

PUBLIC NOTICE

A new air pollution source is proposed for construction by the Florida Mining & Materials Corporation near the town of Brooksville, in Hernando County, Florida. The source is a Portland cement plant and will increase emissions of air pollutants by the following amounts in tons per year:

<u>PM</u>	<u>SO₂</u>	<u>NO_x</u>	<u>CO</u>	<u>VOC</u>	<u>Other</u>
179	13.1	855	39	11.7	Negl.

The proposed construction has been reviewed by the U.S. Environmental Protection Agency (EPA) under Federal Prevention of Significant Deterioration Regulations (40 CFR 52.21), and EPA has made a preliminary determination that the construction can be approved provided certain conditions are met. A summary of the basis for this determination and the application for a permit submitted by Florida Mining & Materials Corporation are available for public review in the office of the Clerk of Circuit Courts, 20 North Brooksville Avenue, Brooksville, Florida.

The maximum percentage of allowable increment consumed by the proposed construction is as follows:

	<u>Class I</u>		<u>Class II</u>	
	<u>Annual</u>	<u>24-hour</u>	<u>Annual</u>	<u>24-hour</u>
PM	2.2%	15%	17%	57%
SO ₂	-----Insignificant Impact-----			

Any person may submit written comments to EPA regarding the proposed modification. All comments, postmarked not later than 30 days from the date of this notice, will be considered by EPA in making a Final determination regarding approval for construction of this source. These comments will be made available for public review at the above location. Furthermore, a public hearing can be requested by any person. Such requests should be submitted within 15 days of the date of this notice. Letters should be addressed to:

Mr. Tommie A. Gibbs, Chief
 Air Facilities Branch
 U.S. Environmental Protection Agency
 345 Courtland Street, NE
 Atlanta, Georgia 30308

Preliminary Determination
Florida Mining and Materials Corporation
PSD-FL-063

I. Applicant

Florida Mining and Materials Corporation
P.O. Box 6
Brooksville, Florida 33512

II. Project Location

The applicant proposes to modify an existing plant located off Highway 98 near the town of Ringgold, about 10 miles northwest of Brooksville, Florida. The latitude and longitude for the plant site are 28°38'34" N and 82°28'25" W.

III. Project Description

The applicant plans to expand the existing Portland cement plant through the addition of a second rotary kiln, clinker cooler, finish mill and associated processing units. The facility will produce a maximum of 71 tons per hour of finished Portland cement. The kiln will be fired with low sulfur coal (1% sulfur; 12% ash; 12,000 Btu/lb) at a maximum rate of 8.9 tons per hour. Table 1 outlines the new and modified emissions units proposed for construction. Figure 1 shows schematically the location of each emissions unit. The cement plant/clay crusher (C-10) and one of two emissions units in the cement plant raw materials handling system (C-11) are existing facilities which will increase utilization of previously permitted capacity. Since the capacity was not restricted previously by enforceable limits, these two existing emissions units are not part of the modification.

IV. Source Impact Analysis

The existing Portland cement plant which is similar to the proposed modification has the potential to emit greater than 100 tons per year of pollutants regulated under the Clean Air Act (Act). The source, therefore, is an existing major stationary source which is located in an area designated attainment under section 107 of the Act. In addition, the proposed construction will significantly increase emissions of regulated pollutants (see Table 2). For these reasons the proposed construction is a major modification subject to review under Federal Prevention of Significant Deterioration (PSD) regulations (40 CFR 52.21). PSD review involves an analysis of the following:

Table 1
Emission Units

<u>Unit Description</u>	<u>Emission Point Numbers</u>	<u>Status</u>
Finish Mill (Dust Collection System)	N-23 and N-27	New
Cement/Masonry Silos (Dust Collection System)	P-05, P-07, and Q-17	New
Clinker Silo (Dust Collection System)	L-07, M-09, and M-10	New
Clinker Cooler (Dust Collection System)	K-09	New
Kiln Mill (Dust Collection System)	E-19	New
Kiln Feed Silo (Dust Collection System)	H-13	New
Blending Silos (Dust Collection System)	G-11 and F-17	Modified
Cement Plant/Clay Crusher (Dust Collection System)	C-10	Existing source; increased capacity utilization
Cement Plant/Raw Materials Handling (Dust Collection System)	C-11	Existing source; increased capacity utilization
	C-11A	Modified

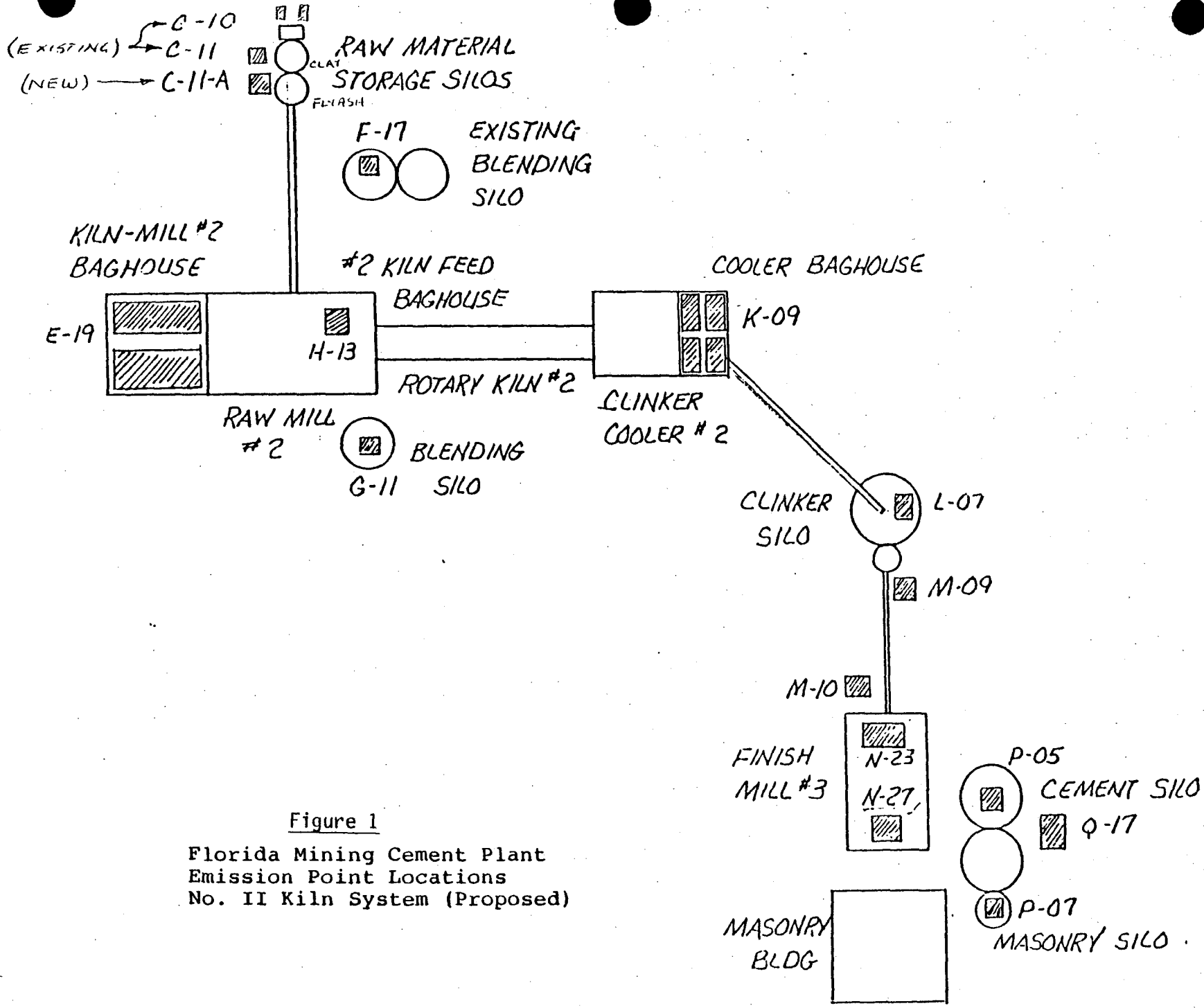


Figure 1
 Florida Mining Cement Plant
 Emission Point Locations
 No. II Kiln System (Proposed)

- A. Best Available Control Technology;
- B. PSD Increment Impacts;
- C. National Ambient Air Quality Standards (NAAQS) Impacts;
- D. Class I Area Impacts;
- E. Growth Impacts; and
- F. Additional Impacts on Soils, Vegetation and Visibility.

PSD review applies to each pollutant regulated under the Act for which a significant net emissions increase results from the modification. As shown in Table 2, this includes particulate matter (PM) and nitrogen oxides (NO_x). Emissions of other pollutants are insignificant. As proposed by the applicant, sulfur dioxide (SO_2), carbon monoxide (CO) and volatile organic compounds (VOC) emissions will be restricted by Federally enforceable allowable emission limits to ensure insignificant emissions.

A. BACT Analysis

NO_x Emissions

The kiln-mill is the only NO_x emissions unit requiring BACT review. NO_x is formed from the combustion of coal in the kiln. The applicant proposes to minimize NO_x emissions by maintaining low excess air firing conditions. This operating technique reduces both available free nitrogen and peak flame temperature thus limiting NO_x formation. Low excess air firing conditions will be maintained by continuously monitoring oxygen in the combustion gases. The allowable emissions rate proposed by the applicant is considerably lower than the majority of NO_x emissions rates found during an industry survey of NO_x performance test data at cement plants located across the country. The rate also compares reasonably well with the AP-42 emissions factor. For easy comparison these values are listed as follows:

Table 2
Emissions Summary^a

Emissions Unit	PM ^b	Pollutant (Tons per Year)				Other
		SO ₂ ^c	NO _x ^d	CO ^e	VOC ^e	
1. Kiln Mill (E-19)	94.8	13.1 ^c	855.2 ^d	39 ^e	11.7 ^e	Negl.
2. Finish Mill						
(N-23)	17.3					
(N-27)	3.2					
3. Cement/Masonry Silos						
(P-05)	4.3					
(P-07)	2.1					
(Q-17)	2.1					
4. Clinker Silo						
(L-07; M-09; M-10)	7.5					
5. Clinker Cooler						
(N-09)	31.1					
6. Kiln Feed Silo (M-13)	2.2					
7. Blending Silos						
(G-11)	8.6					
(F-17)	2.2					
8. Cement Plant Raw Material Handling (C-11A)	3.8					
TOTAL	179.2	13.1	855.4	39	11.7	Negl.
PSD Significance Levels	25	40	40	100	40	

^aEstimates based on maximum capacity continuous operation (8760 hrs/yr).

^bFigures are based on the proposed allowable emissions rates. The kiln emissions rate (E-19) was based on 0.2 lb PM/dry ton kiln feed. Other emissions units estimates were based on baghouse design flow rates and (0.01 grains/ACFM in exit stream).

^cThe applicant estimated and proposed an allowable rate of 13.1 tons/yr (3 lb/hr) based on stack tests performed on an existing unit and a sulfur mass balance. To ensure insignificant potential to emit a 3 lb/hr allowable emissions limit is required by this permit.

^dBased on cement industry NO_x survey data (2.75 lb NO_x/ton clinker).

^eBased on AP-42 factors for bituminous coal firing.

	<u>NO_x Emissions Rate (lb/ton clinker Produced)</u>
Proposed Limit	2.75
Industry Survey Data for Coal-fired Dry Process Kilns	
Arithmetic Average	4.66
Range	3.3 to 6.3
AP-42 Factor*	2.74

*Note this value is the 2.6 lb/ton cement produced factor listed in AP-42 Table 8.6-1 corrected to account for a 5 percent finished cement gypsum content.

Based on this comparison EPA accepts low excess air firing and the proposed emissions limit (2.75 lb/ton clinker; 195.3 lb/hr) as BACT for NO_x for the proposed modification.

PM Emissions

BACT also is required for all PM emissions units. The kiln (E-19) and clinker cooler (K-09) are the largest PM emissions sources. In addition, 12 other point sources exist in various materials handling systems, and several fugitive PM emissions units (coal pile, limestone storage, haul roads, etc.) are a part of the proposed modification.

The applicant evaluated low efficiency scrubbers, high efficiency scrubbers, electrostatic precipitators, and fabric filters as alternative technologies to be applied to the kiln (E-19) and clinker cooler (K-09). The following factors were estimated and considered in the BACT analysis: collection efficiency, capital and operating costs, product recovery capability, water consumption and generation of waste byproducts. The scrubber technologies were shown incapable of meeting the applicable NSPS limits (see Table 3). Further, due to low exhaust gas SO₂ content and resulting high particle resistivity and low collection efficiency, the electrostatic precipitator is considered to be less reliable than a fabric filter, which has been demonstrated on similar existing kilns as a reliable effective control technology. The applicant proposed NSPS

allowable emissions limits as BACT for the kiln (0.3 lb/ton dry kiln feed) and a limit slightly lower than NSPS for the clinker cooler (0.066 vs 0.1 lb/ton dry kiln feed). However, the Florida State Department of Environmental Resources (FDER) has determined, on the basis of emissions rates achieved by other recently constructed kilns, that a more stringent level can be met for the kiln (0.2 lb/ton dry kiln feed). The limits proposed by the applicant and required by the State are summarized in Table 3. EPA agrees with the clinker cooler limit proposed by the applicant and the kiln limit required by FDER. BACT for PM for these limits, therefore, is determined to be 0.2 lb/ton dry kiln feed and 10 percent opacity for the kiln and 0.066 lb/ton dry kiln feed and 10 percent opacity for the clinker cooler.

An analysis was performed to evaluate economic and environmental impacts of a cyclone scrubber, a venturi scrubber and a baghouse for each of the additional 12 PM emissions units. Fabric filter technology was chosen as the lower cost, more reliable control system for these applications. The applicant proposed pound-per-hour limits based on 0.02 gr/ACFM outlet grain loading for each of the 12 additional PM emissions units. This limit, however, exceeds the manufacturer's outlet grain-loading design specification for each fabric filter (0.01 gr/ACFM). The manufacturer's specification is consistent with BACT determinations made on similar Portland cement kilns and other fabric filter controlled PM emissions units. On this basis, EPA determines BACT for PM for the 12 emissions units (L-07, M-10, M-09, H-13, G-11, F-17, N-23, N-27, P-05, P-07, Q-17, and C-11A) to be fabric filter technology and pound-per-hour limits based on maximum design flow rate and 0.01 gr/ACFM.

BACT must also be applied to all fugitive PM emissions sources including coal, raw materials and cement products storage and handling, haul roads, and other fugitive sources. The following techniques and practices will be employed by the applicant in controlling fugitive PM emissions.

1. All permanent haul roads shall be paved.
2. Temporary haul roads shall be watered or treated with chemical dust suppressants at regular intervals.
3. Raw materials shall be stored in silos or enclosed structures.

Table 3
BACT for Particulate Matter

<u>Emissions Unit</u>	<u>NSPS Limits</u>	<u>Applicant Proposed Limits</u>	<u>State Permit Limits^a</u>	<u>PSD BACT Limits</u>
Kiln (E-19)				
1b/ton dry kiln feed	0.3	0.3	0.2 ^a	0.2
Opacity	20%	20%	10%	10%
Clinker Cooler (K-09)				
1b/ton dry kiln feed	0.1	0.066 ^a	0.066 ^a	0.066
Opacity	10%	10%	10%	10%
Other 12 Emissions Units				
gr/ACFM	-	0.02 ^a	0.02 ^a	0.01 ^b
Opacity	10%	-	Zero %	Zero %

^aCalculated from a 1b/hr emissions limit assuming 120 T/hr wet kiln feed at 9.8 percent moisture as specified in the application.

^bBased on manufacturer's equipment design specifications for fabric filter outlet grain loadings.

4. The coal storage pile shall be compacted, watered to maintain a minimum 8 percent moisture in the surface layer and aligned with the predominant wind direction to minimize wind erosion.
5. Abandoned haul roads and other disturbed areas shall be revegetated within 60 days of the date active service ends.
6. All cement products shall be transferred to transport trucks with a sealed pneumatic conveying system which is either a closed system or exhausted through a bag filter.
7. Exhaust gases from all materials handling systems other than those for which specific allowable emissions limits are specified in Condition 2 and any other fugitive PM emissions units shall not exceed 5 percent opacity as measured by EPA Standard Method 9.

B. Increment Analysis

Maximum allowable increases in ambient air pollutant concentrations have been set by the PSD regulations for emissions of PM and SO₂ in Class II areas. PSD review for the proposed project does not apply to SO₂ which is emitted in insignificant quantities. An analysis, however, is required to show that the PM emissions impacts from the proposed project, in conjunction with all other interacting increment consuming source impacts, do not exceed the allowable increment.

In identifying other pertinent increment consuming sources, the applicant searched FDER air permit files and the existing State air inventory and screened all major sources within 50 kilometers of the proposed plant site. Also, all minor sources located within the proposed impact area of the modification were screened (circular impact area with 3.8 km radius defined with CRSTER model results). Due to the rural surroundings of the plant location, no increment consuming sources were identified within the impact area. Also, no new or modified major sources having undergone construction or other emissions increases were found within 50 kilometers. Thus, only the proposed new and modified emissions units were considered in the increment analysis.

Air quality impacts from the 14 proposed new and modified emissions units were predicted through dispersion modeling using approved UNIMAP models; CRSTER was used for annual averages and PTMTP for refined short-term averages. Four years (1970-1974) of digitized hourly observations from Tampa Airport were used as meteorology data input to the CRSTER model. Refined short-term maximum impacts were estimated with PTMTP using the worst case 24-hour period identified by the CRSTER results. A 0.1 kilometer spacing was used in refining the maximum impacts. The results of the Class II increment analysis are listed in Table 4.

The applicant also evaluated the effect of aerodynamic downwash on short-term air impacts from the proposed emissions units. Plant boundary line concentrations were generated for each emissions unit for the directions which predictably could result in building downwash effects due to stack heights which do not meet minimum Good Engineering Practices. The Huber-Snyder "enhanced sigmas" technique was utilized along with the conservative Pasquill-Gifford, Gaussian dispersion equation to estimate maximum property line concentrations. No off-property increment violations occurred from individual units. Further, by summing all maximum individual impacts which may be physically capable of interacting due to wind direction (note that this is an ultra-conservative technique) a total impact of $\leq 23.5 \text{ ug/m}^3$ (24-hour average) is estimated. This value also does not exceed the available increment of 37 ug/m^3 .

On the basis of the downwash analysis results and the results presented in Table 4, EPA concludes that the proposed modification does not threaten Class II increments. The Class I impact analysis is discussed in a later section. It should be noted that an analysis of the impacts of fugitive PM emissions was not required consistent with EPA Region IV policy for applications submitted prior to August 7, 1980. Finally, no areas of known increment violation exist within the impact area of the proposed modification.

C. NAAQS Analysis

An air quality analysis was performed to demonstrate that emissions from the proposed modification, along with existing ambient concentrations,

Table 4
PM Increment Analysis Results*

<u>Averaging Period</u>	<u>Distance from Source</u>	<u>Maximum Impact ($\mu\text{g}/\text{m}^3$)</u>	<u>Class II Increment ($\mu\text{g}/\text{m}^3$)</u>	<u>Percent Increment Consumed</u>
Annual	0.1 km	3.2	19	17%
24-hour	0.25 km	21	37	57%

* Modification does not significantly increase SO_2 emissions and no SO_2 increment analysis is required.

will not exceed the NAAQS. Also, as required by the PSD regulations, the analysis must show that emissions from the modification will not significantly impact any designated non-attainment area. The analysis addresses only emissions of PM and NO_x . The modification does not result in a significant increase for other criteria pollutants for which NAAQS ceilings exist.

The maximum annual NO_x emissions impact was estimated using CRSTER and 5-year Tampa Airport meteorological data with a method similar to the method previously described in the increment analysis. The kiln is the only NO_x emitting unit in the proposed modification and it alone was modeled to determine NO_x impacts. As shown in Table 5, the NO_x modeling results show impacts which are less than the significance levels outlined in the Preamble to the June 19, 1978 PSD regulations (43FR26398). For this reason, no refined analysis is required, and it is concluded that NO_x emissions from the proposed modification do not pose a threat to the NAAQS for NO_x .

Site-specific preconstruction PM monitoring data was collected at four sites in the vicinity of the existing plant to quantify existing air quality for use in the NAAQS analysis for PM. Four months of data were collected with 3-day sampling intervals. The results were reasonably consistent with the results of two previous monitoring programs conducted during the periods of October 1974 to March 1975 and April 1976 to October 1976. EPA agrees that the monitoring data is sufficient to characterize existing air quality for PM.

The highest annual geometric mean of four stations (36.4 ug/m^3) is considered to represent the worst case background ambient concentration for the annual averaging period. Similarly, the highest individual sample concentration (120 ug/m^3) represents the worst case background for the 24-hour averaging period.

Maximum annual and 24-hour air quality impacts from the 14 proposed new and modified emissions units were estimated with dispersion models as discussed previously. The results of this modeling analysis are presented in Table 5 along with the background values. Making the conservative assumption that maximum modeled impacts and background concentrations occur simultaneously at the same location, the worst case projected ambient

Table 5
NAAQS Analysis Results

<u>Pollutant</u>	<u>Averaging Time</u>	<u>Significance Value (ug/m³)</u>	<u>Maximum Impact from Proposed Units (ug/m³)</u>	<u>Existing Air Quality (ug/m³)</u>	<u>Total Projected Air Quality (ug/m³)</u>	<u>NAAQS₃ (ug/m³)</u>
NO _x	Annual	1	0.36 ^a (at 5km)	a	a	100
PM	Annual	1	3.2 (at 0.1km)	36.4 ^b	39.6	60
	24-hour	5	21 (at 0.25km)	120 ^c	141	150
PM impact on Tampa non-attainment area (65 kilometers to the south)	Annual	1	0.01 ^a			
	24-hour	5	0.3 ^a			

^aThis value is not significant (i.e. <1 ug/m³) and refined analysis is not required.

^bMaximum annual geometric mean of four site-specific monitoring stations.

^cMaximum 3-hour concentration of four site-specific monitoring stations.

impact is estimated. A comparison of these values with the NAAQS (see Table 5) shows the proposed modification to pose no threat to the standards.

The analysis also estimated the maximum impact from the proposed modification on the PM non-attainment area located 65 kilometers to the south. The area of significant PM impact for the proposed units is limited to a circle with a 3.8 kilometer radius. Projected maximum impacts at the non-attainment area are 0.01 ug/m^3 annual geometric mean and 0.3 ug/m^3 24-hour average. These impacts do not exceed the significance criteria (43FR26398), and the proposed modification is determined not to pose a threat to the Tampa PM non-attainment area.

D. Class I Area Analysis

The plant site for the proposed modification is located at a distance of 12 kilometers to the east of the Chassahowitzka Class I area. The air quality impact of the proposed construction was estimated in the previously discussed dispersion modeling analysis. In addition, all sources permitted since January 6, 1975 within 100 kilometers of the Class I area were screened to identify increment consuming sources which, by virtue of their location, could interact with the proposed modification in impacting the Class I area. Consideration was given only to those sources located in a sector area east of both the Class I area and the existing plant site and to those sources in the direct vicinity which could interact due to lateral plume dispersion.

The screening identified only minor increment consuming sources (i.e. <100 tons/year) located outside of the impact area for the proposed modification. No other increment consuming sources were found within the impact area, and no major source construction since January 6, 1975 was identified within the 100 kilometer sector. Therefore, it was concluded that no other increment consuming sources exist which are capable of interaction with the proposed modification in impacting the Class I area.

The results of the Class I impact analysis are presented in Table 6. The impacts are less than the significance levels applicable to Class II

Table 6
Class I Area Impact Analysis Results

	PM Annual ($\mu\text{g}/\text{m}^3$)	PM 24-hour ($\mu\text{g}/\text{m}^3$)	NO _x Annual
Proposed Modification Impacts	0.11	1.5	0.22
Interacting Increment Consuming Source Impacts	0	0	a
Total Impact from the Modification	0.11	1.5	0.22
Class I Increments	5	10	a
Percent of Increment Consumed	2.2%	15%	a

^aNo increment has been established for NO_x.

areas (1 ug/m^3 annual average and 5 ug/m^3 24-hour average); however, this criteria, as discussed in the Preamble to the 1978 PSD regulations (43FR26398), is not applicable to Class I areas. Further, the 24-hour impact exceeds the significance criteria triggering PSD review for sources located within 10 kilometers of a Class I area (1 ug/m^3 24-hour average). Most significantly, the proposed modification consumes a maximum of 15 percent of the available increment (24-hour average) in the Chassahowitzka Class I area. The results of the Class I area impact analysis have been forwarded to the Federal Land Manager responsible for managing the Chassahowitzka Refuge*. Comments received regarding the significance of the estimated Class I area impacts will be considered in making a final determination regarding permitting for the proposed modification.

E. Growth Analysis

The applicant estimates the proposed modification will increase plant employment by 250 temporary workers during construction and 10 permanent employees. Consumption of cement products is expected to be regional and should not significantly increase local growth. Increased power consumption (12 megawatts) will be supplied by existing capacity at Florida Power's Crystal River plant.

Increased truck traffic to the cement plant hauling products, etc. will generate the following quantities of pollutants.

<u>Year</u>	<u>CO(t/y)</u>	<u>VOC(t/y)</u>	<u>NO_x(t/y)</u>
1980	101	19.5	176
1982	95	18	176
1985	91	14	163
1990	89	11	76

Increased coal consumption will necessitate a larger number of cars on each delivery train. The emissions associated with the increased load are considered to be insignificant.

*Edward Collinsworth, Refuge Manager, National Wildlife Refuge, Route 2, Box 44, Homosassa, Florida 32646.

F. Soils, Vegetation and Visibility Analysis

Based on the results of the air quality impacts analysis and a general survey of the soils and vegetation indicative of the plant vicinity, no significant adverse soils, vegetation or visibility impacts are anticipated to result from the proposed modification. Conservative modeling results, discussed previously, show that the project does not cause air impacts in excess of the NAAQS developed to protect public health and welfare. Moreover, the modification consumes less than 15 percent and 57 percent of the Class I and Class II increments, respectively. On this basis, no significant adverse soils or vegetation impacts are anticipated.

Regional visibility in this subtropical environment is limited by naturally occurring high humidity. PM emissions from the modification will consist primarily of submicron size particles. Although particles in this size range possess active light scatters properties, the total emissions increase amounts to less than 179 tons per year. This amount is not anticipated to cause significant adverse visibility effects. Adverse plume visibility effects also will be limited by the 10 percent maximum opacity standard.

V. Conclusions

EPA Region IV proposes a preliminary determination of approval with conditions for the construction of the kiln, clinker cooler and the associated production units described in the Florida Mining and Materials Corporation, application received complete by EPA on August 2, 1980 (Materials May 12, July 17, July 30, and October 9, 1980). The conditions set forth in the permit are as follows:

1. The modification shall be constructed in accordance with the specifications, capabilities and descriptions contained in the application except as otherwise required by the permit conditions. This specifically includes a maximum design kiln feed rate of 120 tons per hour (wet basis), a clinker production rate of 71 tons per hour (dry basis), and a kiln fuel input rate of 8.9 tons per hour of coal (12,000 Btu/hr) with sulfur content not to exceed 1 percent by weight.

2. The maximum emissions rate for each emissions unit shall not exceed the allowable limits specified in Table 7.
3. Compliance with each allowable emissions limit shall be demonstrated with performance tests conducted with the provisions of 40 CFR 60.8 and the attached General Conditions. EPA standard reference methods shall be utilized for all performance tests in accordance with applicable sampling provisions as follows:

<u>Pollutant</u>	<u>40 CFR 60 Appendix A Reference Method</u>	<u>Applicable Provisions</u>
PM	Method 5	40 CFR 60.64
SO ₂	Method 6	40 CFR 60.46
NO _x	Method 7	40 CFR 60.46
Opacity	Method 9	--
CO	Method 10	--

Compliance with the VOC allowable emissions rate will be assumed provided the CO allowable emissions rate is achieved; specific VOC compliance testing is not required.

4. The kiln feed rate and clinker production rates shall be monitored and recorded daily in accordance with 40 CFR 60.63. Also, the coal feed rate to the kiln and the coal sulfur content of each coal shipment will be determined and recorded.
5. Actual emissions of NO_x will be minimized through the use of low excess air firing. A continuous kiln exhaust gas oxygen monitor/recorder will be installed, calibrated and operated in accordance with the attached general provision, "Use of a Flue Gas Oxygen Meter as BACT for Combustion Controls."
6. The applicant shall comply with the following work practices to minimize fugitive PM emissions:
 - a. All permanent haul roads shall be paved.
 - b. Temporary haul roads shall be watered or treated with chemical dust suppressants at regular intervals.
 - c. Raw materials shall be stored in silos or enclosed structures.

Table 7
 Allowable Emissions Limits
 (PSD-FL-063)

<u>Emissions Unit</u>	<u>Allowable Emissions Rate</u> (pounds per hour)					<u>Opacity</u>
	<u>PM</u>	<u>NO_x</u>	<u>SO₂</u>	<u>CO</u>	<u>VOC</u>	
Clinker Silo L-07, M-09, M-10	1.72					0%
Clinker Cooler (K-09)	7.1 (0.066) ^a					10%
Kiln (E-19)	21.6 (0.2) ^a	195.3 (0.81) ^b	3	8.9	2.7	10%
Kiln Feed (H-13)	0.51					0%
Blending Silo (G-11)	1.97					0%
(F-17)	0.51					0%
Finish Mill (N-23)	3.94					0%
(N-24)	0.73					0%
Cement/Masonry Silos (P-05)	0.99					0%
(P-07)	0.47					0%
(Q-17)	0.47					0%
Cement Plant Raw Materials Handling (C-11A)	0.86					0%

^a Allowable emissions limit in pounds per ton of kiln feed materials (dry basis).

^b Allowable emissions limit in pounds per million Btus of kiln heat input.

- d. The coal storage pile shall be compacted, watered to maintain a minimum 8 percent moisture in the surface layer and aligned with the predominant wind direction to minimize wind erosion.
 - e. Abandoned haul roads and other disturbed areas shall be revegetated within 60 days of the date active service ends.
 - f. All cement products shall be transferred to transport trucks with a sealed pneumatic conveying system which is either a closed system or exhausted through a bag filter.
 - g. Exhaust gases from all materials handling systems other than those for which specific allowable emissions limits are specified in Condition 2 and any other fugitive PM emissions units shall not exceed 5 percent opacity as measured by EPA Standard Method 9.
7. The applicant shall comply with the provisions and requirements of the attached General Conditions.

USE OF FLUE GAS OXYGEN METER AS BACT FOR
COMBUSTION CONTROLS

Within the time limits specified in General Condition 3 of this permit, the permittee shall determine the emissions of nitrogen oxides and carbon monoxide from the permitted combustion device in accordance with test methods and procedures set out in 40 CFR Part 60, Appendix A, Methods 7 and 10, respectively. These emission determinations shall be made at:

- 1) Maximum design capacity; and
- 2) Normal operational load.

The permittee shall install a continuous oxygen monitor in the flue of the permitted combustion device which meets the requirements of 40 CFR Part 60, Appendix B, Performance Specification 3. Results of emission determinations shall be correlated to the flue gas oxygen content to define:

- 1) The point at which Nitrogen Oxides (NO_x) emissions (lb/MMBtu) equals the allowable NO_x emission rate contained in the permit.
- 2) The point at which carbon monoxide (CO) emissions exceed the allowable CO emission rate contained in the permit.

The flue gas oxygen content shall be maintained between these points and alarms shall be set to sound when flue gas oxygen levels exceed either side of this range. Any operation outside of this range will constitute noncompliance with this specific condition, shall be recorded in accordance with General Condition 4 of this permit, and will be reported quarterly along with excess emissions in accordance with 40 CFR 60.7 (c).

Should any combustion equipment modifications be made such as different type burners, combustion air relocation, fuel conversion, tube removal or addition, etc., emissions correlations as described above shall be conducted within 90 days of attaining full operation after such modification. Results of all emission determinations shall be sent to the permitting authority within 90 days after completion of the tests.

GENERAL CONDITIONS

1. The permittee shall notify the permitting authority in writing of the beginning of construction of the permitted source within 30 days of such action and the estimated date of start-up of operation.
2. The permittee shall notify the permitting authority in writing of the actual start-up of the permitted source within 30 days of such action and the estimated date of demonstration of compliance as required in the specific conditions.
3. Each emission point for which an emission test method is established in this permit shall be tested in order to determine compliance with the emission limitations contained herein within sixty (60) days of achieving the maximum production rate, but in no event later than 180 days after initial start-up of the permitted source. The permittee shall notify the permitting authority of the scheduled date of compliance testing at least thirty (30) days in advance of such test. Compliance test results shall be submitted to the permitting authority within forty-five (45) days after the complete testing. The permittee shall provide (1) sampling ports adequate for test methods applicable to such facility, (2) safe sampling platforms, (3) safe access to sampling platforms, and (4) utilities for sampling and testing equipment.
4. The permittee shall retain records of all information resulting from monitoring activities and information indicating operating parameters as specified in the specific conditions of this permit for a minimum of two (2) years from the date of recording.
5. If, for any reason, the permittee does not comply with or will not be able to comply with the emission limitations specified in this permit, the permittee shall provide the permitting authority with the following information in writing within five (5) days of such conditions:
 - (a) description of noncomplying emission(s),
 - (b) cause of noncompliance,
 - (c) anticipated time the noncompliance is expected to continue or, if corrected, the duration of the period of noncompliance,
 - (d) steps taken by the permittee to reduce and eliminate the noncomplying emission,and
 - (e) steps taken by the permittee to prevent recurrence of the noncomplying emission.

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

6. Any change in the information submitted in the application regarding facility emissions or changes in the quantity or quality of materials processed that will result in new or increased emissions must be reported to the permitting authority. If appropriate, modifications to the permit may then be made by the permitting authority to reflect any necessary changes in the permit conditions. In no case are any new or increased emissions allowed that will cause violation of the emission limitations specified herein.
7. In the event of any change in control or ownership of the source described in the permit, the permittee shall notify the succeeding owner of the existence of this permit by letter and forward a copy of such letter to the permitting authority.
8. The permittee shall allow representatives of the State environmental control agency and/or representatives of the Environmental Protection Agency, upon the presentation of credentials:
 - (a) to enter upon the permittee's premises, or other premises under the control of the permittee, where an air pollutant source is located or in which any records are required to be kept under the terms and conditions of the permit;
 - (b) to have access to and copy at reasonable times any records required to be kept under the terms and conditions of this permit, or the Act;
 - (c) to inspect at reasonable times any monitoring equipment or monitoring method required in this permit;
 - (d) to sample at reasonable times any emission of pollutants;and
 - (e) to perform at reasonable times an operation and maintenance inspection of the permitted source.
9. All correspondence required to be submitted by this permit to the permitting agency shall be mailed to the:

Chief, Air Facilities Branch
Air and Hazardous Materials Division
U.S. Environmental Protection Agency
Region IV
345 Courtland Street
Atlanta, Georgia 30308
10. The conditions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

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