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

December 4, 1995

Mr. Clair Fancy, P.E.
Chief, Bureau of Air Regulation
Florida Dept. of Environmental Protection
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Re: DEP Files PSD-FL-227, AC27-274892, PA82-17
Florida Crushed Stone, Proposed 2nd Cement Kiln

Dear Mr. Fancy:

Florida Crushed Stone (FCS) wishes to thank the Department for the final permit for the second cement kiln which addressed many of our concerns as set forth in our October 24th letter. FCS submits the following comments for the record and requests that the Department's final air construction permit reflect the following conditions as appropriate.

NO_x Emission Limit

The Department imposed a 24-hour NO_x emission limit of 2.8 lb/ton for the second cement kiln (adding a footnote to Table I allowing up to 18 months after startup of commercial operation to achieve this standard). As stated previously, FCS feels this is a very aggressive limit.

In the Department's BACT Determination, it was agreed that SNCR is not a "demonstrated technology" on preheater-only type kilns. In addition, the only operating facilities with current NO_x permit limits near 2.8 lb/ton are the Lone Star Industries, California plant (2.5 lb/ton) and the Calvaras Cement, California plant (staged combustion retrofits required to meet 2.9 lb/ton). Both plants are preheater/precalciner kilns, which allow for staged combustion conditions. As noted at our October 11th meeting, the unique feed materials available at the FCS facility do not permit the use of a precalciner.

Other facilities listed in or considered for the Department's BACT Determination were a facility never constructed (Dixie Cement, Tennessee at 1.11 lb/ton), two recent/pending BACT determinations which have not yet initiated construction (Great Star Cement, Nevada at 3.1 lb/ton based on SNCR, which local agency personnel felt would never be built and Florida Rock Industries at 2.8 lb/ton), and two facilities which have never met their permitted NO_x emission limit. The two latter plants were the SW Portland, Odessa, Texas facility which was never able to achieve the permit limit of 0.85 lb/ton and is currently being repermitted (a 1983 test showed 5.7 lb/ton) and a Texas Lehigh plant in Texas which was never able to achieve the 2.09 lb/ton limit and was repermitted at about 3.7 lb/ton based on the average of stack test data (even this limit was later dropped).

Other than the two California plants listed above, the most stringent permit limit for an operating facility is Florida Mining & Materials (FMM) Kiln #2, permitted in 1993 with a 30-day emission limit of 3.14 lb/ton.

At the October 11th meeting, it was agreed that emissions for the FCS or FMM kilns could be used to support emission limits alternatives to the 2.8 lb/ton value. These data represent kiln configurations and feed stocks most representative of the proposed kiln. In our October 24th letter, recent 1993 and 1994 stack test data for FCS kiln 1 were submitted which show NO_x emissions at or slightly above 2.8 lb/ton. These data are for limited test periods of about three hours and may not be representative of the entire range of operating conditions experienced during a full year.

FCS also provided 36 days (April 1993) of available CEM data for FMM kiln #2 obtained from Koogler and Associates. While average (36-day) NO_x emissions are about 2.0 lb/ton as represented by the Department during our meeting, one 24-hour average was greater than 3.1 lb/ton. Therefore, as stated above, FCS feels that the 24-hour NO_x emission limit of 2.8 lb/ton is a very aggressive limit.

Recordkeeping Requirements

As noted in our October 24th letter, FCS feels that Permit Condition 28 should be revised to require recordkeeping of the preheater feed rate rather than kiln feed rate. As noted in our letter and in the existing kiln permit, the kiln feed rate is a calculated value based on the measured preheater feed rate.

Kiln Gas Temperatures

The Department did reword the requirement for 1750°F kiln gas temperatures in Permit Condition 7 to reflect periods "upon reaching steady state conditions, and within 6 hours [of startup]." However, FCS feels that this permit condition is unnecessary. The pyroprocessing of cement requires temperatures in excess of 3000°F. This combined with the long residence times associated with cement kilns insures the destruction of dioxins, furans, and precursors. The requirement to monitor the temperature of gases exiting the kiln serves no useful purpose in ensuring complete combustion and low dioxin emissions.

Typographical Errors

The remaining comments correct typographical errors in the final permit and do not change any of the permit conditions. These corrections are:

Final Air Construction Permit:

(1) Page 1, Second Paragraph, First line: This line should read (change underlined):

"...second portland cement kiln at a maximum..."

(2) Page 1, Second Paragraph, Last two lines: This cover page description of the source does not reflect the fuel types allowed for by the permit conditions. These lines should read (changes underlined):

"...coal as the main fuel, and burn whole tires, tire derived fuel, and/or natural gas as the supplemental fuel."

(3) Page 5, Condition 3, Third line: Two periods mark the end of a sentence.

(4) Page 5, Condition 4.b, Second line: the word *"and"* should be deleted between the words *"and/or"* and *"blends"*.

(5) Page 6, Condition 10, Fourth line: The citation for the used oil sample should read (correction underlined):
"...from Specific Condition No. 31 shall be..."

(6) Page 7, Condition 10, First three lines on page: The Flash Point test method should be EPA SW-846 (1010), the Heat of Combustion test method should be ASTM D240, and the test methods for density and PCBs should be blank.

(7) Pages 11 and 12, Conditions 35 et. al: Since condition 34 has been removed, conditions 35 through 38 should be renumbered (i.e., become conditions 34 through 37).

(8) Table I: In accordance with the revised permit language in Condition 13, Table I should include a footnote stating the following:
"Visible limits shown for minor baghouse sources are alternative standards in accordance with Rule 62-297.620(4) in lieu of stack tests to demonstrate compliance with the 0.01 gr/dscf emission limitations."

Best Available Control Technology (BACT) Determination:

(1) Page 12, Kiln (SO_2) Pollutant Emission Limit, Second line: Should read (corrections underlined):
"...blend of fuel oil and on-spec used oil (1.5% sulfur by weight)..."

(2) Page 13, Paragraph 7, Third Line: Should read (corrections underlined):
"...using EPA Methods 29 and 104 to confirm..."

Please call either myself or William Corbin at 908-968-9600 or Tom Mountain of FCS at 904-799-7881 if you have any questions or need any additional information.

Sincerely,

RTP ENVIRONMENTAL ASSOCIATES, INC.®

Donald F. Elias
Principal

cc: H.Oven/A.Linero/T.Heron/C.Holladay, DEP
L.Curtin, Esq., H&K
W.Corbin/M.Hober/M.Lewis/FCS Project File, RTP

CC: EPA
NPS
SWD
OGC - Beason
Hernando
FCS - T. Mountain

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Donald F. Elias
Principal

cc: H.Oven/A.Linero/T.Heron/C.Holladay, DEP
L.Curtin, Esq., H&K
W.Corbin/M.Hober/M.Lewis/FCS Project File, RTP

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October 31, 1995

RECEIVED
NOV 21 1995
BUREAU OF
AIR REGULATION

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

Dear Mr. Oven:

We have the following comments on the draft of the PPSA Final Order for the proposed second cement kiln at Florida Crushed Stone.

(1) Condition I. (second and third lines) - A majority of the proposed revisions are to update citations to the current version of the Florida Administrative Code. Accordingly, the second and third lines should read as follows:

"...plant shall be in accordance with all applicable provisions of Chapters 62-2, 62-4, 62-17, and 62-210 through 62-297, Florida Administrative Code (FAC)."

(2) Condition I.B.4 - In order to update all of the FAC citations in the PPSA permit, Condition I.B.4 should be included in the revisions as follows (revisions underlined):

4. The permittee shall provide stack sampling facilities as required by Rule 62-297.345, FAC.

(3) Condition I.C.2 - In order to update all of the FAC citations in the PPSA permit, Condition I.C.2 should be included in the revisions as follows (revisions underlined):

2. Performance tests shall be conducted and data reduced in accordance with methods and procedures outlined in Rule 62-297, FAC.

(4) Condition I.A.16 - The basic intent of this condition, as proposed in the August 11th letter, was to reference the air Construction Permit for specific permit conditions. At this time, the Department is currently reviewing the emission rates and compliance conditions, particularly for NO_x, to be included in the final air Construction Permit. Since final emission rates are unknown, the following are suggested revisions to Condition I.A.16 to reference the air Construction Permit for permit emissions and conditions (revisions underlined) and to correct typographical errors (corrections double-underlined):

16. Stack emissions from cement plant II shall not exceed the ___ site specific limitations for the cement kiln, clinker cooler, raw mill and preheater __ given in Permit No. AC27-274892 with all subsequent revisions, which specifies:

a. The emission rates and compliance conditions for the Unit II cement kiln stack;
b. The raw and finished material feed rates and fuel types for cement plant II;
c. The operating conditions required for proper operation and startup/shutdown periods; and
d. The testing, monitoring, recordkeeping, and reporting requirements for cement plant II.

It should be noted this is more explicit than language in the current PPSA permit for the existing cement kiln, which does not give emissions or conditions for operation of the existing cement kiln alone.

(5) Condition I.A.17 - As written, the current draft air Construction Permit specifies 5% opacity as the minor source emission limit and not as an alternative limit in accordance with standard Department policy given at FAC 62-297.620(4). In addition, the current draft Construction Permit makes no reference to lb/hour emission limits. This permit condition was commented on in our October 24th letter to the Department. The following are suggested revisions to Condition I.A.17 to remove the emission limits and instead reference the final air Construction Permit (areas with revisions or deletions underlined) and to correct typographical errors (corrections double-underlined):

17. Minor source cement plant II particulate emissions due to the storage and/or use of raw materials, intermediate (cement kiln dust) and final (clinker) products will be controlled though the use of silos and/or covered conveyors equipped with fabric filter baghouses as described in Permit No. AC27-274892 with all subsequent revisions, which also specifies methods for verifying permit compliance for these minor particulate sources. (delete rest of condition I.A.17)

(6) Conditions I.H.1 to I.H.36 - Please delete these conditions, which were given in our July 17th letter as suggested language for the air Construction Permit and not the PPSA. Conditions I.A.16 and I.A.17 (described above) adequately revise the PPSA to allow the construction and operation of the proposed second cement kiln. The current PPSA does not reference emissions or conditions for the existing cement kiln during operation of the existing cement kiln only since the basic focus of the PPSA is the power plant (conditions for the existing cement plant are appropriately given in Operating Permit No. AO27-231888A).

Further, the draft air Construction Permit conditions are different than these, being reordered and reworded by the Department with some emissions and permit conditions changed from our July 17th suggestions.

If you have any questions or need any additional information, please feel free to contact either Tom Mountain of FCS at 904-799-7881, or William E. Corbin or myself at 908-968-9600.

Sincerely,

RTP ENVIRONMENTAL ASSOCIATES, INC.®

Donald F. Elias
Principal

DFE/WEC/wec

cc: T.Mountain, Florida Crushed Stone
L.Curtin, Esq., Holland & Knight
C.Fancy/A.Linero/T.Heron/C.Holladay, FDEP
M.Hober/W.Corbin/M.Lewis/FCS Proj.File, RTP