Attached is a process flow diagram showing the tire feeder mechanism. The existing tire feed conveyor system for the existing FCS kiln will be modified to include a second conveyor system for delivering tires to the proposed second kiln. Also attached is an October 10<sup>th</sup> letter from Mr. Charles Allen describing the modifications required to the existing tire feeder mechanism and the operation of the airlock for the proposed kiln.
- (3) As described in A&WMA's Air Pollution Engineering Manual (formerly AP-40), operation of the pyroprocessing system receives particularly close attention since clinker and cement quality is largely determined in the kiln. Proper process conditions and kiln temperatures must be maintained within strict tolerances if the clinker is to meet required specifications. Operation of modern cement plants is almost exclusively controlled by digital computers which continuously monitor process variables and frequent chemical and physical tests are made on the raw materials and final product. Kiln operations are optimized to the maximum extent possible to prevent upset and other transient conditions which affect clinker quality. Proper operation of the kiln and systems to prevent transient and upset conditions also minimizes emissions of nitrogen oxides (NO<sub>x</sub>), carbon monoxide (CO), sulfur dioxide (SO<sub>2</sub>), and volatile organic compounds (VOCs).

The extreme temperatures required for pyroprocessing minimizes products of incomplete combustion (PICs) such as CO and VOC. Maintaining sufficient air (i.e., oxygen) to calcine calcium carbonate to calcium oxide (releasing CO<sub>2</sub> in the process) provides sufficient oxygen to ensure nearly complete combustion of CO and VOCs and minimize formation of PICs. As noted in the A&WMA reference, PICs are usually of environmental interest only when hazardous waste is combusted. Summaries of stack test data for CO and total hydrocarbons (THC) taken during 1990 through 1994 for the existing FCS kiln were provided in our July 11, 1995 letter to the Department. Maximum emissions for the existing FCS kiln were 79.9 lb/hour for CO at 77 tph of clinker (1.038 lb/ton of clinker) and 3.6 lb/hour for THC at 78 tph of clinker (0.046 lb/ton of clinker), less than the proposed BACT levels for CO and VOC of 2.000 and 0.085 lb/ton of clinker, respectively. Existing FCS kiln test data provide reasonable assurance of meeting the proposed CO and VOC emission limits.

The operating characteristics and higher thermal efficiency of the precalciner kiln compared to the previously approved Gepol tower kiln should lower SO<sub>2</sub> and NO<sub>x</sub> emissions on a lb/ton basis for several reasons. The amount of fuel consumed per ton of clinker is less, reducing fuel sulfur and nitrogen. As reported in the A&WMA reference, short-term spikes of NO<sub>x</sub> emissions occur during process upsets due to the higher heat inputs required to restore equilibrium and stable kiln operation as found in a precalciner system appears to reduce long-term NO<sub>x</sub> emissions. The use of indirect-fired burners for the precalciner and kiln should minimize NO<sub>x</sub> formation by minimizing available oxygen in the flame region. Finally, the precalciner design has been shown to reduce emissions of NO<sub>x</sub> in comparison to other kiln designs.

For the NO<sub>x</sub> emission limits, the proposed BACT limits are extremely aggressive limits imposed by the Department on the previously approved (Gepol tower) kiln design. As noted in the approved permit, the applicant and project vendor will have up to 18 months to optimize the facility operation to meet the NO<sub>x</sub> emission limits. Existing continuous emission monitor (CEM) data for a nearby Gepol tower preheater cement kiln shows that only one day out of over three months had emissions greater than 2.8 lb/ton of clinker.

The more efficient thermal design of the precalciner system, the expected reduction in NO<sub>x</sub> emissions for a precalciner design as compared to other types of cement kilns, the use of indirect-fired burners, and the 18-month optimization period should provide reasonable assurance that the proposed kiln will be able to meet and maintain the proposed BACT limit for NO<sub>x</sub> within the optimization period. Reasonable assurance for SO<sub>2</sub> emissions are described in the following response.

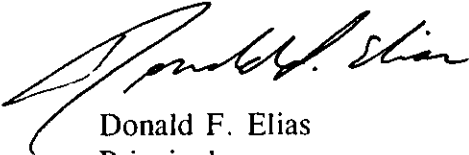
- (4) As noted in AP-42, the alkaline nature of the materials provides for direct absorption of SO<sub>2</sub>, with absorption rates of about 70% to more than 95% depending on the process and source of sulfur. Also, AP-42 reports that as much as 50% of the SO<sub>2</sub> can be removed from the pyroprocessing system exhaust gases when this gas steam is used in the raw mill for heat recovery and drying (like the proposed system). Thus, the proposed cement kiln will have a highly alkaline internal environment that provides substantial SO<sub>2</sub> control.

Summaries of stack test data SO<sub>2</sub> taken during 1990 through 1994 for the existing FCS kiln were provided in our July 11, 1995 letter to the Department. The maximum measured SO<sub>2</sub> emissions was 5.23 lb/hour at 66 tph of clinker production (0.079 lb/ton of clinker). Thus, the nature of the kiln process and stack test data for the existing FCS kiln should provide reasonable assurance of meeting the proposed SO<sub>2</sub> BACT limit for SO<sub>2</sub> of 0.230 lb/ton of clinker. Since compliance with the SO<sub>2</sub> limits for the proposed kiln will be determined by CEM, the proposed BACT limit for SO<sub>2</sub> was not reduced further since available data for the existing FCS kiln are limited (testing requirements for the existing cement kiln are annual stack tests only).

Please contact us at 908-968-9600 if you have any additional questions or need any additional information.

Sincerely,


RTP ENVIRONMENTAL ASSOCIATES, INC.®



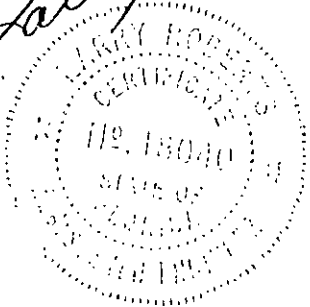
Donald F. Elias  
Principal

Enclosure/Attachments

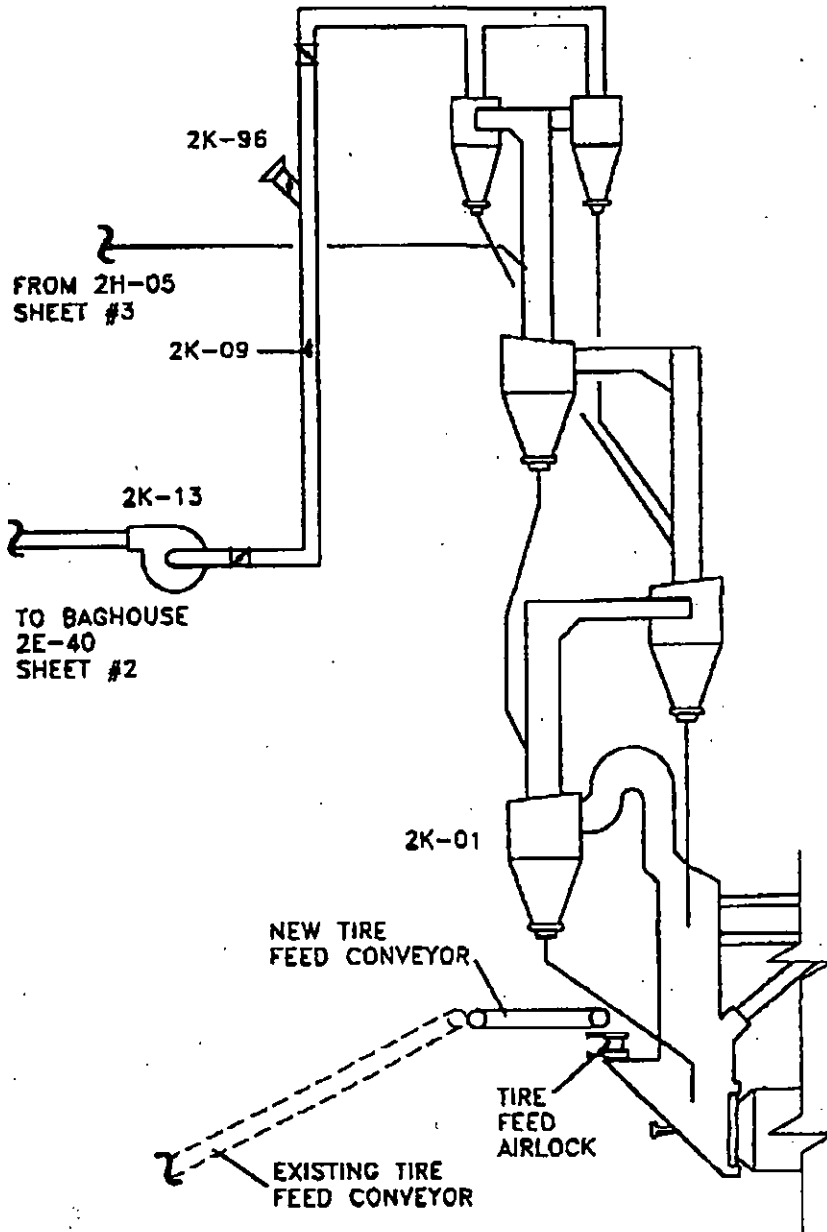
cc (w/o Enclosure): C. Fancy, T. Heron, A. Linero, C. Holladay/FDEP  
(w/ Attachments) T. Mountain, C. Allen/FCS  
L. Curtin, Esq./Holland & Knight  
M. Hober, W. Corbin, M. Lewis, FCS3 Project File/RTP



10/30/96







<small>UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE TO CENTER LINE UNLESS OTHERWISE SPECIFIED</small>		
DATE	COX 9/18/86	<small>FOR ALL INFORMATION CONTACT POLYSUB CORPORATION P.O. BOX 1000 MARIETTA, GA 30067 PHONE (404) 875-1000</small>
SCALE	NONE	<small>STATE OF GEORGIA REGISTERED PROFESSIONAL ENGINEER NO. 5840-2200</small>
<b>PREHEATER TIRE FEED SYSTEM FLORIDA CRUSHED STONE</b>		
PROJECT NO.		
DATE		

COMPUTER GENERATED DRAWING

XREF DWG: 2K-01, 2K-09, 2K-13, 2K-96, 2E-40, 2H-05, 2H-06, 2H-07, 2H-08, 2H-09, 2H-10, 2H-11, 2H-12, 2H-13, 2H-14, 2H-15, 2H-16, 2H-17, 2H-18, 2H-19, 2H-20, 2H-21, 2H-22, 2H-23, 2H-24, 2H-25, 2H-26, 2H-27, 2H-28, 2H-29, 2H-30, 2H-31, 2H-32, 2H-33, 2H-34, 2H-35, 2H-36, 2H-37, 2H-38, 2H-39, 2H-40, 2H-41, 2H-42, 2H-43, 2H-44, 2H-45, 2H-46, 2H-47, 2H-48, 2H-49, 2H-50, 2H-51, 2H-52, 2H-53, 2H-54, 2H-55, 2H-56, 2H-57, 2H-58, 2H-59, 2H-60, 2H-61, 2H-62, 2H-63, 2H-64, 2H-65, 2H-66, 2H-67, 2H-68, 2H-69, 2H-70, 2H-71, 2H-72, 2H-73, 2H-74, 2H-75, 2H-76, 2H-77, 2H-78, 2H-79, 2H-80, 2H-81, 2H-82, 2H-83, 2H-84, 2H-85, 2H-86, 2H-87, 2H-88, 2H-89, 2H-90, 2H-91, 2H-92, 2H-93, 2H-94, 2H-95, 2H-96, 2H-97, 2H-98, 2H-99, 2H-100, 2H-101, 2H-102, 2H-103, 2H-104, 2H-105, 2H-106, 2H-107, 2H-108, 2H-109, 2H-110, 2H-111, 2H-112, 2H-113, 2H-114, 2H-115, 2H-116, 2H-117, 2H-118, 2H-119, 2H-120, 2H-121, 2H-122, 2H-123, 2H-124, 2H-125, 2H-126, 2H-127, 2H-128, 2H-129, 2H-130, 2H-131, 2H-132, 2H-133, 2H-134, 2H-135, 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2H-761, 2H-762, 2H-763, 2H-764, 2H-765, 2H-766, 2H-767, 2H-768, 2H-769, 2H-770, 2H-771, 2H-772, 2H-773, 2H-774, 2H-775, 2H-776, 2H-777, 2H-778, 2H-779, 2H-780, 2H-781, 2H-782, 2H-783, 2H-784, 2H-785, 2H-786, 2H-787, 2H-788, 2H-789, 2H-790, 2H-791, 2H-792, 2H-793, 2H-794, 2H-795, 2H-796, 2H-797, 2H-798, 2H-799, 2H-800, 2H-801, 2H-802, 2H-803, 2H-804, 2H-805, 2H-806, 2H-807, 2H-808, 2H-809, 2H-810, 2H-811, 2H-812, 2H-813, 2H-814, 2H-815, 2H-816, 2H-817, 2H-818, 2H-819, 2H-820, 2H-821, 2H-822, 2H-823, 2H-824, 2H-825, 2H-826, 2H-827, 2H-828, 2H-829, 2H-830, 2H-831, 2H-832, 2H-833, 2H-834, 2H-835, 2H-836, 2H-837, 2H-838, 2H-839, 2H-840, 2H-841, 2H-842, 2H-843, 2H-844, 2H-845, 2H-846, 2H-847, 2H-848, 2H-849, 2H-850, 2H-851, 2H-852, 2H-853, 2H-854, 2H-855, 2H-856, 2H-857, 2H-858, 2H-859, 2H-860, 2H-861, 2H-862, 2H-863, 2H-864, 2H-865, 2H-866, 2H-867, 2H-868, 2H-869, 2H-870, 2H-871, 2H-872, 2H-873, 2H-874, 2H-875, 2H-876, 2H-877, 2H-878, 2H-879, 2H-880, 2H-881, 2H-882, 2H-883, 2H-884, 2H-885, 2H-886, 2H-887, 2H-888, 2H-889, 2H-890, 2H-891, 2H-892, 2H-893, 2H-894, 2H-895, 2H-896, 2H-897, 2H-898, 2H-899, 2H-900, 2H-901, 2H-902, 2H-903, 2H-904, 2H-905, 2H-906, 2H-907, 2H-908, 2H-909, 2H-910, 2H-911, 2H-912, 2H-913, 2H-914, 2H-915, 2H-916, 2H-917, 2H-918, 2H-919, 2H-920, 2H-921, 2H-922, 2H-923, 2H-924, 2H-925, 2H-926, 2H-927, 2H-928, 2H-929, 2H-930, 2H-931, 2H-932, 2H-933, 2H-934, 2H-935, 2H-936, 2H-937, 2H-938, 2H-939, 2H-940, 2H-941, 2H-942, 2H-943, 2H-944, 2H-945, 2H-946, 2H-947, 2H-948, 2H-949, 2H-950, 2H-951, 2H-952, 2H-953, 2H-954, 2H-955, 2H-956, 2H-957, 2H-958, 2H-959, 2H-960, 2H-961, 2H-962, 2H-963, 2H-964, 2H-965, 2H-966, 2H-967, 2H-968, 2H-969, 2H-970, 2H-971, 2H-972, 2H-973, 2H-974, 2H-975, 2H-976, 2H-977, 2H-978, 2H-979, 2H-980, 2H-981, 2H-982, 2H-983, 2H-984, 2H-985, 2H-986, 2H-987, 2H-988, 2H-989, 2H-990, 2H-991, 2H-992, 2H-993, 2H-994, 2H-995, 2H-996, 2H-997, 2H-998, 2H-999, 2H-1000.



# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

1875 Century Boulevard  
Atlanta, Georgia 30345  
October 11, 1996

IN REPLY REFER TO:

**RECEIVED**  
OCT 15 1996  
BUREAU OF  
AIR REGULATION

Mr. C. H. Fancy  
Chief, Bureau of Air Regulation  
Department of Environmental Regulation  
Twin Towers Office Building  
2600 Blair Stone Road, MS 48  
Tallahassee, Florida 32399-2400

Dear Mr. Fancy:

We have reviewed the Prevention of Significant Deterioration Application for the proposed permit modification of Florida Crushed Stone's (FCS) Kiln #2 in Brooksville. The Brooksville facility is located 20 km southeast of Chassahowitzka Wilderness Wilderness Area, a Class I air quality area, administered by the Fish and Wildlife Service (FWS). Comments from the FWS Air Quality Branch follow:

### Best Available Control Technology (BACT) Analysis

The BACT analysis is complete. We are pleased that FCS has decided to install a preheater/precalciner kiln. The high thermal efficiency achieved by these types of kilns results in less heat and fuel consumed, and therefore, less NO<sub>x</sub> produced. We agree that 2.8 pounds NO<sub>x</sub> per ton clinker is a reasonable emission rate for the kiln. However, recent BACT determinations for Roanoke Cement and Lone Star Industries have required emission limits as low as 2.5 pounds of NO<sub>x</sub> per ton of clinker. Therefore, although we agree time is needed after initiating commercial operation to attain a representative NO<sub>x</sub> limit for the kiln, we are very interested in the emission rate FCS's kiln ultimately achieves. Please forward to us any test results which indicate what emission rate can be achieved on a continuous basis.

FCS's analysis for Class I area impacts is complete.

Thank you for giving us the opportunity to comment on this permit application. We appreciate your cooperation in notifying us of proposed projects with the potential to impact the air quality and related resources of our Class I air quality areas. If you have questions, please contact Ms. Ellen Porter of our Air Quality Branch in Denver at 303/969-2617.

cc: Jersea Heron  
B. Thomas, SWD  
EPA  
Hernando Co.  
D. Elias RTP  
T. Mountain  
B. Overn

Sincerely yours,

Noreen K. Clough  
Regional Director



**FLORIDA CRUSHED STONE COMPANY**  
**CEMENT PLANT**

October 10, 1996

RTP Environmental Associates Inc.  
Attn: Mr. Bill Corbin  
Highway 22 East  
Green Brook, New Jersey 08812

Dear Mr. Corbin,

The Tire feeder mechanism is composed of two horizontally mounted slide gates. These gates are pneumatically operated and working in sequence provide a lock to prevent false air from entering the Pyro-processing system as tires are discharged into the preheater just above the kiln inlet. The top or upper slide gate acts as a weather gate and opens allowing a tire to enter the chamber between gates. After entry, the upper gate closes and the lower gate operates to allow passage of the tire without air infiltration.

The tire feeder system is composed of the following equipment:

- B-01 Supply conveyor (modified) (exists) - supplies maximum 1.33 TPH to kiln line (1) and 1.44 TPH to kiln line (2).
- B-02 weigh scale (modified) (exists) - PC controlled and remotely operated by plant control system to supply both kiln lines.
- B-03 Incline conveyor (modified) (exists) - Accepts tires from B-02 scale and delivers to kiln line (1) or 2B-06 diverter.
- 2B-06 Diverter (New) - Diverts tires from B-03 incline conveyor to 2B-03 conveyor (line 2)
- 2B-03 Conveyor (New) - Delivers tires from 2B-06 diverter to 2B-04 weather gate.
- 2B-04 Weather Gate (New) - Works in sequence with 2B-05 gate to provide air lock for line 2 preheater.
- 2B-05 Slide gate (New) - Works in sequence with 2B-04.

RTP Environmental Associates, Inc.


October 10, 1996

Page 2

Modifications to the Bailey Network 90 Plant Control System will allow for control of TDF Firing to both Kiln lines. The existing equipment will be upgraded to handle the additional tonnage. The newly installed 2B-06 Diverter will act in conjunction with B-02 weigh scale to send tires to line 2 preheater.

If you have any questions, please call me.

Sincerely,

A handwritten signature in cursive script that reads "Charles E. Allen". The signature is written in black ink and is positioned above the typed name.

Charles E. Allen

CEA/kab

# Memorandum

# Florida Department of Environmental Protection

TO: Buck Oven

THROUGH: A. A. Linero *A. A. Linero*

FROM: Teresa Heron

DATE: October 2, 1996

SUBJECT: Florida Crushed Stone - Cement Plant No. 2  
Permits No. AC27-274892 and PSD-FL-227 (A)  
Application submitted on September 11, 1996  
Completeness/Sufficiency Review

Please forward these comments to Florida Crushed Stone. Please copy Brian Beals at EPA Region IV, John Bunyak of the Park Service in Denver, Don Elias of RTP Associates, and L. Roberts, P.E. of FCS. Let us know if you prefer that we write FCS directly on subsequent matters and copy you.

The Bureau of Air Regulation has conducted a completeness/sufficiency review of the Air Construction Permit application to modify the approved project, site certification, construction permit and PSD permit applicable to the second cement kiln planned by Florida Crushed Stone for the proposed for completeness/sufficiency.

The review encompassed the original application submitted on March 13, 1995, subsequent completeness letters, applicant's responses, the previously issued Technical Evaluations, Final BACT Determination and permit as well as the additional information provided in the application of September 11, 1996. After reviewing the above information, the Department, pursuant to Rule 62-04. 070 (1) and (3), F.A.C., needs clarification in the following issues:

1. Provide the Department with reasonable assurance that the particulate control system for the kiln and cooler will comply with the emission limits requested. Examples of reasonable assurance can be based on a manufacturer's guarantee, preliminary design information, tests results at similar plants, etc.
2. Provide a description and diagram of the tire feeder mechanism. Provide the technical specifications for the proposed tire feeder system.
3. Describe the process design and good combustion practices (GCP) that will be used to optimize control of proposed emissions of NO<sub>x</sub>, CO, SO<sub>2</sub>, and VOCs (e.g., process controls such as oxygen levels and temperature).
4. Provide reasonable assurance that the SO<sub>2</sub> emission limit proposed (0.23 lb/ton clinker) will be met. This may include test results at similar plants, removal phenomena such as alkali/sulfate reactions, kiln design, etc.

We will forward any comments received from other agencies as soon. We expect to hear from Hernando County who regularly comment on all cement projects in the County. We will also pass along any comments received from the National Park Service and EPA.

If you have any questions on this matter, please call Teresa Heron (review engineer), A. A. Linero, P.E., or Cleve Holladay (meteorologist) at (904) 488-1344.

cc: Clair Fancy, BAR  
Bill Thomas, SWD



RTP ENVIRONMENTAL ASSOCIATES INC.

AIR • WATER • SOUD WASTE CONSULTANTS

239 U.S. Highway 22 East • Green Brook, New Jersey 08812

DATE: 09-27-96

FAX#: (904) 922-6979

TO: Ms. Teresa Heron  
Florida Dept. of Environmental Protection

FROM: Donald F. Elias

PROJECT NAME: FCS3

PAGES TO FOLLOW: 1

NOTES: The following is a copy of the transmittal that accompanied  
the Florida Crushed Stone proposed modification to Mr. Larry Jennings  
of Hernando County.

IF YOU SHOULD HAVE ANY QUESTIONS OR PROBLEMS, PLEASE CONTACT Don or Mary  
AT (908) 968-9600.

RTP FAX NO.: (908) 968-9603



RTP ENVIRONMENTAL ASSOCIATES INC.

AIR • WATER • SOLID WASTE CONSULTANTS

239 U.S. Highway 22 East • Green Brook, New Jersey 08812

(908) 968-9600

LETTER OF TRANSMITTAL

TO Mr. Larry Jennings
Hernando County Planning Dept.
20 North Main Street, Room 262
Brooksville, FL 34601-2807

Date: 9/23/96 Proj. ID: ECS3

WE ARE SENDING YOU: [x] Attached [ ] Under separate cover
VIA: [ ] 1st Class Mail [x] Federal Express [ ] Hand Delivery [ ] Other AM Delivery
THE FOLLOWING ITEMS:

Table with 4 columns: Copies, Date, No., Description. Row 1: 1, 09/06/96, Proposed Modifications for Alteration of Construction Permits AC27-274892 to Construct a Second Cement Kiln for Florida Crushed Stone

THESE ARE TRANSMITTED AS CHECKED BELOW:

- [ ] For approval [ ] For review and comment [ ] Resubmit \_\_\_ copies for approval
[x] For your use [ ] Copies returned after loan [ ] For signature
[ ] As requested [ ] Returned for corrections

REMARKS

COPY TO:

SIGNED: [Signature]

If enclosures are not as noted, kindly notify us at once.



# RTP ENVIRONMENTAL ASSOCIATES INC.®

AIR • WATER • SOLID WASTE CONSULTANTS

239 U.S. Highway 22 East  
Green Brook, New Jersey 08812-1909

(908) 968-9600  
Fax: (908) 968-9603

**RECEIVED**  
SEP 23 1996  
BUREAU OF  
AIR REGULATION

September 18, 1996

Mr. Clair Fancy  
Florida Department of Environmental Protection  
Bureau of Air Regulation  
111 South Magnolia, Suite 4  
Tallahassee, FL 32301

RE: Florida Crushed Stone Company PSD Permit Application

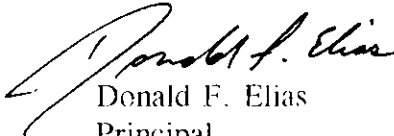
Dear Mr. Fancy:

As discussed in our meeting on September 11, 1996, we have forwarded copies of the air permit application for the above-referenced facility to the National Park Service, the USEPA Region IV office, and the FDEP Southwest District Office. Attached are copies of the Letters of Transmittal which accompanied the applications.

Should you have any questions or require additional information, please contact me at the above telephone number.

Sincerely,

RTP ENVIRONMENTAL ASSOCIATES, INC.®

  
Donald F. Elias  
Principal

DFE/mpj

cc: A. Lincro  
T. Mountain  
M. Hober  
W. Corbin  
Proj. File: FCS3







RTP ENVIRONMENTAL ASSOCIATES INC.

AIR • WATER • SOLID WASTE CONSULTANTS

239 U.S. Highway 22 East • Green Brook, New Jersey 08812

(908) 968-9600

LETTER OF TRANSMITTAL

TO Ms. Jewel Harper
USEPA - Air Division - PSD Programs
100 Alabama Street, S.W.
Atlanta, GA 30303

Date: 09-16-96 Proj. ID: FCS3

WE ARE SENDING YOU: [X] Attached [ ] Under separate cover
VIA: [ ] 1st Class Mail [X] Federal Express [ ] Hand Delivery [ ] Other
THE FOLLOWING ITEMS: 2nd Day

Table with 4 columns: Copies, Date, No., Description. Row 1: 1, 09-06-96, Copy of PSD Air Permit Application for Florida Crushed Stone Company (as submitted to Florida Department of Environmental Protection)

THESE ARE TRANSMITTED AS CHECKED BELOW:

- [ ] For approval [ ] For review and comment [ ] Resubmit \_\_\_ copies for approval
[X] For your use [ ] Copies returned after loan [ ] For signature
[ ] As requested [ ] Returned for corrections

REMARKS

COPY TO:

SIGNED: Mary D. Jordan

If enclosures are not as noted, kindly notify us at once.



RTP ENVIRONMENTAL ASSOCIATES INC.

AIR • WATER • SOLID WASTE CONSULTANTS

239 U.S. Highway 22 East • Green Brook, New Jersey 08812

(908) 968-9600

LETTER OF TRANSMITTAL

TO Mr. John Bunyak
National Park Service
12795 W. Alameda Parkway
Lakewood, CO 80228

Date: 09-16-96 Proj. ID: ECS3

WE ARE SENDING YOU: [X] Attached [ ] Under separate cover
VIA: [ ] 1st Class Mail [X] Federal Express [ ] Hand Delivery [ ] Other
THE FOLLOWING ITEMS: 2nd Day

Table with 4 columns: Copies, Date, No., Description. Row 1: 1, 09-06-96, PSD Air Permit Application for Florida Crushed Stone Company (as submitted to Florida Department of Environmental Protection)

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[X] For your use [ ] Copies returned after loan [ ] For signature
[ ] As requested [ ] Returned for corrections

REMARKS

COPY TO:

SIGNED: Mary D. Jordan

If enclosures are not as noted, kindly notify us at once.