



RTP ENVIRONMENTAL ASSOCIATES INC.®

AIR • WATER • SOLID WASTE CONSULTANTS

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August 22, 1995

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

RECEIVED

AUG 27 1995

Bureau of
Air Regulation

Re: Brooksville Cement Plant
Permit Nos. AC27-274892 and PSD-FL-227

Dear Mr. Fancy:

RTP Environmental Associates, Inc. (RTP) and the applicant have prepared the following responses to the comments of the Department's August 10, 1995 memorandum regarding the Florida Crushed Stone air permit application for the additional cement kiln. These responses are given below in the numbered order of the FDEP memorandum. In addition, responses to the National Park Service letter follow the FDEP responses.

- (1) Attachment 1 contains emissions estimates from secondary vehicular traffic as prepared by Koogler and Associates and presented in the Power Plant Siting Application for the Florida Crushed Stone Unit I kiln. Emissions estimates from secondary vehicular traffic resulting from the proposed Unit II kiln were conservatively assumed to be equivalent to those produced from the Unit I kiln. Thus, total secondary vehicular emissions for the proposed Unit II kiln were calculated to be twice those estimated for the Unit I kiln as presented in Section 3.3.2 of the Air Permit Application Document.
- (2) Attachment 2 is a projected chemical analysis of the raw materials and additives likely to be used at this plant. The data shown under the heading "Materials" indicates the elemental oxide composition in percentage by weight of each of the raw material additives making up the kiln feed. The "Loss" column indicates in percentage by weight the amount of material that is lost during the combustion process. The chemical composition of the raw material may total greater than 100% in certain cases due to subtraction algorithms used to calculate weight loss in the computer program generating this data.

The data shown under the heading "Solution" indicates a typical raw material mix in percent by weight for the kiln feed. The data shown under the heading "Calculated Analysis" indicates the elemental oxide composition in percentage by weight for the kiln

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- feed (unignited), partially fired material inside the kiln (ignited), and clinker (final product).
- (3) Attachment 2 also shows a chemical analysis of the cement kiln dust, identified as "CKD" under the heading "Materials", based on likely raw materials and processes to be used at the facility. This cement kiln dust composition will likely differ from cement kiln dust at other facilities due to the unique raw material mix of each cement facility. The nature of the mix is dependant on a number of factors, one being the desired characteristics of the product being manufactured.
 - (4) 40 CFR 60, NSPS Subpart Kb applies to vessels greater than 40 cubic meters in size storing volatile organic liquids (VOLs). There will be no storage vessels of that size constructed to hold organic liquids as a result of this project.
 - (5) Environmentally related federal, state, and local permits required for this facility are included in the Power Plant Siting Act (PPSA) modification. The existing mining operation is in compliance with its existing permits.
 - (6) Proposed draft conditions for the cement kiln dated July 17, 1995, were submitted to FDEP and outline procedures in place to help ensure continuous compliance with emission limits. Relevant requirements include emission testing on the Unit II kiln for particulate matter (PM), opacity, nitrogen oxides (NO_x), and sulfur dioxide (SO₂ [Condition 19] and the installation of a continuous opacity monitoring system (Condition 29). Other conditions which will help ensure continuous compliance include requirements that used oil be sampled quarterly and analyzed (Condition 14), a used oil control system be implemented (Condition 27) and a coal usage system be established to ensure coal usage does not exceed allowable limits (Condition 26).
 - (7) Design specifications for the minor source dust collectors were contained in the April 25, 1995 comment responses. These preliminary design specifications on the dust collectors are provided in Attachment 3 and are revised to reflect the percent moisture values contained in the permit application forms and to show the outlet grain loadings in gr/dscf. More extensive design details and vendor specifications will be available subsequent to permit approval, after the preparation of bid specifications and the issuance of contracts for equipment, if desired.
 - (8) A comparison of the existing cement production technologies currently utilized in the United States relative to NO_x emissions and control is presented in the USEPA *Alternative Control Techniques (ACT) Document - NO_x Emissions from Cement Manufacturing* (EPA-453/R-94-004, March, 1994). In this document, ranges of NO_x emissions data for each technology, as well as average emissions, are presented. The data shows considerable overlap for all cement kiln technologies. In the case of pre-

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heater/kilns, such as FCS Unit I, NO_x emissions data ranged from 2.5 to 11.7 lbs. per ton of clinker with an average of 5.9 lbs. per ton of clinker. In the case of pre-heater/pre-calciner/kilns, NO_x emissions data ranged from 0.9 to 7.0 lbs. per ton of clinker with an average of 3.4 lbs. per ton of clinker.

FCS Unit I NO_x emissions testing have resulted in average emissions of 275.9 lbs per hour or 3.32 lbs. per ton of clinker. Furthermore, FCS has proposed a NO_x emission limit of 2.9 lbs. per ton of kiln feed (4.437 lbs per ton of clinker) with a not-to-exceed hourly limit of 359 lbs. per hour, which is at the lower end of the range for pre-heater kilns and in the middle of the range for the pre-heater/pre-calciner/kiln. NO_x emissions from the Unit II kiln are expected to be in line with those from the Unit I kiln.

The choice of the pre-heater/kiln design, rather than the pre-heater/pre-calciner/kiln design, for FCS Unit II provides many advantages in maintaining synergy of operations at the facility. FCS Unit I is a dry pre-heater/kiln design, thus, all FCS personnel are trained in the operation of this technology. To introduce a different technology at the facility would require training and maintaining an additional staff of operators, technicians, etc. to operate the facility. In addition, raw material feed requirements may be different for the pre-heater/pre-calciner/kiln design, thus, adding another layer of complexity and potential for mistakes. The design engineer, The Polysius Corporation, feels that the Gepol pre-heater design is the best match for the material feed at FCS. In this regard, the potential benefit from installation of a different technology at FCS for Unit II is questionable both environmentally and operationally.

- (9) Estimates of potential Hazardous Air Pollutant (HAP) emissions from the Unit II kiln were presented in the letter to Mr. Hamilton S. Oven, Jr., P.E., dated May 10, 1995. Estimates of potential HAP emissions were derived from two sources: (a) existing test data for FCS Unit I and similar plants and (b) the USEPA "Emission Factor Documentation for AP-42, Section 11.6 - Portland Cement Manufacturing". Table A from the May 10, 1995 comment response, provided in Attachment 4, listing the specific Hazardous Air Pollutants (HAPs) and associated worst-case emission values has been revised to include units of tons per year. In addition, the emission factor previously utilized for estimated hydrogen chloride emissions (1.4×10^{-1} lbs/ton clinker taken from the AP-42 Document) has been revised to reflect data from the existing cement kiln similar to the proposed Unit II kiln. Data from this kiln were also used in the emission factor presented for hexane on Table A.

It should be noted that the bulk of the emission rate estimates of HAPs presented in Table A are taken from generic data of numerous kilns with different technologies and material mixes and in most cases were worst-case values as stated in the May 10, 1995 comment response. Despite these worst-case emission estimates, projected HAP emissions from the proposed Unit II kiln are 16.64 tons per year. Thus, the proposed

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Unit II kiln will not be a major source of HAP emissions. Emission testing of the proposed Unit II kiln in operation may very well demonstrate substantially different (lower) levels of HAP emissions.

- 10) A material and gas flow diagram for the kiln was provided in the July 11, 1995 letter to you. The complexity of the manufacturing process makes it extremely difficult to show in a single diagram all raw material feeds and gas flow for all operations at the facility. Florida Crushed Stone is willing to meet with representatives of the FDEP in order to answer questions or provide available information on the material and gas flow for all operations at the facility, if desired.
- 11) To the best knowledge of the senior representatives of Florida Crushed Stone, neither Florida Crushed Stone nor the parent company have received citations for violations of Department regulations at any of their facilities.
- 12) All personnel operating the Brooksville facility pollution control equipment will undergo formal operator training program on the proper operation and maintenance of the equipment. In addition, employees will be trained in the regulatory requirements of the environmental permits. Between one and four employees will be certified as smoke readers and trained in procedures listed in EPA Method 9, to help ensure that opacity requirements are met. The facility, on average, devotes three hundred man hours/month to employee training programs which incorporate pollution mitigation and pollution prevention training.
- 13) Several theories exist concerning the formation of dioxins (PCDD) and furans (PCDF) from combustion of fuels. All theories involve the formation of precursors (during post-combustion) that can be converted to PCDD/PCDF at lower temperatures and potentially catalyzed by fly ash particles. Studies of Municipal Waste Combustion (MWC) facilities have shown that combustion temperatures exceeding 1600°F and a residence time of two to three seconds at this temperature are sufficient to destroy the precursors of PCDD and PCDF formation. Combustion temperatures in the range of 2750°-3000°F are necessary to pyro-process the cement raw materials to produce clinker. Thus, with the temperature in the combustion zone greatly exceeding the destruction temperature of PCDD/PCDF precursors, the potential for post-combustion formation of dioxins and furans is expected to be negligible.
- 14) The project is not anticipated to have any appreciable impact on any sensitive receptors in the vicinity of the cement plant. As discussed in the application, the SO₂, NO_x, and CO concentrations, even at the point of maximum predicted impact, are all well below levels which have been observed to result in damage to vegetative materials. No impact on water supplies or livestock is expected to be observed in any area surrounding the facility due to the low concentration of contaminants emitted from the facility.

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- (15) A revised visibility analysis was performed in accordance with the NPS comments. To better assess impacts, a refined Level 2 analysis was performed eliminating the period between 6 p.m. and midnight. Attachment 5 contains a table showing that the revised cumulative frequency of a visible plume due to emissions from the proposed kiln only is 2.23 percent based on the conservative assumptions in the analysis. As noted in our July 11, 1995 comment responses, this case was modeled at the request of the NPS even though it is not indicative of the change in visibility impacts from the proposed kiln. Since the proposed kiln flue is attached to the main facility stack similar to a multiflued arrangement, the difference between the existing facility (power plant + one cement kiln) and proposed facility (power plant + two cement kilns) impacts must be evaluated to consider the impacts of the proposed action.

Included on the attached table are the revised frequencies (eliminating the period between 6 p.m. to midnight) showing the VISCREEN predicted frequencies of a visible plume due to emissions from the existing and proposed facility configurations. As can be seen, the increase in visibility impacts for the proposed action is about 0.3 percent, i.e., the difference between 3.9 percent for proposed facility emissions and 3.6 percent for existing facility emissions. Since this increase in facility impacts is less than 1 percent, no significant facility impacts on Class I visibility is expected for the proposed action.

Should you have any questions or need any additional information, please feel free to contact me at 908-968-9600.

Sincerely,
RTP ENVIRONMENTAL ASSOCIATES, INC.®



Donald F. Elias
Principal

cc: T. Mountain, Florida Crushed Stone
L. Curtin, Holland & Knight
H. Oven, T. Heron, A. Linero, C. Holladay, FDEP
S. Kukier, USEPA Region IV
J. Bunyak, NPS
M. Hober, W. Corbin, M. Lewis, RTP
FCS Project File

ATTACHMENT 1

**EMISSION ESTIMATES
FOR
SECONDARY VEHICULAR TRAFFIC**

Auto TRAFFIC

$$90 \text{ persons} \times (1/1.25) \text{ cars/employee} \times 350 \text{ trips/yr} \times 2 \text{ miles/trip} \\ = 50,000 \text{ miles/yr}$$

Emissions

Part. Matter

$$\text{Roads} = 0.012 \text{ lb/mile} \times 50,000 \text{ miles} \times 1/2000 = 0.3 \text{ tpy} \\ \text{Auto} = 0.6 \text{ g/mi} \times 1/453.6 \times 50,000 \times 1/2000 = <0.1$$

$$\begin{array}{l} \text{CO} = 76.5 \text{ g/mi} \times (\quad) = 4.2 \\ \text{HC} = 10.8 \text{ g/mi} \times (\quad) = 0.6 \\ \text{NO}_x = 4.9 \text{ g/mi} \times (\quad) = 0.3 \\ \text{SO}_2 = 0.2 \text{ g/mi} \times (\quad) = <0.1 \end{array}$$

TRUCK TRAFFIC

$$20,800 \text{ trucks/yr} \times 2 \text{ mi/trip} = 41,600 \text{ miles/yr}$$

Emissions

Part. Matter

$$\text{Roads} = 0.024 \text{ lb/mi} \times 41,600 \times 1/2000 = 0.5 \text{ tpy} \\ \text{Auto} = 1.3 \text{ g/mi} \times 1/453.6 \times 41,600 \times 1/2000 = 0.1$$

$$\begin{array}{l} \text{CO} = 28.7 \text{ g/mi} \times (\quad) = 1.3 \\ \text{HC} = 4.6 \text{ g/mi} \times (\quad) = 0.2 \\ \text{NO}_x = 20.9 \text{ g/mi} \times (\quad) = 1.0 \\ \text{SO}_2 = 2.8 \text{ g/mi} \times (\quad) = 0.1 \end{array}$$

RAIL TRAFFIC

Assume one locomotive will operate on-site 6 hours per day for 30 days/year at a fuel consumption rate of 100 gal/hour.

$$6 \text{ hr/day} \times 30 \text{ day/yr} \times 100 \text{ gal/hr} = 18 \times 10^3 \text{ gal \#2 fuel/yr}$$

EMISSIONS

Part. Matter @ 25 lb/1000 gal	=	0.2 tpy
CO @ 130 lb/1000 gal	=	1.2
HC @ 94 lb/1000 gal	=	0.9
NO _x @ 370 lb/1000 gal	=	3.3
SO ₂ @ 57 lb/1000 gal	=	0.5

TOTAL SECONDARY EMISSIONS

PART MATTER	-	1.2 tpy
CO	-	6.7 tpy
HC	-	1.7 tpy
NO _x	-	4.6 tpy
SO ₂	-	0.7 tpy

ATTACHMENT 2

**RAW MATERIAL AND KILN DUST
CHEMICAL ANALYSIS**

MIX DESIGN SUMMARY:

Materials:

#	SiO2	Al2O3	Fe2O3	CaO	MgO	SO3	Na2O	K2O	Loss
1									
2 PCS HIGH LIMESTONE	4.37	0.40	0.20	52.30	0.40	0.01	0.01	0.07	41.23
3 MILL SCALE	2.60	2.30	100.30	0.30	0.10	0.10	0.10	0.10	-5.50
7 WASTE PINES @ 11.0% SiO2	11.00	0.50	0.20	48.30	0.42	0.01	0.01	0.07	39.20
8 GAINSVILLE FLYASH 3/92	50.39	25.00	7.50	0.90	1.00	0.50	0.25	1.10	11.30
6 CRYSTAL RIVER FLYASH CKD	56.40	10.28	4.34	1.34	0.25	0.19	0.29	1.82	2.30
	9.15	4.17	1.27	44.70	0.48	1.95	0.15	0.95	27.00

Solution:

Dry, Unignited Basis

PCS HIGH LIMESTONE	14.02
MILL SCALE	1.43
GAINSVILLE FLYASH 3/92	10.70
WASTE PINES @ 11.0% SiO2	73.35

Calculated Analyses:

	Unignited	Ignited	Clinker
SiO2.....	14.24	22.19	22.60
Al2O3.....	3.14	4.90	5.21
Fe2O3.....	2.41	3.76	3.77
CaO.....	43.54	67.34	67.03
MgO.....	0.47	0.74	0.73
SO3.....	0.06	0.10	0.10
Na2O.....	0.04	0.06	0.06
K2O.....	0.39	0.52	0.53
Equiv.....	0.30	0.46	0.47
Loss.....	35.33	0.00	0.03
Total....	100.16	100.26	100.23

ATTACHMENT 3

DUST COLLECTOR SPECIFICATIONS

DUST COLLECTOR SPECIFICATION DATA SHEET

Dust Collector Equipment Number:	2D-63		
Emission Unit Description:	Iron Ore Bin		
Dust Collector Type:	Pulse Jet	Total Cloth Area (sq. ft.):	500
Bag Fabric:	Polyester	Flowrate (ACFM):	3000
Air To Cloth Ratio:	6:1	Control Efficiency:	99.9%
Temperature of Outlet (deg. F):	100	Inlet Moisture Content:	2-3%
Outlet Grain Loading (gr/ACF):	0.010		
Outlet Grain Loading (gr/DSCF):	0.011		

DUST COLLECTOR SPECIFICATION DATA SHEET

Dust Collector Equipment Number:	2D-67		
Emission Unit Description:	Fly Ash Bin		
Dust Collector Type:	Pulse Jet	Total Cloth Area (sq. ft.):	567
Bag Fabric:	Polyester	Flowrate (ACFM):	3400
Air To Cloth Ratio:	6:1	Control Efficiency:	99.9%
Outlet Grain Loading (gr/ACF):	0.010	Inlet Moisture Content:	2-3%
Outlet Grain Loading (gr/DSCF):	0.011		

**DUST COLLECTOR
SPECIFICATION DATA SHEET**

Dust Collector Equipment Number:	2D-75		
Emission Unit Description:	Filter Dust Bin		
Dust Collector Type:	Pulse Jet	Total Cloth Area (sq. ft.):	750
Bag Fabric:	Polyester	Flowrate (ACFM):	4500
Air To Cloth Ratio:	6:1	Control Efficiency:	99.9%
Temperature of Outlet (deg. F):	200	Inlet Moisture Content:	2-3%
Outlet Grain Loading (gr/ACF):	0.010		
Outlet Grain Loading (gr/DSCF):	0.013		

**DUST COLLECTOR
SPECIFICATION DATA SHEET**

Dust Collector Equipment Number:	2F-14		
Emission Unit Description:	Raw Meal Transport		
Dust Collector Type:	Pulse Jet	Total Cloth Area (sq. ft.):	167
Bag Fabric:	Polyester	Flowrate (ACFM):	1000
Air To Cloth Ratio:	6:1	Control Efficiency:	99.9%
Temperature of Outlet (deg. F):	180	Inlet Moisture Content:	2-3%
Outlet Grain Loading (gr/ACF):	0.010		
Outlet Grain Loading (gr/DSCF):	0.012		

**DUST COLLECTOR
SPECIFICATION DATA SHEET**

Dust Collector Equipment Number:	2F-30		
Emission Unit Description:	Lime Silo Storage		
Dust Collector Type:	Pulse Jet	Total Cloth Area (sq. ft.):	667
Bag Fabric:	Polyester	Flowrate (ACFM):	4000
Air To Cloth Ratio:	6:1	Control Efficiency:	99.9%
Temperature of Outlet (deg. F):	200	Inlet Moisture Content:	2-3%
Outlet Grain Loading (gr/ACF):	0.010		
Outlet Grain Loading (gr/DSCF):	0.013		

**DUST COLLECTOR
SPECIFICATION DATA SHEET**

Dust Collector Equipment Number:	2G-12		
Emission Unit Description:	Raw Meal Storage and Homogenizing Silo		
Dust Collector Type:	Pulse Jet	Total Cloth Area (sq. ft.):	2833
Bag Fabric:	Polyester	Flowrate (ACFM):	17000
Air To Cloth Ratio:	6:1	Control Efficiency:	99.9%
Temperature of Outlet (deg. F):	180	Inlet Moisture Content:	2-3%
Outlet Grain Loading (gr/ACF):	0.010		
Outlet Grain Loading (gr/DSCF):	0.012		

DUST COLLECTOR SPECIFICATION DATA SHEET

Dust Collector Equipment Number:	2H-15		
Emission Unit Description:	Kiln Feed System		
Dust Collector Type:	Pulse Jet	Total Cloth Area (sq. ft.):	1200
Bag Fabric:	Polyester	Flowrate (ACFM):	7200
Air To Cloth Ratio:	6:1	Control Efficiency:	99.9%
Temperature of Outlet (deg. F):	180	Inlet Moisture Content:	2-3%
Outlet Grain Loading (gr/ACF):	0.010		
Outlet Grain Loading (gr/DSCF):	0.012		

**DUST COLLECTOR
SPECIFICATION DATA SHEET**

Dust Collector Equipment Number:	2L-08		
Emission Unit Description:	Gypsum Storage Bin		
Dust Collector Type:	Pulse Jet	Total Cloth Area (sq. ft.):	333
Bag Fabric:	Polyester	Flowrate (ACFM):	2000
Air To Cloth Ratio:	6:1	Control Efficiency:	99.9%
Temperature of Outlet (deg. F):	70	Inlet Moisture Content:	2-3%
Outlet Grain Loading (gr/ACF):	0.010		
Outlet Grain Loading (gr/DSCF):	0.010		

**DUST COLLECTOR
SPECIFICATION DATA SHEET**

Dust Collector Equipment Number:	2L-16		
Emission Unit Description:	Clinker Transport		
Dust Collector Type:	Pulse Jet	Total Cloth Area (sq. ft.):	333
Bag Fabric:	Polyester	Flowrate (ACFM):	2000
Air To Cloth Ratio:	6:1	Control Efficiency:	99.9%
Temperature of Outlet (deg. F):	180	Inlet Moisture Content:	2-3%
Outlet Grain Loading (gr/ACF):	0.010		
Outlet Grain Loading (gr/DSCF):	0.012		

DUST COLLECTOR SPECIFICATION DATA SHEET

Dust Collector Equipment Number:	2M-08		
Emission Unit Description:	Belt Conveyer		
Dust Collector Type:	Pulse Jet	Total Cloth Area (sq. ft.):	750
Bag Fabric:	Polyester	Flowrate (ACFM):	4500
Air To Cloth Ratio:	6:1	Control Efficiency:	99.9%
Temperature of Outlet (deg. F):	180	Inlet Moisture Content:	2-3%
Outlet Grain Loading (gr/ACF):	0.010		
Outlet Grain Loading (gr/DSCF):	0.011		

**DUST COLLECTOR
SPECIFICATION DATA SHEET**

Dust Collector Equipment Number:	2N-13		
Emission Unit Description:	Finish Mill Discharge Vent		
Dust Collector Type:	Pulse Jet	Total Cloth Area (sq. ft.):	10000
Bag Fabric:	Polyester	Flowrate (ACFM):	40000
Air To Cloth Ratio:	4:1	Control Efficiency:	99.9%
Temperature of Outlet (deg. F):	200	Inlet Moisture Content:	2-3%
Outlet Grain Loading (gr/ACF):	0.010		
Outlet Grain Loading (gr/DSCF):	0.013		

**DUST COLLECTOR
SPECIFICATION DATA SHEET**

Dust Collector Equipment Number:	2N-20		
Emission Unit Description:	Finish Mill Sepol Separator		
Dust Collector Type:	Pulse Jet	Total Cloth Area (sq. ft.):	28750
Bag Fabric:	Polyester	Flowrate (ACFM):	115000
Air To Cloth Ratio:	4:1	Control Efficiency:	99.9%
Temperature of Outlet (deg. F):	160	Inlet Moisture Content:	2-3%
Outlet Grain Loading (gr/ACF):	0.010		
Outlet Grain Loading (gr/DSCF):	0.012		

**DUST COLLECTOR
SPECIFICATION DATA SHEET**

Dust Collector Equipment Number:	2Q-15A		
Emission Unit Description:	Cement Storage Silo A		
Dust Collector Type:	Pulse Jet	Total Cloth Area (sq. ft.):	770
Bag Fabric:	Polyester	Flowrate (ACFM):	4620
Air To Cloth Ratio:	6:1	Control Efficiency:	99.9%
Temperature of Outlet (deg. F):	200	Inlet Moisture Content:	2-3%
Outlet Grain Loading (gr/ACF):	0.010		
Outlet Grain Loading (gr/DSCF):	0.013		

DUST COLLECTOR SPECIFICATION DATA SHEET

Dust Collector Equipment Number:	2Q-15B		
Emission Unit Description:	Cement Storage Silo B		
Dust Collector Type:	Pulse Jet	Total Cloth Area (sq. ft.):	770
Bag Fabric:	Polyester	Flowrate (ACFM):	4620
Air To Cloth Ratio:	6:1	Control Efficiency:	99.9%
Temperature of Outlet (deg. F):	200	Inlet Moisture Content:	2-3%
Outlet Grain Loading (gr/ACF):	0.010		
Outlet Grain Loading (gr/DSCF):	0.013		

**DUST COLLECTOR
SPECIFICATION DATA SHEET**

Dust Collector Equipment Number:	2Q-17		
Emission Unit Description:	Cement Silo Discharge Hopper		
Dust Collector Type:	Pulse Jet	Total Cloth Area (sq. ft.):	600
Bag Fabric:	Polyester	Flowrate (ACFM):	3000
Air To Cloth Ratio:	6:1	Control Efficiency:	99.9%
Temperature of Outlet (deg. F):	180	Inlet Moisture Content:	2-3%
Outlet Grain Loading (gr/ACF):	0.010		
Outlet Grain Loading (gr/DSCF):	0.011		

**DUST COLLECTOR
SPECIFICATION DATA SHEET**

Dust Collector Equipment Number:	2S-04		
Emission Unit Description:	Coal Transport Conveyer		
Dust Collector Type:	Pulse Jet	Total Cloth Area (sq. ft.):	444
Bag Fabric:	Polyester	Flowrate (ACFM):	2000
Air To Cloth Ratio:	4.5:1	Control Efficiency:	99.9%
Temperature of Outlet (deg. F):	70	Inlet Moisture Content:	2-3%
Outlet Grain Loading (gr/ACF):	0.010		
Outlet Grain Loading (gr/DSCF):	0.010		

**DUST COLLECTOR
SPECIFICATION DATA SHEET**

Dust Collector Equipment Number:	2S-07		
Emission Unit Description:	Coal Storage Bin		
Dust Collector Type:	Pulse Jet	Total Cloth Area (sq. ft.):	444
Bag Fabric:	Polyester	Flowrate (ACFM):	2000
Air To Cloth Ratio:	4.5:1	Control Efficiency:	99.9%
Temperature of Outlet (deg. F):	70	Inlet Moisture Content:	2-3%
Outlet Grain Loading (gr/ACF):	0.010		
Outlet Grain Loading (gr/DSCF):	0.010		

ATTACHMENT 4

HAZARDOUS AIR POLLUTANT EMISSIONS

TABLE A (Revised)

HAP EMISSION FACTORS
For Volatile Organic Compounds

#	COMPOUND	EMISSION FACTOR (lbs/ton Clinker)	ANNUAL EMISSIONS (tons/year)	SOURCE ^a
1.	Benzene	1.9×10^{-2}	6.91	(1)
2.	Biphenyl	7.8×10^{-6}	0.003	(1)
3.	Carbon disulfide	2.5×10^{-3}	0.91	(2)
4.	Chlorobenzene	3.9×10^{-4}	0.14	(2)
5.	Ethylbenzene	1.8×10^{-4}	0.07	(2)
6.	2-Ethyl hexyl phthalate	2.1×10^{-4}	0.08	(1)
7.	Formaldehyde	5.4×10^{-4}	0.20	(1)
8.	Hexane	5.7×10^{-5}	0.02	(3)
9.	Hydrogen chloride ^b	1.0×10^{-2}	3.64	(3)
10.	Methyl chloride	3.6×10^{-4}	0.13	(2)
11.	Methylene chloride	7.8×10^{-4}	0.28	(1)
12.	Methyl ethyl ketone	3.0×10^{-5}	0.01	(1)
13.	Naphthalene	3.9×10^{-3}	1.42	(1)
14.	Phenol	1.1×10^{-4}	0.04	(1)
15.	Styrene	5.2×10^{-4}	0.19	(2)
16.	2,3,7,8-TCDD ^c	6.5×10^{-10}	0.000000236	(2)
17.	Toluene	2.4×10^{-3}	0.87	(2)
18.	Trichloroethane	4.3×10^{-6}	0.0016	(1)
19.	Xylenes	6.9×10^{-4}	0.25	(2)

^a(1) Emission data from the USEPA *Emission Factor Documentation for AP-42, Section 11.6 - Portland Cement Manufacturing*, May, 1994.

(2) Emission test data of FCS Unit I kiln, power plant, and lime plant operating simultaneously.

(3) Emission test data of cement plant similar to FCS Unit I.

^bHCl is not a Volatile Organic Compound.

^cTotal penta through octa dioxin and furan emissions as 2,3,7,8-TCDD equivalents.

TABLE A (Revised)(Concluded)

HAP EMISSION FACTORS
For Metals

#	COMPOUND	EMISSION FACTOR (lbs/ton clinker)	ANNUAL EMISSIONS (tons/year)	SOURCE ^a
1.	Arsenic	4.8×10^{-5}	0.02	(1)
2.	Beryllium	9.9×10^{-7}	0.00036	(2)
3.	Cadmium	6.0×10^{-5}	0.02	(1)
4.	Chromium	2.5×10^{-4}	0.09	(2)
5.	Cobalt	6.0×10^{-5}	0.02	(1)
6.	Lead	1.6×10^{-3}	0.58	(1)
7.	Manganese	1.1×10^{-3}	0.40	(2)
8.	Mercury	4.8×10^{-4}	0.17	(1)
9.	Nickel	2.4×10^{-4}	0.09	(1)
10.	Selenium	2.6×10^{-4}	0.09	(2)
TOTAL (VOCs and Metals)			16.64	

- ^a(1) Emissions test data of FCS Unit I kiln, power plant, and lime plant operating simultaneously.
- (2) Emission data from the USEPA *Emission Factor Documentation for AP-42, Section 11.6 - Portland Cement Manufacturing*, May, 1994.

ATTACHMENT 5

LEVEL-2 VISIBILITY SCREENING ANALYSES

LEVEL-2 VISIBILITY SCREENING ANALYSES
FOR SINGLE CEMENT KILN EMISSIONS

Stab Class	WS Class (m/s)	Avg. WS (m/s)	$u\sigma_y\sigma_z$ (m ³ /s)	Transport		Cumul Freq.	VISCREEN RESULTS for Single Cement Kiln	
				Time (hrs)	Freq.		ΔE	Contrast
F	1-2	1.5	4.51E+04	3.7	0.38%	0.38%	7.565*	-.049
F	2-3	2.5	7.52E+04	2.2	1.10%	1.48%	4.748*	-.030
F	3-4	3.5	1.05E+05	1.6	0.26%	1.74%	3.458*	-.022
E	1-2	1.5	1.23E+05	3.7	0.07%	1.81%	4.356*	-.028
F	4-5	4.5	1.35E+05	1.2	0.00%	1.81%	2.718*	-.017
E	2-3	2.5	2.05E+05	2.2	0.42%	2.23%	2.679*	-.017

LEVEL-2 VISIBILITY SCREENING ANALYSES
FOR PROPOSED VERSUS EXISTING FACILITY EMISSIONS

Stab Class	WS Class (m/s)	Avg. WS (m/s)	$u\sigma_y\sigma_z$ (m ³ /s)	Transport		Cumul Freq.	----- VISCREEN RESULTS -----			
				Time (hrs)	Freq.		-Power +2 Kilns-		-Power +1 Kiln-	
							ΔE	Contrast	ΔE	Contrast
F	1-2	1.5	4.51E+04	3.7	0.38%	0.38%	22.893*	-.160*	19.233*	-.126*
F	2-3	2.5	7.52E+04	2.2	1.10%	1.48%	16.175*	-.108*	13.204*	-.085*
F	3-4	3.5	1.05E+05	1.6	0.26%	1.74%	12.521*	-.082*	10.069*	-.063*
E	1-2	1.5	1.23E+05	3.7	0.07%	1.81%	15.128*	-.100*	12.286*	-.079*
F	4-5	4.5	1.35E+05	1.2	0.00%	1.81%	10.206*	-.065*	8.122*	-.049
E	2-3	2.5	2.05E+05	2.2	0.42%	2.23%	10.077*	-.064*	8.014*	-.049
E	3-4	3.5	2.87E+05	1.6	0.29%	2.52%	7.539*	-.046	5.934*	-.035
D	1-2	1.5	3.02E+05	3.7	0.04%	2.56%	8.999*	-.056*	7.125*	-.043
E	4-5	4.5	3.69E+05	1.2	0.15%	2.71%	6.017*	-.036	4.708*	-.028
E	5-6	5.5	4.51E+05	1.0	0.02%	2.73%	5.005*	-.030	3.901*	-.023
D	2-3	2.5	5.03E+05	2.2	0.38%	3.11%	5.715*	-.035	4.467*	-.026
E	7-8	7.5	6.15E+05	0.7	0.00%	3.11%	3.743*	-.022	2.905*	-.017
D	3-4	3.5	7.04E+05	1.6	0.46%	3.57%	4.183*	-.025	3.251*	-.019
D	4-5	4.5	9.05E+05	1.2	0.32%	3.89%	3.298*	-.020	2.555	-.015

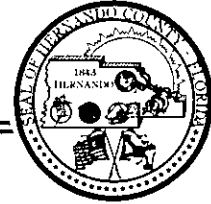
Values identified by VISCREEN as exceeding the visibility screening criteria are starred "*".

Board of County Commissioners

Hernando County

PLANNING DEPARTMENT

Government Center / Administration Building
20 North Main Street, Room 262
Brooksville, Florida 34601-2807



Planning - (904) 754-4057
Fax - (904) 754-4420

August 11, 1995

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. A.A. Linero, P.E.
Administrator, New Source Review Section
Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

RE: Florida Crushed Stone Company
New Cement Kiln, Hernando County, PSD-FL-227

RECEIVED

AUG 15 1995

Bureau of
Air Regulation

Dear Mr. Linero:

Thank you for your letter dated August 3, 1995. The information provided addresses staff's concerns regarding the above referenced permit application. However, please be advised that the County's final position on the proposed project must be determined by the Board of County Commissioners and will depend on the conditions contained in the permit, if issued.

To date we have provided information to our Board regarding this project as it was made available to us. Therefore, please ensure that this Department is copied on the Notice of Intent when it is issued so that we may quickly review the document and present the information to the Board of County Commissioners for their consideration.

If you have any questions or would like to discuss this information, please contact Ms. Lizanne Garcia at (904)754-4057 (SunCom 669-4057).

Thank you again for your cooperation in this matter. You and your staff have been helpful in coordinating this complex process.

Sincerely,

Lawrence Jennings,
Department Director

KLJ:tag

pc: Claire Fancy, DEP

E:\WPDATA\KLJ\DEPPERMT\NWKILN3.DEP



United States Department of the Interior

FISH AND WILDLIFE SERVICE

1875 Century Boulevard
Atlanta, Georgia 30345

AUG 11 1995

RECEIVED
AUG 17 1995

Bureau of
Air Regulation

IN REPLY REFER TO:

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

Dear Mr. Fancy:

In our April 19, 1995, and June 16, 1995, letters to you, we commented on the Prevention of Significant Deterioration permit application and additional information for the new cement kiln (kiln #2) proposed by Florida Crushed Stone. The kiln would be located 20 km southeast of Chassahowitzka Wilderness Area, a Class I air quality area, administered by the Fish and Wildlife Service. The new kiln would emit significant amounts of PM-10, sulfur dioxide (SO₂), nitrogen oxides, and carbon monoxide. Our reviews determined that the application was incomplete, and we requested additional information. FCS's most recent submittal of July 11, 1995, responds to some, but not all, of our concerns. Our comments are presented in the attached technical review document. It is our understanding that FCS is still considering how to mitigate SO₂ impacts at Chassahowitzka WA.

We will continue to consult with your office on this project. If you have any questions, please contact Ms. Ellen Porter of our Air Quality Branch in Denver at telephone number 303/969-2617.

Sincerely yours,

Noreen K. Clough
Regional Director

Enclosure

cc: Teresa Heron, BAR ✓
Bernardo Co. ✓
EPA ✓
SWD ✓

Technical Review of the
Class I Nitrogen Dioxide Increment Analysis and
Visibility Analysis for the
Prevention of Significant Deterioration
Permit Application for Florida Crushed Stone's
Proposed New Cement Kiln, Hernando County, Florida

by

Air Quality Branch, Fish and Wildlife Service - Denver

On July 11, 1995, Florida Crushed Stone (FCS) submitted additional information, as requested by our office, regarding impacts from emissions from its proposed new cement kiln on the Class I nitrogen dioxide (NO₂) increment and visibility at Chassahowitzka Wilderness Area (WA). Our comments on this additional information are presented below.

Class I NO₂ Increment Analysis

A previous analysis by FCS predicted that emissions from the proposed new kiln would contribute significantly to consumption of the Class I NO₂ annual increment at Chassahowitzka WA. Therefore, we requested that FCS perform a cumulative analysis of all area NO₂ increment-consuming sources to determine whether the Class I increment was exceeded. This analysis predicted that the maximum annual NO₂ impact from all modeled sources at Chassahowitzka WA would be 0.954 micrograms per cubic meter (ug/m³), which is 38 percent of the Class I increment of 2.5 ug/m³. This indicates that the NO₂ increment would not be exceeded as a result of emissions from this project and other area sources.

Visibility Analysis

The revised visibility modeling analysis predicted numerous occurrences of a visible coherent plume in Chassahowitzka WA resulting from emissions from the proposed new kiln. The VISCREEN model predicted a visible plume occurring 3.23 percent of the time in the Class I area with "delta E" values greater than 2.0, which is the Environmental Protection Agency's and Fish and Wildlife Service's accepted threshold value of a colored plume. This would correspond to approximately 282 hours of a visible coherent plume in the Class I area. Most of these impacts occur during "E" and "F" atmospheric stabilities, conditions that usually occur at night, early morning, or late afternoon. To better assess impacts of visible plumes from the proposed kiln, we request that the applicant ~~perform a refined analysis, eliminating the period between 6 p.m. and midnight from the analysis.~~ A visible plume formed during these hours would probably not impact Chassahowitzka WA during daylight, assuming a wind speed of 4 km per hour. To ensure that no adverse impacts to visibility occur at the Class I area from this project, we will review the results of this refined analysis to determine the need for emissions reductions or emissions offsets at FCS.



Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

August 10, 1995

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Joseph J. Piermatteo
Senior Vice President
Florida Crushed Stone, Inc.
10311 Cement Plant Road
Brooksville, Florida 34601

Dear Mr. Piermatteo:

RE: Brooksville Cement Plant
Permit Nos. AC27-274892 and PSD-FL-227

The Department received your letter on July 12, 1995. After reviewing the information in the application and letter, we need the following additional information:

1. Submit emission calculations for vehicle traffic summary using AP-42 Emission Factors. Table 3-3 of the application does not include these calculations.
2. Submit a projected chemical analysis of the raw materials and additives likely to be used at this plant.
3. Submit a projected analysis of the cement kiln dust (CKD) based on the likely raw material sources and the process to be used at the planned facility. Indicate if and why this CKD composition may differ from CKD from other plants.
4. Storage tanks facilities meeting the applicability requirements under 40 CFR 60, NSPS Subpart Kb are subject to this regulation. Please evaluate the proposed storage tanks (capacity & emissions) at this facility to determine if they will comply with this regulation.
5. Has Florida Crushed Stone applied to the Department for any other required permits (stormwater, solid waste, industrial waste, etc)? What other environmental-related federal or local permits does this facility already have or need (e.g. NPDES, dredge and fill, etc.). Is the existing mining operation in compliance with its existing permits?

"Protect, Conserve and Manage Florida's Environment and Natural Resources"

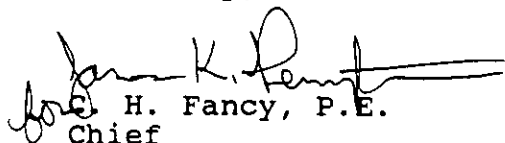
Mr. Joseph J. Piermatteo
August 10, 1995
Page Two

6. Please describe your program (such as enhanced or continuous monitoring, pollution control equipment maintenance) to insure that emissions limits will be met on a continuous basis.
7. Submit the design specification and the operating and maintenance manual for the equipment (kiln, baghouses) used at this facility.
8. Based on the information received, it appears the preheater/precalciner/kiln design will produce lower NOx emissions rates than the preheater/kiln design due to higher fuel efficiency and lower firing rates. Please explain the rationale for choosing the preheater/kiln design.
9. Would Cement Plant No. 2 be a major source for hazardous air pollutants? Please quantify these emissions in tons per year.
10. Submit a flow diagram of the new kiln that will show specifically all input feeds of gases and materials along with the sources of these feeds. Please refer to question No. 3 of the June 16, 1995 memo.
11. Has Florida Crushed Stone or its parent company had any violations of Department regulations at any of their facilities in Florida?
12. What will be the qualifications with respect to pollution control of personnel who will operate the Company's Brooksville facility? Are any training programs planned for plant personnel in the area of pollution prevention?
13. Is there a potential for post combustion formation of dioxins and furans? If so, how will this be minimized.
14. Identify and address the air quality impacts on any sensitive areas in the vicinity of the cement plant (i.e., sources of drinking water, farm crops, fish ponds, livestock, etc.) that may be more susceptible to atmospheric deposition caused by the project's proposed air emissions.
15. Perform the visibility analysis requested in the enclosed National Park Service correspondence.

Mr. Joseph J. Piermatteo
August 10, 1995
Page Three

We will continue to conduct our technical evaluation of this project and request the information described above within 30 days to maintain our present review schedule. If you have any questions on this matter, please call me or Teresa Heron, Review Engineer, at 904/488-1344.

Sincerely,


Joe H. Fancy, P.E.
Chief
Bureau of Air Regulation

AL/th/t

Enclosure

cc: B. Thomas, SWD
D. Beason, OGC
J. Harper, EPA
J. Bunyak, NPS
L. Curtain, H&K
L. Jennings, HCPD
T. Mountain, FCS
D. Elias, RTP

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

Dear Mr. Fancy:

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We will continue to consult with your office on this project. If you have any questions, please contact Ellen Porter of our Air Quality Branch in Denver at (303) 969-2617.

Sincerely,

Noreen K. Clough
Regional Director

cc: Jewell Harper, Chief
Air Enforcement Branch
Air, Pesticides and Toxic Management Division
U.S. EPA, Region 4
345 Courtland Street, NE
Atlanta, Georgia 30365

bcc: FWS-REG. 4: AQC
CHAS: Refuge Manager
AQD-DEN: Ellen Porter
National Park Service - AIR
P.O. Box 25287
Denver, CO 80225

**Technical Review of the
Class I Nitrogen Dioxide Increment Analysis and
Visibility Analysis for the
Prevention of Significant Deterioration
Permit Application for Florida Crushed Stone's
Proposed New Cement Kiln, Hernando County, Florida**

by

Air Quality Branch, Fish and Wildlife Service - Denver

On July 11, 1995, Florida Crushed Stone (FCS) submitted additional information, as requested by our office, regarding impacts from emissions from its proposed new cement kiln on the Class I nitrogen dioxide (NO₂) increment and visibility at Chassahowitzka Wilderness Area (WA). Our comments on this additional information are presented below.

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Fold at line over top of envelope to return

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

- Addressee's Address
- Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to: *Joseph J. Perramatto
10311 Cement Plant Rd
Brooksville, FL 34601*

4a. Article Number: *2 392 979 022*

4b. Service Type:

Registered Insured

Certified COD

Express Mail Return Receipt for Merchandise

7. Date of Delivery

5. Signature (Addressee): *[Signature]*

6. Signature (Agent): *[Signature]*

8. Addressee's Address (Only if requested and fee is paid)

PS Form 3811, December 1991 U.S. GPO: 1993-352-714 **DOMESTIC RETURN RECEIPT**

Is your RETURN ADDRESS completed on the reverse side?

Thank you for using Return Receipt Service.

2 392 979 022



Receipt for Certified Mail

No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

PS Form 3800, March 1993

Sender: <i>Joseph Perramatto</i>	
Street and No.: <i>JCS</i>	
City, State, and ZIP Code: <i>Brooksville, FL</i>	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	\$
Postmark or Date: <i>AC 27-274892 PSD-FI-227</i>	



Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

August 3, 1995

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Lawrence Jennings, Department Director
Board of County Commissioners
Hernando County Planning Department
20 North Main Street, Room 262
Brooksville, Florida 34601-2807

Dear Mr. Jennings:

RE: Florida Crushed Stone (FCS) - New Cement Kiln No. 2
Construction Permit Nos: PSD-Fl-227 and PA 82-17

Thank you for your letter dated June 5, 1995, requesting clarification of Florida Crushed Stone's responses to your letter dated April 28 and our letter dated April 21, 1995. Specifically, your office requested to know if FCS responses are consistent with our rules and policies. Following are our responses which have been keyed to your specific questions:

1. HERNANDO COUNTY REQUEST:

Do the emissions from unconfined and fugitive sources contain any of these constituents (Pb, Be, Hg, or H₂SO₄)? If so, shouldn't emissions of these pollutants have been calculated?

DEPARTMENT RESPONSE:

In general, raw materials associated with the manufacture of portland cement do not contain appreciable amounts of these compounds. These raw materials are lime, silica, alumina, and iron. However, fuels like coal, fuel oil, and on-specification used oil may contain traces of these compounds (refer to page 3-15 of the May 10, 1995, FCS letter). Thus, any emissions can be attributed almost entirely to the content of these materials in the fuel being combusted. Emissions of lead (Pb), mercury (Hg), beryllium (Be), and sulfuric acid mist from this cement plant will be based on the maximum amount of each fuel burned at any given time.

Mr. Lawrence Jennings
August 3, 1995
Page Two

2. HERNANDO COUNTY REQUEST:

Is this (allowing use of used oil during start up) consistent with the enclosed (DEP) guidance memo regarding the PCB content of used oil utilized for start-up fuels?

DEPARTMENT RESPONSE:

We believe that Florida Crushed Stone's use of used oil is consistent with the Guidance on Burning Used Oil memo, dated March 31, 1994. They provided specific test data demonstrating no detectable levels of PCBs. Please refer to attached the DEP letter of October 18, 1994 and the FCS letter of October 11, 1994. The new permit for kiln No. 2 will be clearer regarding the 2 ppm PCB limitation. The permit will be written in accordance with the Bureau's Guidance Memo and applicable provisions of Chapter 62-710 F.A.C. and 40 CFR 761.

3. HERNANDO COUNTY REQUEST:

The applicant does not believe that multisource modeling is appropriate for the proposed action. Does DEP concur? If so, then how does DEP determine when the cumulative impacts, from multiple source, have been exceeded the standard or caused damage to the Class I area?

DEPARTMENT RESPONSE:

The DEP and the National Park Service have requested that the applicant perform multisource SO₂ and NO_x modeling to determine the projected impacts of the project on the Chassahowitzka National Wilderness Area. The applicant submitted NO_x multisource modeling to DEP on July 11, 1995. The applicant is waiting for EPA to formally propose Class I significant impact levels (SILs) this summer in the Federal Register. EPA's proposed levels will likely be higher or less stringent than the NPS levels which DEP is currently following. According to the applicant's July 11, 1995 response to DEP's June 16, 1995 incompleteness/insufficiency letter, the applicant will likely reduce the proposed SO₂ emission rate to a level that will show increases in facility impacts less than the applicable Class I SILs rather than perform multisource SO₂ modeling.

4. HERNANDO COUNTY QUESTION:

The applicant indicates that the current permit application includes natural gas as a fuel. Will FCS be required to amend the construction permit if they utilize natural gas?

Mr. Lawrence Jennings
August 3, 1995
Page Three

DEPARTMENT RESPONSE:

That is correct. FCS is requesting to burn natural gas at kiln No. 2. This will be reflected in a new construction permit applicable only to kiln No. 2. If they plan to burn natural gas at any other source they will need to apply for an amendment of the construction permit. Natural gas is inherently less polluting fuel and its use is encouraged.

HERNANDO COUNTY QUESTION:

The applicant appears to be inconsistent when stating the effect of using natural gas as fuel. Is there published data available on this topic and what are DEP' conclusions regarding the emissions from natural gas?

DEPARTMENT RESPONSE:

Emissions from natural gas burning will be less than burning other fuels. The Department encourages use of natural gas whenever possible as an inherently less polluting fuel. Attached is a copy of Chapter 7, "Combustion Sources", from the Air Pollution Engineering Manual. Natural gas is described as a "clean fuel". It is our understanding that when the applicant stated that no significant changes in SO₂ emissions will be expected due to cleaner fuels, the applicants intention was to be permitted at a higher emission level than the natural gas levels. As requested, kiln No. 2, will be permitted to burn coal, used oil and tires. The emissions resulting from combusting all these fuels will be the worst-case scenario. Therefore, the emission standards set as permit limits will consider the worst-case condition.

6. HERNANDO COUNTY QUESTION:

Does DEP concur that any five years of meteorological data from Tampa International Airport is acceptable?

DEPARTMENT RESPONSE:

The DEP concurs that any five consecutive years of meteorological data from Tampa International Airport and the Ruskin National Weather Service upper air station is acceptable. Normally, the applicant will submit modeling analyses based on the use of the most recently available consecutive five year set from a particular station or set of stations. However, any consecutive five year data set should, from a climatological point of view, provide a

Mr. Lawrence Jennings
August 3, 1995
Page Four

representative set of meteorological conditions for evaluating maximum predicted impacts due to a proposed project. In addition, data from these stations were selected for use in the air quality modeling analyses since these are the closest primary weather stations to the project site and because data from these stations are most representative of the meteorology in the vicinity of the project site.

7. HERNANDO COUNTY QUESTION:

Does DEP concur with the statement "that ambient air quality standard would still be maintained by a wide margin regardless of the background AAQ values used?"

DEPARTMENT RESPONSE:

The DEP concurs with the above statement. As shown in Table 6-10 of the application report, maximum facility impacts are all less than ten percent of the applicable ambient air quality standards (AAQS). The NO₂, CO, Pb, and O₃ background concentrations were taken from Pinellas County, which is more urbanized than Hernando County; therefore, these background values are most likely higher and more conservative than those that would be measured in Hernando County near the proposed project. The higher TSP values from the Hernando County TSP monitor could conservatively be substituted for PM₁₀ values taken from Pinellas County with the result being that maximum proposed PM₁₀ impacts due to the project would still be below the applicable AAQS.

8. HERNANDO COUNTY QUESTION:

The DEP Guidance memo (enclosed) prohibits the use of used oil for start-up fuel if the used oil contains PCBs greater than or equal to 2 ppm. Is response 8 consistent with the guidance memo and DEP regulations?

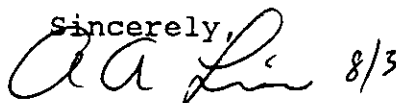
DEPARTMENT RESPONSE:

Please refer to our response to Hernando County Question No. 2 above.

In summary, most of FCS responses are consistent with our rules and guidances. Any which are not, will be clarified before the application is deemed complete and resolved prior to public notice of our intent to issue or deny a construction permit.

Mr. Lawrence Jennings
August 3, 1995
Page Five

We appreciate your comments and interest in this review. If you have any questions on this matter, please call me, Teresa Heron or Cleve Holladay at (904) 488-1344 or write to us at the above address.

Sincerely,
 8/3
A. A. Linero, P.E.
Administrator
New Source Review Section

AL/th/t

Enclosures

cc: B. Thomas, SWD
J. Harper, EPA
J. Bunyak, EPA

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number. The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

- Addressee's Address
- Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:
 Lawrence Jennings
 Board of County Commissioners
 Hernando Co Planning Dept.
 20 N. Main St., Rm 262
 Brooksville, FL 34601-2807

4a. Article Number
 Z 392 979 016

4b. Service Type

<input type="checkbox"/> Registered	<input type="checkbox"/> Insured
<input checked="" type="checkbox"/> Certified	<input type="checkbox"/> COD
<input type="checkbox"/> Express Mail	<input type="checkbox"/> Return Receipt for Merchandise

7. Date of Delivery
 8-7-AUG 1995
 BROOKSVILLE FL 34601

5. Signature (Addressee)
 6. Signature (Agent)
 L. Barnett

8. Addressee's Address (Only if requested and fee is paid)

PS Form 3811, December 1991 U.S. GPO: 1993-352-714

DOMESTIC RETURN RECEIPT

Is your RETURN ADDRESS completed on the reverse side? Thank you for using Return Receipt Service.

Z 392 979 016



Receipt for Certified Mail
 No Insurance Coverage Provided
 Do not use for International Mail
 (See Reverse)

PS Form 3800, March 1993

Sender's Name and No.	Lawrence Jennings
City, State and ZIP Code	Hernando Co
Contents	1 ea Crushed Stone
City, State and ZIP Code	Brooksville, FL
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date and Addressee's Address	
TOTAL Postage & Fees	\$
Postmark or Date	8-3-95 PSD-FI-227 on 8-2-17

Florida Department of
Environmental Protection

Memorandum

RECEIVED

JUL 28 1995

TO: Tommy Lemacks
FROM: Buck Oven *HCO*
DATE: July 25, 1995 *W*
SUBJECT: Florida Crushed Stone PA 82-17
Module 8027

Bureau of
Air Regulation

On January 25, 1994, Florida Crushed Stone Company submitted a request for modification of PA 82-17, and the PSD-FL-90 permit. On March 21, 1994, the company submitted the \$10,000 modification fee to pay for the review of the site certification modification and the Air Permit (PSD Permit) modification. In order to satisfy the requirements of section 62-296, F.A.C. an Air Permit Processing Fee must be deposited to the Department's Florida Permit Fee Trust Fund. Please transfer \$7,500.00 from the Operating Trust Fund, subaccount PA 82-17/8027 to the Florida Permit Fee Trust Fund for PSD-FL-90.

Please furnish this office and the Bureau of Air Regulation with a copy of documentation effecting this transfer.

cc: Patty Adams
Landa Korokous